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**FINAL  
SUPPLEMENTAL  
ENVIRONMENTAL IMPACT REPORT  
FOR THE  
LONG BEACH COMMUNITY COLLEGE  
DISTRICT  
2041 FACILITIES MASTER PLAN  
LIBERAL ARTS CAMPUS IMPROVEMENTS**

*Prepared for:*

**LONG BEACH COMMUNITY COLLEGE DISTRICT**  
4901 East Carson Street  
Long Beach, California 90808

*Prepared by:*

**CHAMBERS GROUP, INC.**  
5 Hutton Centre Drive, Suite 750  
Santa Ana, California 92707

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## EXECUTIVE SUMMARY

### E.S.1 INTRODUCTION

The Long Beach Community College District (LBCCD or District) is proposing to implement the LBCCD 2041 Facilities Master Plan at the Long Beach City College Liberal Arts Campus (LAC, Project Site). The District's goal as part of the California Community College system is to offer academic and vocational education to students at the lower college division level.

The objective of the LBCCD 2041 Facilities Master Plan is to provide plans to implement proposed necessary construction, renovation, and general capital improvements at the campus in order to meet the District's goals. The improvements are intended to update and improve existing technological and program services in order to meet the increasing needs of students and faculty.

This document is a Draft Supplemental Environmental Impact Report (SEIR) prepared in accordance with the California Environmental Quality Act (CEQA); and it provides an overview of the Proposed Project and considered alternatives, identifies the anticipated environmental impacts from the Proposed Project and the alternatives, and identifies mitigation measures designed to reduce the level of significance of any impact.

### E.S.2 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The primary purpose of CEQA is to inform the public and decision makers as to the potential impacts of a project and to allow an opportunity for public input to ensure informed decision-making. CEQA requires all State and local government agencies to consider the environmental effects of projects over which they have discretionary authority. CEQA also requires each public agency to mitigate or avoid the significant environmental impacts resulting from proposed projects, when feasible, and to identify a range of feasible alternatives to the Proposed Project that could reduce those environmental effects.

Under CEQA, a project SEIR analyzes the impacts of an individual activity or specific project and focuses primarily on changes in the environment that would result from the activity or project. The SEIR must include the contents required by CEQA and the *CEQA Guidelines* (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387) and is required to examine all phases of the project, including planning, construction, operation, and any reasonably foreseeable future phases.

### E.S.3 PROJECT SUMMARY

This overview is intended to provide a summary of the LBCCD 2041 Facilities Master Plan Liberal Arts Campus (LAC) Improvements Final SEIR. A complete copy of the Final SEIR may be inspected at:

- LBCCD Bond Management Team office, Building O-1, 4901 East Carson Street, Long Beach, California 90808
- Online at the LBCCD website (<https://www.lbcc.edu/pod/facilities-master-plans>)

The Project Site is located approximately 3.0 miles west of Interstate 605 (San Gabriel River Freeway), 3.0 miles east of Interstate 710 (Long Beach Freeway), 1.5 miles north of Interstate 405 (San Diego Freeway), and 0.5 mile east of Lakewood Boulevard (State Highway 19). Additionally, the Project Site is located

approximately 0.3 mile northeast of Long Beach Municipal Airport (LBMA). LBCC LAC is bounded by Harvey Way on the north, Clark Avenue on the east, Skylinks Golf Course on the south, and Faculty Avenue on the west. Figure ES-1 presents the regional and local settings surrounding the Project Site.

The District has prepared this Draft SEIR to address implementation of the LBCC 2041 Facilities Master Plan. Through implementation of the LBCC 2041 Facilities Master Plan, the District's goals are to provide academic and vocational education to students at the lower college division level and to advance California's economic growth and global competitiveness using education, training, and services to lead to a continuous workforce improvement.

#### **E.S.4 PROJECT BACKGROUND**

The District's goal as part of the California Community College system is to offer academic and vocational education to students at the lower college division level. In addition, the District's goal is to advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement. Long Beach City College is committed to providing equitable student learning and achievement, academic excellence, and workforce development by delivering high quality educational programs and support services to their diverse communities.

The objective of the 2041 Facilities Master Plan is to provide plans to implement proposed necessary construction, renovation, and general capital improvements at the campus in order to meet the District's goals and to support the District's Strategic Plan. The improvements are intended to create and improve building space to support the LBCCD Strategic Plan and Student Learning Outcomes in all areas.

Since the 2020 Unified Master Plan, the District prepared the LBCCD 2041 Facilities Master Plan to provide an understanding of the projects envisioned to be constructed in the near future. This Facilities Master Plan breaks down the type and size of each project for both campuses, as well as estimating the probable cost of each project. The 2041 Facilities Master Plan allows the District to re-evaluate available funds and expanded details of priority projects that the District is working to complete. Enrollment and the production of weekly student contact hours (WSCH) were used as the basis for quantifying growth as well as for determining the space needs of the future. Physical capacity was defined by the District as achieving student enrollment of 28,100 and 349,844 WSCH at LAC. At this point in time, the campus will have effectively reached its physical limit for available land area, for parking, and the ability to effectively serve students.

#### **E.S.5 PROJECT DESCRIPTION**

Looking to the year of 2041, LAC's priorities will lie with addressing the key areas for academic growth. These include the Life Sciences (Biology), Mathematics, Language Arts, Performing Arts, and Construction Trade facilities. From the Student Services side of the equation, an economic and workforce development center is a high priority. LAC will also need to address its Physical Education facilities including a new Aquatic Center, renovation of the stadium and gymnasiums, and outdoor kinesiology labs. Lastly, the provision of parking that is close and usable to the primary academic areas will also be a high priority at LAC.

The 2041 Facilities Master Plan provides updates to the 2020 Unified Master Plan and provides updated construction dates and budgets for the facilities projects. The projects incorporate the space and building needs identified to the year 2041. Table ES-1 presents the updates to the Master Plan through new project details determined since the previous SEIR.

**Table ES-1: Updated 2041 Facilities Master Plan Improvements**

<b>Project</b>	<b>Scope/Usage</b>	<b>Gross Square Feet (GSF)/ Features</b>
Building B Classroom	Renovate Building with electrical upgrades, data and communication, larger lecture halls, better lighting, and additional lab functions	Renovation – 44,357
Building D Science Building	Renovate Science Building for improved classroom learning environments, new fiber data backbone, and enhanced signage	Renovation – 16,000
Building E College Center	Campus-wide Student Support	Demolition – 50,276 New Construction – 50,276
Building F Family/Consumer Education	Outdated building that will be replaced with new landscape and hardscape	Demolition – 15,968
Building G Performing Arts	New Performing Arts Building replaces the existing and outmoded Music Building.	Demolition – 27,792 New Construction – 42,857
Building J Auditorium	Complete renovation of Auditorium building with expansion of the building as well as general refurbishment and updates	Renovation – 37,878 Expansion – 14,119
Building K Art Building	Fine Arts building needs complete renovation and modernization	Retrofit/Renovation – 29,479
Building M Liberal Arts	Replace Buildings M and N with new building for classrooms, laboratory facilities, and technology center	Demolition – 48,768 New Construction – 81,970
Building O1 IITS/Warehouse	Structural enhancements to obtain certification by Division of State Architect	Renovation – 26,560
Building O2 Economic & Workforce Development/Foundation	Structural enhancements to obtain certification by Division of State Architect	Renovation – 51,302
Building P Language Arts	Upgrade building's functional systems with upgraded power systems, HVAC, plumbing, storm drainage, fire alarm, and telecommunication systems	Renovation – 16,016
Building Q Secondary Gymnasium	Renovation and upgrading to address issues related to instructional space, training needs, seismic upgrades, AHA compliance, and other upgrades	Renovation – 30,270

**Table ES-1: Updated 2041 Facilities Master Plan Improvements**

Project	Scope/Usage	Gross Square Feet (GSF)/ Features
Building R Primary Gymnasium	Comprehensive structural and seismic renovation, ADA access, HVAC upgrades	Renovation – 78,024 New Construction – 10,000
Building S Stadium	Renovation including ADA access, structural upgrades	Renovation – 57,455
Building W Aquatic Center	Construction of a new 50-meter by 25-yard pool, with a new support building	New Construction – 54,660 including pool area
Outdoor Kinesiology Labs	New construction of physical education outdoor playing fields to include softball relocation, two soccer fields, six tennis courts, five sand volleyball courts, and supporting facilities, restrooms, field house, storage.	New Construction Supporting Facilities – 15,014
Walkways and Wayfinding	New and revised walkways, installation of uniform signage program	New construction/renovation

ADA: Americans with Disabilities Act; HVAC: heating, ventilation, and air conditioning

The LBCCD 2041 Facilities Master Plan LAC improvements would result in an estimated increase over the 2020 Unified Master Plan of 15,877 square feet of renovation, 69,564 square feet removed, and an estimated increase of 34,913 square feet of new construction.

The following descriptions identify specific improvements recommended for the 2041 Facilities Master Plan LAC Improvements that were not part of the 2020 Unified Master Plan or the original 2004 LAC Master Plan Program EIR.

- Building D, Science Building, renovation will be expanded from 9,326 square feet to 16,000 square feet
- Building E, the Existing College Center, will be demolished (50,276 gross square feet [GSF]) and a new building will be constructed with approximately the same GSF of 50,276. The new construction will be in lieu of major renovation of Building E that was previously shown on the 2020 Master Plan.
- Building F will be demolished and replaced with new landscape and hardscape.
- The Performing Arts Building (Building G, previously shown as Building 3 on 2020 Master Plan) will replace the existing Buildings G and H, consisting of approximately 42,857 square feet instead of 46,671 square feet, which was shown on the 2020 Master Plan.

- Building M, Liberal Arts Building, (Previously shown as building 2 & 6 on 2020 Master Plan) will replace the existing buildings M & N, consisting of approximately 81,970 GSF instead of 77,693 GSF, which was shown on the 2020 Master Plan.
- Building O1 will undergo structural enhancements to the 26,560-square-foot building to obtain Division of State Architect certification.
- Building O2 will undergo structural enhancements to the 51,302-square-foot building to obtain Division of State Architect certification.
- Building R, Primary Gymnasium, is anticipated to have an expansion with new construction to the south of 10,000 GSF to accommodate program needs.
- In order to meet programmatic needs, a new 10,000 GSF structure may be built between Buildings Q and R to accommodate swing space and Title IX needs while the buildings are being renovated.
- Building W, Aquatics Center, will be 31,692 GSF and approximately 21,871 GSF of building structure will be allocated to the pool facility including restrooms, locker rooms, team rooms, classroom and offices and will have a capacity of approximately 800 spectator seats. (An Olympic-sized swimming pool with grandstands to accommodate a 3,000-spectator-seat capacity was shown in the 2020 Master Plan.)
- Outdoor Kinesiology Labs, renovation and new construction of physical education outdoor playing fields to include softball relocation, two soccer fields, six tennis courts, and five sand volleyball courts and supporting facilities, such as restrooms, field house, and storage facilities. Approximately 9,821 square feet of Building W will be allocated to The Outdoor Kinesiology Labs as supporting facilities. Also, the existing field house for Softball Field will be removed and replaced with approximately 5,193 square feet of new supporting facilities. (Outdoor Physical Education Labs, including softball field relocation, were previously shown in the 2020 Master Plan.)
- In order for the District to meet the state requirements and Executive Order B-18-12 for Zero-Net-Energy, the LAC campus will be studied for possible Solar Photovoltaic systems at various locations. Parking Lot M as well as other parking lots may have two-thirds of the lot covered with photovoltaic carport structures to meet the statewide requirements for energy production and achieve a Zero Net Energy District.

### **Master Plan Schedule**

The 2041 Facilities Master Plan provides an approximate schedule sequence that identifies timelines for construction and project scope. Table ES-2 summarizes the 2041 Facilities Master Plan Improvements for building renovation, expansion, and/or new construction. To determine the projects and sequencing in the 2041 Facilities Master Plan, the Board of Trustees of the Long Beach Community College District (Board) evaluated the District's urgent and critical capital needs, including school and student safety issues; enrollment trends; class size reduction; overcrowding; energy efficiency and computer technology; seismic safety requirements; and aging, outdated, or deteriorating school buildings, in developing the scope of projects to be funded. In developing the scope of projects, the District has prioritized the key health and safety and sustainability needs so that the most critical school site needs are addressed.

The timing of certain projects will be dependent on the completion of other projects and will ultimately occur over the different phases. For example, improvements to utilities will occur across the LAC. However, these improvements will be completed in portions following building construction or renovation. Other projects sequenced like this include the Photovoltaic Projects, Landscape Master Plan Projects, and Wayfinding/Walkway Projects.

The Master Plan projects called out the projects identified with the 2041 Facilities Master Plan and the time frame that is most likely to occur during these time periods. However, the time frame in which a project is planned may change if the priority characteristics change for an individual project due to program needs or state funding allocation. The general building scope by phase is shown in Table ES-2 for the 2041 Facilities Master Plan Updates.

**Table ES-2: 2041 Facilities Master Plan Construction by Planned Construction Years**

Construction Start Year	Projects Planned
Ongoing	Building P – Language Arts (Renovation), Building D – Science (Renovation), Building J – Auditorium, Minor Campus Improvements, Energy/Water Conservation Projects, Infrastructure Projects, Campus Landscaping
To be Determined	Walkways & Wayfinding, Surface Parking Improvement
2019/2020	Kinesiology Lab & Aquatic Center (Renovation), Building M – Liberal Arts Classroom Building
2022/2023	Building E – College Center (new construction)
2024/2025	Building O2 – Economic & Workforce Development/Foundation (Renovation)
2027/2028	Building G – Performing Arts (New Construction)
2030/2031	Building K – Art (Renovation)
2031/2032	Building R – Primary Gymnasium (Renovation)
2034/2035	Building B – Classroom (Renovation), Building Q – Secondary Gymnasium (Renovation)
2037/2038	Building F – Family/Consumer Education (Demolition), Building S – Stadium (Renovation), Building O1 – IITS/Warehouse

### E.S.6 TABLE OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Table ES-3 summarizes the potential significant adverse impacts for the Proposed Project. Each environmental resource area covered in Chapter 3.0 is summarized. Impacts found to be significant are listed along with the proposed mitigation measures. The residual impact after application of mitigation is also indicated for each significant impact. Cumulative impacts, if any, are also identified.

**Table ES-3: Summary of Significant Impacts and Mitigation Measures**

<b>Potential Impacts</b>	<b>Mitigation Measures</b>	<b>Level of significance after mitigation</b>
<b>3.4 – Aesthetics</b>		
<i>Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.</i>	None needed	Less than Significant
<b>3.5 – Air Quality</b>		
<i>Result in conflict with or obstruct implementation of the applicable air quality plan.</i>	None needed	Less than Significant
<i>Violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation.</i>	None needed	Less than Significant
<i>Expose sensitive receptors to substantial pollutant concentrations.</i>	None needed	Less than Significant
<b>3.6 – Greenhouse Gas Emissions</b>		
<i>Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.</i>	None needed	Less than Significant
<i>Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.</i>	None needed	Less than Significant
<b>3.7- Noise</b>		
<i>Result in a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</i>	<p><b>MM N-1:</b> The site plan and project design for the Swim Pool Facility shall include construction of a minimum 16-foot-high wall along the northern edge of the Swim Pool Facility that is adjacent to Carson Street. There shall be no cut outs or openings in the noise barrier.</p> <p><b>MM N-2:</b> The LBCCD shall restrict any swimming or water polo competitions from occurring in the Swim Pool Facility between the hours of 10:00 p.m. and 7:00 a.m. This restriction shall not apply to swim and water polo practices and other non-intensive uses of the Swim Pool Facility.</p>	Less than Significant
<i>Result in generation of excessive groundborne vibration or groundborne noise levels.</i>	None needed	Less than Significant

**Table ES-3: Summary of Significant Impacts and Mitigation Measures**

Potential Impacts	Mitigation Measures	Level of significance after mitigation
<b>3.8- Transportation</b>		
<p><i>Conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths.</i></p>	<p><b>MM TRA-1: Lakewood Boulevard at Harvey Way:</b> Restripe Harvey Way to provide an exclusive westbound right-turn lane. Given that this key study intersection is located jointly in the cities of Long Beach and Lakewood, the installation of this improvement is subject to the approval of the City of Long Beach and the City of Lakewood. It should be noted that these improvements cannot be guaranteed by the Proposed Project or the City of Long Beach as the improvements would also require approval from the City of Lakewood. As such, the impact at this location is considered <b><i>significant and unavoidable</i></b>; and a statement of overriding considerations will be required for this location.</p> <p><b>MM TRA-2: Clark Avenue at Harvey Way:</b> Restripe Harvey Way to provide an exclusive eastbound right-turn lane. The installation of this improvement is subject to the approval of the City of Long Beach.</p> <p><b>MM TRA-3: Faculty Avenue at Carson Street:</b> Install signage to restrict southbound left-turn movements during the AM peak period (7:00 AM – 9:00 AM) and during the PM peak period (4:00 PM – 6:00 PM). The installation of this improvement is subject to the approval of the City of Long Beach.</p>	<p>Significant and Unavoidable</p>

Figure ES-1: Regional and Local Settings

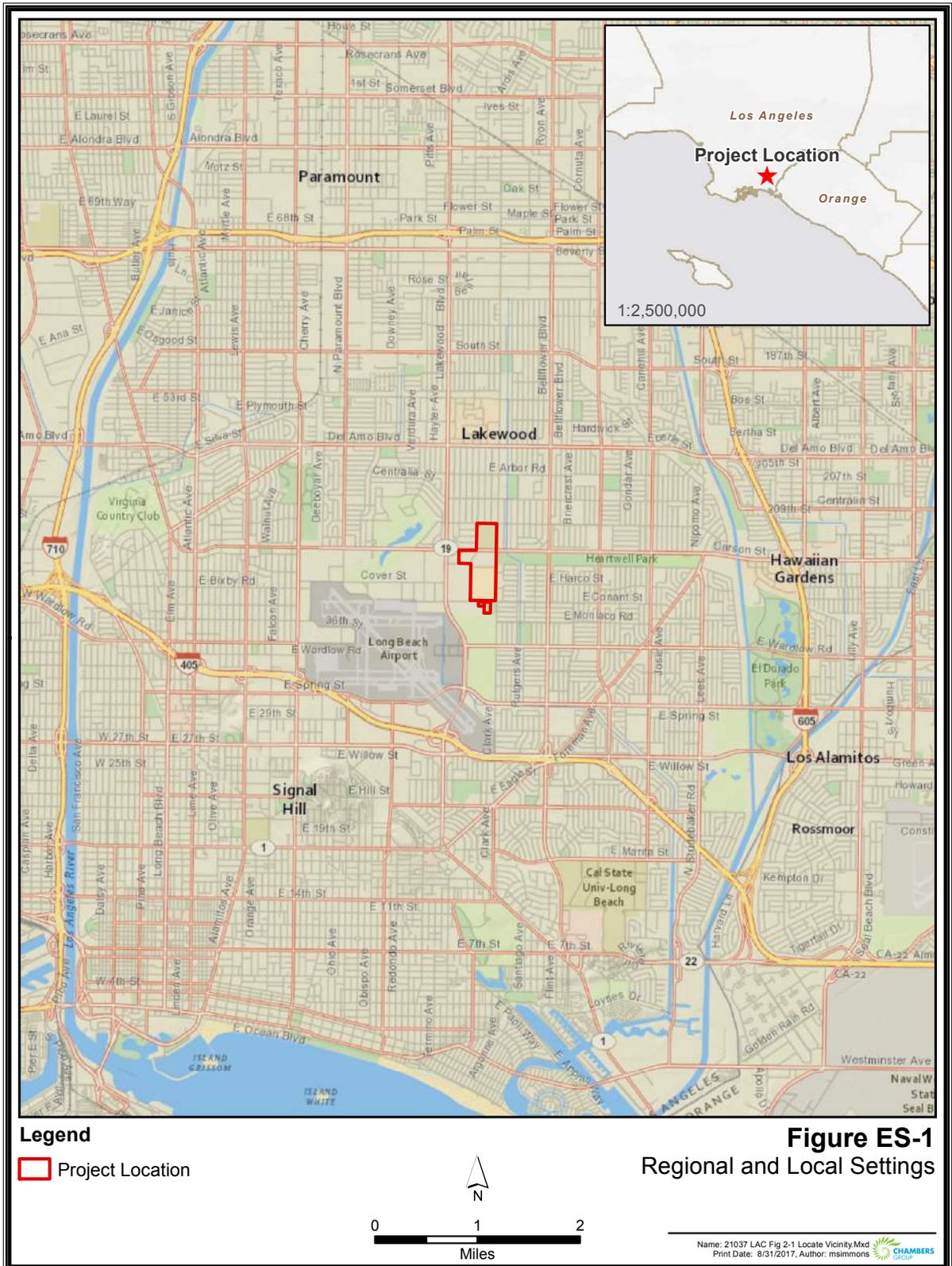


Figure ES-2: LBCCD 2041 Facilities Master Plan LAC Improvements



## **E.S.7 PROJECT ALTERNATIVES**

Two alternatives for the Draft SEIR were identified and evaluated:

- No Project/No Build Alternative - assumes that no improvements beyond those described in the 2041 Facilities Master Plan LAC Improvements and its amendments would be implemented.
- Reduced Project Alternative – assumes that the campus would be developed consistent with planned improvements outlined in the LBCCD 2041 Facilities Master Plan but that the Kinesiology Lab and Aquatic Center projects would not be implemented.

Chapter 4.0 discusses the alternatives in detail.

## CHAPTER 1.0 – INTRODUCTION

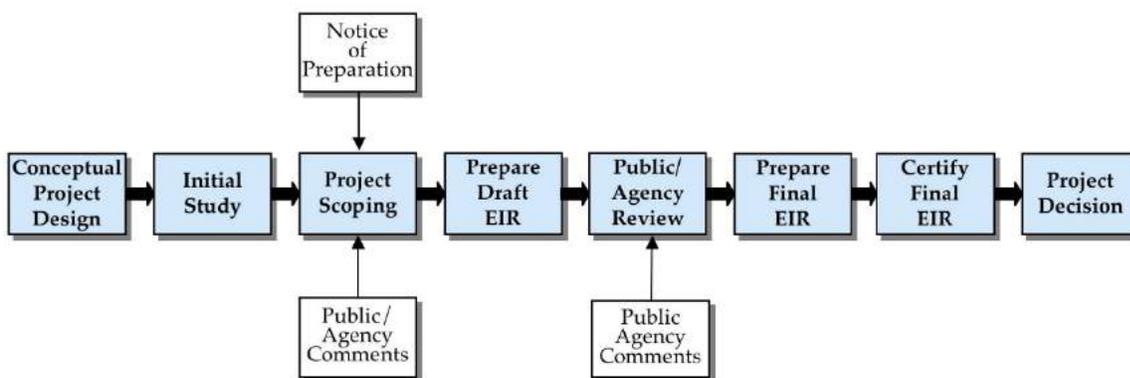
### 1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The Long Beach Community College District (LBCCD or District) has prepared the LBCCD 2041 Facilities Master Plan, in which the District plans to complete renovation, demolition, and new construction projects on the LBCCD Liberal Arts Campus (LAC, Project Site). All “projects” within the State of California are required to undergo environmental review to determine the environmental impacts associated with implementation of the project in accordance with the California Environmental Quality Act (CEQA).

CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of a proposed project and identify possible ways to avoid or minimize significant environmental effects of a project by requiring implementation of mitigation measures or recommending feasible alternatives. CEQA applies to all California governmental agencies at all levels, including local, regional, and State, as well as boards, commissions, and special districts (such as LBCCD). As such, LBCCD is required to conduct an environmental review to analyze the potential environmental effects associated with the Proposed Project. LBCCD is the lead agency for the preparation of this Draft Supplemental Environmental Impact Report (Draft SEIR) in accordance with CEQA.

This Draft SEIR is circulated to the public and affected agencies for review and comment. One of the primary objectives of CEQA is to enhance public participation in the planning process; public involvement is an essential feature of CEQA. Community members are encouraged to participate in the environmental review process, request to be notified, monitor newspapers for formal announcements, and submit substantive comments at every possible opportunity afforded by the agency. The environmental review process provides ample opportunity for the public to participate through scoping, public notice, and public review of CEQA documents. A diagram illustrating the CEQA process is shown in Figure 1-1 below. Additionally, lead agencies are required to respond to public comments in Final EIRs and consider comments from the scoping process in the preparation of the Draft EIR.

**Figure 1-1: The Environmental Review Process**



## 1.2 SCOPE OF THE SEIR

This section provides a summary of the issues addressed in this Final SEIR. This Final SEIR was prepared following input from the public, responsible agencies, and affected agencies through the EIR scoping process, which included the following:

- In accordance with the State *CEQA Guidelines* (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387), a Notice of Preparation (NOP) and Initial Study (IS) were prepared and distributed to responsible agencies, affected agencies, and other interested parties.
- The NOP was posted in the County Clerk’s office for 30 days. The NOP was submitted to the State Clearinghouse to officially solicit participation in determining the scope of the SEIR.
- Information requested and input provided during the 30-day public review period regarding the contents of the NOP/IS and the scope of the EIR were incorporated in this Draft SEIR.

The content of the Final SEIR was established based on the findings of the IS and public and agency input. Under the *CEQA Guidelines*, the analysis in the Draft SEIR is focused on issues determined in the IS to be potentially significant, whereas issues found in the IS to have less than significant impacts (with or without mitigation) or no impact do not require further evaluation. Therefore, based on the analysis contained in the IS, the following issue areas were determined to have less than significant impacts or no impacts with respect to implementation of the Proposed Project and would not require further evaluation in the Draft SEIR:

- Agricultural and Forestry Resources
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

This Draft SEIR analyzes the following environmental issues:

- Aesthetics (lighting and glare)
- Air Quality
- Noise
- Transportation and Traffic

Mitigation measures to reduce impacts to a less-than-significant level are proposed whenever feasible. In addition to the environmental issues identified above, this Final SEIR also includes all of the sections required by the *CEQA Guidelines*. (Table 1-1 contains a list of sections required under *CEQA Guidelines*, along with reference to the chapter where these items can be found.)

**Table 1-1: Required EIR Contents**

Section Title	Location
Table of Contents (Section 15122)	Table of Contents
Summary (Section 15123)	Executive Summary
Introduction (Section 15122)	Chapter 1
Project Description (Section 15124) and Environmental Setting (Section 15125)	Chapter 2
Consideration and Discussion of Environmental Impacts (Section 15126)	Chapter 3.4-3.8
Unavoidable Significant Environmental Impacts (Section 15126.2)	Chapter 5
Mitigation Measures (Section 15126.4)	Chapter 3.4-3.8
Cumulative impacts (Section 15130)	Chapter 3.4-3.8
Alternatives to the Proposed Project (Section 15126.6)	Chapter 4
Growth-Inducing Impacts (Section 15126.2)	Chapter 5
Effects Found Not to Be Significant (Section 15128)	Chapter 5
Organizations and Persons Consulted (Section 15129)	Chapter 6 and 7
List of Preparers	Chapter 7

### 1.3 FINAL SEIR ORGANIZATION

The Final SEIR is organized into the following chapters so the reader can easily obtain information about the Proposed Project and related environmental issues:

- Executive Summary – Presents a summary of the Proposed Project and alternatives, potential impacts and mitigation measures, and impact conclusions regarding growth inducement and cumulative impacts.
- Chapter 1: Introduction – Describes the purpose and use of the Final SEIR, provides a brief overview of the Proposed Project, and outlines the organization of the Final SEIR.
- Chapter 2: Project Description and Environmental Setting – Describes the project location, project details, baseline environmental setting and existing physical conditions, and the LBCCD’s overall objectives for the Proposed Project.
- Chapter 3: Environmental Analysis – Describes the existing conditions, or setting, before project implementation; methods and assumptions used in impact analysis; thresholds of significance; impacts that would result from the Proposed Project; and applicable mitigation measures that would eliminate or reduce significant impacts for each environmental issue.
- Chapter 4: Alternatives Analysis – Evaluates the environmental effects of project alternatives, including the No-Project Alternative and Environmentally Superior Project Alternative.

- Chapter 5: Other CEQA Considerations – Includes a discussion of issues required by CEQA that are not covered in other chapters. This includes unavoidable adverse impacts, impacts found not to be significant, irreversible environmental changes, and growth-inducing impacts.
- Chapter 6: Final SEIR Introduction – Outlines the environmental review process that occurred for the supplemental EIR.
- Chapter 7: Public Review Process – Identifies the public review periods and notices that were posted, as well as where documents were made available for review.
- Chapter 8: Response to Comments – Provides responses to comments that were received on the Draft SEIR.
- Chapter 9: Changes to the Draft SEIR – Identifies where revisions and clarifications were made to the Draft SEIR in ~~strikeout~~ and *bold italics*.
- Chapter 10: Mitigation Monitoring and Reporting Plan – Outlines the mitigation measures proposed for the Project and who is responsible for implementing them.
- Chapter 11: Acronyms/Abbreviations – Presents a list of the acronyms and abbreviations.
- Chapter 12: References – Identifies the documents and individuals consulted in preparing the Final SEIR.
- Chapter 13: Report Preparation – Lists the individuals involved in preparing the Final SEIR and organizations and persons consulted.

Appendices – Present data supporting the analysis or contents of this Final SEIR. The Appendices include the following:

- APPENDIX A Notice of Preparation, Initial Study, and Comments
- APPENDIX B Air Quality Analysis Data
- APPENDIX C Noise Analysis Data
- APPENDIX D Traffic Report
- APPENDIX E 2041 Facilities Master Plan

## CHAPTER 2.0 – PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING

### 2.1 PROJECT BACKGROUND

The LBCCD, founded in 1927, is one of the largest of the 114 California community college districts. The District comprises two campuses: the Pacific Coast Campus (PCC) located at 1305 East Pacific Coast Highway, and the Liberal Arts Campus (LAC) located at 4901 East Carson Street, the subject of this Supplemental EIR. Together, the campuses currently serve a student population of more than 24,000.

The District's goal as part of the California Community College system is to offer academic and vocational education to students at the lower college division level. In addition, the District's goal is to advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement. Long Beach City College is committed to providing equitable student learning and achievement, academic excellence, and workforce development by delivering high quality educational programs and support services to their diverse communities.

The objective of the 2041 Facilities Master Plan is to provide plans to implement proposed necessary construction, renovation, and general capital improvements at the campus in order to meet the District's goals and to support the District's Strategic Plan. The improvements are intended to create and improve building space to support the LBCCD Strategic Plan and Student Learning Outcomes in all areas.

#### 2.1.1 Location

The LBCC LAC is located at 4901 East Carson Street in the City of Long Beach (City), California. The City of Long Beach is in the southwestern portion of Los Angeles County, adjacent to the northern border of Orange County. The LAC is bounded by Harvey Way on the north, Clark Avenue on the east, Skylinks Golf Course on the south, and Faculty Avenue on the west. Figure 2-1 illustrates the City in its regional and local contexts. Figure 2-2 depicts the site on the United States (U.S.) Geological Survey (USGS) Long Beach 7.5-minute quadrangle topographic map.

The Proposed Project Site is approximately 3.0 miles west of the Interstate 605 San Gabriel River Freeway, 3.0 miles east of Interstate 710 (Long Beach Freeway), 1.5 miles north of Interstate 405 (San Diego Freeway), and less than 0.5 mile east of Lakewood Boulevard, State Highway 19. In addition, the Proposed Project Site is located approximately one-third mile northeast of the Long Beach Municipal Airport.

#### 2.1.2 Adjacent Land Uses

The Proposed Project Site is located along Carson Street between Bellflower and Lakewood Boulevards in the City of Long Beach, California. The campus is within the City of Long Beach General Plan Land Use District No. 10 – Institutions/Schools and is zoned Institutional (I).

As shown in Figure 2-3, existing land uses surrounding the LAC are single-family residences to the north, single-family residences and parkland to the east; parkland, Long Beach Fire Department Station No. 19 and the Skylinks Golf Course to the south; and large aerospace industrial, automotive, and storage facilities to the west.

Figure 2-1: Regional and Local Settings

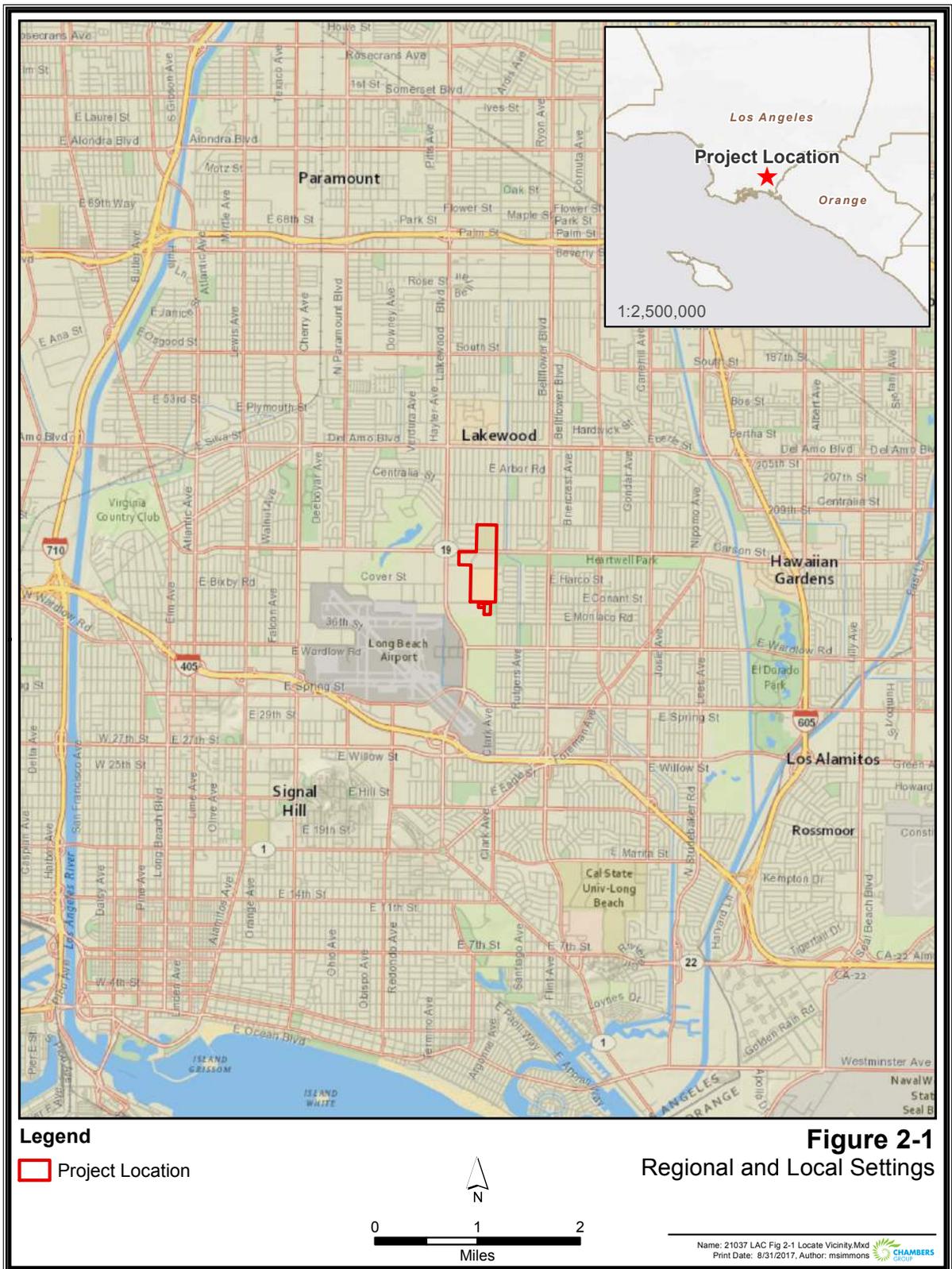


Figure 2-2: USGS Topographic Map

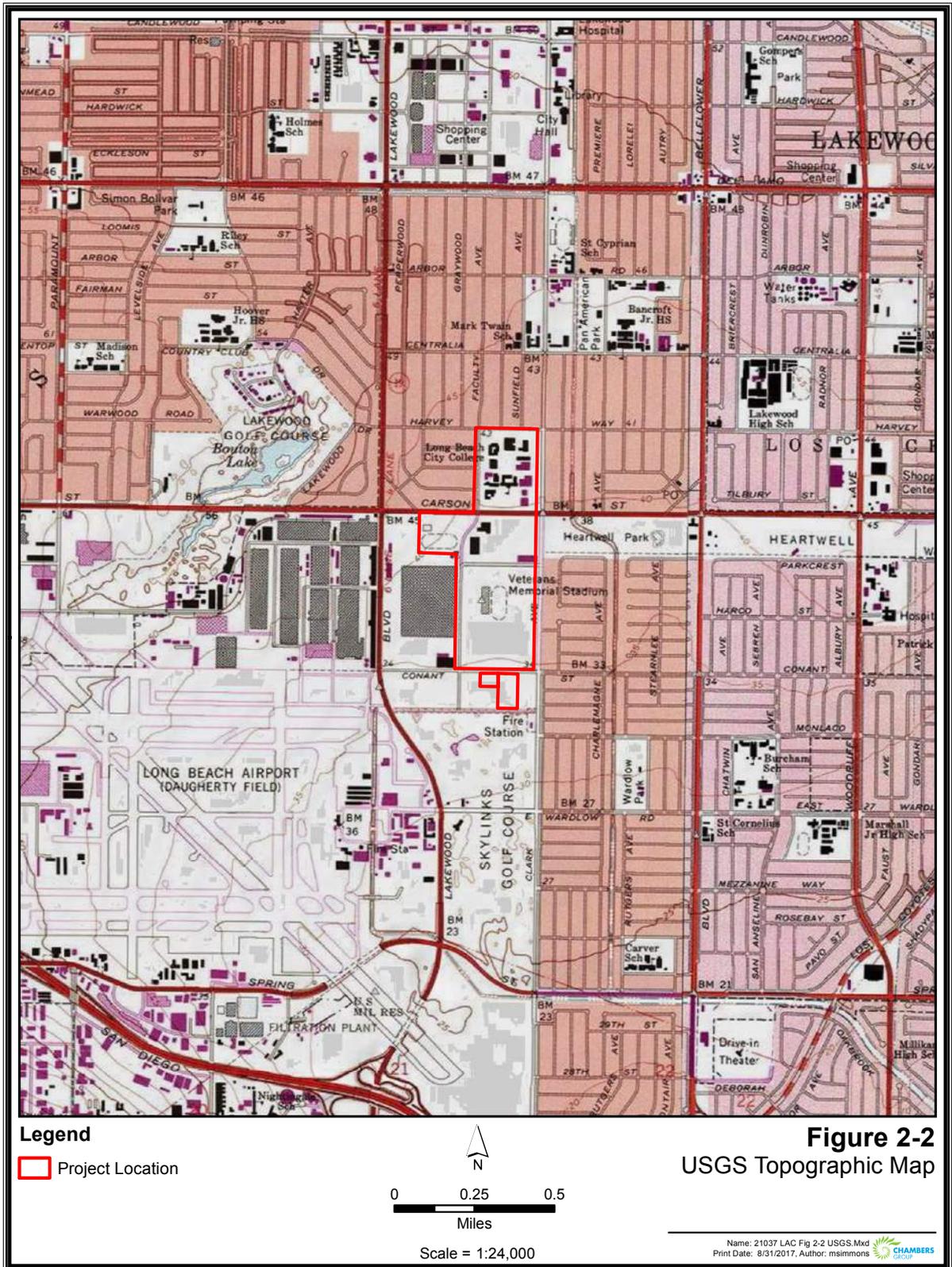


Figure 2-3: Existing Campus and Adjacent Land



**LAC Land Uses**

The approximately 112-acre LAC site is improved with 33 buildings constructed between 1935 and 2017 that contain approximately 1,285,337 square feet of gross area. The LAC is transected by Carson Street and is organized into three general areas: the North Campus, which contains administrative and classroom buildings; the Central Campus, which contains administrative buildings, classroom buildings, and physical education facilities; and the South Campus, which includes the Veterans Memorial Stadium complex, facilities buildings, and information technology/bond management team offices. The LAC also includes ancillary structures such as athletic fields, landscaped areas, parking lots, and pedestrian walkways. Table 2-1 provides a building inventory including age of construction, use, and square footage.

**Table 2-1: LAC Existing Building Inventory**

Building Letter	Building Name	Gross Square Footage	Year Built	Last Addition
A	ADMINISTRATION	33,967	1940	2013
B	TECHNICAL	44,357	1971	
C	NURSING HEALTH-TECHNOLOGY	23,250	1969	2016
D	SCIENCE BUILDING	81,132	1973	2000
E	COLLEGE CENTER	50,276	1968	1991
F	FAMILY- CONSUMER STUDIES	15,387	1952	1974
G	MUSIC	20,530	1952	1993
H	THEATER ARTS BLDG	7,262	1980	
I	CAMPUS BOOKSTORE	8,544	1992	2012
J	AUDITORIUM	37,878	1956	
K	ART	29,479	1952	1995
L	LIBRARY LEARNING CENTER	79,053	1958	2009
M	BUSINESS-SOCIAL SCIENCE-FOREIGN LANGUAGE	36,476	1935	1975
N	ENGLISH–JOURNALISM–LANGUAGE ARTS	12,292	1935	1975
O1	INSTRUCTIONAL & INFORMATIONAL TECHNOLOGY SERVICES	26,560	2001	2009
O2	COLLEGE ADVANCEMENT AND ECONOMIC DEVELOPMENT	51,302	2001	2009
P	LANGUAGE ARTS	16,016	1935	1984
PS	PARKING STRUCTURE	295,485	2011	
Q	GYMNASIUM WOMEN	30,270	1952	
R	GYMNASIUM MEN	78,024	1952	1963
S	VETERANS' STADIUM	57,694	1950	1991

**Table 2-1: LAC Existing Building Inventory**

Building Letter	Building Name	Gross Square Footage	Year Built	Last Addition
	STADIUM PRESS BOX	1,920	1949	
T	ACADEMIC SERVICES	108,312	2009	
TS	TENNIS STORAGE	200	1960	
	FACILITIES STORAGE	988	1980	
RR	ATHLETIC FIELD HOUSE	1,656	1960	
TW	TW MODULAR	960	2007	
U	GROUNDS SHOP	4,800	1975	
V	MATH-TECHNOLOGY-CULINARY ARTS	73,650	2015	
X	CAMPUS SAFETY/CENTRAL PLANT	9,000	2009	
XT	PHYSICAL EDUCATION OFFICE	2,160	1989	
Y	MAINTENANCE SHOP	7,000	1989	
Z	MAINTENANCE/WAREHOUSE	39,457	2005	

Source: FUSION database 2017

### **2.1.3 LBCC and LAC History**

Long Beach City College, formerly known as Long Beach Junior College (LBJC), celebrated its 90th Anniversary in 2017. LBJC opened at Woodrow Wilson High School in September 1927. LBJC was the second two-year college established in the metropolitan area of Los Angeles. LBJC served students not only from Long Beach, but also from as far away as Redondo Beach to the north and Laguna Beach to the south. In 1933 LBJC was offered 25 acres on Carson Street for a new campus by the Montana Land Company. The area was then known as “Lakewood Village.” The Montana Land Company donated additional land parcels in 1934. The new campus with a total of 29.844 acres, now referred to as the Liberal Arts Campus, opened in 1935 with Mission architecture with tile roofs, white exterior walls, and patios. Bean, alfalfa, and carrot fields surrounded the new campus on Carson Street. The first mailing address of the Carson campus was Route No. 1, Clark and Carson Streets. The enrollment in 1935-36 was 1,603 students with 51 full-time faculty members. By 1942-43, the middle of the war years (1941-45), enrollment had climbed to 2,966 students with 56 full-time faculty members. In the postwar expansion period from 1945-52, the college acquired an additional 38.379 acres south of Carson Street.

In response to the postwar increase in enrollment, LBJC also acquired the former Hamilton Junior High School site at Pacific Coast Highway and Alamitos Avenue in 1949 for the newly formed Business and Technology Division of Long Beach City College. This site is now the Pacific Coast Campus of LBCC.

### **2.1.4 2004 Master Plan Elements**

A general obligation bond election (Measure “E”/Proposition 39) was approved in March 2002 for both general and specific improvements at the LBCC at both the PCC and the LAC. The District was undertaking an extensive improvement and building program at the two campuses to meet increasing enrollment needs, evolving demands for post-secondary educational institutions, and the needs of the

Long Beach community. Additionally, the District will be using capital improvement funds from the State of California for renovation and new construction projects.

In 2004, the District prepared the LBCC LAC Master Plan to reflect LBCC’s projected instructional and programmatic needs for the Liberal Arts Campus. The 2004 LBCC LAC Master Plan outlined capital improvements through 2015 and proposed construction of new buildings, renovation, modernization and additions to existing facilities, demolition of existing buildings, and landscaping enhancements. Improvements are intended to update existing technological and program services to meet increasing needs of students and faculty.

The District prepared a Program Environmental Impact Report (PEIR) to address implementation of the 2004 LBCC LAC Master Plan. The Board of Trustees of the LBCCD certified the Final PEIR for the 2004 LBCC LAC Master Plan, State Clearinghouse No. 2004051060, on January 25, 2005. Since the adoption of the PEIR, two Addendums to the PEIR were completed to address updates to the original project description. The September 2008 Addendum addressed a revision to the location of the parking structure proposed in the PEIR to one of three alternative locations on the LAC campus. This Addendum was approved by the Board of Trustees of the LBCCD on September 23, 2008. The May 2009 Addendum addressed a revision to the renovation/retrofit of Buildings M and N proposed in the PEIR to their replacement with an approximately 49,000-gross-square-foot building. This Addendum was approved by the Board of Trustees of the LBCCD on May 19, 2009. In addition, an Initial Study/Negative Declaration (IS/ND) was prepared for the acquisition of the property and buildings at 4900 and 4910 East Conant Street for use by LBCCD as classroom and administrative space. This IS/ND was approved by the Board of Trustees of the LBCCD on November 11, 2008. Table 2-2 presents LAC Master Plan Improvements previously approved under the PEIR, its Addendums, and/or the Final IS/MND for the Conant Street Project.

**Table 2-2: 2004 LAC Master Plan Improvements**

<b>Project</b>	<b>Function/Support</b>	<b>Scope /GSF</b>
Building A Administration/ Student Services	Reuse for Student Services	Retrofit/Renovation – 37,058
Building B Tech Studies	Technical Education Program	Retrofit/Renovation – 44,536
Building C Nursing/Health Technology	Nursing/Health Technology	Retrofit/Renovation – 22,260
Building E College Center	Campus-wide Student Support	Retrofit/Renovation – 50,276
Building F	Replace existing Building F with new Multi-Disciplinary building	New Construction – 15,968
Building G Music Building	Music	Retrofit/Renovation – 27,591
Building H Theater Arts	Drama, Dance	Retrofit/Renovation – 7,262
Building J Auditorium	Performing Arts	Retrofit/Renovation – 28,214

**Table 2-2: 2004 LAC Master Plan Improvements**

<b>Project</b>	<b>Function/Support</b>	<b>Scope /GSF</b>
Library/ Learning Resource Center (LRC)	Library/ LRC Functions	Renovation – 73,521 Expansion – 13,384
Liberal Arts Building	Replace existing Buildings M & N with building. Language Arts, Speech Communication, CIS, Construction Education	New Construction - 67,948
Trailers O	Speech relocated to SQC	Demolition/Removal – 5,760
Building O1	ACIT, Bond Management Team, Warehouse	Retrofit/Renovation – 40,892
Building O2	LBCCD Foundation Organization, Economic Resource Development	Retrofit/Renovation – 70,972
Building P Language Arts	Language Arts	Retrofit/Renovation - 16,016
Building Q Secondary Gymnasium	Physical Education	Retrofit/Renovation – 30,270
Building R Primary Gymnasium	Physical Education	Retrofit/Renovation – 77,916
Trailers T	Relocate uses to Liberal Arts Building	Remove – 6,240
Building U	Relocate Grounds Shop to Building Z	Remove – 4,800
Building V	Relocate Human Resources/Purchasing to SQC	Remove – 8,160
Trailers W	Relocate uses to SQC	Remove – 23,167
Building X Campus Police Facility	Campus Safety/ Central Plant/ Physical Education	New Construction – 18,859
Building Y	Relocate Maintenance Shop to Building Z	Remove – 7,000
Building Z Maintenance/ Warehouse	Maintenance Operations/ Warehousing	New Construction - 36,606
South Quad Complex (SQC)	Business, Social Sciences, Child Development, Administration	New Construction – 121,722
Child Development Center	Child Development	New Construction - 15,102
Outdoor Performance Area	Outdoor performance area and seating in Building 3 courtyard	New Construction - 31,250
Pedestrian Promenade	Renovate, widen, and extend Pedestrian Promenade	Retrofit/Renovation - 5,970 linear ft.
Entry Plazas	Pedestrian entry plazas between parking lots and buildings	New Construction - 90,000
Swim Pool Facility	Infrastructure Support	Retrofit/Upgrades – 12,080
Sculpture Garden	Sculpture Garden between Buildings J and K	New Construction 13,727
Landscape Improvements	Campus-wide	Retrofit/Renovation
Circulation Improvements	Campus-wide including closure of Faculty Drive at Carson Street	Retrofit/Renovation
Infrastructure Improvements	Campus-wide	Retrofit/Renovation

**Table 2-2: 2004 LAC Master Plan Improvements**

Project	Function/Support	Scope /GSF
Office/ Classroom Buildings (3 Buildings)	Office/ Classroom/ Lab	New Construction – 271,791
Parking Structure	Replace Surface Parking N with 4-story Parking Structure	New Construction – 175,000

(Note: These square footage numbers have been changed from assignable square footage (ASF) to gross square footage (GSF) for purposes of analysis within this Supplemental EIR. Only conversions from ASF to GSF or clarifications in numbers were made here.)

**2.1.5 2020 Unified Master Plan Elements**

The Measure E Bond Program approved in March 2002 provided a jump-start to the District’s capital facilities program; however, it was never intended to address all building/facilities needs for the campus. The age of the existing facilities coupled with the need to meet both current and future growth of the academic program of instruction required improvements that go beyond Measure E.

The District addressed this need in 2006 when it requisitioned the Long Beach Community College Resource and Facilities Plan. The Resource and Facilities Plan identified the growth rates vis-à-vis the academic programs of instruction at LAC and PCC. Enrollment and the production of weekly student contact hours (WSCH) were used as the basis for quantifying growth as well as for determining the space needs of the future. The year 2020 was selected as the “target year.” Based on the growth rates, the vectors for enrollment and WSCH were determined to intersect with the physical capacity of the two campuses at or about year 2020. Physical capacity was defined by the District as achieving student enrollment of 27,500 and 238,000 WSCH at LAC. At this point in time, the campus will have effectively reached its physical limit for available land area, for parking, and the ability to effectively serve students.

While the 2020 target year is somewhat relative, the enrollment and WSCH benchmarks are not. Enrollment and WSCH projections may be reached prior to the year 2020 or after that point in time. However, when 238,000 WSCH are reached at LAC, the campus will effectively be operating at maximum capacity.

While looking to 2020, LAC's priorities focused on addressing the key areas for academic growth. These included the Life Sciences (Biology), Mathematics, Language Arts, Performing Arts, and Child Development. From the Student Services side of the equation, a comprehensive student center for educational support was a high priority. LAC also addressed its Physical Education facilities. With the exception of cosmetic treatment, these facilities had remained unchanged since the 1940s and 1950s. Additionally, the physical capacity of the outdoor laboratories was understated for the enrollment served, the expansion of the athletics program, and the impacts of the Title IX program. LAC also focused on the renovation of its buildings north of Carson Street. While the structural integrity of the selected buildings to be retained was in good condition, the teaching/learning environments and the technology support offered are outdated for today's methods of instructional delivery. Additionally, these buildings have utility and mechanical systems that have been extended well beyond their intended life span. The provision of parking that is close and usable to the primary academic areas will also be a high priority at LAC.

The District prepared a Supplemental Environmental Impact Report (SEIR) to address implementation of the 2020 Unified Master Plan. The Board of Trustees of the LBCCD certified the Final SEIR for the 2020

Unified Master Plan, State Clearinghouse No. 2004051060, on December 8, 2009. Table 2-3 presents the updates to the Master Plan through eliminated projects. Table 2-4 and Figure 2-4 present LAC Master Plan Improvements previously approved under the SEIR.

**Table 2-3: Eliminated Master Plan Improvements**

Project	Function/Support	Scope (GSF)
Building E	Campus-wide Student Support	Retrofit/Renovation - 50,276
Building F	Replace existing Building F with new building	New Construction – 15,968
Building G Music Building	Music	Retrofit/Renovation – 27,591
Building H Theater Arts	Drama, Dance	Retrofit/Renovation – 7,262
Office/ Classroom Building	Office/ Classroom/ Lab	New Construction – 271,791
Parking Structure	Replace Surface Parking N with 4-story Parking Structure	New Construction – 175,000

(Note: These square footage numbers have been changed from assignable square footage (ASF) to gross square footage (GSF) for purposes of analysis within this Supplemental EIR. Only conversions from ASF to GSF or clarifications in numbers were made here.)

**Table 2-4: 2020 LAC Master Plan Improvements**

Project	Function/Support	Scope (GSF)
Building A	Reuse for Student Services	New Construction – 9,279
Building D Science Building	Renovate bottom floor for Biology	Retrofit/Renovation - 9,326
Building E College Center	Campus-wide Student Support	Renovation – 50,276
Building F	Multi-Disciplinary	Retrofit/Renovation – 15,968
Building I Foundations Building	Conversion to Bookstore. LBCC Foundations Organization moves to Building O2	Retrofit/Renovation – 4,994 Expansion – 4,994
Building K Art Building	Fine Arts	Retrofit/Renovation – 29,479
Building S Stadium Building	Health/ Safety & Fitness/ Wellness	Retrofit/Renovation – 57,455 Expansion – 57,455
Building 1 Math Tech	Math, Culinary Arts, Health, Instructional Support	New Construction - 83,202
Building 3 Performing Arts	Replace existing Buildings G & H. Drama, Dance, Music	New Construction – 46,671 Remove – 27,792
Parking Structure 7	Replace Surface Parking J with 950 space Parking Structure	New Construction - 310,000
MPOE Building	Telecommunications	New Construction – 450
Outdoor Physical Education Labs	Physical Education	Relocation/Reconstruction
Olympic-sized Pool	Physical Education	New Construction – 37,062
Signage Improvements	Campus-wide improvement of directional signage; new	New Construction/Renovation

**Table 2-4: 2020 LAC Master Plan Improvements**

Project	Function/Support	Scope (GSF)
	electronic informational sign adjacent to Carson Street	
Circulation Improvements	Closure of Faculty Avenue at Lew Davis Drive	Reconstruction
Photovoltaic Projects	LAC buildings will be studied for possible Solar Photovoltaic systems.	New Construction

(Note: These square footage numbers have been changed from assignable square footage (ASF) to gross square footage GSF for purposes of analysis within this Supplemental EIR. Only conversions from ASF to GSF or clarifications in numbers were made here.)

The following descriptions identify specific improvements recommended for the 2020 Unified Master Plan LAC Improvements that were not part of the 2004 LAC Master Plan.

- The bottom floor of Building D will be renovated for Biology.
- Building E, the College Center (Student Center), will be renovated.
- Building F will be renovated for Multi-Disciplinary uses.
- Building I will be renovated and expanded by 4,994 square feet for use as the new Bookstore. The LBCCD Foundation organization will be moved to Building O2, located south of Conant Street.
- Building K, the Fine Arts Building, will be renovated.
- A new Math Tech Building (Building 1) will be built on the northwest portion of the existing surface Parking Lot J. This building will support Math, Culinary Arts, Health, and Instructional Support. It would consist of two stories and approximately 83,202 square feet of space.
- A new Performing Arts Building (Building 3) will replace the existing Buildings G and H, consisting of approximately 46,671 square feet.
- The proposed Parking Structure 7 will be built on a portion of surface Parking Lot J, immediately southeast of the proposed Building 1. It would consist of five stories and approximately 310,000 square feet. It would contain approximately 900 parking spaces with a maximum 950 parking spaces. The proposed structure would be accessed from two locations off Clark Street and one location off Lew Davis Street. These entrances would provide vehicle queuing space for eight cars entering and exiting the garage to reduce congestion on Clark Avenue. A solar photovoltaic system will be installed on the roof of the proposed parking structure to supply electricity to the structure. The Proposed Project will also include secure bicycle parking at ground level for 100 bicycles.
- A new telecommunications building will be built adjacent to Building P. This 400-square-foot building will consolidate the telecommunications network, most of which is currently housed in Building N. This will include one or two parking spaces for electronic vehicles.

- An Olympic-sized swimming pool will be constructed between Buildings R and Q. It will include grandstands to accommodate 3,000 people.
- Improvements to directional signage will take place campus-wide. This will include monument, directional, and an electronic information sign adjacent to the north side of Carson Street, midway between Faculty Avenue and Clark Avenue. The electronic information sign will be approximately 22 feet tall and 16 feet wide.
- Faculty Drive between Lew Davis Street and Carson Street will be closed, and the closed area will be converted to an athletic field with a possible drop-off zone at Faculty Drive and Lew Davis Street.
- LAC buildings will be studied for possible solar photovoltaic systems. The first system will be placed on the roof of the new Parking Structure 7, and others may be added if appropriate rooftops are identified. Potential candidates include the new Math Tech Building (Building 1) and the new Performing Arts Building (Building 3).

Figure 2-4: 2020 Unified Master Plan

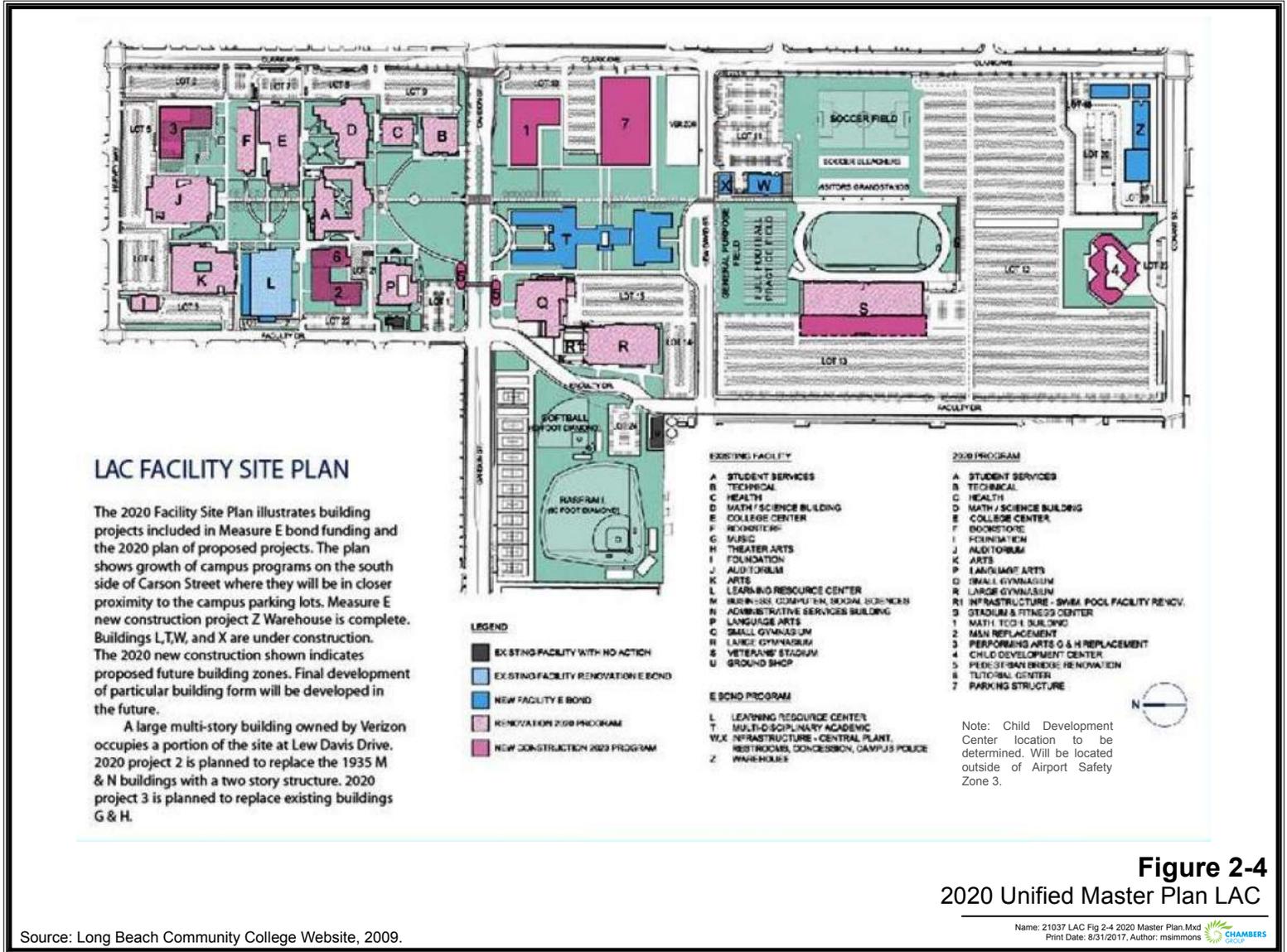


Figure 2-4  
 2020 Unified Master Plan LAC

Source: Long Beach Community College Website, 2009.

Name: 21037 LAC Fig 2-4 2020 Master Plan.Mxd  
 Print Date: 8/31/2017, Author: msimmons  
 CHAMBERS GROUP

## **2.2 PROJECT DESCRIPTION**

### **2.2.1 2041 Facilities Master Plan LAC Improvements**

Since the 2020 Unified Master Plan, the District prepared the LBCCD 2041 Facilities Master Plan to provide an understanding of the projects envisioned to be constructed in the near future. This Facilities Master Plan breaks down the type and size of each project for both campuses, as well as estimating the probable cost of each project. The 2041 Facilities Master Plan allowed the District to re-evaluate available funds and expanded details of priority projects that the District is working to complete. Enrollment and the production of weekly student contact hours (WSCH) were used as the basis for quantifying growth as well as for determining the space needs of the future. Physical capacity was defined in the 2041 Facilities Master Plan as achieving student enrollment of 28,100 and 349,844 WSCH at LAC. At this point in time, the campus will have effectively reached its physical limit for available land area, for parking, and the ability to effectively serve students.

Looking to the year of 2041, LAC's priorities will lie with addressing the key areas for academic growth. These include the Life Sciences (Biology), Mathematics, Language Arts, Performing Arts, and Construction Trade facilities. From the Student Services side of the equation, an economic and workforce development center is a high priority. LAC will also need to address its Physical Education facilities including a new Aquatic Center, renovation of the stadium and gymnasiums, and outdoor kinesiology labs. Lastly, the provision of parking that is close and usable to the primary academic areas will also be a high priority at LAC.

## **2.3 PROJECT DESIGN FEATURES**

### **2.3.1 Master Plan Updates**

The 2041 Facilities Master Plan provides updates to the 2020 Unified Master Plan and provides updated construction dates and budgets for the facilities projects. The projects incorporate the space and building needs identified to the year 2041. Figure 2-5 presents the LBCC 2041 Facilities Master Plan LAC improvements. Table 2-5 presents the updates to the Master Plan through new project details determined since the previous SEIR.

Figure 2-5: LBCC 2041 Facilities Master Plan LAC Improvements



Figure 2-5  
2041 Facilities Master Plan LAC

**Table 2-5: Updated 2041 Facilities Master Plan Improvements**

Project	Scope/Usage	Square Feet (GSF)/ Features
Building B Classroom	Renovate Building with electrical upgrades, data and communication, larger lecture halls, better lighting, and additional lab functions	Renovation – 44,357
Building D Science Building	Renovate Science Building for improved classroom learning environments, new fiber data backbone, and enhanced signage	Renovation – 16,000
Building E College Center	Campus-wide Student Support	Demolition – 50,276 New Construction – 50,276
Building F Family/Consumer Education	Outdated building that will be replaced with new landscape and hardscape	Demolition – 15,968
Building G Performing Arts	New Performing Arts Building replaces the existing and outmoded Music Building.	Demolition – 27,792 New Construction – 42,857
Building J Auditorium	Complete renovation of Auditorium building with expansion of the building as well as general refurbishment and updates	Renovation – 37,878 Expansion – 14,119
Building K Art Building	Fine Arts building needs complete renovation and modernization	Retrofit/Renovation – 29,479
Building M Liberal Arts	Replace Buildings M and N with new building for classrooms, laboratory facilities, and technology center	Demolition – 48,768 New Construction – 81,970
Building O1 IITS/Warehouse	Structural enhancements to obtain certification by Division of State Architect	Renovation – 26,560
Building O2 Economic & Workforce Development/Foundation	Structural enhancements to obtain certification by Division of State Architect	Renovation – 51,302
Building P Language Arts	Upgrade building's functional systems with upgraded power systems, HVAC, plumbing, storm drainage, fire alarm, and telecommunication systems	Renovation – 16,016
Building Q Secondary Gymnasium	Renovation and upgrading to address issues related to instructional space, training needs, seismic upgrades, AHA compliance, and other upgrades	Renovation – 30,270
Building R Primary Gymnasium	Comprehensive structural and seismic renovation, ADA access, HVAC upgrades	Renovation – 78,024 New Construction – 10,000
Building S Stadium	Renovation including ADA access, structural upgrades	Renovation – 57,455
Building W Aquatic Center	Construction of a new 50 meter by 25-yard pool, with a new support building	New Construction – 54,660 including pool area
Outdoor Kinesiology Labs	New construction of physical education outdoor playing fields to include softball relocation, two soccer fields, six tennis courts, five sand	New Construction Supporting Facilities – 15,014

**Table 2-5: Updated 2041 Facilities Master Plan Improvements**

Project	Scope/Usage	Square Feet (GSF)/ Features
	volleyball courts, and supporting facilities, restrooms, field house, storage.	
Walkways and Wayfinding	New and revised walkways, installation of uniform signage program	New construction/renovation

ADA: Americans with Disabilities Act; HVAC: heating, ventilation, and air conditioning

The LBCCD 2041 Facilities Master Plan LAC improvements would result in an estimated increase over the 2020 Unified Master Plan of 15,877 square feet of renovation, 69,564 square feet removed, and an estimated increase of 34,913 square feet of new construction.

The following descriptions identify specific improvements recommended for the 2041 Facilities Master Plan LAC Improvements that were not part of the 2020 Unified Master Plan or the original 2004 LAC Master Plan Program EIR.

- Building D, Science Building, renovation will be expanded from 9,326 square feet to 16,000 square feet
- Building E, the Existing College Center, will be demolished (50,276 gross square feet); and a new building will be constructed with approximately the same gross square footage of 50,276. The new construction will be in lieu of major renovation of Building E that was previously shown on the 2020 Master Plan.
- Building F will be demolished and replaced with new landscape and hardscape.
- The Performing Arts Building (Building G, previously shown as Building 3 on 2020 Master Plan) will replace the existing Buildings G and H, consisting of approximately 42,857 square feet instead of 46,671 square feet, which was shown on the 2020 Master Plan.
- Building O1 will undergo structural enhancements to the 26,560-square-foot building to obtain Division of State Architect certification.
- Building O2 will undergo structural enhancements to the 51,302-square-foot building to obtain Division of State Architect certification.
- Building R, Primary Gymnasium, is anticipated to have an expansion with new construction to the south of 10,000 gross square feet to accommodate program needs.
- In order to meet programmatic needs a new 10,000-gross-square-foot structure may be built between Buildings Q and R to accommodate swing space and Title IX needs while the buildings are being renovated.
- Building W, Aquatics Center, will be 31,692 GSF approximately 21,871 gross square footage of building structure will be allocated to the pool facility including restrooms, locker rooms, team rooms, classrooms, and offices and will have a capacity of approximately 800 spectator seats. (An

Olympic-sized swimming pool with grandstands to accommodate a 3,000-spectator-seat capacity was shown in the 2020 Master Plan.)

- Outdoor Kinesiology Labs, Renovation and New construction of physical education outdoor playing fields to include softball relocation, two soccer fields, six tennis courts, and five sand volleyball courts, and supporting facilities, such as restrooms, field house, and storage facilities. Approximately 9,821 square feet of Building W will be allocated to The Outdoor Kinesiology Labs as supporting facilities. Also, the existing field house for Softball Field will be removed and replaced with approximately 5,193 square feet of new supporting facilities. (Outdoor Physical Education Labs, including softball field relocation, were previously shown in the 2020 Master Plan.)
  
- In order for the District to meet the state requirements and Executive Order B-18-12 for Zero-Net-Energy, the LAC campus will be studied for possible solar photovoltaic systems at various locations. Parking Lot M, as well as other parking lots, may have two-thirds of the lot covered with photovoltaic carport structures to meet the statewide requirements for energy production and achieve a Zero Net Energy District.

### 2.3.2 Master Plan Schedule

The 2041 Facilities Master Plan provides an approximate schedule sequence that identifies timelines for construction and project scope. Table 2-5 summarizes the 2041 Facilities Master Plan Improvements building renovation, expansion, and/or new construction. To determine the projects and sequencing in the 2041 Facilities Master Plan, the Board of Trustees of the Long Beach Community College District evaluated the District’s urgent and critical capital needs, including school and student safety issues; enrollment trends; class size reduction; overcrowding; energy efficiency and computer technology; seismic safety requirements; and aging, outdated, or deteriorating school buildings in developing the scope of projects to be funded. In developing the scope of projects, the District has prioritized the key health and safety and sustainability needs so that the most critical school site needs are addressed.

The timing of certain projects will be dependent on the completion of other projects and will ultimately occur over different phases. For example, improvements to utilities will occur across the LAC; however, these improvements will be completed in portions following building construction or renovation. Other projects like this include the Photovoltaic Projects, Landscape Master Plan Projects, and Wayfinding/Walkway Projects.

The Master Plan projects called out the projects identified in the 2041 Facilities Master Plan and the time frame that is most likely to occur during these time periods. However, the time frame in which a project is planned may change if the priority characteristics change for an individual project due to program needs or state funding allocation. The general building scope by phase is shown in Table 2-6 for the 2041 Facilities Master Plan Updates.

**Table 2-6: 2041 Facilities Master Plan Construction by Planned Construction Years**

Construction Start Year	Projects Planned
Ongoing	Building P – Language Arts (Renovation), Building D – Science (Renovation), Building J – Auditorium, Minor Campus Improvements,

**Table 2-6: 2041 Facilities Master Plan Construction by Planned Construction Years**

Construction Start Year	Projects Planned
	Energy/Water Conservation Projects, Infrastructure Projects, Campus Landscaping
To be Determined	Walkways & Wayfinding, Surface Parking Improvement
2019/2020	Kinesiology Lab & Aquatic Center (Renovation), Building M – Liberal Arts Classroom Building
2022/2023	Building E – College Center (new construction)
2024/2025	Building O2 – Economic & Workforce Development/Foundation (Renovation)
2027/2028	Building G – Performing Arts (New Construction)
2030/2031	Building K – Art (Renovation)
2031/2032	Building R – Primary Gymnasium (Renovation)
2034/2035	Building B – Classroom (Renovation), Building Q – Secondary Gymnasium (Renovation)
2037/2038	Building F – Family/Consumer Education (Demolition), Building S – Stadium (Renovation), Building O1 – IITS/Warehouse

### 2.3.3 Design Guidelines

The Design Guidelines of the 2004 LAC Master Plan are incorporated by reference into the 2041 Facilities Master Plan. The Design Guidelines include “Guiding Principles” that govern the design of the proposed campus improvements, including the buildings, parking area, planting scheme, pavement and courtyards, traffic/circulation, signage, lighting, site furnishings, and screening (LBCCD 2004). The Long Beach City College Liberal Arts Campus has outstanding examples of Spanish Colonial Revival architecture that serve as the physical and emotional core of its campus. Additions to the campus should build on this strength and extend the underlying values of this historical core. According to the Design Guidelines:

- The design objectives and guidelines used for the improvement of the architectural character at the Liberal Arts Campus are based on new construction, rehabilitation of existing buildings, and demolition or removal of obsolete or deteriorated facilities.
- New facility design should contribute to a unified campus appearance with a consistent architectural character. All future construction shall employ a single, unifying architectural vernacular based on a contemporary interpretation of the original Spanish Colonial Revival Style.
- All new buildings shall be sited in groups or clusters to define interior public courtyards protected from public ways and parking areas. All new construction shall be sited to relate to existing or future buildings so that strongly defined edges to outdoor rooms are formed. These outdoor rooms should be simple and comprehensible in shape, and pedestrian connections between the clustered buildings should be carefully articulated.

### 2.3.4 Best Management Practices

All Best Management Practices (BMPs) from the PEIR will be incorporated by reference in this NOP/IS, as well as the proposed SEIR for the 2041 Facilities Master Plan.

## 2.4 STATEMENT OF PROJECT GOALS AND OBJECTIVES

The District's goal as part of the California Community College system is to offer academic and vocational education to students at the lower college division level. In addition, the District's goal is to advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement.

The objective of the 2041 Facilities Master Plan is to provide plans to implement proposed necessary construction, renovation, and general capital improvements at the campus in order to meet the District's goals. The improvements are intended to update and improve existing technological and program services in order to meet the increasing needs of students and faculty. Specific objectives that have been identified by the LBCCD include the following:

- Provide equitable student learning and achievement, academic excellence, and workforce development by delivering high quality educational programs and support services to diverse communities
- Provide clear pathways to students to achieve their career and educational goals through providing adequate facilities to support the ability for students to earn an associate degree or certificate solely within each campus, without having to take classes at both campuses
- Provide upgraded athletic facilities that support physical activity on campus and provide opportunities and for organized recreational use for the community
- Provide renovated classrooms and educational facilities in order to properly serve current and future students on campus
- Ensure a sustainable and state-of-the-art facilities infrastructure

## 2.5 REQUIRED PERMITS AND APPROVALS

As required by the *CEQA Guidelines*, this section provides, to the extent the information is known to LBCCD, the CEQA Lead Agency, a list of the agencies that are expected to use this SEIR in their decision-making, and a list of permits and other approvals required to implement the project.

### 2.5.1 Lead Agency Approval

The Final SEIR must be certified by the LBCCD Board of Trustees (Board) as to its adequacy in complying with the requirements of CEQA before taking any action on the Proposed Project. The Board will consider the information contained in the SEIR in making a decision to approve or deny the 2041 Facilities Master Plan LAC Improvements that were not previously addressed under the 2020 Unified Master Plan SEIR or the 2004 PEIR (Proposed Project). The analysis in the SEIR is intended to provide environmental review for the whole of the Proposed Project, including the project planning, site acquisition, demolition of existing structures, site clearance, site excavation, and construction of school buildings and appurtenant facilities in accordance with CEQA requirements.

## **2.5.2      Required Permits and Approvals**

A Responsible Agency is a public agency, other than the lead agency, that has discretionary approval power over a project. The Responsible Agencies, and their corresponding approvals, for this project include the following:

### **California Department of General Services**

- Division of the State Architect (Approval of architectural plans)

### **City of Long Beach**

- Department of Public Works (Approval of on- and offsite drainage infrastructure and roadway improvements)

## **2.5.3      Reviewing Agencies**

Reviewing Agencies include those agencies that do not have discretionary powers, but that may review the SEIR for adequacy and accuracy. Potential Reviewing Agencies include the following:

### **State Agencies**

- Department of Transportation (Caltrans)
- Environmental Protection Agency (Cal EPA)
- Department of Fish and Wildlife (CDFW)

### **Regional Agencies**

- Southern California Association of Governments (SCAG)
- South Coast Air Quality Management District (SCAQMD)

## **2.6            CUMULATIVE SCENARIO**

Cumulative impacts refer to the combined effect of Proposed Project impacts with the impacts of other past, present, and reasonably foreseeable future projects. Both CEQA and the *CEQA Guidelines* require that cumulative impacts be analyzed in an EIR. As set forth in the *CEQA Guidelines*, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, “a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable.”

According to the *CEQA Guidelines*:

“‘Cumulative impacts’ refer to two or more individual effects which, when considered together, are considerable and which compound or increase other environmental impacts.

- The individual effects may be changes resulting from a single project or a number of separate projects.

- The cumulative impact from several projects is the change in the environment which results from the incremental impact of the Proposed Project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”.

In addition, as stated in the *CEQA Guidelines*, it should be noted that:

“The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the Proposed Project’s incremental effects are cumulatively considerable.”

Cumulative impact discussions for each issue area are provided in the technical analyses contained within Section 4.0 – Environmental Impacts.

As previously stated, and as set forth in the *CEQA Guidelines*, related projects consist of “closely related, past, present, and reasonable foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area.” An area of influence, defined by an approximate 1.5-mile radius from the Proposed Project site, was utilized in order to capture specific locations of other approved and pending projects. Based on coordination with the City of Long Beach, an area projects list was created. Responses that were received from the City were incorporated in the analysis. A majority of the study area is located in a highly urbanized area. The ability to develop new major projects within or adjacent to the study area is limited. Twenty-six pending/approved developments were identified by the City of Lakewood and City of Long Beach within the study area:

- Staybridge Suites Hotel – 2640 North Lakewood Boulevard
- Retail/Carwash Project – 4201 East Willow Street
- New Coffee Shop – 5861-5865 Spring Street
- Northgate Market Expansion – 4700 Cherry Avenue
- Law Office of Jeff Lung – 4909 Lakewood Boulevard #302
- Sparx Logistics – 4909 Lakewood Boulevard #303
- Thrivent – 4909 Lakewood Boulevard #305
- Image 2000 – 4909 Lakewood Boulevard #540
- McDonalds – 4910 Lakewood Boulevard
- Petco – 5215 Lakewood Boulevard
- Kinecta Federal Credit Union – 4055 Hardwick Street
- Raising Cane’s Chicken Fingers – 4624 Candlewood Street

- Dickey's Barbeque Pit – 5125 Candlewood Street
- Outback Steakhouse – 5305 Clark Avenue
- Journey's – 500 Lakewood Center Mall #20
- Miniso – 500 Lakewood Center Mall #39
- Play Live Nation – 500 Lakewood Center Mall #127
- Box Lunch – 500 Lakewood Center Mall #307
- Burgerim – 4131 Woodruff Avenue
- Morey's Music Store – 4834 Woodruff Avenue
- Piggie's Adobo Taco Bar – 2700 Carson Street
- Carwood Carwash – 2729-35 Carson Street
- Stone Yoga Studio – 3219 Carson Street
- Bubble Express Car Wash – 2711 Del Amo Boulevard
- Starbucks – 5906 Del Amo Boulevard
- Laborers Local 1309 – 3971 Pixie Avenue

## CHAPTER 3.0 – ENVIRONMENTAL ANALYSIS

### 3.1 ENVIRONMENTAL ISSUES ADDRESSED

An Initial Study (IS) was prepared for the Proposed Project in February 2018 (see Appendix A). Based on the findings documented in the IS, LBCCD determined that a Supplemental Environmental Impact Report (SEIR) would be required for the Proposed Project. Environmental issue areas are listed in Table 3-1 by the level of significance of their impacts, as determined by the IS process. Those issue areas identified in the IS as having potentially significant impacts are further analyzed in this SEIR.

**Table 3-1: Summary of Environmental Impacts Identified in the Initial Study**

No Impact	Less Than Significant Impact	Potentially Significant Impact
Agricultural & Forestry Resources	Biological Resources	Aesthetics (Lighting & Glare)
Land Use & Planning	Cultural Resources (with mitigation)	Air Quality
Mineral Resources	Energy	Greenhouse Gas Emissions
Population & Housing	Geology & Soils (with mitigation)	Noise
Tribal Cultural Resources	Hazards & Hazardous Materials (with mitigation)	Transportation
	Hydrology & Water Quality	
	Public Services	
	Recreation	
	Utilities & Services Systems	

LBCCD used the IS, as well as agency and public input received during the public comment period (February 8, 2018, to March 9, 2018), to determine the final scope for this SEIR. The four issue areas and their corresponding subchapter numbers discussed in their SEIR include:

- 3.4 – Aesthetics (Lighting & Glare)
- 3.5 - Air Quality
- 3.6 – Greenhouse Gas Emissions
- 3.7 – Noise
- 3.8 – Transportation

Chapters 3.4 through 3.8 provide a detailed discussion of the environmental setting, applicable project design features, impacts associated with the Proposed Project, cumulative impacts, and mitigation measures designed to reduce significant impacts. Where impacts cannot be reduced to a less than significant level, LBCCD shall consider adopting a Statement of Overriding Considerations (SOC).

### 3.2 ORGANIZATION OF ENVIRONMENTAL ANALYSIS

To assist the reader in comparing information about the various environmental issues, each chapter contains the following information.

- Introduction
- Existing Environmental Setting
- Applicable Regulations
- Impacts and Mitigation
  - Methodology
  - Criteria for Determining Significance
  - Project Impacts
    - Mitigation Measures
    - Residual Impacts
  - Cumulative Impacts
    - Mitigation Measures
    - Residual Impacts

### 3.3 TERMINOLOGY USED IN THIS ANALYSIS

For each CEQA checklist question listed in the SEIR, a determination of the level of significance of the impact is provided. Impacts are categorized in the following categories:

- **No Impact.** A designation of *no impact* is given when no adverse changes in the environment are expected.
- **Less Than Significant.** A *less than significant impact* would cause no substantial adverse change in the environment.
- **Less Than Significant with Mitigation.** A *potentially significant (but mitigable) impact* would have a substantial adverse impact on the environment but could be reduced to a less-than-significant level with incorporation of mitigation measure(s).
- **Potentially Significant.** A *significant and unavoidable impact* would cause a substantial adverse effect on the environment and no feasible mitigation measures would be available to reduce the impact to a less-than-significant level.

### 3.4 AESTHETICS

#### 3.4.1 Existing Environmental Setting

The visual character of the LAC and surrounding area is that of a fully developed urban corridor, developed with a mix of institutional, commercial, residential, and park uses. Implementation of the Proposed Project would involve redevelopment, renovation, demolition, and new construction on the LAC. The 2041 Facilities Master Plan LAC Improvements incorporate the design features of the 2004 LBCC LAC Master Plan and the 2020 Unified Master Plan LAC Improvements. The LBCCD LAC Master Plan has been developed to support the Long Beach Community College District vision, mission, and values. New design will contribute to a unified campus appearance with a consistent architectural character.

LBCCD LAC is an existing source of light in an urbanized area of the City of Long Beach. Sources of illumination on the LAC include street lighting, interior building lighting, lighting in parking lots, and security lighting.

#### 3.4.2 Impacts and Mitigation

As outlined in the Initial Study (Appendix A), the Proposed Project will not have a substantial adverse impact on a scenic vista, damage scenic resources within a state scenic highway, or degrade the existing visual character of the site. The analysis below analyzes impacts from light and glare due to implementation of the 2041 Facilities Master Plan.

**Impact 3.4-1:** Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

LBCCD LAC is an existing source of light and glare in an urbanized area of the City of Long Beach. The Proposed Project would provide updated lighting on campus as well as additional sources of nighttime illumination. Lighting associated with renovated or new buildings would be similar to that of the existing surrounding buildings. Pedestrian lighting will be coordinated with other elements such as signage, security, paving materials, and street furniture. New lighting proposed in the LBCCD 2041 Facilities Master Plan for the LAC campus includes improved field lights for the two soccer fields (Outdoor Kinesiology Labs) and stadium lights at the Aquatic Center. The new lights include three field lights on each of the two soccer fields, as well as five lights at the Aquatic Center. Lighting currently exists in that portion of the campus at the existing tennis courts. The sports courts and facilities in this portion of the campus will be reconfigured with the outdoor Kinesiology Lab project; therefore, the proposed addition of lighting will occur in a portion of the campus where lighting is already present. The soccer fields and the Aquatic Center could potentially be used from 8:00 a.m. to 10:00 p.m. any day of the week, both for use of the Outdoor Kinesiology Labs and for recreational use. All lighting will be shielded and directed onto the Proposed Project Site. In addition, the more current versions of stadium lights include specialized optics that focus the light directly to the areas where it is needed, which greatly reduces light spill while also minimizing glare. Although the addition of new lighting to the campus will cause an increase in substantial light and/or glare, this increase will not adversely affect the day or nighttime view on or around the campus.

#### Mitigation Measures

No mitigation measures are necessary.

Residual Impacts

Impacts would be less than significant.

**3.4.3**      Cumulative Impacts

Compliance with the architectural design principles identified in the LBCCD 2041 Facilities Master Plan will ensure that no cumulative impacts will occur as a result of the Proposed Project.

## 3.5 AIR QUALITY

### 3.5.1 Introduction

This section provides information on ambient air quality conditions in the vicinity of the Proposed Project Site, and potential impacts to air quality as a result of the construction and operation of the Proposed Project are identified. The air quality modeling output is included in this EIR as Appendix B.

### 3.5.2 Existing Environmental Setting

Long Beach City College (LBCC) Liberal Arts Campus (LAC) (i.e., Project Site) is located at 4901 East Carson Street in Long Beach, California. The City of Long Beach is located on the Pacific Coast of Southern California in the southwest region of the Los Angeles Basin, approximately 20 miles south of Los Angeles.

The Project Site is located in the northern region of the City of Long Beach. California is divided into 15 air basins based on meteorological and geographical similarity. The Proposed Project area lies within the South Coast Air Basin (Air Basin), which exhibits a distinctive climate due to its unique terrain and geographic location. The Air Basin incorporates approximately 12,000 square miles within four counties – all of Orange County, most of Los Angeles and Riverside Counties, and the western portion of San Bernardino County. The Air Basin is a coastal plain with broad valleys and low hills and is bounded by the Pacific Ocean from the southwest and by the San Gabriel, San Bernardino, and San Jacinto Mountains from the northeast. The region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.

Air quality within the Air Basin is some of the worst in the United States. The Air Basin has the highest recorded concentrations of ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), and particulate matter. The extent and severity of the air pollution is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Air Basin.

#### **Regional Climate**

The Air Basin experiences a Mediterranean climate characterized by warm summers, mild winters, infrequent rainfall, and plentiful sunshine. The Pacific Ocean is the primary moderating influence on the climate pattern, but the coastal mountain ranges lying along the north and east sides of the Air Basin act to buffer extreme summer heat and winter cold temperatures occurring in the interior desert and plateau areas.

The Proposed Project Site lies in the southwestern portion of Los Angeles County, within the boundaries of the City of Long Beach. The normal daily maximum temperature is 83.9 degrees Fahrenheit (°F) in August, while the normal daily minimum temperature is 45.3 °F in December, according to the Western Regional Climate Center (2016). The area typically experiences warm, dry summers; and the annual average total precipitation is 12.01 inches (predominantly occurring in the winter and early spring months).

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between the periods of dominant airflow, periods of air stagnation may occur, both in the morning and evening hours. Whether such a period of stagnation occurs is one of the critical determinants of air quality conditions on any given day. Although the Air Basin has a semi-arid climate, the air near the surface is generally moist due to the presence of a shallow marine layer. With very low average wind speeds, a limited capacity exists to disperse air contaminants (e.g., smog) horizontally. The dominant daily wind pattern is an onshore 8 to 12 miles per hour (mph) daytime breeze and an offshore 3 to 5 mph nighttime breeze. The typical wind flow pattern fluctuates only with occasional wind storms, or strong northeasterly Santa Ana winds from the mountains and deserts northeast of the Air Basin. During the winter and fall months, surface high pressure systems over the Air Basin, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally have durations of a few days before predominant meteorological conditions are reestablished.

On virtually all spring and early summer days, most of the pollution produced during an individual day is moved out of the Air Basin through mountain passes or is lifted by warm vertical current produced by the heating of adjacent mountain slopes. In those seasons, the Air Basin can be “flushed” of pollutants by a transport of ocean air in the afternoon.

From late summer through the winter months, flushing is less pronounced because of lower wind speeds and earlier appearance of offshore winds. With extremely stagnant wind flows, the drainage winds may begin near the mountains by late afternoon. Remaining pollutants are trapped and begin to accumulate during the night and the following morning. A low average morning wind speed in pollution source areas is an indicator of stagnation potential and pollutant accumulation.

Vertical dispersion of air pollutants in the Air Basin is hampered by the presence of a temperature inversion in the layers of the atmosphere near the surface of the Earth. In a normal situation, temperatures decrease with altitude and air continues to rise because it remains warmer than the surrounding air. With an inversion layer, air cannot expand upward because the warmer air above traps it. However, as day progresses and the sun warms the ground, the surface layer of the air approaches a temperature equal to the temperature of the inversion layer. When these temperatures become equal, the inversion layer begins to erode at the lower edge. If enough warming takes place, the inversion layer becomes weaker and weaker and finally “breaks.” The surface air layers will then mix upward without limit. This phenomenon is frequently observed in the middle or late afternoon on hot summer days when the smog appears to clear up suddenly. Winter inversions frequently break by mid-morning, preventing contaminant build-up. The combination of low wind speeds and low level inversions produces the greatest concentration of pollutants. On high wind days, air pollutants are swept and carried in the air. On days of no inversion or on days of wind speed averaging 15 mph, concentration of pollutants is minimal, independent of season.

## **Air Pollutants of Concern**

### Criteria Air Pollutants

Federal and state laws regulate the air pollutants emitted into the ambient air by stationary and mobile sources. These regulated air pollutants are known as “criteria air pollutants” and are categorized as

primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and most fine particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>) including lead (Pb) and fugitive dust; are primary air pollutants. Of these CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are criteria pollutants. VOC and NO<sub>x</sub> are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants.

### Toxic Air Contaminants

The public's exposure to toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Act (42 United States Code [U.S.C.] Sec. 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency, acting through the California Air Resources Board (CARB), is authorized to identify a substance as a TAC if it determines the substance is an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health.

One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no "safe" level of exposure to carcinogens; that is, any exposure to a carcinogen poses some risk of causing cancer. Health statistics show that one in four people, or 250,000 in a million, will contract cancer over their lifetime from all causes, including diet, genetic factors, and lifestyle choices.

Unlike carcinogens, for most noncarcinogens it is believed that there is a threshold level of exposure to the compound below which that compound will not pose a health risk. The California Environmental Protection Agency (Cal EPA) and California Office of Environmental Health Hazard Assessment (OEHHA) have developed reference exposure levels (RELs) for noncarcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The noncancerous health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index (HI).

### Other Effects on Air Pollution

Just as humans are affected by air pollution, so too are plants and animals. Animals must breathe the same air and are subject to the same types of negative health effects. Certain plants and trees may absorb air pollutants that can stunt their development or cause premature death.

Numerous additional impacts to the human economy include lost workdays due to illness, a desire on the part of business to locate in areas with a healthy environment, and increased expenses from medical costs. Pollutants may also lower visibility and cause damage to property. Certain air pollutants are responsible for discoloring painted surfaces, eating away at stones used in buildings, dissolving the mortar that holds bricks together, and cracking tires and other items made from rubber.

### **3.5.3 Applicable Regulations**

The Proposed Project would be constructed in the City of Long Beach in Los Angeles County, within the South Coast Air Basin coastal area. The following subsections present a summary of air quality regulatory requirements for the 2041 Facilities Master Plan for the Liberal Arts Campus Improvements.

#### **Federal Ambient Air Quality Standards**

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below for which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for six primary air pollutants (called “criteria” pollutants): ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), lead (Pb), respirable particulate matter equal to or smaller than 10 microns in diameter (PM<sub>10</sub>), and fine particulate matter equal to or smaller than 2.5 microns in diameter (PM<sub>2.5</sub>). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

Areas that do not meet the NAAQS for a particular pollutant are considered to be “nonattainment areas” for that pollutant. As part of its enforcement responsibilities, the USEPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, State, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the time frame identified in the SIP. The CARB defines attainment as the category given to an area with no violations in the past three years. As indicated below in Table 3-2, the Air Basin has been designated by USEPA for the national standards as a nonattainment area for ozone (O<sub>3</sub>) and suspended particulates (PM<sub>10</sub> and PM<sub>2.5</sub>) and partial nonattainment for lead. Currently, the Air Basin is in attainment with the national ambient air quality standards for carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and nitrogen dioxide (NO<sub>2</sub>).

**Table 3-2: South Coast Air Basin Attainment Status**

Criteria Pollutant	Standard	Averaging Time	Designation	Attainment Date
CO	NAAQS	1971 1-Hour (35 ppm)	Attainment (Maintenance)	6/11/2007 (attained)
	CAAQS	1-Hour (20 ppm)	Attainment	N/A (attained)
	NAAQS	8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (attained)
	CAAQS	8-Hour (9 ppm)	Attainment	N/A (attained)
Pb	NAAQS	2008 3-Months Rolling (0.15 µg/m <sup>3</sup> )	Nonattainment (Partial) (Attainment determination requested)	12/31/15
	CAAQS	30-Day Average (1.5 µg/m <sup>3</sup> )	Attainment	N/A (attained)
NO <sub>2</sub>	NAAQS	2010 1-Hour (100 ppb)	Unclassifiable/Attainment	N/A (attained)
	CAAQS	1-Hour (180 ppb)	Attainment	N/A (attained)
	NAAQS	1971 Annual (53 ppb)	Attainment (Maintenance)	9/22/1998 (attained)
	CAAQS	Annual (30 ppb)	Attainment	N/A (attained)
O <sub>3</sub>	NAAQS	1979 1-Hour (0.12 ppm)	Nonattainment (Extreme)	2/26/2023 (revised deadline)
	CAAQS	1-Hour (0.09 ppm)	Nonattainment	N/A
	NAAQS	2015 8-Hour (0.070 ppm)	Pending – Expect Nonattainment (Extreme)	Pending (beyond 2032)
	NAAQS	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)	7/20/2032
	NAAQS	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024
	CAAQS	8-Hour (0.070 ppm)	Nonattainment	N/A
PM <sub>10</sub>	NAAQS	1987 24-Hour (150 µg/m <sup>3</sup> )	Attainment (Maintenance)	7/26/2013 (attained)
	CAAQS	24-Hour (50 µg/m <sup>3</sup> )	Nonattainment	N/A
	CAAQS	Annual (20 µg/m <sup>3</sup> )	Nonattainment	N/A
PM <sub>2.5</sub>	NAAQS	2006 24-Hour (35 µg/m <sup>3</sup> )	Nonattainment (Serious)	12/31/2019
	NAAQS	2012 Annual (12 µg/m <sup>3</sup> )	Nonattainment (Moderate)	12/31/2021
	NAAQS	1997 Annual (12 µg/m <sup>3</sup> )	Attainment (final determination pending)	4/5/2015 (attained 2013)
	CAAQS	Annual (12 µg/m <sup>3</sup> )	Nonattainment	N/A
SO <sub>2</sub>	NAAQS	2010 1-Hour (75 ppb)	Designation Pending (expect Unclassifiable/Attainment)	N/A (attained)
	CAAQS	1-Hour (0.25 ppm)	Attainment	N/A (attained)
	NAAQS	1971 24-Hour (0.14 ppm)	Unclassifiable/Attainment	3/19/1979 (attained)
	CAAQS	24-Hour (0.04 ppm)	Attainment	N/A (attained)
	NAAQS	1971 Annual (0.03 ppm)	Unclassifiable/Attainment	3/19/1979 (attained)

Source: SCAQMD, 2016. µg/m<sup>3</sup> = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion.

### State Regulatory Setting

The CARB is the agency responsible for regulation of air quality in the State of California. The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988 and also has

established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. As indicated above in Table 3-2, the Air Basin is currently classified as a nonattainment area under the CAAQS for O<sub>3</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>.

The CARB is the State regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The CARB is responsible for the development, adoption, and enforcement of the State's motor vehicle emissions program as well as the adoption of the CAAQS. The CARB also reviews operations and programs of the local air districts and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS.

### Local Regulatory Setting

The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations.

The South Coast Air Quality Management District (SCAQMD) is the local agency responsible for the administration and enforcement of air quality regulations for the Air Basin. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-county South Coast Air Basin, the Mojave Desert Air Basin, and the Riverside County portions of the Salton Sea Air Basin. The SCAQMD develops and administers local regulations for stationary air pollutant sources within the Air Basin and also develops plans and programs to meet attainment requirements for the NAAQS and the CAAQS. In addition, the SCAQMD, along with the CARB, maintains and operates ambient air quality monitoring stations at numerous locations throughout the Air Basin that monitor the ambient air quality.

The SCAQMD is responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the Basin. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMPs). The Final 2016 Air Quality Management Plan (2016 AQMP) was adopted by the SCAQMD Board on March 3, 2016, and was adopted by CARB on March 23, 2017, for inclusion into the California State Implementation Plan (SIP). The 2016 AQMP was prepared in order to meet the following standards:

- 8-hour ozone (75 parts per billion [ppb]) by 2032
- Annual PM<sub>2.5</sub> (12 micrograms per meters cubed [ $\mu\text{g}/\text{m}^3$ ]) by 2021-2025
- 8-hour ozone (80 ppb) by 2024 (updated from the 2007 and 2012 AQMPs)
- 1-hour ozone (120 ppb) by 2023 (updated from the 2012 AQMP)
- 24-hour PM<sub>2.5</sub> (35  $\mu\text{g}/\text{m}^3$ ) by 2019 (updated from the 2012 AQMP)

In addition to meeting the above standards, the 2016 AQMP also includes revisions to the attainment demonstrations for the 1997 8-hour ozone NAAQS and the 1979 1-hour ozone NAAQS. The prior 2012 AQMP was prepared in order to demonstrate attainment with the 24-hour PM<sub>2.5</sub> standard by 2014 through adoption of all feasible measures. The prior 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023 through implementation of future improvements in control techniques and technologies. These "black box" emissions reductions represent 65 percent of the remaining NO<sub>x</sub> emission reductions needed by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NO<sub>x</sub> control measures have been provided in the 2012 AQMP even though the primary purpose was to show compliance with 24-hour PM<sub>2.5</sub> emissions standards.

The 2016 AQMP provides a new approach that focuses on available, proven, and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities to promote reductions in greenhouse gas (GHG) emissions and TAC emissions as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings, and industrial facilities to cleaner technologies in a manner that benefits not only air quality but also local businesses and the regional economy.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the Air Basin. Instead, this is controlled through local jurisdictions in accordance with the CEQA. In order to assist local jurisdictions with air quality compliance issues, the CEQA Air Quality Handbook (SCAQMD CEQA Handbook), prepared by SCAQMD (1993), with the most current updates found at <http://www.aqmd.gov/ceqa/hdbk.html>, was developed in accordance with the projections and programs detailed in the AQMPs. The purpose of the SCAQMD CEQA Handbook is to assist lead agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the Air Basin, and adverse impacts will be minimized.

The following lists the SCAQMD rules that are applicable to but not limited to the Proposed Project:

#### Rule 402 - Nuisance

Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property. Compliance with Rule 402 will reduce local air quality and odor impacts to nearby sensitive receptors.

#### Rule 403- Fugitive Dust

Rule 403 governs emissions of fugitive dust during construction activities and requires that no person shall cause or allow the emissions of fugitive dust such that dust remains visible in the atmosphere beyond the property line or the dust emission exceeds 20-percent opacity if the dust is from the operation of a motorized vehicle. Compliance with this rule is achieved through application of standard Best Available Control Measures, which include but are not limited to the measures below. Compliance with these rules would reduce local air quality impacts to nearby sensitive receptors.

- Utilize either a pad of washed gravel 50 feet long, 100 feet of paved surface, a wheel shaker, or a wheel washing device to remove material from vehicle tires and undercarriages before leaving project site.

- Do not allow any track-out of material to extend more than 25 feet onto a public roadway and remove all track-out at the end of each workday.
- Water all exposed areas on active sites at least three times per day and pre-water all areas prior to clearing and soil-moving activities.
- Apply nontoxic chemical stabilizers according to manufacturer specifications to all construction areas that will remain inactive for 10 days or longer.
- Pre-water all material to be exported prior to loading, and either cover all loads or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114.
- Replant all disturbed areas as soon as practical.
- Suspend all grading activities when wind speeds (including wind gusts) exceed 25 mph.
- Restrict traffic speeds on all unpaved roads to 15 mph or less.

#### Rules 1108 and 1108.1 – Cutback and Emulsified Asphalt

Rules 1108 and 1108.1 govern the sale, use, and manufacturing of asphalt and limit the VOC content in asphalt. This rule regulates the VOC contents of asphalt used during construction as well as any ongoing maintenance during operations. Therefore, all asphalt used during construction and operation of the Proposed Project must comply with SCAQMD Rules 1108 and 1108.1.

#### Rule 1113 – Architectural Coatings

Rule 1113 governs the sale, use, and manufacturing of architectural coatings and limits the VOC content in sealers, coatings, paints, and solvents. This rule regulates the VOC contents of paints available during construction. Therefore, all paints and solvents used during construction and operation of the Proposed Project must comply with SCAQMD Rule 1113.

#### Rule 1143 – Paint Thinners

Rule 1143 governs the sale, use, and manufacturing of paint thinners and multi-purpose solvents that are used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations. This rule regulates the VOC content of solvents used during construction. Solvents used during construction and operation of the Proposed Project must comply with SCAQMD Rule 1143.

#### Rule 2202 – On-Road Motor Vehicle Mitigation Options

Rule 2202 requires employers who employ 250 or more employees on a full or part-time basis at a worksite, to reduce vehicle emissions generated from employee commutes. Rule 2202 was developed by SCAQMD in order to comply with federal and state Clean Air Act requirements from Health & Safety Code Section 40458 and Section 182(d)(1)(B) of the federal Clean Air Act. LAC has been required to pay an annual fee of \$30,000 for the last several years to SCAQMD per Rule 2202 requirements in order to offset emissions created by LAC employee commutes.

### Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development, and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted April 2016 and the 2015 Federal Transportation Improvement Program (FTIP), adopted October 2013, which addresses regional development and growth forecasts. Although the RTP/SCS and FTIP are primarily planning documents for future transportation projects, a key component of these plans is to integrate land use planning with transportation planning that promotes higher density infill development in close proximity to existing transit service. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The RTP/SCS, FTIP, and AQMP are based on projections originating within the City and County General Plans.

### **Existing Ambient Air Quality Monitoring Data**

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the Air Basin. Estimates of the existing emissions in the Air Basin, provided in the 2012 AQMP, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NO<sub>x</sub> emissions, and 40 percent of directly emitted PM<sub>2.5</sub>, with another 10 percent of PM<sub>2.5</sub> from road dust. The 2016 AQMP found that since the 2012 AQMP projections were made, stationary source VOC emissions have decreased by approximately 12 percent; but mobile VOC emissions have increased by 5 percent. The percentage of NO<sub>x</sub> emissions remained unchanged between the 2012 and 2016 projections.

SCAQMD has divided the Air Basin into 38 air-monitoring areas. The Project Site is located in Air Monitoring Area 4, which covers the South Coastal Los Angeles County monitoring region. Since not all air monitoring stations measure all of the tracked pollutants, the data from the following two monitoring stations, listed in the order of proximity to the Project Site, have been used: Long Beach Monitoring Station (Long Beach Station) and Compton Monitoring Station (Compton Station).

The Long Beach Station is located approximately 5 miles west of the Project Site at 2425 Webster Street, Long Beach; and the Compton Station is located approximately 6 miles northwest of the Project Site at 700 North Bullis Road, Compton. Table 3-3 presents the monitored pollutant levels from these Monitoring Stations. Ozone, PM<sub>10</sub>, and NO<sub>2</sub> were measured at the Long Beach Station; and PM<sub>2.5</sub> was measured at the Compton Station. CO measurements have not been provided, since CO is currently in attainment in the Air Basin, and monitoring of CO within the Air Basin ended on March 31, 2013. It should also be noted that due to the air monitoring stations' distances from the Project Site, recorded air pollution levels at the air monitoring stations reflect, with varying degrees of accuracy, local air quality conditions at the Project Site.

**Table 3-3: Ambient Air Quality Monitoring Summary**

Pollutant (Standard)	Year		
	2014	2015	2016
<b>Ozone</b>			
Maximum 1-Hour Concentration (ppm)	0.087	0.087	0.079
Days > CAAQS (0.09 ppm)	0	0	0
Maximum 8-Hour Concentration (ppm)	0.072	0.067	0.059
Days > NAAQS (0.070 ppm)	<b>1</b>	0	0
Days > CAAQS (0.070 ppm)	<b>1</b>	0	0
<b>Nitrogen Dioxide</b>			
Maximum 1-Hour Concentration (ppb)	135.9	101.8	75.6
Days > NAAQS (100 ppb)	<b>2</b>	<b>1</b>	0
<b>Respirable Particulate Matter (PM10)</b>			
Maximum 24-Hour California Measurement ( $\mu\text{g}/\text{m}^3$ )	84.0	80.0	75.0
Days > NAAQS (150 $\mu\text{g}/\text{m}^3$ )	0	0	0
Days > CAAQS (50 $\mu\text{g}/\text{m}^3$ )	3	6	ND
Annual Arithmetic Mean (AAM) ( $\mu\text{g}/\text{m}^3$ )	29.6	31.5	31.9
Annual > NAAQS (50 $\mu\text{g}/\text{m}^3$ )	No	No	No
Annual > CAAQS (20 $\mu\text{g}/\text{m}^3$ )	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
<b>Fine Particulate Matter (PM2.5)</b>			
Maximum 24-Hour National Measurement ( $\mu\text{g}/\text{m}^3$ )	35.8	41.3	36.3
Days > NAAQS (35 $\mu\text{g}/\text{m}^3$ )	<b>1</b>	<b>3</b>	<b>1</b>
Annual Arithmetic Mean (AAM) ( $\mu\text{g}/\text{m}^3$ )	ND	11.7	11.0
Annual > NAAQS and CAAQS (12 $\mu\text{g}/\text{m}^3$ )	ND	No	No

Notes: Exceedances are listed in **bold**. CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; ND = no data available;  $\mu\text{g}/\text{m}^3$  = micrograms per meters cubed.

### Toxic Air Contaminant Levels in the Air Basin

In order to determine the Air Basin-wide risks associated with major airborne carcinogens, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES) studies. According to the SCAQMD's MATES-IV study, the Project Site has an estimated cancer risk of 973 per million persons chance of cancer. In comparison, the average cancer risk for the Air Basin is 991 per million persons, which is based on the use of age-sensitivity factors detailed in the OEHHA Guidelines (OEHHA 2015).

In order to provide a perspective of risk, it is often estimated that the incidence in cancer over a lifetime for the United States' population ranges between 1 in 3 to 4 and 1 in 3, or a risk of about 300,000 per million persons. The MATES-III study referenced a Harvard Report on Cancer Prevention, which estimated that of cancers associated with known risk factors, about 30 percent were related to tobacco, about 30 percent were related to diet and obesity, and about 2 percent were associated with environmental pollution related exposures that include hazardous air pollutants.

### Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. As adopted by the SCAQMD in their CEQA Air Quality Handbook (Chapter 4),

a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Hazards and hazardous materials regulators typically define sensitive receptors as schools (Preschool through 12th Grade), hospitals, resident care facilities, residences or day-care centers, or other facilities that may house individuals with health conditions. Residential areas are considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive since children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution because exercise places a high demand on respiratory functions, which can be impaired by air pollution.

The nearest sensitive receptors are single-family homes located on the north side of Carson Street, approximately 130 feet north of the proposed recreational swimming pool, which would be located on the south side of Carson Street. Homes are also nearby the LAC campus on the west side of Faculty Avenue, north side of Harvey Way, and east side of Clark Avenue.

### **3.5.4      Impacts and Mitigation**

**Impact 3.5-1:** Conflict with or obstruct implementation of the applicable air quality plan.

The Proposed Project may conflict with or obstruct implementation of the SCAQMD Air Quality Management Plan (AQMP). The following section discusses the Proposed Project's consistency with the SCAQMD AQMP.

#### **SCAQMD Air Quality Management Plan**

CEQA requires a discussion of any inconsistencies between a proposed project and applicable General Plans (GPs) and regional plans (*CEQA Guidelines* Section 15125). The regional plan that applies to the Proposed Project includes the SCAQMD AQMP. Therefore, this section discusses any potential inconsistencies of the Proposed Project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the Proposed Project would interfere with the region's ability to comply with federal and State air quality standards. If the decision makers determine that the Proposed Project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

- (1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP
- (2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase

Both of these criteria are evaluated in the following sections.

*Criterion 1 – Increase in the Frequency or Severity of Violations?*

The Project Site is located in the South Coast Air Basin, which is currently designated by the USEPA for federal standards as a nonattainment area for ozone and PM<sub>2.5</sub> and by CARB for the State standards as a nonattainment area for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. Based on the air quality modeling and analysis contained in this report, short-term regional construction air emissions would not result in significant impacts based on SCAQMD regional thresholds of significance or local thresholds of significance discussed in Impact 3.5-2. The ongoing operation of the Proposed Project would generate air pollutant emissions that are inconsequential on a regional basis and would not result in significant impacts based on SCAQMD thresholds of significance. The analysis for long-term local air quality impacts showed that local pollutant concentrations would not be projected to exceed the air quality standards. Therefore, a less than significant long-term impact would occur, and no mitigation would be required.

Therefore, based on the information provided above, the Proposed Project would be consistent with the first criterion.

*Criterion 2 – Exceed Assumptions in the AQMP?*

Consistency with the AQMP assumptions is determined by performing an analysis of the Proposed Project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the Proposed Project are based on the same forecasts as the AQMP. The AQMP is developed through use of the planning forecasts provided in the RTP/SCS and FTIP. The RTP/SCS is a major planning document for the regional transportation and land use network within southern California. The RTP/SCS is a long-range plan that is required by federal and State requirements placed on SCAG and is updated every four years. The FTIP provides long-range planning for future transportation improvement projects that are constructed with State and/or federal funds within southern California. Local governments are required to use these plans as the basis of their plans for the purpose of consistency with applicable regional plans under CEQA.

Development of the proposed 2041 Facilities Master Plan would result in the demolition of 109,156 square feet of existing structures, renovation of 387,341 square feet of existing buildings, and construction of 246,018 square feet of new building space. Project construction would employ dust control measures (i.e., watering twice daily, application of soil stabilizers, daily removal of track-out onto public roads, etc.) and would utilize only CARB-certified off-road equipment and stationary equipment and would therefore be in compliance with strategies in the AQMP (SCAQMD 2017) for attaining and maintaining the air quality standards. Construction of the Proposed Project would therefore not conflict or obstruct the implementation of the AQMP or applicable portions of the SIP.

According to the Traffic Impact Analysis (Linscott Law & Greenspan 2018), implementation of the proposed 2041 Facilities Master Plan is anticipated to result in the addition of 7,458 students to the LAC campus.

The project applicant has committed to a net zero building energy use campus by the buildout year 2041. To address the SCAQMD program for reducing toxic and smog-forming air pollutants from mobile sources, the Proposed Project would provide 36 electric vehicle charging stations that would be placed strategically throughout the campus. In addition, the LAC campus promotes the use of public transportation; and bus

stops are currently located on Clark Avenue, East Carson Street, and East Lew Davis Street, which are all in the immediate vicinity of the LAC campus. Operation of the Proposed Project would therefore be in compliance with strategies in the AQMP (SCAQMD 2017) for attaining and maintaining the air quality standards. Operation of the Proposed Project would therefore not conflict or obstruct the implementation of the AQMP or applicable portions of the SIP.

Therefore, based on the information provided above, the Proposed Project would be consistent with the second criterion.

#### Mitigation Measures

No mitigation measures are necessary.

#### Residual Impacts

Impacts would be less than significant.

**Impact 3.5-2:** Violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation?

Implementation of the proposed 2041 Facilities Master Plan may violate an air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation. The following section calculates the potential air emissions associated with the construction and operations of the Proposed Project and compares the emissions to the following SCAQMD standards for regional air quality and local air quality.

#### **Regional Air Quality**

Many air quality impacts that derive from dispersed mobile sources, which are the dominate pollution generators in the Air Basin, often occur hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. The quantitative SCAQMD regional emission thresholds are shown in Table 3-4.

**Table 3-4: Regional Air Quality Significance Thresholds**

Criteria Pollutants Mass Daily Thresholds (pounds/day)		
Pollutant	Construction	Operation
NO <sub>x</sub>	100	55
VOC	75	55
PM <sub>10</sub>	150	150
PM <sub>2.5</sub>	55	55

Criteria Pollutants Mass Daily Thresholds (pounds/day)		
Sox	150	150
CO	550	550
Lead	3	3

Source: SCAQMD, 2015.

## Local Air Quality

Project-related air emissions may have the potential to exceed the State and federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. In order to assess local air quality impacts, the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. SCAQMD has also provided *Final Localized Significance Threshold Methodology* (LST Methodology), July 2008, which details the methodology to analyze local air emission impacts. The LST Methodology found that the primary emissions of concern are NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>.

The LST Methodology provides Look-Up Tables with different thresholds based on the location and size of the project site and distance to the nearest sensitive receptors. LAC is located in Source-Receptor Area 4, the South Coastal Los Angeles County area. Table 3-5 presents the LSTs for the South Coastal Los Angeles County area.

**Table 3-5: Localized Significance Thresholds South Coastal LA County**

Size of Source	Distance to Receptors (meters)				
	25	50	100	200	500
<b>Allowable NOx Emissions (pounds/day)</b>					
1 acre	46	47	55	72	113
2 acres	66	64	70	85	121
5 acres	99	94	101	112	143
<b>Allowable CO Emissions (pounds/day)</b>					
1 acre	574	789	1,180	2,296	7,558
2 acres	827	1,158	1,611	2,869	8,253
5 acres	1,503	1,982	2,613	4,184	10,198
<b>Allowable PM<sub>10</sub> Construction Emissions (pounds/day)</b>					
1 acre	4	13	29	61	158
2 acres	7	21	37	70	167
5 acres	14	42	58	92	191
<b>Allowable PM<sub>10</sub> Operational Emissions (pounds/day)</b>					
1 acre	1	3	7	15	38
2 acres	2	5	9	17	40
5 acres	4	10	14	22	46
<b>Allowable PM<sub>2.5</sub> Construction Emissions (pounds/day)</b>					
1 acre	3	5	10	26	93
2 acres	5	7	13	30	101
5 acres	8	10	18	39	120
<b>Allowable PM<sub>2.5</sub> Operational Emissions (pounds/day)</b>					

**Table 3-5: Localized Significance Thresholds South Coastal LA County**

Size of Source	Distance to Receptors (meters)				
	1	2	3	7	23
1 acre	1	2	3	7	23
2 acres	1	2	4	8	25
5 acres	1	3	5	10	29

Source: SCAQMD Mass Rate Look-Up Tables, 2009.

In the event that emissions exceed these thresholds, modeling would be required to demonstrate that the Project's total air quality impacts result in ground-level concentrations that are below the State and federal Ambient Air Quality Standards, including appropriate background levels (shown in Table 3-3). In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the State and federal government as TACs or hazardous air pollutants (HAPs). With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (Preschool through 12th Grade), hospitals, resident care facilities, residences or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the potential to directly impact a sensitive receptor located within 1 mile and results in a health risk greater than ten in one million would be deemed to have a potentially significant impact. Sensitive receptors in the area include the single-family residences located approximately 130 feet around the Project Site.

#### Construction Impacts

The California Emissions Estimator Model (CalEEMod) has been utilized to calculate the construction-related regional emissions from the Proposed Project, and the input parameters utilized in this analysis model printouts are provided in Appendix B. The worst-case summer or winter daily construction-related criteria pollutant emissions from the Proposed Project for each phase of construction activities are shown below in Table 3-6 for years 2019-2021, Table 3-7 for years 2021-2025, Table 3-8 for years 2026-2030, Table 3-9 for years 2031-2035, and Table 3-10 for years 2036-2041.

**Table 3-6: Projected Years 2019-2021 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition<sup>1</sup></b>						
On site <sup>2</sup>	3.51	35.78	22.06	0.04	2.73	1.81
Off site <sup>3</sup>	0.22	4.20	1.64	0.01	0.42	0.13
<b>Total</b>	<b>3.73</b>	<b>39.98</b>	<b>23.70</b>	<b>0.05</b>	<b>3.15</b>	<b>1.94</b>
<b>Grading<sup>1</sup></b>						
On site	2.58	28.35	16.29	0.03	3.95	2.60
Off site	0.11	0.76	0.91	0.00	0.21	0.06
<b>Total</b>	<b>2.69</b>	<b>29.11</b>	<b>17.20</b>	<b>0.03</b>	<b>4.16</b>	<b>2.66</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
On site	12.02	22.92	19.00	0.03	1.42	1.34
Off site	0.96	5.77	7.99	0.03	1.87	0.53
<b>Total</b>	<b>13.00</b>	<b>28.69</b>	<b>26.99</b>	<b>0.06</b>	<b>3.29</b>	<b>1.87</b>

**Table 3-6: Projected Years 2019-2021 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Paving</b>						
On site	1.36	14.07	14.65	0.02	0.75	0.69
Off site	0.08	0.05	0.66	0.00	0.17	0.05
<b>Total</b>	<b>1.44</b>	<b>14.12</b>	<b>15.31</b>	<b>0.02</b>	<b>0.92</b>	<b>0.74</b>
<b>Maximum Daily Emissions</b>	<b>13.00</b>	<b>39.98</b>	<b>26.99</b>	<b>0.06</b>	<b>4.16</b>	<b>2.66</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently.

Source: CalEEMod Version 2016.3.2 (see Appendix B).

**Table 3-7: Projected Years 2021-2025 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition<sup>1</sup></b>						
On site <sup>2</sup>	3.17	31.44	21.57	0.04	2.52	1.59
Off site <sup>3</sup>	0.19	3.74	1.48	0.01	0.42	0.12
<b>Total</b>	<b>3.36</b>	<b>35.18</b>	<b>23.05</b>	<b>0.05</b>	<b>2.94</b>	<b>1.71</b>
<b>Grading<sup>1</sup></b>						
On site	2.29	24.74	15.86	0.03	3.72	2.38
Off site	0.09	0.63	0.76	0.00	0.21	0.06
<b>Total</b>	<b>2.38</b>	<b>25.37</b>	<b>16.62</b>	<b>0.03</b>	<b>3.93</b>	<b>2.44</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
On site	6.32	18.96	18.40	0.03	1.05	0.99
Off site	0.57	3.32	4.69	0.02	1.30	0.36
<b>Total</b>	<b>6.89</b>	<b>22.28</b>	<b>23.09</b>	<b>0.05</b>	<b>2.35</b>	<b>1.35</b>
<b>Paving</b>						
On site	0.98	9.52	12.19	0.02	0.49	0.45
Off site	0.09	0.06	0.74	0.00	0.23	0.06
<b>Total</b>	<b>1.07</b>	<b>9.59</b>	<b>12.93</b>	<b>0.02</b>	<b>0.72</b>	<b>0.51</b>
<b>Maximum Daily Emissions</b>	<b>6.89</b>	<b>35.18</b>	<b>23.09</b>	<b>0.05</b>	<b>3.93</b>	<b>2.44</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>

**Table 3-7: Projected Years 2021-2025 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently.

Source: CalEEMod Version 2016.3.2 (see Appendix B).

**Table 3-8: Projected Years 2026-2030 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition<sup>1</sup></b>						
On site <sup>2</sup>	1.34	9.46	13.33	0.02	1.08	0.59
Off site <sup>3</sup>	0.09	1.44	0.85	0.01	0.30	0.08
<b>Total</b>	<b>1.43</b>	<b>10.90</b>	<b>14.18</b>	<b>0.03</b>	<b>1.38</b>	<b>0.67</b>
<b>Grading<sup>1</sup></b>						
On site	1.19	9.10	8.49	0.02	3.05	1.77
Off site	0.05	0.43	0.40	0.00	0.15	0.04
<b>Total</b>	<b>1.24</b>	<b>9.53</b>	<b>8.89</b>	<b>0.02</b>	<b>3.20</b>	<b>1.81</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
On site	4.82	9.65	15.82	0.03	0.52	0.50
Off site	0.35	2.01	2.82	0.01	1.10	0.30
<b>Total</b>	<b>5.17</b>	<b>11.66</b>	<b>18.64</b>	<b>0.04</b>	<b>1.62</b>	<b>0.80</b>
<b>Paving</b>						
On site	0.79	7.44	11.67	0.02	0.35	0.32
Off site	0.05	0.03	0.39	0.00	0.17	0.05
<b>Total</b>	<b>0.84</b>	<b>7.47</b>	<b>12.06</b>	<b>0.02</b>	<b>0.52</b>	<b>0.37</b>
<b>Maximum Daily Emissions</b>	<b>5.17</b>	<b>11.66</b>	<b>18.64</b>	<b>0.04</b>	<b>3.20</b>	<b>1.81</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently.

Source: CalEEMod Version 2016.3.2 (see Appendix B).

**Table 3-9: Projected Years 2031-2035 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Grading<sup>1</sup></b>						
On site	1.62	4.54	14.45	0.04	2.79	1.55
Off site	0.05	0.41	0.42	0.00	0.21	0.06
<b>Total</b>	<b>1.67</b>	<b>4.95</b>	<b>14.87</b>	<b>0.04</b>	<b>3.00</b>	<b>1.61</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
On site	8.11	5.15	17.96	0.03	0.17	0.17
Off site	0.43	2.87	3.34	0.02	1.70	0.46
<b>Total</b>	<b>8.54</b>	<b>8.02</b>	<b>21.30</b>	<b>0.05</b>	<b>1.87</b>	<b>0.63</b>
<b>Paving</b>						
On site	1.15	6.23	13.09	0.02	0.25	0.25
Off site	0.05	0.02	0.38	0.00	0.22	0.06
<b>Total</b>	<b>1.20</b>	<b>6.25</b>	<b>13.47</b>	<b>0.02</b>	<b>0.47</b>	<b>0.31</b>
<b>Maximum Daily Emissions</b>	<b>8.54</b>	<b>8.02</b>	<b>21.30</b>	<b>0.05</b>	<b>3.00</b>	<b>1.61</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently.

Source: CalEEMod Version 2016.3.2 (see Appendix B).

**Table 3-10: Projected Years 2036-2041 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition<sup>1</sup></b>						
On site <sup>2</sup>	1.83	3.36	18.71	0.05	0.53	0.27
Off site <sup>3</sup>	0.06	0.93	0.56	0.01	0.27	0.07
<b>Total</b>	<b>1.89</b>	<b>4.29</b>	<b>19.27</b>	<b>0.06</b>	<b>0.80</b>	<b>0.34</b>
<b>Grading<sup>1</sup></b>						
On site	1.46	2.91	14.33	0.04	2.71	1.47
Off site	0.04	0.40	0.35	0.00	0.21	0.06
<b>Total</b>	<b>1.50</b>	<b>3.31</b>	<b>14.68</b>	<b>0.04</b>	<b>2.92</b>	<b>1.53</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
On site	4.83	3.85	17.91	0.03	0.10	0.10
Off site	0.24	1.95	1.88	0.01	1.18	0.32
<b>Total</b>	<b>5.07</b>	<b>5.80</b>	<b>19.79</b>	<b>0.04</b>	<b>1.28</b>	<b>0.42</b>

**Table 3-10: Projected Years 2036-2041 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Paving</b>						
On site	0.99	4.74	13.07	0.02	0.15	0.15
Off site	0.04	0.02	0.32	0.00	0.22	0.06
<b>Total</b>	<b>1.03</b>	<b>4.76</b>	<b>13.39</b>	<b>0.02</b>	<b>0.37</b>	<b>0.21</b>
<b>Maximum Daily Emissions</b>	<b>5.07</b>	<b>5.80</b>	<b>19.79</b>	<b>0.06</b>	<b>2.92</b>	<b>1.53</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently.

Source: CalEEMod Version 2016.3.2 (see Appendix B).

As shown in Table 3-6, Table 3 7, Table 3 8, Table 3 9, and Table 3 10, the emissions from construction activities associated with implementation of the 2041 Facilities Master Plan would be below the significance thresholds for all phases of construction. A less than significant impact would occur.

#### Construction-Related Local Impacts

Construction-related air emissions may have the potential to exceed the State and federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. The local air quality emissions from construction were analyzed through utilizing the methodology described in *Localized Significance Threshold Methodology (LST Methodology)*, prepared by SCAQMD, revised October 2009. The LST Methodology found the primary criteria pollutant emissions of concern are NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. In order to determine if any of these pollutants require a detailed analysis of the local air quality impacts, each phase of construction was screened using the SCAQMD's Mass Rate LST Look-up Tables. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily onsite emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> from the Proposed Project could result in a significant impact to the local air quality.

The project that would be closest to offsite receptors would be the proposed recreational pool, where homes are located as near as 130 feet (40 meters) from the proposed construction. In order to provide a conservative analysis, the 25-meter thresholds provided in the Look-Up Tables were utilized in this analysis. Table 3-11 shows the onsite emissions from CalEEMod for the different construction phases and the calculated localized emissions thresholds that have been detailed above. Since this analysis assumed that building construction and architectural coating activities would occur concurrently, Table 3-11 also shows the combined local criteria pollutant emissions from the building construction and architectural coating phases of construction.

**Table 3-11: Projected Construction Local Criteria Pollutant Emissions  
Without CEQA Mitigation(lbs/day)**

Land Use Subtype in CalEEMod	Pollutant Emissions			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Demolition <sup>1</sup>	38.32	22.30	2.64	1.91
Grading <sup>1</sup>	59.52	35.09	6.02	3.83
Building Construction & Architectural Coating	22.91	19.01	1.42	1.34
Paving	12.92	14.65	0.68	0.62
<b>SCAQMD Thresholds for 25 meters (82 feet)<sup>2</sup></b>	<b>66</b>	<b>827</b>	<b>7</b>	<b>5</b>
<b>Exceeds Threshold?</b>	No	No	No	No

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter.

<sup>1</sup> Demolition and Grading based on adherence to the fugitive dust suppression requirements from SCAQMD Rule 403.

<sup>2</sup> The nearest sensitive receptors are homes located approximately 130 feet (40 meters) from the proposed construction. In order to provide a conservative analysis, the 25-meter thresholds provided in the Look-Up Tables are utilized in this analysis. Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-Up Tables for 2 acres in Air Monitoring Area 4, South Coastal Los Angeles County.

### Operational Impacts

Operational emissions were calculated using CalEEMod, Version 2016.3.2, to take into account area sources (energy use, landscaping maintenance, architectural coatings use) and vehicle emissions at buildout of 387,341 square feet of renovation area and 264,018 square feet of new construction area at the LAC campus. Because the majority of the emissions are attributable to on-road vehicles, the LST methodology is not appropriate and emissions were not compared with LSTs. The estimated operational and construction emissions at LAC are shown in Table 3 12 for interim year 2020, Table 3 13 for interim year 2025, Table 3 14 for interim year 2030, Table 3 15 for interim year 2035, and Table 3 16 for buildout year 2041.

**Table 3-12: Summary of Total Estimated Buildout Year 2020 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources <sup>1</sup>	5.20	0.00	0.08	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.14	1.31	1.10	0.01	0.10	0.10
Mobile Sources <sup>3</sup>	1.94	9.14	25.25	0.08	6.30	1.74
Construction <sup>4</sup>	13.00	39.98	26.99	0.06	4.16	2.66
<b>Total</b>	<b>20.28</b>	<b>50.43</b>	<b>53.42</b>	<b>0.15</b>	<b>10.56</b>	<b>4.50</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Threshold?	No	No	No	No	No	No

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2020 from Table 3-6.

Source: CalEEMod Version 2016.3.2.

**Table 3-13: Summary of Total Estimated Buildout Year 2025 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources <sup>1</sup>	7.53	0.00	0.31	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.22	2.05	1.72	0.01	0.16	0.16
Mobile Sources <sup>3</sup>	3.58	15.71	45.97	0.19	16.46	4.50
Construction <sup>4</sup>	6.89	35.18	23.09	0.05	3.93	2.44
<b>Total</b>	<b>18.22</b>	<b>52.94</b>	<b>71.09</b>	<b>0.25</b>	<b>20.55</b>	<b>7.10</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2025 from Table 3-7.

Source: CalEEMod Version 2016.3.2.

**Table 3-14: Summary of Total Estimated Buildout Year 2030 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources <sup>1</sup>	9.22	0.01	0.69	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.28	2.58	2.16	0.02	0.20	0.20
Mobile Sources <sup>3</sup>	5.98	22.11	50.21	0.22	21.47	5.87
Construction <sup>4</sup>	5.17	11.66	18.64	0.04	3.20	6.07
<b>Total</b>	<b>20.65</b>	<b>36.35</b>	<b>71.69</b>	<b>0.28</b>	<b>24.87</b>	<b>7.88</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2030 from Table 3-8.

Source: CalEEMod Version 2016.3.2.

**Table 3-15: Summary of Total Estimated Buildout Year 2035 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources <sup>1</sup>	12.94	0.01	1.23	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.41	3.76	3.15	0.03	0.29	0.29
Mobile Sources <sup>3</sup>	5.82	32.91	75.66	0.39	39.88	10.86
Construction <sup>4</sup>	8.54	8.02	21.30	0.05	3.00	1.61
<b>Total</b>	<b>27.71</b>	<b>44.71</b>	<b>101.34</b>	<b>0.47</b>	<b>43.17</b>	<b>12.76</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2035 from Table 3-9.

Source: CalEEMod Version 2016.3.2.

**Table 3-16: Summary of Total Estimated Buildout Year 2041 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources <sup>1</sup>	17.09	0.01	0.76	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.56	5.11	4.29	0.03	0.39	0.39
Mobile Sources <sup>3</sup>	6.36	42.34	74.56	0.41	42.71	11.54
Construction <sup>4</sup>	5.07	5.80	19.79	0.06	2.92	1.53
<b>Total</b>	<b>29.08</b>	<b>53.26</b>	<b>99.40</b>	<b>0.50</b>	<b>46.02</b>	<b>13.46</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2041 from Table 3-10.

Source: CalEEMod Version 2016.3.2.

As shown in Table 3 12, Table 3 13, Table 3 14, Table 3 15, and Table 3 16, the emissions associated with the 2041 Facilities Master Plan for the LAC Improvements would be less than the daily significance thresholds, and no significant impacts are anticipated.

*Localized CO Impacts from Project-Generated Vehicular Trips*

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and federal CO standards of 20 ppm over one hour or 9 ppm over eight hours.

At the time of the 1993 Handbook, the Air Basin was designated nonattainment under the CAAQS and NAAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Air Basin and in the State have steadily declined. In 2007, the Air Basin was designated in attainment for CO under both the CAAQS and NAAQS. SCAQMD conducted a CO hot spot analysis for attainment at the busiest intersections in Los Angeles during the peak morning and afternoon periods and did not predict a violation of CO standards.<sup>1</sup> Since the intersections near the Proposed Project are much smaller with less traffic than what was analyzed by the SCAQMD, no local CO hot spots are anticipated to be created from the Proposed Project; and no CO hot spot modeling was performed. Therefore, a less than significant long-term air quality impact is anticipated to local air quality with the ongoing use of the Proposed Project.

*Local Criteria Pollutant Impacts from Onsite Operations*

Project-related air emissions from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances may have the potential to create emissions areas that exceed the State and federal air quality standards in the project vicinity, even though those pollutant emissions may not be significant enough to create a regional impact to the Air Basin.

The local air quality emissions from onsite operations were analyzed using the SCAQMD’s Mass Rate LST Look-Up Tables and the methodology described in the LST Methodology (SCAQMD 2008). The Look-Up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> from the Proposed Project could result in a significant impact to the local air quality. Table 3-17 shows the onsite emissions from CalEEMod that includes area sources and energy usage in the immediate vicinity of the Project Site and the calculated emissions thresholds. Due to the nature of the Proposed Project, the individual proposed facilities are not expected to generate vehicle traffic; and, therefore, mobile sources are not included in this local emissions analysis.

**Table 3-17: Buildout Year 2041 Operations-Related Local Criteria Pollutant Emissions  
(pounds/day)**

Land Use Subtype in CalEEMod	Pollutant Emissions			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources	0.01	0.76	0.00	0.00
Paving	5.11	4.29	0.39	0.39
<b>Total</b>	<b>5.12</b>	<b>5.05</b>	<b>0.39</b>	<b>0.39</b>

<sup>1</sup> The four intersections analyzed by the SCAQMD were: Long Beach Boulevard and Imperial Highway, Wilshire Boulevard and Veteran Avenue, Sunset Boulevard and Highland Avenue, and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with Level of Service (LOS) E in the morning and LOS F in the evening peak hour.

Land Use Subtype in CalEEMod	Pollutant Emissions			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>SCAQMD Thresholds for 25 meters (82 feet)<sup>1</sup></b>	<b>66</b>	<b>827</b>	<b>2</b>	<b>1</b>
<b>Exceeds Threshold?</b>	No	No	No	No

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter.

<sup>1</sup> The nearest sensitive receptors are homes located approximately 130 feet (40 meters) from the proposed construction. In order to provide a conservative analysis, the 25-meter thresholds provided in the Look-Up Tables are utilized in this analysis. Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-Up Tables for 2 acres in Air Monitoring Area 4, South Coastal Los Angeles County.

As shown in Table 3-17, the ongoing operations of the Proposed Project would not exceed the local NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> thresholds of significance. Therefore, the ongoing operations of the Proposed Project would create a less than significant operations-related impact to local air quality due to onsite emissions, and no mitigation would be required.

Implementation of the proposed 2041 Facilities Master Plan may result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Cumulative projects include local development as well as general growth within the Project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel throughout the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and, when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the Project's air quality must be generic by nature. The Project area is out of attainment for ozone and PM<sub>10</sub> and PM<sub>2.5</sub> particulate matter. In accordance with *CEQA Guidelines* Section 15130(b), this analysis of cumulative impacts incorporates a three-tiered approach to assess cumulative air quality impacts.

- Consistency with the SCAQMD project-specific thresholds for construction and operations;
- Project consistency with existing air quality plans; and
- Assessment of the cumulative health effects of the pollutants.

#### Consistency with Project Specific Thresholds

##### *Construction-Related Impacts*

The Project Site is located in the South Coast Air Basin, which is currently designated by the USEPA for federal standards as a non-attainment area for ozone and PM<sub>2.5</sub> and by CARB for the State standards as a non-attainment area for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. The regional ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions associated with construction of the Proposed Project have been calculated above. The above analysis found that development of the Proposed Project would result in less than significant regional emissions of VOC and NO<sub>x</sub> (ozone precursors), PM<sub>10</sub>, and PM<sub>2.5</sub> during construction of the Proposed Project. Therefore, a less than significant cumulative impact would occur from construction of the Proposed Project.

##### *Operations-Related Impacts*

The greatest cumulative operational impact on the air quality to the Air Basin will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial

development. In accordance with SCAQMD methodology, projects that do not exceed SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. The regional ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions created from the on-going operations of the Proposed Project have been calculated above under Impact 3.5-2. The above analysis found that development of the Proposed Project would result in less than significant regional emissions of VOC and NO<sub>x</sub> (ozone precursors), PM<sub>10</sub>, and PM<sub>2.5</sub> during operation of the Proposed Project. With respect to long-term emissions, this project would create a less than significant cumulative impact.

#### Consistency with Air Quality Plans

The analysis provided above under Impact 3.5-1 indicates that over the course of buildout, emissions from the proposed 2041 Facilities Master Plan would not result in significant impacts based on SCAQMD thresholds of significance. Additionally, project construction and operation would be in compliance with the strategies outlined in the AQMP. As such the Proposed Project is not anticipated to exceed the AQMP assumptions for the Project Site and is found to be consistent with the AQMPs for the Air Basin.

Therefore, air quality impacts resulting from construction and operation of the Proposed Project would not be cumulatively considerable.

#### *Mitigation Measures*

No mitigation measures are necessary.

#### *Residual Impacts*

Impacts would be less than significant.

#### **Impact 3.5-3:** Expose sensitive receptors to substantial pollutant concentrations.

Implementation of the proposed 2041 Facilities Master Plan may expose sensitive receptors to substantial pollutant concentrations. The local concentrations of criteria pollutant emissions produced in the nearby vicinity of the Proposed Project, which may expose sensitive receptors to substantial concentrations, have been calculated above under Impact 3.5-2 for both construction and operations, which are discussed separately below. The discussion below also includes an analysis of the potential impacts from toxic air contaminant emissions. The nearest sensitive receptor to the Project Site consists of a single-family home located adjacent at 130 feet north of the proposed recreational pool which is part of the proposed new construction.

#### Construction-Related Sensitive Receptor Impacts

Construction of the Proposed Project may expose sensitive receptors to substantial pollutant concentrations of localized criteria pollutant concentrations and from toxic air contaminant emissions created from onsite construction equipment, which are described below.

#### *Local Criteria Pollutant Impacts from Construction*

The local air quality impacts from construction of the Proposed Project have been analyzed above under Impact 3.5-2 and found that the construction of the Proposed Project would not exceed the local NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> thresholds of significance discussed above under Impact 3.5-1. Therefore,

construction of the Proposed Project would create a less than significant construction-related impact to local air quality, and no mitigation would be required.

#### *Toxic Air Contaminants Impacts from Construction*

The greatest potential for toxic air contaminant emissions would be related to diesel particulate matter (DPM) emissions associated with heavy equipment operations during construction of the Proposed Project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of “individual cancer risk.” “Individual cancer risk” is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the Proposed Project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. In addition, California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 regulates emissions from off-road diesel equipment in California. This regulation limits idling of equipment to no more than five minutes and requires equipment operators to label each piece of equipment and provide annual reports to CARB of their fleet’s usage and emissions. This regulation also requires systematic upgrading of the emission Tier level of each fleet, and currently no commercial operator is allowed to purchase Tier 0 or Tier 1 equipment, and by January 2023 no commercial operator is allowed to purchase Tier 2 equipment. In addition to the purchase restrictions, equipment operators need to meet fleet average emissions targets that become more stringent each year between years 2014 and 2023. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the Proposed Project. As such, construction of the Proposed Project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

#### Operations-Related Sensitive Receptor Impacts

The on-going operations of the Proposed Project may expose sensitive receptors to substantial pollutant concentrations of local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from onsite operations. The following analyzes the vehicular CO emissions, local criteria pollutant impacts from onsite operations, and toxic air contaminant impacts.

#### *Local CO Hot spot Impacts from Project-Generated Vehicle Trips*

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts to sensitive receptors. The analysis provided above in Impact 3.5-2 shows that no local CO hot spots are anticipated to be created at any nearby intersections from the vehicle traffic generated by the Proposed Project. Therefore, operation of the Proposed Project would result in a less than significant exposure of offsite sensitive receptors to substantial pollutant concentrations.

#### *Local Criteria Pollutant Impacts from Onsite Operations*

The local air quality impacts from the operation of the Proposed Project would occur from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances. The analysis provided above in Impact 3.5-2 found that the operation of the Proposed Project would not exceed the local NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> thresholds of significance discussed above under Impact 3.5-1.

Therefore, the ongoing operations of the Proposed Project would create a less than significant operations-related impact to local air quality due to onsite emissions, and no mitigation would be required.

#### *Operations-Related Toxic Air Contaminant Impacts*

Particulate matter (PM) from diesel exhaust is the predominant TAC in most areas; and, according to The California Almanac of Emissions and Air Quality 2013 Edition, prepared by CARB, about 80 percent of the outdoor TAC cancer risk is from diesel exhaust. Some chemicals in diesel exhaust, such as benzene and formaldehyde, have been listed as carcinogens by State Proposition 65 and the Federal Hazardous Air Pollutants program. Due to the nominal number of diesel truck trips generated by the Proposed Project, a less than significant TAC impact would occur during the ongoing operations of the Proposed Project; and no mitigation would be required.

#### *Mitigation Measures*

No mitigation measures are necessary.

#### *Residual Impacts*

Impacts would be less than significant.

**Impact 3.5-4:** Result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people.

The Proposed Project would not create objectionable odors affecting a substantial number of people. Potential odor impacts have been analyzed separately for construction and operations below.

Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the Project Site and is typically presented as the mean (or 50 percent of the population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration.

### Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of coatings such as asphalt pavement, paints, and solvents and from emissions from diesel equipment. The objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the Project Site's boundaries. Due to the transitory nature of construction odors, a less than significant odor impact would occur; and no mitigation would be required.

### Operations-Related Odor Impacts

The implementation of the proposed 2041 Facilities Master Plan would include development of institutional junior college land uses. Potential sources that may emit odors during the ongoing operations of the Proposed Project would primarily occur from odor emissions from the trash storage area and from vehicle emissions. Pursuant to City regulations, permanent trash enclosures that protect trash bins from rain as well as limit air circulation would be required for the trash storage areas. Perceptible odors may also be emitted from substances from other on-campus activities such as laboratory uses and combustion of fuels. However, the nominal amount of these substances would not result in a significant odor impact. Due to the distance of the nearest receptors from the Project Site and through compliance with City trash storage regulations, no significant impact related to odors would occur during the ongoing operations of the Proposed Project. Therefore, a less than significant odor impact would occur, and no mitigation would be required.

### ***Mitigation Measures***

No mitigation measures are necessary.

### ***Residual Impacts***

Impacts would be less than significant.

## 3.6 GREENHOUSE GAS EMISSIONS

### 3.6.1 Introduction

This section provides information on potential impacts from the greenhouse gas (GHG) emissions generated either directly or indirectly by the Proposed Project. This section also addresses the potential of the Proposed Project to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The GHG modeling parameter and output is included in this EIR as Appendix B. This analysis follows the SCAQMD recommendations for preparing a GHG emissions analysis under CEQA.

### 3.6.2 Background Information

#### **Global Climate Change**

Climate change is a recorded change in the Earth's average weather measured by variables such as wind patterns, storms, precipitation, and temperature. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O), which are known as greenhouse gases (GHGs). Historical records show that global temperature changes have occurred naturally in the past, such as during previous ice ages. However, it has been shown that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere. The year 2016 ranks as Earth's warmest year since record keeping began in 1880, and 16 of the 17 warmest years in the instrumental record occurred since 2001. The average global temperature has risen about 2.0 degrees Fahrenheit (°F) (1.1 degree Celsius [°C]) since 1880 (NASA 2017).

The global atmospheric concentration of CO<sub>2</sub> has increased from a pre-industrial (roughly 1750) value of about 280 parts per million (ppm) to a peak of 407 ppm and a seasonally adjusted 404 ppm in October 2017, primarily due to fossil fuel use, with land use change providing a significant but smaller contribution. The annual CO<sub>2</sub> concentration growth rate during the 10-year period between 1995 and 2005 was larger than the growth rate from the beginning of continuous direct measurements in 1960 to 2005 (NOAA 2018).

#### **Greenhouse Gases**

GHGs are global pollutants and are therefore unlike criteria air pollutants such as ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and toxic air contaminants (TACs), which are pollutants of regional and local concern (see Section 3.5, Air Quality, of this SEIR). While pollutants with localized air quality effects have relatively short atmospheric lifetimes (generally on the order of a few days), GHGs have relatively long atmospheric lifetimes, ranging from one year to several thousand years. Long atmospheric lifetimes allow for GHGs to disperse around the globe. Therefore, GHG effects are global, as opposed to the local and/or regional air quality effects of criteria air pollutant and TAC emissions.

California Assembly Bill 32 (AB 32) defines greenhouse gases as any of the following compounds: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>) (California Health and Safety Code Section 38505(g)). CO<sub>2</sub>, followed by CH<sub>4</sub> and N<sub>2</sub>O, are the most common GHGs that result from human activity.

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the “cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas” (USEPA 2018). The reference gas for GWP is CO<sub>2</sub>; therefore, CO<sub>2</sub> has a GWP of 1. The other main greenhouse gases that have been attributed to human activity include CH<sub>4</sub>, which has a GWP of 21, and N<sub>2</sub>O, which has a GWP of 310. Table 3-18 presents the GWP and atmospheric lifetimes of common GHGs.

**Table 3-18: Global Warming Potentials, Atmospheric Lifetimes, and Abundances of GHGs**

Gas	Atmospheric Lifetime (year) <sup>1</sup>	Global Warming Potential (100 Year Horizon) <sup>2</sup>	Atmospheric Abundance
carbon dioxide (CO <sub>2</sub> )	50-200	1	379 ppm
methane (CH <sub>4</sub> )	9-15	25	1,774 ppb
nitrous oxide (N <sub>2</sub> O)	114	298	319 ppb
HFC-23	270	14,800	18 ppt
HFC-134a	14	1,430	35 ppt
HFC-152a	1.4	124	3.9 ppt
PFC: Tetrafluoromethane (CF <sub>4</sub> )	50,000	7,390	74 ppt
PFC: Hexafluoroethane (C <sub>2</sub> F <sub>6</sub> )	10,000	12,200	2.9 ppt
sulfur hexafluoride (SF <sub>6</sub> )	3,200	22,800	5.6 ppt

Notes:

<sup>1</sup> Defined as the half-life of the gas.

<sup>2</sup> Compared to the same quantity of CO<sub>2</sub> emissions and is based on the Intergovernmental Panel On Climate Change (IPCC) 2007 standard, which is utilized in CalEEMod (Version 2016.3.2), that is used in this report (CalEEMod user guide: Appendix B).

Definitions: HFC = hydrofluorocarbon; PFC = perfluorocarbon; ppm = parts per million; ppb = parts per billion; ppt = parts per trillion

Source: IPCC 2007, EPA 2015

Human-caused sources of CO<sub>2</sub> include combustion of fossil fuels (coal, oil, natural gas, gasoline, and wood). Data from ice cores indicate that CO<sub>2</sub> concentrations remained steady prior to the current period for approximately 10,000 years. Concentrations of CO<sub>2</sub> have increased in the atmosphere since the industrial revolution. CH<sub>4</sub> is the main component of natural gas and also arises naturally from anaerobic decay of organic matter. Human-caused sources of natural gas include landfills, fermentation of manure, and cattle farming. Human-caused sources of N<sub>2</sub>O include combustion of fossil fuels and industrial processes such as nylon production and production of nitric acid.

Other GHGs are present in trace amounts in the atmosphere and are generated from various industrial or other uses. The sources of GHG emissions, GWP, and atmospheric lifetime of GHGs are all important variables to be considered in the process of calculating carbon dioxide equivalent (CO<sub>2</sub>e) for discretionary land use projects that require a climate change analysis.

### 3.6.3 Regulatory Framework

The regulatory setting related to global climate change is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to reduce GHG emissions through legislation, regulations, planning, policy-making,

education, and a variety of programs. The agencies responsible for global climate change regulations are discussed below.

## International

International and federal legislation has been enacted to deal with global climate change issues. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel On Climate Change (IPCC) to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis for human-induced climate change, its potential impacts, and options for adaptation and mitigation. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. The parties of the UNFCCC adopted the Kyoto Protocol, which set binding GHG reduction targets for 37 industrialized countries with the objective of reducing their collective GHG emissions by 5 percent below 1990 levels by 2012. The Kyoto Protocol has been ratified by 182 countries but has not been ratified by the United States. It should be noted that Japan and Canada opted out of the Kyoto Protocol, and the remaining developed countries that ratified the Kyoto Protocol have not met their Kyoto targets. The Kyoto Protocol expired in 2012, and the amendment for the second commitment period from 2013 to 2020 has not yet entered into legal force. The Parties to the Kyoto Protocol negotiated the Paris Agreement in December 2015, agreeing to set a goal of limiting global warming to less than 2 degrees Celsius compared with pre-industrial levels. The Paris Agreement has been adopted by 195 nations with 147 ratifying it, including the United States by President Obama, who ratified it by Executive Order on September 3, 2016. On June 1, 2017, President Trump announced that the United States is withdrawing from the Paris Agreement; however, the Paris Agreement is still legally binding by the other remaining nations.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform—were to be phased out, the first three by the year 2000 and methyl chloroform by 2005.

## Federal

### U.S. Environmental Protection Agency

The USEPA is responsible for implementing federal policy to address global climate change. The federal government administers a wide array of public-private partnerships to reduce U.S. GHG intensity. These programs focus on energy efficiency, renewable energy, methane, and other non-CO<sub>2</sub> gases; agricultural practices; and implementation of technologies to achieve GHG reductions. USEPA implements several voluntary programs that substantially contribute to the reduction of GHG emissions. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act. The findings state:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases: carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulfur hexafluoride (SF<sub>6</sub>), into the atmosphere, threaten the public health and welfare of current and future generations.

- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings did not impose any requirements on industry or other entities; however, since 2009 the USEPA has been providing GHG emission standards for vehicles and other stationary sources of GHG emissions that are regulated by the USEPA. On September 13, 2013, the USEPA Administrator signed 40 Code of Federal Regulations (CFR) Part 60, that limits emissions from new sources to 1,100 pounds of CO<sub>2</sub> per megawatt hour (Mwh) for fossil fuel-fired utility boilers and 1,000 pounds of CO<sub>2</sub> per Mwh for large natural gas-fired combustion units.

On August 3, 2015, the USEPA announced the Clean Power Plan, emissions guidelines for U.S. states to follow in developing plans to reduce GHG emissions from existing fossil fuel-fired power plants (Federal Register Vol. 80, No. 205, October 23, 2015). On February 9, 2016, the Supreme Court stayed implementation of the Clean Power Plan due to a legal challenge from 29 states; and, in April 2017, the Supreme Court put the case on a 60-day hold and directed both sides to make arguments for whether it should keep the case on hold indefinitely or close it and remand the issue to the USEPA. On October 11, 2017, the USEPA issued a formal proposal to repeal the Clean Power Plan; however, the repeal of the Plan will require following the same rule-making system used to create regulations and will likely result in court challenges.

#### Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) have been working together on developing a National Program of regulations to reduce GHG emissions and to improve the fuel economy of light-duty vehicles. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking establishing standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. The rules require these vehicles to meet an estimated combined average emissions level of 295 grams of CO<sub>2</sub> per mile by 2012, decreasing to 250 grams per mile by 2016, and finally to an average industry fleet-wide level of 163 grams per mile in model year 2025. The 2016 standard is equivalent to 35.5 miles per gallon (mpg), and the 2025 standard is equivalent to 54.5 mpg if the levels were achieved solely through improvements in fuel efficiency. The agencies expect, however, that a portion of these improvements will occur due to air conditioning technology improvements (i.e., they will leak less) and due to the use of alternative refrigerants, which would not contribute to fuel economy. These standards would cut GHG emissions by an estimated 2 billion metric tons and 4 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2017–2025). The combined USEPA GHG standards and NHTSA Corporate Average Fuel Economy (CAFE) standards resolve previously conflicting requirements under both federal programs and the standards of the State of California and other states that have adopted the California standards (USEPA 2010; USEPA and NHTSA 2012).

The State and federal government are offering limited financial incentives for electric vehicle purchases to promote the sale of hybrid and plug-in electric vehicles. Electric vehicles have the potential to reduce GHG emissions as compared to gasoline-fueled vehicles, but the change in GHG emissions is dependent on the type of fuel used for the generation of electric power.

## State

The CARB has the primary responsibility for implementing State policy to address global climate change; however, State regulations related to global climate change affect a variety of State agencies. CARB, which is part of the California Environmental Protection Agency (Cal EPA), is responsible for the coordination and administration of both the federal and State air pollution control programs within California. In this capacity, the CARB conducts research, sets California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In 2008, CARB approved a Climate Change Scoping Plan that proposes a “comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health” (CARB 2008a). The Climate Change Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. In 2014, CARB approved the First Update to the Climate Change Scoping Plan (CARB 2014) that identifies additional strategies moving beyond the 2020 targets to the year 2050. On December 14, 2017, CARB adopted California’s 2017 Climate Change Scoping Plan of November 2017 (CARB 2017) that provides specific statewide policies and measures to achieve the 2030 GHG reduction target of 40 percent below 1990 levels by 2030 and the aspirational 2050 GHG reduction target of 80 percent below 1990 levels by 2050. In addition, the State has passed the following laws directing CARB to develop actions to reduce GHG emissions, which are listed below in chronological order, with the most current first.

### Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations (CCR) Title 24, Part 6: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) was first established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions; and energy-efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

Title 24 standards are updated on a three-year schedule, and the most current 2016 standards went into effect on January 1, 2017. The Title 24 standards require the installation of insulated hot water pipes, improved window performance, improved wall insulation, and mandatory duct sealing. Title 24 also requires roofs to be constructed to be solar ready, with cool roofing shingles, a minimum of 1-inch air space between roof material and roof deck, and a minimum of R-22 roof/ceiling insulation. All lighting is required to be high efficiency, and daylight sensors and motion sensors are required for outdoor lighting, bathrooms, utility rooms, and other spaces. The forced air systems are required to limit leakage to 5 percent or less, and all heat pump systems are required to be equipped with liquid line filter driers. The 2016 Title 24 Part 6 standards are anticipated to reduce electricity consumption by 281 gigawatt-hours per year and natural gas consumption by 16 million therms per year (CEC 2016).

### Title 24, Part 11, California Green Building Standards

CCR Title 24, Part 11: California Green Building Standards (Title 24) was developed in response to continued efforts to reduce GHG emissions associated with energy consumption. The most current version is the 2016 California Green Building Standards Code (CALGreen), which became effective on January 1, 2017, and replaced the 2013 CALGreen.

The CALGreen Code contains requirements for construction site selection; stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.

The CALGreen Code provides standards for bicycle parking, carpool/vanpool/electric vehicle spaces, light and glare reduction, grading and paving, energy efficient appliances, renewable energy, graywater systems, water-efficient plumbing fixtures, recycling and recycled materials, pollutant controls (including moisture control and indoor air quality), acoustical controls, stormwater management, building design, insulation, flooring, and framing, among others. Implementation of the CALGreen Code measures reduce energy consumption and vehicle trips and encourage the use of alternative-fuel vehicles, which reduces pollutant emissions.

Some of the notable changes in the 2016 CALGreen Code over the prior 2013 CALGreen Code include: an increase in amount of bicycle parking requirements, an increase in number of electric vehicle (EV) charging stations and clean air vehicle parking at non-residential buildings, a reduction in water usage in urinals to 0.125 gallon per flush, an increased rate of diversion for construction and operational waste to 65 percent as well as adding organic waste as waste to be diverted, and a requirement for fireplaces to meet new Cal EPA standards.

### Executive Order B-30-15, Senate Bill 32, and Assembly Bill 197 (Statewide Year 2030 GHG Targets)

California Executive Order (EO) B-30-15 (April 29, 2015) set an “interim” statewide emission target to reduce greenhouse emissions to 40 percent below 1990 levels by 2030 and directed state agencies with jurisdiction over greenhouse gas emissions to implement measures pursuant to statutory authority to achieve this 2030 target and the 2050 target of 80 percent below 1990 levels. Specifically, the Executive Order directed CARB to update the Scoping Plan to express this 2030 target in metric tons. Assembly Bill 197 (AB 197) (September 8, 2016) and Senate Bill 32 (SB 32) (September 8, 2016) codified into statute the GHG emissions reduction targets of at least 40 percent below 1990 levels by 2030 as detailed in EO B-30-15. AB 197 also requires additional GHG emissions reporting to CARB from stationary sources and requires CARB to provide sources of GHG emissions on its website that is broken down to sub-county levels. AB 197 requires CARB to consider the social costs of emissions impacting disadvantaged communities.

### Senate Bill 350, Renewable Electricity Goals

SB 350, Signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 implements some of the goals of EO B-30-15. The objectives of SB 350 are as follows:

- (1) To increase from 33 percent to 50 percent the procurement of our electricity from renewable sources
- (2) To double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation (California Legislative Information 2015)

The text of SB 350 sets a December 31, 2030, target for 50 percent of electricity to be generated from renewable sources. SB 350 is being implemented by requiring all large utilities to develop and submit Integrated Resource Plans that detail how they will meet their customers' energy needs, reduce GHG emissions and deploy clean energy resources. SB 350 superseded the renewable energy requirements set by SB 1078, SB 107, and SB X1-2.

#### Executive Order B-29-15 and Senate Bill X7-7, Water Conservation Measures

The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.

The Department of Water Resources adopted a regulation on February 16, 2011, that sets forth criteria and methods for exclusion of industrial process water from the calculation of gross water use for purposes of urban water management planning. The regulation would apply to all urban retail water suppliers required to submit an Urban Water Management Plan, as set forth in the Water Code, Division 6, Part 2.6, Sections 10617 and 10620.

On April 1, 2015, the California Governor issued Executive Order B-29-15 that directed the State Water Resources Control Board to impose restrictions to achieve a statewide 25-percent reduction in urban water usage and directed the Department of Water Resources to replace 50 million square feet of lawn with drought-tolerant landscaping through an update to the State's Model Water Efficient Landscape Ordinance. The Ordinance also requires installation of more efficient irrigation systems, promotes greywater usage and onsite stormwater capture, and limits the turf planted in new residential landscapes to 25 percent of the total area and restricts turf from being planted in median strips or in parkways unless the parkway is next to a parking strip and a flat surface is required to enter and exit vehicles. Executive Order B-29-15 and SB X7-7 would reduce GHG emissions associated with the energy used to transport and filter water.

#### Senate Bill 97 and Amendments to the California Environmental Quality Act Guidelines

SB 97 directed the California Natural Resources Agency (CNRA) to adopt amendments to the *CEQA Guidelines* that require evaluation of GHG emissions or the effects of GHG emissions by January 1, 2010. The CNRA has done so, and the amendments to the *CEQA Guidelines*, in a new Section 15064.4 entitled Determining the Significance of Impacts from Greenhouse Gas Emissions, provide that:

- a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a

good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project.

- b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:
- 1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting
  - 2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project
  - 3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions

The amendments also add a new Section 15126.4(c), Mitigation Measures Related to Greenhouse Gas Emissions. Generally, this *CEQA Guidelines* section requires lead agencies to consider feasible means—supported by substantial evidence and subject to monitoring or reporting—of mitigating the significant effects of GHG emissions. Potential measures to mitigate the significant effects of GHG emissions are identified, including those outlined in Appendix F, Energy Conservation, of the *CEQA Guidelines*.

#### Executive Order B-18-12

Signed on April 25, 2012, EO B-18-12 established targets for energy and water efficiency and GHG emissions. EO B-18-12 also rescinded previous EO S-20-04. Specifically, EO B-18-12 required State agencies to continue to reduce grid-based energy by a minimum of 20 percent below 2003 levels by 2020. The key element of EO B-18-12 required 50 percent of new State buildings and major renovations started after 2020 to be constructed as Zero Net Energy Facilities, with 100 percent of new and renovated State facilities beginning after 2025 constructed as Zero Net Energy Facilities. EO B-18-12 also required State agencies to take measures toward achieving Zero Net Energy for 50 percent of the square footage of existing State-owned building area by 2025. New construction or major renovation of State facilities larger than 10,000 square feet is required to use clean, on-site power generation, and new construction or major renovation of State facilities smaller than 10,000 square feet is required to obtain Leadership in Energy and Environmental Design (LEED) “Silver” certification or higher.

#### Senate Bill 375

SB 375 was adopted September 2008 in order to support the State’s climate action goals to reduce GHG emissions through coordinated regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires CARB to set regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each Metropolitan Planning Organization (MPO) within the State. It was up to each MPO to adopt a sustainable communities strategy (SCS) that will prescribe land use allocation in that MPO’s Regional Transportation Plan (RTP) to meet CARB’s 2020 and 2035 GHG emission reduction targets. These reduction targets are required to be updated every eight years, and in June 2017 CARB released Staff Report Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Target, which provides recommended GHG emissions reduction targets for SCAG of 8 percent by 2020 and 21 percent by 2035.

The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted by SCAG in April 2016, provides a 2020 GHG emission reduction target of 8 percent and a 2035 GHG emission reduction target of 18 percent. SCAG will need to develop additional strategies in its next revision of the RTP/SCS in order to meet CARB's new 21-percent GHG emission reduction target for 2035. CARB is also charged with reviewing SCAG's RTP/SCS for consistency with its assigned targets.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS. However, new provisions of CEQA incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS and categorized as "transit priority projects."

#### Assembly Bill 32, The California Global Warming Solutions Act of 2006

The California Legislature adopted the public policy position that global warming is "a serious threat to the economic well-being, public health, natural resources, and the environment of California" (California Health and Safety Code, Section 38501). Further, the State Legislature has determined that:

the potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra Nevada snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious disease, asthma, and other human health-related problems.

The State Legislature also states that:

Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the State (California Health and Safety Code, Section 38501).

These public policy statements became law with the enactment of AB 32, the California Global Warming Solutions Act of 2006, signed by Governor Arnold Schwarzenegger in September 2006. AB 32 is now codified as Sections 38500 through 38599 of the California Health and Safety Code.

AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction is to be accomplished through an enforceable statewide cap on GHG emissions to be phased in starting in 2012. AB 32 directs CARB to establish this statewide cap based on 1990 GHG emissions levels; to disclose how it arrived at the cap; to institute a schedule to meet the emissions cap; and to develop tracking, reporting, and enforcement mechanisms. Emissions reductions under AB 32 are to include carbon sequestration projects and best management practices that are technologically feasible and cost-effective. As of the date of this Draft SEIR, CARB has not promulgated GHG emissions or reporting standards that are directly applicable to the Project.

### Executive Order S-3-05

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce snowpack in the Sierra Nevada Mountains, could further exacerbate California's air quality problems, and could potentially cause a rise in sea levels. In an effort to avoid or reduce the impacts of climate change, Executive Order S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. It should be noted that the 80 percent below 1990 levels by 2050 is currently an aspirational goal by Executive Order S-3-05 but has not yet been codified into law.

### Assembly Bill 1493, Clean Car Standards

AB 1493, adopted September 2002, also known as Pavley I, requires the development and adoption of regulations to achieve the maximum feasible reduction of GHGs emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the state. Although setting emissions standards on automobiles is solely the responsibility of the USEPA, the Federal Clean Air Act allows California to set state-specific emission standards on automobiles if the State first obtains a waiver from the USEPA. The USEPA granted California that waiver on July 1, 2009. The emission standards become increasingly more stringent through the 2016 model year. California is also committed to further strengthening these standards beginning in 2017 to obtain a 45-percent GHG reduction from 2020 model year vehicles (CARB 2008b, 2009).

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions. The program also requires car manufacturers to offer for sale an increasing number of zero-emission vehicles each year, including battery electric, fuel cell, and plug-in hybrid electric vehicles.

In December 2012, CARB adopted regulations allowing car manufacturers to comply with California's GHG emissions requirements for model years 2017-2025 through compliance with the USEPA GHG requirements for those same model years (CARB 2012).

## **Regional – Southern California**

### South Coast Air Quality Management District

The Project site lies within the boundaries of the SCAQMD. The SCAQMD is bounded by the Ventura County/Los Angeles County border to the northwest, the Mojave Desert Air Basin to the north, the Riverside County border to the east, and the San Diego County-Riverside County border the south.

The portion of the Project site under the jurisdiction of the SCAQMD lies within the South Coast Air Basin (Air Basin). The mission of the SCAQMD is to undertake all necessary steps to protect public health from air pollution, with sensitivity to the impacts of its actions on the community and businesses through a comprehensive program of planning, regulation, compliance assistance, enforcement, monitoring, technology advancement, and public education (SCAQMD 2015).

Beginning in April 2008, the SCAQMD convened a Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. The Working Group is scheduled to meet once per month. On December 5, 2008, the SCAQMD Governing Board adopted its staff proposal for an interim CEQA GHG significance threshold of 10,000 metric tons of CO<sub>2</sub> equivalent per year (MTCO<sub>2</sub>e per year) for industrial projects where the SCAQMD is the lead agency. The policy objective for establishing this significance threshold is to capture projects that represent approximately 90 percent of GHG emissions from new sources and to avoid EIR-level analysis for relatively small impacts (SCAQMD 2008).

In September 2010, the Working Group proposed extending the 10,000 MTCO<sub>2</sub>e per year screening threshold currently applicable to industrial projects where the SCAQMD is the lead agency, described above, to other lead agency industrial projects. For all other projects, SCAQMD staff proposed a multiple tier analysis to determine the appropriate threshold to be used. The draft proposal suggests the following tiers: Tier 1 is any applicable CEQA exemptions; Tier 2 is consistency with a GHG reduction plan; Tier 3 is a screening value or bright line; Tier 4 is a performance-based standard with three options that include percent emission reductions, early implementation of AB 32 scoping plan measures, or an efficiency target; and Tier 5 is GHG mitigation offsets. According to the presentation given at the September 28, 2010, Working Group meeting, SCAQMD staff proposed a Tier 3 draft threshold of 1,400 to 3,500 MTCO<sub>2</sub>e per year depending on whether the project was commercial, mixed use, or residential. For the Tier 4 draft threshold, SCAQMD staff presented a percent emission reduction target option but did not provide any specific recommendation for a percent emission reduction target; instead it referenced the San Joaquin Valley Air Pollution Control District approach. The percent reduction target is based on consistency with AB 32 as it was based on the same numeric reductions calculated in the Scoping Plan to reach 1990 levels by 2020. The second Tier 4 option is to assess the early implementation of applicable AB 32 scoping plan measures. The third Tier 4 option is to utilize an efficiency target for 2020 of 4.8 MTCO<sub>2</sub>e per year per service population (SP) for project-level thresholds where SP is project residents plus employees and 6.6 MTCO<sub>2</sub>e per year per SP for plan-level threshold (SCAQMD 2010). The Working Group has not convened since the fall of 2010. As of December 2016, the proposal has not been considered or approved for use by the SCAQMD Board.

#### Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated MPO for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the 2016-2040 RTP/SCS, adopted in April 2016 and the 2015 FTIP, adopted in October 2013, which address regional development and growth forecasts. Although the RTP/SCS and FTIP are primarily planning documents for future transportation projects, a key component of these plans is to integrate land use planning with transportation planning that promotes higher density infill development in close proximity to existing transit service. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The RTP/SCS, FTIP, and AQMP are based on projections originating within the City and County General Plans.

## Local – City of Long Beach

Local jurisdictions, such as the City of Long Beach, have the authority and responsibility to reduce air emissions of GHGs through police power and decision-making authority. Specifically, SB 97 encourages Cities to quantify GHG emissions from new projects. The City of Long Beach is in the process of developing a Climate Action and Adaption Plan. However, because the City has not yet adopted a Climate Action Plan or greenhouse gas reduction strategy, the City currently relies on the expertise of the SCAQMD and utilizes the expertise, programs, procedures, and methodologies developed by the SCAQMD for the environmental review of plans and developmental proposals within its jurisdiction.

### 3.6.4 Impacts and Mitigation

**Impact 3.6-1:** Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

The Proposed Project may generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The Proposed Project consists of a Master Plan for a junior college that would result in the demolition of 109,156 square feet of existing structures, renovation of 387,341 square feet of existing buildings, and construction of 246,018 square feet of new building space. These improvements are anticipated to increase the student enrollment of the LAC campus by 7,458 students. Implementation of the 2041 Facilities Master Plan is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste disposal, water usage, and construction equipment.

In December 2008, SCAQMD adopted a threshold of 10,000 MTCO<sub>2</sub>e per year for industrial, but only with respect to projects where SCAQMD is the lead agency. As of the time of this writing (January 2018), the SCAQMD has not yet adopted a threshold for residential or commercial projects or a threshold for projects where SCAQMD is not the lead agency.

In order to identify significance criteria under CEQA for all land use projects, SCAQMD initiated a Working Group, which provided detailed methodology for evaluating significance under CEQA. At the September 28, 2010, Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that includes the following Tiers:

- Tier 1: Applicable CEQA Exemptions (e.g., SB 97, categorical and statutory exemptions)
- Tier 2: Consistency with a GHG Reduction Plan (an adopted plan by a local agency)
- Tier 3: Quantitative Screening Values. The following quantitative thresholds were proposed:
  - 3,000 MTCO<sub>2</sub>e per year for all land use types; or
  - 3,500 MTCO<sub>2</sub>e per year for residential;
  - 1,400 MTCO<sub>2</sub>e per year for commercial;
  - 3,000 MTCO<sub>2</sub>e per year for mixed-use; and
  - 10,000 MTCO<sub>2</sub>e per year for industrial.
- Tier 4: Performance Standards. The following options were proposed as performance standards:
  - Option 1: Percent Emission Reduction Target (Provide an undefined percent reduction in GHG emissions over business-as-usual emissions)

- Option 2: Early Implementation of Applicable AB32 Scoping Plan Measures (Require a set of AB 32 Scoping Plan measures to be implemented)
- Option 3: SCAQMD Efficiency Targets. The following targets were proposed:
  - Year 2020 Targets
    - 4.8 MTCO<sub>2e</sub> per year per service population for project-level threshold (land use employment only)
    - 6.6 MTCO<sub>2e</sub> per year per service population for plan-level threshold
  - Year 2035 Targets
    - 3.0 MTCO<sub>2e</sub> per year per service population for project-level threshold
    - 4.1 MTCO<sub>2e</sub> per year per service population for plan-level threshold
- Tier 5: Mitigation Offsets (either alone or in combination with above tiers to achieve target threshold)

Since the Proposed Project would consist of development of a Master Plan for LAC, the Project is not exempt from CEQA and Tier 1 is not applicable. Because the City of Long Beach has not yet adopted a Climate Action Plan or GHG reduction strategy, consistency with a GHG reduction plan by a local agency for the Tier 2 approach is not applicable. The quantitative screening values provided in Tier 3 were developed for project-level analyses and are not applicable to plan-level analyses. For Tier 4, the most applicable performance standard to the Proposed Project is the Option 3 Year 2035 Target for a plan-level analysis of 4.1 MTCO<sub>2e</sub> per year per SP.

However, since the SCAQMD Working Group's thresholds were developed prior to AB 197 and SB 32 being codified into law in September 2016, these thresholds do not currently contain adequate thresholds to reduce California's GHG emissions to 40 percent below 1990 levels by 2030. The *California's 2017 Climate Change Scoping Plan*, prepared by CARB, November 2017, recommends that local agency thresholds for the year 2030 are 40 percent lower than the year 2020 thresholds. Since the SCAQMD's Year 2020 Target for a plan-level analysis is 6.6 MTCO<sub>2e</sub> per year per SP, a 40-percent reduction of this threshold would result in a Target of 3.96 MTCO<sub>2e</sub> per year per service population, which was utilized in this analysis.

According to the Traffic Impact Analysis (Linscott Law & Greenspan 2018), implementation of the proposed 2041 Facilities Master Plan would result in an increase of 7,458 students at the LAC, which was utilized as the service population associated with the Proposed Project.

The Project's GHG emissions have been calculated with the CalEEMod model based on the construction and operational parameters detailed in Appendix B, which also provides printouts of the CalEEMod output files. A summary of the results is shown below in Table 3-19.

**Table 3-19: Project Related Greenhouse Gas Annual Emissions**

Sector	Greenhouse Gas Emissions (Metric Tons per Year)			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Area Sources <sup>1</sup>	0.19	0.00	0.00	0.20
Energy Uses <sup>2</sup>	3,256.76	0.11	0.04	3,270.81
Mobile Sources <sup>3</sup>	6,627.71	0.25	0.00	6,634.06
Solid Waste <sup>4</sup>	278.02	16.43	0.00	688.79
Water and Wastewater <sup>5</sup>	160.32	0.53	0.01	177.63
Construction Year 2020 <sup>6</sup>	12.20	0.00	0.00	12.24
Construction Year 2025 <sup>6</sup>	10.65	0.00	0.00	10.70
Construction Year 2030 <sup>6</sup>	8.53	0.00	0.00	8.56
Construction Year 2035 <sup>6</sup>	11.63	0.00	0.00	11.64
Construction Year 2041 <sup>6</sup>	10.40	0.00	0.00	10.41
<b>Total 2040 Emissions</b>	<b>10,376.41</b>	<b>17.33</b>	<b>0.05</b>	<b>10,825.04</b>
<b>Service Population<sup>7</sup></b>				<b>7,458</b>
<b>Metric Tons CO<sub>2</sub>e per Service Population</b>				<b>1.45</b>
<b>SCAQMD Modified Draft Threshold of Significance<sup>8</sup> (Metric Tons CO<sub>2</sub>e per Service Population)</b>				<b>3.96</b>

Notes:

- <sup>1</sup> Area sources consist of GHG emissions from consumer products, architectural coatings, and landscaping equipment.
- <sup>2</sup> Energy usage consists of GHG emissions from electricity and natural gas usage. It should be noted the energy usage rates are based on a worst-case analysis as LBCCD is committed to achieving net zero energy usage for LAC by 2041.
- <sup>3</sup> Mobile sources consist of GHG emissions from vehicles.
- <sup>4</sup> Waste includes the CO<sub>2</sub> and CH<sub>4</sub> emissions created from the solid waste placed in landfills.
- <sup>5</sup> Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
- <sup>6</sup> Construction emissions amortized over 30 years as recommended in the SCAQMD GHG Working Group on November 19, 2009.
- <sup>7</sup> Service population based on the anticipated increase of students to the LAC campus.
- <sup>8</sup> SCAQMD's Year 2020 threshold of 6.6 MTCO<sub>2</sub>e per year was reduced by 40 percent to account for AB 197 and SB 32.  
Source: CalEEMod Version 2016.3.2 (see Appendix B)

Table 3-19 shows that implementation of the proposed 2041 Facilities Master Plan would create 10,825.04 MTCO<sub>2</sub>e per year, which is equivalent to 1.45 MTCO<sub>2</sub>e per year per SP, which would be within SCAQMD's modified draft threshold of 3.96 MTCO<sub>2</sub>e per year per SP that has been modified to account for the more stringent GHG emissions reduction required by AB 197 and SB 32. Therefore, a less than significant generation of GHG emissions would occur from implementation of the proposed 2041 Facilities Master Plan. Impacts would be less than significant.

**Impact 3.6-2:** Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The Proposed Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. As detailed above in Impact 3.6-1, the City of Long Beach has not yet adopted a climate action plan; as such, the only applicable plans for reducing GHGs are the SCAG 2016-2040 RTP/SCS and CARB's 2017 Climate Change Scoping Plan, which are discussed below.

## Consistency with the SCAG 2016-2040 RTP/SCS

The Project's consistency with the SCAG 2016-2040 RTP/SCS GHG-related goals and policies is shown in Table 3-20.

**Table 3-20: Consistency with SCAG RTP/SCS GHG-Related Goals and Policies**

RTP/SCS Goal/Policy	Project Consistency
Goal 1: Align the plan investments and policies with improving regional economic development and competitiveness	<b>Not Applicable.</b> The goal is applicable to SCAG's implementation of the RTP/SCS.
Goal 2: Maximize mobility and accessibility for all people and goods in the region.	<b>Consistent.</b> All walkways and parking lots will be designed to be ADA-compliant and the LAC campus promotes the use of public transportation as bus stops are currently located adjacent to the campus on Clark Avenue, Carson Street, and Lew Davis Street that promote multiple modes of travel.
Goal 3: Ensure travel safety and reliability for all people and goods in the region.	<b>Not Applicable.</b> The goal is applicable to Caltrans and the several county transportation departments in the region.
Goal 4: Preserve and ensure a sustainable regional transportation system.	<b>Not Applicable.</b> The goal is applicable to Caltrans and the several county transportation departments in the region.
Goal 5: Maximize productivity of our transportation system.	<b>Not Applicable.</b> The goal is applicable to Caltrans and the several county transportation departments in the region.
Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	<b>Consistent.</b> The LAC Campus is located in an area that includes a mix of uses, including residential, retail, and recreational uses, that are connected by walkways and bikeways to reduce reliance on automobile use and offsite commuting.
Goal 7: Actively encourage and create incentives for energy efficiency, where possible.	<b>Consistent.</b> The LBCCD has committed to a net zero energy campus by the buildout of the Master Plan in 2041.
Goal 8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	<b>Consistent.</b> The proposed Master Plan would intensify the land use on the LAC campus that is currently connected to nearby residential, retail, and recreational uses by walkways and bikeways and promotes the use of public transportation as bus stops are currently located adjacent to the campus on Clark Avenue, Carson Street, and Lew Davis Street.
Goal 9: Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	<b>Not Applicable.</b> The goal is applicable to Caltrans, the several county transportation departments, the California Highway Patrol, and other law enforcement agencies in the region.
Policy 1: Transportation investments shall be based on SCAG's adopted regional Performance Indicators.	<b>Not Applicable.</b> The policy is applicable to SCAG's implementation of the RTP/SCS.

**Table 3-20: Consistency with SCAG RTP/SCS GHG-Related Goals and Policies**

RTP/SCS Goal/Policy	Project Consistency
Policy 2: Ensuring safety, adequate maintenance, and efficiency of operations on the existing multimodal transportation system should be the highest RTP/SCS priorities for any incremental funding in the region.	<b>Not Applicable.</b> The policy is applicable to SCAG’s implementation of the RTP/SCS.
Policy 3: RTP/SCS land use and growth strategies in the RTP/SCS will respect local input and advance smart growth initiatives.	<b>Not Applicable.</b> The policy is applicable to SCAG’s implementation of the RTP/SCS.
Policy 4: Transportation demand management (TDM) and active transportation will be focus areas, subject to Policy 1.	<b>Not Applicable.</b> The policy is applicable to SCAG’s implementation of the RTP/SCS.
Policy 5: High-occupancy vehicle (HOV) gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy 1.	<b>Not Applicable.</b> The policy is applicable to SCAG’s implementation of the RTP/SCS.
Policy 6: The RTP/SCS will support investments and strategies to reduce non-recurrent congestion and demand for single occupancy vehicle use, by leveraging advanced technologies.	<b>Not Applicable.</b> The policy is applicable to SCAG’s implementation of the RTP/SCS.
Policy 7: The RTP/SCS will encourage transportation investments that result in cleaner air, a better environment, a more efficient transportation system, and sustainable outcomes in the long run.	<b>Not Applicable.</b> The policy is applicable to SCAG’s implementation of the RTP/SCS.
Policy 8: Monitoring progress on all aspects of the Plan, including the timely implementation of projects, programs, and strategies, will be an important and integral component of the Plan.	<b>Not Applicable.</b> The policy is applicable to SCAG’s implementation of the RTP/SCS.

Source: SCAG 2016

As shown in Table 3-20, with implementation of design features committed to by the LBCCD and statewide regulatory requirements including the CALGreen building standards, the Proposed Project would be consistent with all applicable policies of the RTP/SCS. Impacts would be less than significant.

**Consistency with CARB’s 2017 Scoping Plan**

The Project’s consistency with the list of feasible mitigation measures for individual projects provided in the CARB’s 2017 Scoping Plan is shown in Table 3-21.

**Table 3-21: Consistency with CARB’s 2017 Scoping Plan Measures for Individual Projects**

Measures from Scoping Plan	Project Consistency
<b>Construction</b>	
Enforce idling time restrictions for construction vehicles	<b>Consistent.</b> LBCCD will require that all off-road equipment utilized on the Project Site to be registered with CARB and adhere to CARB’s idling limitation rules.
Require construction vehicles to operate with the highest tier engines commercially available	<b>Consistent.</b> LBCCD will include in all construction contracts that all off-road equipment utilized on site shall be the powered with the highest tier engine commercially available.
Divert and recycle construction and demolition waste and use locally sourced building materials with a high recycled material content to the greatest extent feasible.	<b>Consistent.</b> LBCCD will include in all construction contracts that construction and demolition waste shall be reused or recycled to the greatest extent feasible and that the contractor shall utilize building materials with a high recycled material content to the greatest extent feasible.
Minimize tree removal and mitigate indirect GHG emissions increases that occur due to vegetation removal, loss of sequestration, and soil disturbance.	<b>Consistent.</b> LBCCD will require all construction projects to be evaluated to minimize tree and other vegetation removal.
Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators.	<b>Consistent.</b> LBCCD will include in all construction contracts a requirement that restricts the use of generators except for cases where no other power sources are available. LBCCD will also direct staff to provide contractors with access to existing power sources on the LAC campus.
Increase use of electric and renewable fuel powered construction equipment and require renewable diesel fuel where commercially available.	<b>Consistent.</b> LBCCD will include in all construction contracts the requirement that renewable diesel shall be utilized for all off-road equipment to the greatest extent feasible and that the contractor shall consider using electric equipment when electric off-road equipment becomes commercially available for use.
Require diesel equipment fleets to be lower emitting than any current emission standard.	<b>Consistent.</b> LBCCD will include in all construction contracts a requirement that each contractor’s off-road equipment fleet shall exceed the emissions requirements provided CCR Title 13, Article 4.8, Chapter 9, Section 2449.
<b>Operation</b>	
Comply with lead agency’s standards for mitigating transportation impacts under SB 743	<b>Consistent.</b> The proposed Master Plan conforms with the goals of SB 743 that promote infill projects in areas served by transit.
Require onsite EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals.	<b>Consistent.</b> The proposed Master Plan includes the installation of a minimum of two electric vehicle (EV) charging stations per lot or a total of a minimum of 36 EV charging stations would be provided on the LAC Campus.

**Table 3-21: Consistency with CARB’s 2017 Scoping Plan Measures for Individual Projects**

Measures from Scoping Plan	Project Consistency
Allow for new construction to install fewer onsite parking spaces than required by local municipal building code, if appropriate.	<b>Consistent.</b> LBCCD will review all projects that are included in the proposed Master Plan to determine if it is possible to reduce the number of parking spaces in the immediate vicinity of each project.
Dedicate onsite parking for shared vehicles.	<b>Consistent.</b> As part of the proposed Master Plan, the LAC parking lots will be reconfigured to meet both current ADA requirements and CALGreen requirements that require dedicated spaces for carpools and clean air vehicles.
Provide adequate, safe, convenient, and secure onsite bicycle parking storage in multi-family residential projects and in non-residential projects.	<b>Consistent.</b> The LAC currently provides bicycle parking throughout the campus. All projects implemented as part of the proposed Master Plan would include additional bicycle parking that would exceed the CALGreen minimum bicycle parking requirements.
Provide on- and offsite safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in an applicable bicycle and/or pedestrian master plan.	<b>Consistent.</b> The proposed Master Plan will include a pedestrian and bicycle network plan that details connections to the existing transit stations that are located throughout the LAC.
Require onsite renewable energy generation.	<b>Consistent.</b> LBCCD has committed to a net zero energy use campus by the buildout year of 2041, which will require the installation of onsite renewable energy generation.
Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over a certain size developments.	<b>Consistent.</b> The proposed Master Plan does not include the installation of any wood-burning fireplaces, and currently no wood-burning fireplaces are on the LAC.
Require cool roofs and “cool parking” that promote cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing.	<b>Consistent.</b> LBCCD will require all projects that are included in the Master Plan to meet the CALGreen Building requirements that require installation of cool roofs and cool asphalt for parking.
Require solar-ready roofs	<b>Consistent.</b> LBCCD will require all projects that are included in the Master Plan to meet the CALGreen Building requirements that require all new non-residential structures to be designed with solar-ready roofs.
Require organic collection in new developments	<b>Consistent.</b> LBCCD currently requires all landscape maintenance activities to collect and recycle green waste.
Require low-water landscaping in new developments. Require water-efficient landscape maintenance to conserve water and reduce landscape waste.	<b>Consistent.</b> LBCCD will require all new landscaping to utilize drought-tolerant plants and utilize water-efficient irrigation systems.
Achieve Zero Net Energy performance building	<b>Consistent.</b> LBCCD has committed to a net zero energy

**Table 3-21: Consistency with CARB’s 2017 Scoping Plan Measures for Individual Projects**

Measures from Scoping Plan	Project Consistency
standards prior to dates required by the Energy Code.	use campus by the buildout year of 2041.
Encourage new construction, including municipal building construction, to achieve third-party green building certifications, such as the GreenPoint Rated program, LEED rating system, or Living Building Challenge.	<b>Consistent.</b> LBCCD has committed to a net zero energy use campus by the buildout year of 2041, which will require all new construction to designed to meet the third-party green building certifications.
Require the design of bike lanes to connect to the regional bicycle network.	<b>Consistent.</b> The LAC currently has onsite bikeways that connect to the City of Long Beach’s bicycle network as detailed on the City’s General Plan.
Expand urban forestry and green infrastructure in new land development.	<b>Consistent.</b> The proposed Master Plan includes a Landscape Plan that would increase the number of trees on the LAC.
Require preferential parking spaces for park and ride to incentive carpooling.	<b>Consistent.</b> As part of the proposed Master Plan, the LAC parking lots will be reconfigured to meet both current ADA requirements and CALGreen requirements that require dedicated spaces for carpools and clean air vehicles.
Require a transportation management plan for specific plans which establishes a numeric target for non-SOV travel and overall VMT	<b>Consistent.</b> Although the LAC does not have a specific transportation management plan that quantifies non-single-occupancy vehicle (SOV) travel and overall vehicle miles traveled (VMT), the LAC does promote alternative transportation that results in lower SOV travel and overall VMT rates than what occurs in the region.
Develop a rideshare program targeting commuters to major employment centers.	<b>Not Applicable.</b> The Proposed Project consists of a Master Plan for a college. A large number of commuters would not be traveling from the Project Site to major employment centers.
Require the design of bus stops/shelters/express lanes in new development to promote the usage of mass-transit.	<b>Consistent.</b> Any bus stops or bus shelters that are moved or added as part of implementation of the proposed Master Plan will be designed to promote the usage of mass-transit. Any bus shelters that are moved or added shall include seating that is protected from weather and provides information about the bus service that includes maps and schedules of the routes serviced by the bus stop.
Require gas outlets in residential backyards for use with outdoor cooking appliances such as gas barbeques if natural gas service is available.	<b>Not Applicable.</b> No residential backyards would be a part of the Proposed Project.
Require the installation of electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment	<b>Not Applicable.</b> No residential homes would be a part of the Proposed Project.

**Table 3-21: Consistency with CARB’s 2017 Scoping Plan Measures for Individual Projects**

Measures from Scoping Plan	Project Consistency
Require the design of the electric outlets and/or wiring in new residential unit garages to promote electric vehicle usage.	<b>Not Applicable.</b> No residential homes would be a part of the Proposed Project.
Require electric vehicle charging station and signage for non-residential developments.	<b>Consistent.</b> The proposed Master Plan includes the installation of a minimum of two EV charging stations per parking lot, or a total of a minimum of 36 EV charging stations would be provided on the LAC Campus.
Provide electric outlets to promote the use of electric landscape equipment to the extent feasible on parks and public/quasi-public lands.	<b>Consistent.</b> LBCCD will require all proposed buildings that are included in the Master Plan to meet the CALGreen Building requirements that require installation of outdoor outlets on non-residential structures.
Require each residential unit to be “solar ready,” including installing the appropriate hardware and proper structural engineering.	<b>Not Applicable.</b> No residential homes would be a part of the Proposed Project.
Require the installation of energy conservation appliances such as on-demand tank-less water heaters and whole-house fans.	<b>Not Applicable.</b> These energy conservation appliances are for residential uses and would not operate efficiently in large non-residential buildings.
Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers.	<b>Consistent.</b> LBCCD will require all proposed buildings that are included in the Master Plan to meet the CALGreen building requirements that require installation of programmable thermostats.
Require large-scale residential developments and commercial buildings to report energy use, and set specific targets for per-capita energy use.	<b>Not Applicable.</b> The Proposed Project consists of a Master Plan for a college, which is neither a residential nor a commercial use.
Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets.	<b>Consistent.</b> LBCCD will require all proposed buildings that are included in the Master Plan to meet the CALGreen building requirements that require installation of low flow water fixtures.
Require the use of energy-efficient lighting for all street, parking, and area lighting	<b>Consistent.</b> LBCCD will require all outdoor lighting that would be installed as part of implementation of the Master Plan to meet the CALGreen building requirements that require installation of energy-efficient lighting.
Require the landscaping design for parking lots to utilize tree cover and compost/mulch.	<b>Consistent.</b> LBCCD will require all renovated parking lots to meet City standards for tree coverage of parking lots.
Incorporate water retention in the design of parking lots and landscaping, including using compost/mulch.	<b>Consistent.</b> All parking lots and other improvements included in the proposed Master Plan will be required to meet the water retention requirements detailed in the Water Quality Management Plan.
Require the development project to propose an	<b>Not Applicable.</b> The GHG emissions calculations for the

**Table 3-21: Consistency with CARB’s 2017 Scoping Plan Measures for Individual Projects**

Measures from Scoping Plan	Project Consistency
offsite mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions.	Proposed Project provided above in Impact 3.6-1 did not find an exceedance of the applicable GHG emissions thresholds; and, therefore, no offsite mitigation is needed or required.
Require the project to purchase carbon credits from the California Air Pollution Control Officers Association (CAPCOA) GHG Reduction Exchange Program, American Carbon Registry (ACR), Climate Action Reserve (CAR) or other similar carbon credit registry determined to be acceptable by the local air district.	<b>Not Applicable.</b> The GHG emissions calculations for the Proposed Project provided above in Impact 3.6-1 did not find an exceedance of the applicable GHG emissions thresholds; and, therefore, no offsite mitigation is needed or required.
Encourage the applicant to consider generating or purchasing local and California-only carbon credits as the preferred mechanism to implement its offsite mitigation measure for GHG emissions and that will facilitate the State’s efforts in achieving the GHG emission reduction goal.	<b>Not Applicable.</b> The GHG emissions calculations for the Proposed Project provided above in Impact 3.6-1 did not find an exceedance of the applicable GHG emissions thresholds; and, therefore, no offsite mitigation is needed or required.

Source: CARB 2017

As shown in Table 3-21, with implementation of design features committed to by the LBCCD and Statewide regulatory requirements including the CALGreen building standards, the Proposed Project would be consistent with all feasible mitigation measure for individual projects provided in the CARB’s 2017 Scoping Plan. Therefore, implementation of the proposed 2041 Facilities Master Plan would not conflict with any applicable plan that reduces GHG emissions. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are necessary.

Residual Impacts

Impacts would be less than significant.

## 3.7 NOISE

### 3.7.1 Introduction

This section provides information on ambient noise conditions in the vicinity of the LAC and identifies potential impacts associated with noise as a result of the construction and operation of the Proposed Project. The noise measurement printouts and modeling output are included in this EIR as Appendix C.

### 3.7.2 Existing Environmental Setting

#### **Noise Terminology**

##### Noise Fundamentals

Noise is defined as unwanted or objectionable sound. The effect of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the “A-weighted” noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA. Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling a traffic volume, would increase the noise level by 3 dBA; a halving of the energy would result in a 3-dBA decrease.

A given level of noise may be more or less tolerable depending on the duration of exposure experienced by an individual. A number of measures of noise exposure consider not only the A-level variation of noise but also the duration of the disturbance. The Day-Night Average Level ( $L_{dn}$ ) is the weighted average of the intensity of a sound, with corrections for time of day and averaged over 24 hours. The time of day corrections require the addition of 10 decibels to sound levels at night between 10 p.m. and 7 a.m. The Community Noise Equivalent Level (CNEL) is similar to the  $L_{dn}$ , except that it adds another 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, ambient noise levels decrease, which creates an increased sensitivity to sounds. For this reason, the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of Long Beach Noise Element uses the Day-Night Sound Level ( $L_{dn}$ ).

It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increases or decreases, that a change of 5 dBA is readily perceptible, and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (Caltrans 2013).

##### Groundborne Vibration Fundamentals

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of groundborne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Groundborne noise is an effect of groundborne vibration and only exists

indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as ( $L_v$ ) and is based on the rms velocity amplitude. A commonly used abbreviation is “VdB”, which in this text is when  $L_v$  is based on the reference quantity of 1 microinch per second.

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Offsite sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible groundborne noise or vibration.

## **Existing Noise Conditions**

### Ambient Noise Levels

To determine the existing noise level at the LAC, noise measurements have been taken in the vicinity of the Project Site. The field survey noted that noise within the area of the Project Site is generally characterized by vehicular traffic on Carson Street, Clark Avenue, Harvey Way, and Faculty Avenue. Other noises are related to yard maintenance, pets, pedestrians, and parking lot activities.

Depending upon how close the proposed improvements are to the surrounding City arterials, traffic noise is generally the dominant noise source on campus. It does, however dissipate at receptors that are more removed from the arterials and in locations where existing buildings provide shielding from the traffic noise. Noise generated by student and general campus maintenance activities are also noticeable but relatively quiet. General outdoor activities that occur throughout LAC include people walking, talking, eating, and studying.

The results of the noise level measurements are presented in Table 3-22. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum  $L_{eq}$  averaged over 1-hour intervals. Table 3-22 also shows the  $L_{eq}$ ,  $L_{max}$ , and  $L_{dn}$ , based on the entire measurement time. A photo index of the noise monitoring sites and the noise monitoring data printouts is included in Appendix C (see pages C-1 to C-17 of Appendix C).

**Table 3-22: Existing (Ambient) Noise Level Measurements at LAC**

Site No.	Site Description	Average (dBA L <sub>eq</sub> )	Maximum (dBA L <sub>eq</sub> )	Min 1-Hour Interval (dBA L <sub>eq</sub> /Time)	Max 1-Hour Interval (dBA L <sub>eq</sub> /Time)	Average (dBA L <sub>dn</sub> )
1	Located on a tree approximately 65 feet east of the Faculty Avenue centerline and 70 feet south of the Village Road centerline.	55.5	89.2	40.7 2:57 a.m.	60.8 12:38 p.m.	58.8
2	Located on the fence of a tennis court approximately 80 feet south of the Carson Street centerline and 110 feet west of the Faculty Avenue centerline	66.8	93.7	54.9 2:42 a.m.	69.8 7:38 a.m.	69.9
3	Located on the bus stop pole in front of Building D, approximately 150 feet west of the Clark Avenue centerline	59.5	88.2	49.3 2:00 a.m.	64.2 5:07 p.m.	63.2
4	Located on the light post in front of Building J approximately 85 feet south of the Harvey Way centerline	57.4	84.2	46.2 2:58 a.m.	61.9 12:02 p.m.	59.9

Source: Vista Environmental, 2017.

### Long Beach Airport

Another source of noise is the Long Beach Municipal Airport. However, as shown in Figure 3-1, the LBCC LAC is located well outside the 65 dB CNEL contour for the airport.

### **3.7.3 Applicable Regulations**

The Proposed Project would be constructed in the City of Long Beach in Los Angeles County, within the State of California. The following subsections present a summary of noise-related regulatory requirements for the 2041 Facilities Master Plan for the LAC Improvements.

#### **Federal Regulations**

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive

sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA). Transit noise is regulated by the federal Urban Mass Transit Administration (UMTA), while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately, that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Although the Proposed Project is not under the jurisdiction of the FTA, the FTA is the only agency that has defined what constitutes a significant noise impact from implementing a project. The FTA recommends developing construction noise criteria on a project-specific basis that utilizes local noise ordinances if possible. Project construction noise criteria should take into account the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land uses. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings for a detailed construction noise assessment are provided below in Table 3-23.

**Table 3-23: FTA Construction Noise Criteria**

Land Use	Day (dBA Leq(8-hour))	Night (dBA Leq(8-hour))	30-Day Average (dBA Ldn)
Residential	80	70	75 <sup>1</sup>
Commercial	85	85	80 <sup>2</sup>
Industrial	90	90	85 <sup>2</sup>

Notes:

<sup>1</sup> In urban areas with very high ambient noise levels (Ldn > 65 dB), Ldn from construction operations should not exceed existing ambient +10 dB

<sup>2</sup> 24-hour Leq not Ldn

Source: Federal Transit Administration, 2006.

Table 3-24 provides the thresholds of permanent noise level increase at the project level utilized by the FTA. As shown in Table 3-24, the allowable cumulative noise level increase created from a project would range from 0 to 7 dBA, which is based on the existing (ambient) noise levels in the project vicinity. The justification for the sliding scale is that people already exposed to high levels of noise should be expected to tolerate only a small increase in the amount of noise in their community. In contrast, if the existing noise levels are quite low, it is reasonable to allow a greater change in the community noise for the equivalent difference in annoyance.

**Table 3-24: FTA Project Effects on Cumulative Noise Exposure**

Existing Noise Exposure (dBA L <sub>eq</sub> or L <sub>dn</sub> )	Allowable Noise Impact Exposure dBA L <sub>eq</sub> or L <sub>dn</sub>		
	Project Only	Combined	Noise Exposure Increase
45	51	52	+7
50	53	55	+5
55	55	58	+3
60	57	62	+2
65	60	66	+1
70	64	71	+1
75	65	75	0

Source: Federal Transit Administration, 2006.

## State Regulations

### Noise Standards

#### *California Department of Health Services Office of Noise Control*

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

#### *California Noise Insulation Standards*

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

#### *Government Code Section 65302*

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

#### *California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise*

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for

vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

#### *California Vehicle Code Section 38365-38380 – Off-Road Vehicle Noise*

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California: 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

#### Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

Caltrans issued the *Transportation- and Construction-Induced Vibration Guidance Manual* in 2004. The manual provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. However, this manual is also used as a reference point by many lead agencies and CEQA practitioners throughout California, as it provides numeric thresholds for vibration impacts. Thresholds are established for continuous (construction-related) and transient (transportation-related) sources of vibration, which found that the human response becomes distinctly perceptible at 0.25 inch per second PPV for transient sources and 0.04 inch per second PPV for continuous sources.

#### **Local Regulations – City of Long Beach**

The City of Long Beach General Plan and Municipal Code establishes the following applicable policies related to noise and vibration.

#### City of Long Beach General Plan

Table 3-25 identifies the standards for transportation noise sources as listed in the Noise Element for the City of Long Beach General Plan.

**Table 3-25: City of Long Beach Noise Element Standards**

Major Land Use Type	Exterior			Interior L <sub>dn</sub>
	Maximum Single Hourly Peak	L10 <sup>a</sup>	L50 <sup>b</sup>	
All noise-sensitive land-uses (residential, school, hospital, etc.) 7:00 a.m. – 10:00 p.m.	70 dB(A)	55 dB(A)	45 dB(A)	45 dB(A)
All noise-sensitive land uses (residential, school, hospital, etc.) 10:00 p.m. – 7:00 a.m.	60 dB(A)	45 dB(A)	35 dB(A)	35 dB(A)
Commercial (anytime)	75 dB(A)	65 dB(A)	55 dB(A)	N/A
Industrial (anytime)	85 dB(A)	70 dB(A)	60 dB(A)	N/A

Notes:

a) Noise levels exceeded 10% of the time

b) Noise levels exceeded 50% of the time

Source: City of Long Beach General Plan Noise Element.

#### City of Long Beach Municipal Code

The City's Municipal Code identifies standards for noise intrusion from non-transportation sources within various Noise Districts. LBCC LAC is located in District One. Table 3-26 summarizes the applicable standards in Noise District One.

**Table 3-26: City of Long Beach Exterior Noise Ordinance Standards**

Noise level that may not be exceeded for more than...	Daytime <sup>a</sup>	Nighttime <sup>a</sup>
	7 a.m. – 10 p.m.	10 p.m. – 7 a.m.
30 minutes in any hour	50 dB(A)	45 dB(A)
15 minutes in any hour	55 dB(A)	50 dB(A)
5 minutes in any hour	60 dB(A)	55 dB(A)
1 minute in any hour	65 dB(A)	60 dB(A)
Any time	70 dB(A)	65 dB(A)

Notes:

a) In the event that the alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the specified noise limits are reduced by 5 dB(A).

Source: City of Long Beach Municipal Code Chapter 8.80.160.

Section 8.80.202 of the City's Noise Ordinance regulates noise from construction activities. These regulations limit the permissible hours of construction to between 7:00 a.m. and 7:00 p.m. on weekdays or federal holidays and between 9:00 a.m. and 6:00 p.m. on Saturdays. Construction is generally prohibited on Sundays. The Noise Ordinance also limits hours of operation for mechanically powered tools (e.g., saws, sanders, drills, grinders, lawnmowers, and garden tools) from 7:00 a.m. to 10:00 p.m. Leaf blowers have more stringent standards and can only be used between 8:00 a.m. and 8:00 p.m. on weekdays, 9:00 a.m. and 5:00 p.m. on Saturdays, and 11:00 a.m. and 5:00 p.m. on Sundays.

The Noise Ordinance also provides standards for vibration (Section 8.80.200(G)). It is a violation to operate or permit the operation of any device that creates vibration that is above the vibration perception threshold of an individual at or beyond the property boundary of the source. The Noise Ordinance defines the perception threshold as 0.001 g's in the frequency range of 0-30 hertz and 0.003 g's in the frequency range between 30 and 100 hertz. It should be noted that this perception threshold is only applicable to vibration caused during the operation of the Proposed Project.

### **3.7.4      Impacts and Mitigation**

**Impact 3.7-1:** Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies.

The Proposed Project may generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the General Plan or Noise Ordinance or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the construction and operations of the Proposed Project and compares the noise levels to the City standards.

#### Construction-Related Noise

Construction activities for the Proposed 2041 Facilities Master Plan are anticipated to include demolition of 109,156 square feet of existing structures, grading up to 21 acres of the LAC, building construction of 246,018 feet of new building space and renovating 387,341 square feet of building space, paving the onsite roads and parking areas, and applying architectural coatings. Noise impacts from construction activities associated with the Proposed Project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors to the Project Site are single-family homes located as near as 130 feet from the areas where construction may occur.

Section 8.80.202 of the City's Noise Ordinance restricts construction activities from occurring between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, between 6:00 p.m. and 9:00 a.m. on Saturdays, or anytime on Sundays or federal holidays. Through adherence to the construction-related noise requirements provided in the City's Noise Ordinance, construction-related noise levels would not exceed any noise standards established in the general plan or noise ordinance. However, the City construction noise standards do not provide any limits to the noise levels that may be created from construction activities; and, even with adherence to the City standards, the resultant construction noise levels may result in a significant substantial temporary noise increase to the nearby sensitive receptors.

In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the FTA construction noise criteria thresholds detailed above in Section 3.7.3 have been utilized, which show that a significant construction noise impact would occur if construction noise exceeds 80 dBA during the daytime at any of the nearby homes.

Construction noise impacts to the nearby sensitive receptors have been calculated through the use of the Roadway Construction Noise Model (RCNM) and the parameters and assumptions detailed in Appendix C. The results are shown below in Table 3-27, and the RCNM printouts are provided in Appendix C (see pages C-18 to C-35 of Appendix C).

**Table 3-27 Worst Case Construction Noise Levels at Nearest Receptors**

Construction Phase	Homes on West Side of Faculty Avenue		Homes on North Side of Carson Street		Homes on East Side of Clark Avenue		Homes on North Side of Harvey Way	
	Distance (feet)	Noise Level (dBA Ldn)	Distance (feet)	Noise Level (dBA Ldn)	Distance (feet)	Noise Level (dBA Ldn)	Distance (feet)	Noise Level (dBA Ldn)
Demolition	160	74	135	76	260	70	230	71
Grading	160	74	135	75	260	71	230	71
Building Construction	160	72	135	73	230	70	180	72
Paving	160	68	135	69	260	65	230	66
Architectural Coatings	160	64	135	65	230	60	180	63
<b>Noise Threshold</b>		<b>80</b>		<b>80</b>		<b>80</b>		<b>80</b>

Source: RCNM, Federal Highway Administration, 2006 (See pages C-18 to C-35 of Appendix C).

Table 3-27 shows that the greatest noise impact would occur during the demolition phase of construction at the homes on the north side of Carson Street with a noise level as high as 76 dBA, which is within the FTA’s construction noise threshold of 80 dBA. Through adherence to the noise limitation of allowable construction times provided in Section 8.80.202 of the City’s Municipal Code, the Proposed Project would not create a substantial temporary increase in ambient noise levels from construction of the proposed Project. Therefore, construction-related noise impacts would be less than significant.

#### Operational-Related Noise

The implementation of the proposed 2041 Facilities Master Plan would include development of institutional junior college land uses.

Potential noise impacts associated with the operations of the Proposed Project would be from Project-generated vehicular traffic on the nearby roadways and from onsite activities, which have been analyzed separately below.

#### Roadway Vehicular Noise

Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. The level of traffic noise depends on three primary factors: (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The Proposed Project does not propose any uses that would require a substantial number of truck trips and would not alter the speed limit on any existing roadway. The Proposed Project’s potential offsite noise impacts have been focused on the noise impacts associated with the change of volume of traffic that would occur with development of the Proposed Project.

The City of Long Beach General Plan Noise Element provides the goal of diminishing the transportation roar that impacts on the population. However, neither the General Plan nor the *CEQA Guidelines* define what constitutes a “substantial permanent increase to ambient noise levels;” as such, this impact analysis has utilized guidance from the Federal Transit Administration for a moderate impact that has been detailed above in Table 3-27.

The potential offsite traffic noise impacts created by the ongoing operations of the Proposed Project have been analyzed through utilization of the FHWA model. The FHWA model noise calculation spreadsheets that show the parameters utilized in the FHWA model are provided in Appendix C (see pages C-36 to C-71 of Appendix C). The Proposed Project’s offsite traffic noise impacts have been analyzed for both the existing and year 2041 conditions, which are discussed below.

*Existing Conditions*

The Proposed Project’s potential offsite noise impacts have been calculated through a comparison of the Existing scenario with the Existing plus Project scenario. The results of this comparison are shown in Table 3-28.

**Table 3-28 Existing Year Project Traffic Noise Contributions**

Roadway	Segment	dBA L <sub>dn</sub> at Nearest Receptor <sup>a</sup>			Increase Threshold <sup>b</sup>
		Existing	Existing With Project	Project Contribution	
Cherry Avenue	North of Carson Street	65.9	65.9	0.0	+1 dBA
Cherry Avenue	South of Carson Street	65.9	65.9	0.0	+1 dBA
Paramount Boulevard	North of Carson Street	66.0	66.1	0.1	+1 dBA
Lakewood Boulevard	South of Del Amo Boulevard	65.1	65.2	0.1	+1 dBA
Lakewood Boulevard	North of Harvey Way	74.0	74.2	0.2	+1 dBA
Lakewood Boulevard	North of Carson Street	70.1	70.3	0.2	+1 dBA
Faculty Avenue	North of Carson Street	53.0	53.3	0.3	+5 dBA
Clark Avenue	South of Del Amo Boulevard	64.8	64.9	0.1	+2 dBA
Clark Avenue	North of Harvey Way	64.1	64.3	0.2	+2 dBA
Clark Avenue	North of Carson Street	65.2	65.5	0.3	+1 dBA
Clark Avenue	South of Carson Street	65.1	65.5	0.4	+1 dBA
Clark Avenue	South of Lew Davis Street	64.5	64.7	0.2	+2 dBA
Clark Avenue	South of Conant Street	61.8	62.1	0.3	+2 dBA
Clark Avenue	South of Wardlow Street	62.4	62.6	0.2	+2 dBA
Clark Avenue	South of Spring Street	64.4	64.5	0.1	+2 dBA
Bellflower Boulevard	North of Carson Street	64.9	65.0	0.1	+2 dBA
Bellflower Boulevard	South of Wardlow Road	64.2	64.3	0.1	+2 dBA
Bellflower Boulevard	South of Spring Street	65.9	65.9	0.0	+1 dBA
Del Amo Boulevard	West of Lakewood Boulevard	71.5	71.5	0.0	+1 dBA
Del Amo Boulevard	East of Clark Avenue	69.3	69.4	0.1	+1 dBA
Harvey Way	East of Lakewood Boulevard	57.7	57.9	0.2	+3 dBA
Harvey Way	East of Clark Avenue	56.9	57.2	0.3	+3 dBA
Carson Street	West of Cherry Avenue	68.6	68.7	0.1	+1 dBA
Carson Street	West of Paramount Boulevard	65.1	65.3	0.2	+1 dBA
Carson Street	West of Lakewood Boulevard	63.2	63.4	0.2	+2 dBA
Carson Street	West of Faculty Avenue	67.9	68.1	0.2	+1 dBA
Carson Street	East of Clark Avenue	67.9	68.1	0.2	+1 dBA
Carson Street	East of Bellflower Boulevard	69.4	69.5	0.1	+1 dBA
Carson Street	East of Woodruff Avenue	64.7	64.8	0.1	+2 dBA
Conant Street	East of Clark Avenue	45.7	46.3	0.6	+7 dBA

**Table 3-28 Existing Year Project Traffic Noise Contributions**

Roadway	Segment	dBA L <sub>dn</sub> at Nearest Receptor <sup>a</sup>			Increase Threshold <sup>b</sup>
		Existing	Existing With Project	Project Contribution	
Wardlow Road	East of Clark Avenue	65.3	65.5	0.2	+1 dBA
Wardlow Road	East of Bellflower Boulevard	64.6	64.7	0.1	+2 dBA
Spring Street	East of Clark Avenue	63.2	63.3	0.1	+2 dBA
Spring Street	East of Bellflower Boulevard	63.5	63.6	0.1	+2 dBA

Notes:

- Distance to nearest residential uses are shown in Appendix C. Noise levels do not take into account existing noise barriers.
- Increase Threshold obtained from the FTA's allowable noise impact exposures.

Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108 (see pages C-36 to C-53 of Appendix C).

Table 3-28 shows that for the existing conditions, the Proposed Project's permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the FTA's allowable increase thresholds detailed above. Therefore, the Proposed Project would not result in a substantial permanent increase in ambient noise levels for the existing conditions. Impacts would be less than significant.

#### *Year 2041 Conditions*

The Proposed Project's potential offsite noise impacts have been calculated through a comparison of the year 2041 without Project scenario to the year 2041 with Project scenario. The results of this comparison are shown in Table 3-29.

**Table 3-29 Year 2041 Project Traffic Noise Contributions**

Roadway	Segment	dBA L <sub>dn</sub> at Nearest Receptor <sup>a</sup>			Increase Threshold <sup>b</sup>
		2041 No Project	2041 With Project	Project Contribution	
Cherry Avenue	North of Carson Street	66.6	66.6	0.0	+1 dBA
Cherry Avenue	South of Carson Street	66.6	66.6	0.0	+1 dBA
Paramount Boulevard	North of Carson Street	66.7	66.8	0.1	+1 dBA
Lakewood Boulevard	South of Del Amo Boulevard	65.8	66.0	0.2	+1 dBA
Lakewood Boulevard	North of Harvey Way	74.8	75.0	0.2	+1 dBA
Lakewood Boulevard	North of Carson Street	70.9	71.0	0.1	+1 dBA
Faculty Avenue	North of Carson Street	53.7	54.0	0.3	+5 dBA
Clark Avenue	South of Del Amo Boulevard	65.5	65.6	0.1	+1 dBA
Clark Avenue	North of Harvey Way	64.8	65.0	0.2	+2 dBA
Clark Avenue	North of Carson Street	66.0	66.2	0.2	+1 dBA
Clark Avenue	South of Carson Street	65.8	66.1	0.3	+1 dBA
Clark Avenue	South of Lew Davis Street	65.2	65.4	0.2	+1 dBA
Clark Avenue	South of Conant Street	62.5	62.8	0.3	+2 dBA
Clark Avenue	South of Wardlow Street	63.1	63.3	0.2	+2 dBA
Clark Avenue	South of Spring Street	65.2	65.3	0.1	+1 dBA
Bellflower Boulevard	North of Carson Street	65.1	65.2	0.1	+1 dBA

**Table 3-29 Year 2041 Project Traffic Noise Contributions**

Roadway	Segment	dBA Ldn at Nearest Receptor <sup>a</sup>			Increase Threshold <sup>b</sup>
		2041 No Project	2041 With Project	Project Contribution	
Bellflower Boulevard	South of Wardlow Road	64.9	64.9	0.0	+2 dBA
Bellflower Boulevard	South of Spring Street	66.6	66.6	0.0	+1 dBA
Del Amo Boulevard	West of Lakewood Boulevard	72.3	72.3	0.0	+1 dBA
Del Amo Boulevard	East of Clark Avenue	70.1	70.1	0.0	+1 dBA
Harvey Way	East of Lakewood Boulevard	58.4	58.5	0.1	+3 dBA
Harvey Way	East of Clark Avenue	57.6	57.9	0.3	+3 dBA
Carson Street	West of Cherry Avenue	69.3	69.4	0.1	+1 dBA
Carson Street	West of Paramount Boulevard	65.8	66.0	0.2	+1 dBA
Carson Street	West of Lakewood Boulevard	63.9	64.1	0.2	+2 dBA
Carson Street	West of Faculty Avenue	68.7	68.8	0.1	+1 dBA
Carson Street	East of Clark Avenue	68.6	68.8	0.2	+1 dBA
Carson Street	East of Bellflower Boulevard	70.1	70.3	0.2	+1 dBA
Carson Street	East of Woodruff Avenue	65.4	65.5	0.1	+1 dBA
Conant Street	East of Clark Avenue	46.4	46.9	0.5	+7 dBA
Wardlow Road	East of Clark Avenue	66.0	66.2	0.2	+1 dBA
Wardlow Road	East of Bellflower Boulevard	65.3	65.4	0.1	+2 dBA
Spring Street	East of Clark Avenue	64.0	64.0	0.0	+2 dBA
Spring Street	East of Bellflower Boulevard	64.2	64.3	0.1	+2 dBA

Notes:

- a. Distance to nearest residential uses are shown in Appendix C. Noise levels do not take into account existing noise barriers.
- b. Increase Threshold obtained from the FTA's allowable noise impact exposures.

Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108 (see pages C-54 to C-71 of Appendix C).

Table 3-29 shows that for the year 2041 conditions, the Proposed Project's permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the FTA's allowable increase thresholds detailed above. Therefore, the Proposed Project would not result in a substantial permanent increase in ambient noise levels for the year 2041 conditions. Impacts would be less than significant.

Therefore, roadway vehicle noise impacts resulting from the ongoing operation of the Proposed Project would be less than significant.

Onsite Noise Sources

The operation of the Proposed Project would create an increase in onsite noise levels from rooftop mechanical equipment, parking lot activities, delivery truck activities, and from activities at the proposed swim pool facility and soccer fields adjacent to Carson Street.

Section 8.80.160 of the City's Municipal Code limits noise levels at the nearby residential properties to 50 dBA between 7:00 a.m. and 10:00 p.m. and 45 dBA between 10:00 p.m. and 7:00 a.m. the following day.

In order to determine the noise impacts from rooftop mechanical equipment, parking lot activities, and delivery truck activities and from activities at the proposed swim pool facility and soccer fields, reference noise measurements were taken of each noise source and are shown below in Table 3-30. Table 3-30 also shows the anticipated noise level from each source at the nearest offsite receptors, which were analyzed based on the propagation rates for point sources of 6 dB per doubling of distance (i.e., if the noise level is 56 dB at 50 feet from the source it would be 50 dB at 100 feet). It should also be noted that the distances utilized in the reference noise measurements vary between 5 feet and 50 feet, so in some cases the reference noise level may be higher; but, depending on the distances it was taken, it may result in a lesser noise impact at the nearby homes. The operational reference noise measurements are shown in Appendix C (see pages C-72 to C-85 of Appendix C).

**Table 3-30: Operational Noise Levels at the Nearest Receptors Prior to Mitigation**

Noise Source	Homes on West Side of Faculty Avenue		Homes on North Side of Carson Street		Homes on East Side of Clark Avenue		Homes on North Side of Harvey Way	
	Distance (feet)	Noise Level (dBA Leq)	Distance (feet)	Noise Level (dBA Leq)	Distance (feet)	Noise Level (dBA Leq)	Distance (feet)	Noise Level (dBA Leq)
Rooftop Equipment <sup>1</sup>	170	42	200	41	240	39	190	41
Parking Lot <sup>2</sup>	85	38	140	34	100	37	90	38
Truck Delivery <sup>3</sup>	150	41	130	42	220	37	180	39
Swim Pool Facility <sup>4</sup>	N/A	N/A	140	<b>58</b>	N/A	N/A	N/A	N/A
Soccer Fields <sup>5</sup>	N/A	N/A	140	<b>30</b>	N/A	N/A	N/A	N/A
<b>Combined Noise Levels</b>		<b>45</b>		<b>58</b>		<b>43</b>		<b>44</b>
<b>City Noise Standards (Day/Night)</b>		<b>50/45</b>		<b>50/45</b>		<b>50/45</b>		<b>50/45</b>
<b>Exceeds City Standards (Day/Night)?</b>		<b>No/No</b>		<b>Yes/Yes</b>		<b>No/No</b>		<b>No/No</b>

Notes:

- <sup>1</sup> The rooftop equipment noise level was based on a noise measurement 10 feet from an operational rooftop HVAC unit that measured 66.6 dBA Leq (see pages C-72 and C-73 of Appendix C).
- <sup>2</sup> The parking lot noise level was based on a noise measurement 5 feet from a commercial parking lot that produced a noise level of 63.1 dBA Leq (see pages C-74 and C-75 of Appendix C).
- <sup>3</sup> The truck delivery noise level was based on a noise measurement 30 feet from a truck unloading that produced a noise level of 54.8 dBA Leq (see pages C-76 and C-77 of Appendix C).
- <sup>4</sup> The swim pool facility noise level was based on a noise measurement 30 feet from the existing LAC pool hosting a swim meet that produced a noise level of 71.8 dBA Leq (see pages C-78 and C-79 of Appendix C).
- <sup>5</sup> The soccer fields noise level was based on a noise measurement 5 feet from both JV and Varsity soccer games occurring at Bellflower High School that produced a noise level of 58.9 dBA Leq (see pages C-82 to C-85 of Appendix C).

Source: Noise calculation methodology from Caltrans, 2013.

Table 3-30 shows that the combined noise levels at the homes located on the north side of Carson Street across from the proposed recreational swimming pool facilities would be 58 dBA Leq, which would exceed both the City's daytime and nighttime noise standards of 50 dBA Leq and 45 dBA Leq, respectively. This

would result in a significant impact. Table 3-30 also shows that the combined levels at all other nearby homes would be within the City’s daytime and nighttime noise standards.

As shown above in Table 3-30, the noise source that creates the highest noise levels is the proposed swim pool facility. Mitigation Measure N-1 is provided which requires the construction of a 16-foot-high wall along the northern edge of the swimming pool area that runs adjacent to Carson Street. Mitigation Measure N-2 is also provided which prohibits swim or water polo competitions from occurring between the hours of 10:00 p.m. and 7:00 a.m.

The operational noise levels at the nearby residential receptors have been recalculated based on the implementation of Mitigation Measure N-1 and the results are shown below. Table 3-31 shows that with implementation of Mitigation Measure N-1, the combined noise level at the homes on the north side of Carson Street would be reduced to 49 dBA, which would be within the City’s daytime standard of 50 dBA. Additionally, with implementation of Mitigation Measure N-2, which prohibits swim and water polo events at the proposed recreational swimming pool between the hours of 10:00 p.m. and 7:00 a.m., the combined noise level at the homes on the north side of Carson Street would be reduced to within the City’s nighttime standard of 45 dBA. Therefore, with implementation of Mitigation Measures N-1 and N-2, the Proposed Project would not expose persons to or generate noise levels in excess of standards in the Noise Ordinance from onsite sources. Impacts would be less than significant.

**Table 3-31: Mitigated Operational Noise Levels at the Nearest Receptors**

Noise Source	Homes on West Side of Faculty Avenue		Homes on North Side of Carson Street		Homes on East Side of Clark Avenue		Homes on North Side of Harvey Way	
	Distance (feet)	Noise Level (dBA Leq)	Distance (feet)	Noise Level (dBA Leq)	Distance (feet)	Noise Level (dBA Leq)	Distance (feet)	Noise Level (dBA Leq)
Rooftop Equipment <sup>1</sup>	170	42	200	41	240	39	190	41
Parking Lot <sup>2</sup>	85	38	140	34	100	37	90	38
Truck Delivery <sup>3</sup>	150	41	130	42	220	37	180	39
Swim Pool Facility <sup>4</sup>	N/A	N/A	140	48	N/A	N/A	N/A	N/A
Soccer Fields <sup>5</sup>	N/A	N/A	140	<b>30</b>	N/A	N/A	N/A	N/A
<b>Combined Noise Levels</b>		45		49		43		44
<b>City Noise Standards (Day/Night)</b>		<b>50/45</b>		<b>50/45</b>		<b>50/45</b>		<b>50/45</b>
<b>Exceeds City Standards (Day/Night)?</b>		<b>No/No</b>		<b>No/Yes<sup>6</sup></b>		<b>No/No</b>		<b>No/No</b>

Notes:

- <sup>1</sup> The rooftop equipment noise level was based on a noise measurement 10 feet from an operational rooftop HVAC unit that measured 66.6 dBA Leq (see pages C-72 and C-73 of Appendix C).
- <sup>2</sup> The parking lot noise level was based on a noise measurement 5 feet from a commercial parking lot that produced a noise level of 63.1 dBA Leq (see pages C-74 and C-75 of Appendix C).
- <sup>3</sup> The truck delivery noise level was based on a noise measurement 30 feet from a truck unloading that produced a noise level of 54.8 dBA Leq (see pages C-76 and C-77 of Appendix C).

**Table 3-31: Mitigated Operational Noise Levels at the Nearest Receptors**

- <sup>4</sup> The mitigated swim pool facility noise level was based on a noise measurement 40 feet from the existing LAC pool and 10 feet outside 16-foot-high wall for pool hosting a swim meet that produced a noise level of 58.4 dBA Leq (see pages C-80 and C-81 of Appendix C).
- <sup>5</sup> The soccer fields noise level was based on a noise measurement 5 feet from both a JV and a Varsity soccer games occurring at Bellflower High School that produced a noise level of 58.9 dBA Leq (see pages C-82 to C-85 of Appendix C).
- <sup>6</sup> Mitigation Measure 2 is provided that would restrict competitions from occurring at the Swim Pool Facility between 10 p.m. and 7 a.m., which would reduce the nighttime noise level to within the City noise standard of 45 dBA.
- Source: Noise calculation methodology from Caltrans, 2013.

### **Mitigation Measures**

#### *Mitigation Measure N-1*

The site plan and project design for the Swim Pool Facility shall include construction of a minimum 16-foot-high wall along the northern edge of the Swim Pool Facility that is adjacent to Carson Street. There shall be no cut outs or openings in the noise barrier.

#### *Mitigation Measure N-2*

The LBCCD shall restrict any swimming or water polo competitions from occurring in the Swim Pool Facility between the hours of 10:00 p.m. and 7:00 a.m. This restriction shall not apply to swim and water polo practices and other non-intensive uses of the Swim Pool Facility.

### **Residual Impacts**

Impacts would be less than significant with implementation of Mitigation Measures N-1 and N-2.

**Impact 3.7-2:** Generation of excessive groundborne vibration or groundborne noise levels.

The Proposed Project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the Proposed Project.

#### Construction-Related Vibration Impacts

Construction activities for the Proposed 2041 Facilities Master Plan are anticipated to include demolition of 109,156-square feet of existing structures, grading up to 21 acres of the LAC, building construction of 264,018 feet of new building space and renovating 387,341-square feet of building space, paving the onsite roads and parking areas, and applying architectural coatings. Vibration impacts from construction activities associated with the Proposed Project would typically be created from the operation of heavy off-road equipment, such as bulldozers, excavators, scrapers, vibrator rollers, etc. The nearest sensitive receptors to the project site are single-family homes located as near as 130 feet from the areas where construction may occur.

Section 8.80.200(G) of the City's Municipal Code limits vibration impacts to the nearby single-family homes to 0.001 g's in the frequency range of 0 to 30 hertz and 0.003 g's in the frequency range of 30 to 100 hertz. The acceleration of gravity (g), which is 32.2 feet per second can be converted into peak particle

velocity by multiplying 0.001 g's by 32.2 and then converting to inch per second, which results in a threshold of 0.386 inch per second PPV.

**Table 3-32: Typical Vibration from Construction Equipment and Vibration Levels at Nearest Homes**

Equipment		Peak Particle Velocity (inches/second)	
		Reference Level at 25 feet	At Nearest Homes (130 Feet)
Pile Driver (Impact)	Upper Range	1.518	0.2476
	Typical	0.644	0.1050
Pile Driver (Sonic)	Upper Range	0.734	0.1197
	Typical	0.170	0.0277
Clam Shovel Drop (Slurry Wall)		0.202	0.0329
Vibratory Roller		0.210	0.0342
Hoe Ram		0.089	0.0145
Large Bulldozer		0.089	0.0145
Caisson Drill		0.089	0.0145
Loaded Trucks		0.076	0.0124
Jackhammer		0.035	0.0057
Small Bulldozer		0.003	0.0005

Source: Federal Transit Administration, 2006.

Table 3-32 shows that the highest vibration level at the single-family homes located as near as 130 feet from proposed construction activities would occur if an impact pile driver were to be utilized during construction that would create a vibration level as high as 0.2476 inch per second PPV. Table 3-32 also shows that, based on typical propagation rates, all construction equipment vibration levels at the nearby single-family homes would be within the City's 0.3864 in per second PPV vibration standard. Impacts would be less than significant.

#### Operational-Related Vibration Impacts

The Proposed Project would consist of the development of institutional junior college uses. The only anticipated source of vibration would be from the operation of delivery trucks on the LAC. The nearest sensitive receptors are single-family homes located as near as 125 feet from where delivery trucks are anticipated to operate on the LAC site.

Section 8.80.200(G) of the City's Municipal Code limits vibration impacts to the nearby single-family homes to 0.001 g's in the frequency range of 0 to 30 hertz and 0.003 g's in the frequency range of 30 to 100 hertz. The acceleration of gravity (g), which is 32.2 feet per second, can be converted into peak particle velocity by multiplying 0.001 g's by 32.2 and then converting to inch per second, which results in a threshold of 0.386 inch per second PPV.

Caltrans has done extensive research on vibration levels created along freeways and State Routes, and their vibration measurements of roads have never exceeded 0.08 inch per second PPV at 15 feet from the center of the nearest lane with the worst combinations of heavy trucks. Truck loading activities would occur onsite as near as 125 feet from the nearest home. Based on typical propagation rates, the vibration level at the nearest home would be 0.01 inch per second PPV. This would be within the City's vibration

standard of 0.386 inch per second PPV. Therefore, vibration created from operation of the Proposed Project would be below the threshold of perception at the nearest offsite resident. Impacts would be less than significant.

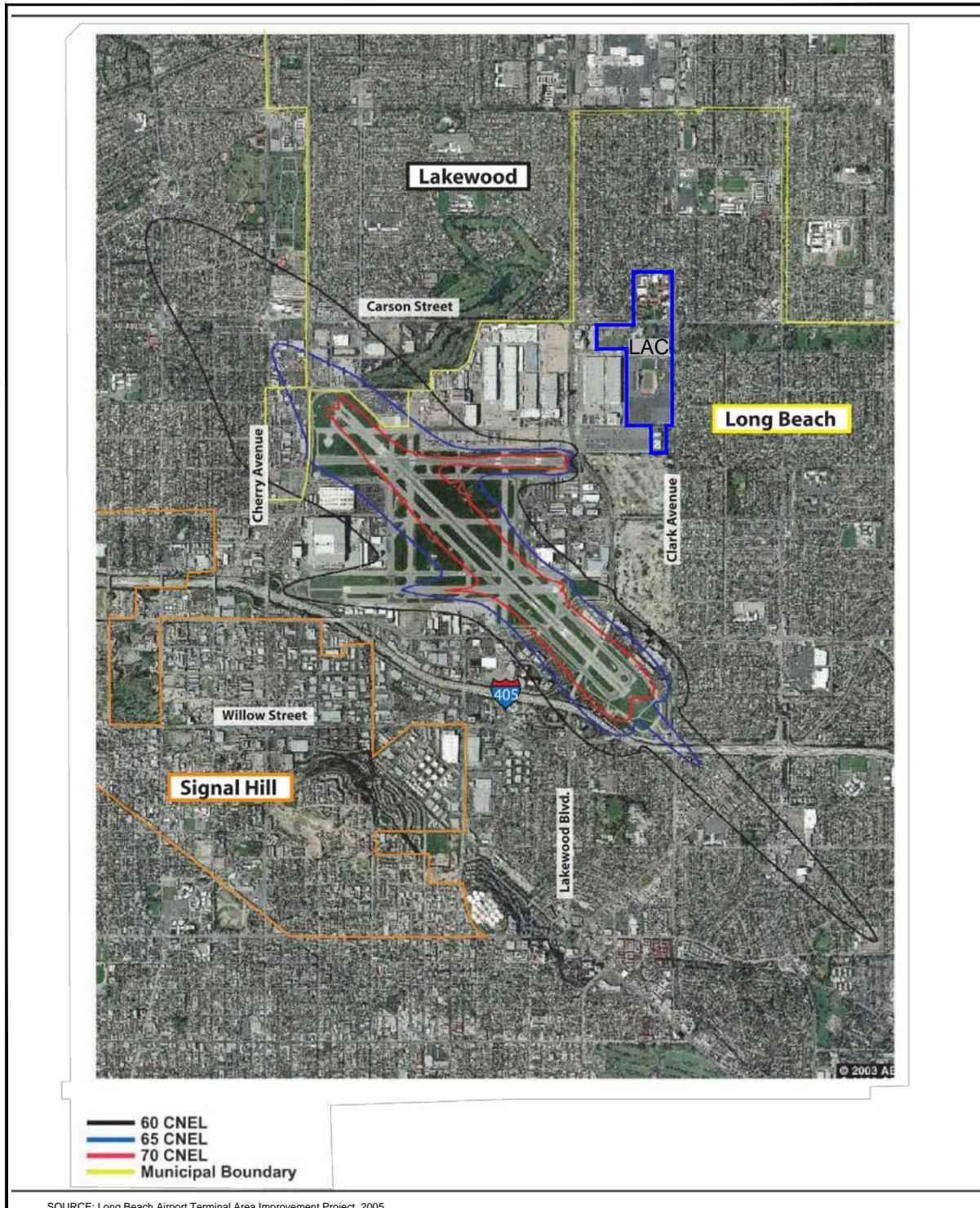
***Mitigation Measures***

No mitigation measures are necessary.

***Residual Impacts***

Impacts would be less than significant.

Figure 3-1: Long Beach Airport Noise Contours



### 3.8 TRANSPORTATION

#### 3.8.1 Introduction

This transportation section summarizes the results of a Traffic Study conducted for the proposed LBCCD 2041 Facilities Master Plan LAC Improvements, located in the City of Long Beach. This section focuses on evaluating the operating conditions at key study intersections within the Project vicinity, including estimating trip-generating potential of the Proposed Project and forecasting future operating conditions without and with the Proposed Project. The methodology, findings, and conclusions of the Traffic Impact Analysis (see Appendix D for the complete analysis) are presented herein. A total of 21 roadway intersections, or study intersections, in the vicinity of the Proposed Project were analyzed to assess the effects of the trips that would be generated by the Proposed Project. The City of Long Beach was consulted to obtain consensus on the traffic scope, methodology, and assumptions. The traffic impact analysis also incorporated both cumulative traffic growth from specific development projects in the surrounding area and overall ambient growth in background traffic.

As noted in the IS (see Appendix A), potential impacts related to consistency with *CEQA Guidelines* Section 15064.3, increase in hazards, and emergency access were found to have less-than-significant impacts. Therefore, these issues are not discussed in the SEIR. Refer to Appendix A, Initial Study, for details on these environmental assessments.

#### 3.8.2 Existing Environmental Setting

##### Project Study Area

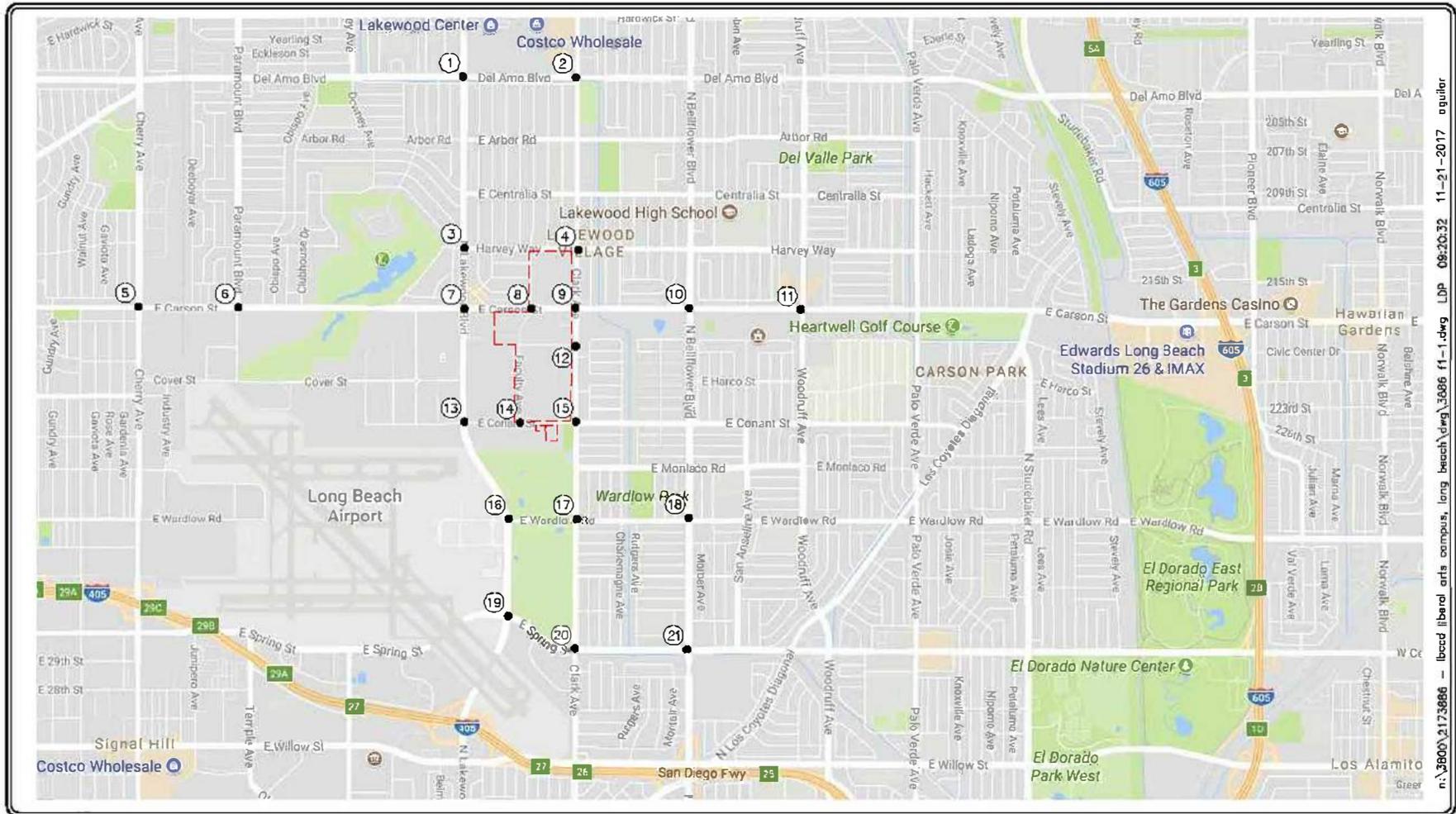
For the Project traffic impact analysis, 21 study intersections were defined for the overall study area. Table 3-25 lists the study intersections.

**Table 3-33: Project Study Intersections**

1. Lakewood Boulevard at Del Amo Boulevard	12. Clark Avenue at Low Davis Street
2. Clark Avenue at Del Amo Boulevard	13. Lakewood Boulevard at Conant Street
3. Lakewood Boulevard at Harvey Way	14. Faculty Avenue at Conant Street
4. Clark Avenue at Harvey Way	15. Clark Avenue at Conant Street
5. Cherry Avenue at Carson Street	16. Lakewood Boulevard at Wardlow Road
6. Paramount Boulevard at Carson Street	17. Clark Avenue at Wardlow Road
7. Lakewood Boulevard at Carson Street	18. Bellflower Boulevard at Wardlow Road
8. Faculty Avenue at Carson Street	19. Lakewood Boulevard at Spring Street
9. Clark Avenue at Carson Street	20. Clark Avenue at Spring Street
10. Bellflower Boulevard at Carson Street	21. Bellflower Boulevard at Spring Street
11. Woodruff Avenue at Carson Street	

The locations of the study intersections in relation to the Project Site are illustrated on Figure 3-2.

Figure 3-2: Locations of Study Intersections



SOURCE: GOOGLE

KEY

- PROJECT SITE
- = STUDY INTERSECTION

**FIGURE 3-2**

VICINITY MAP  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

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### Existing Traffic Volumes

The Volume-to-Capacity (V/C) and Level of Service (LOS) investigations at these key locations were used to evaluate the potential traffic-related impacts associated with area growth, cumulative projects, and the Proposed Project.

Twenty-one key study intersections have been identified as the locations at which to evaluate existing and future traffic operating conditions. Some portion of potential project-related traffic will pass through each of these intersections, and their analysis will reveal the expected relative impacts of the Project. Existing daily, AM peak-hour and PM peak-hour traffic volumes for the locations evaluated in this report were obtained from daily machine and manual peak-hour turning movement counts conducted by Transportation Studies Inc. in November 2017.

Figures 3-3 and 3-4 illustrate the existing AM and PM peak-hour traffic volumes at the key study intersections evaluated in this report, respectively. Appendix D contains the detailed peak-hour count sheets for the key intersections evaluated in this report.

Table 3-26 summarizes the existing peak-hour service level calculations for the 21 key study intersections based on existing traffic volumes and current street geometrics. Review of Table 3-26 indicates that three of the 21 key study intersections currently operate at an unacceptable LOS during the AM and/or PM peak hours. The remaining 18 key study intersections currently operate at acceptable LOS D or better during the AM and/or PM peak hours.

**Table 3-34: Existing Peak Hour Intersection Capacity Analysis Summary**

Key Intersection	Time Period	Jurisdiction	Existing Traffic Conditions	
			ICU/HCM	LOS
1. Lakewood Boulevard at Del Amo Boulevard	AM	Lakewood	<b>0.905</b>	<b>E</b>
	PM		<b>0.958</b>	<b>E</b>
2. Clark Avenue at Del Amo Boulevard	AM	Lakewood	0.729	C
	PM		0.896	D
3. Lakewood Boulevard at Harvey Way	AM	Lakewood/ Long Beach	0.728	C
	PM		0.803	D
4. Clark Avenue at Harvey Way	AM	Long Beach	0.749	C
	PM		0.819	D
5. Cherry Avenue at Carson Street	AM	Long Beach	0.643	B
	PM		0.791	C
6. Paramount Boulevard at Carson Street	AM	Lakewood	0.600	B
	PM		0.839	D
7. Lakewood Boulevard at Carson Street	AM	Long Beach/ Lakewood	0.623	B
	PM		0.762	C
8. Faculty Avenue at Carson Street	AM	Long Beach	<b>47.7 s/v</b>	<b>E</b>
	PM		<b>40.0 s/v</b>	<b>E</b>
9. Clark Avenue at Carson Street	AM	Long Beach	0.665	B
	PM		0.865	D
10. Bellflower Boulevard at Carson Street	AM	Long Beach/ Lakewood	0.762	C
	PM		<b>0.936</b>	<b>E</b>

**Table 3-34: Existing Peak Hour Intersection Capacity Analysis Summary**

Key Intersection	Time Period	Jurisdiction	Existing Traffic Conditions	
			ICU/HCM	LOS
11. Woodruff Avenue at Carson Street	AM	Long Beach/ Lakewood	0.705	C
	PM		0.853	D
12. Clark Avenue at Lew Davis Street	AM	Long Beach	0.503	A
	PM		0.576	A
13. Lakewood Boulevard at Conant Street	AM	Long Beach	0.611	B
	PM		0.685	B
14. Faculty Avenue at Conant Street	AM	Long Beach	0.419	A
	PM		0.373	A
15. Clark Avenue at Conant Street	AM	Long Beach	0.598	A
	PM		0.545	A
16. Lakewood Boulevard at Wardlow Road	AM	Long Beach	0.608	B
	PM		0.633	B
17. Clark Avenue at Wardlow Road	AM	Long Beach	0.599	A
	PM		0.607	B
18. Bellflower Boulevard at Wardlow Road	AM	Long Beach	0.790	C
	PM		0.863	D
19. Lakewood Boulevard at Spring Street	AM	Long Beach	0.805	D
	PM		0.813	D
20. Clark Avenue at Spring Street	AM	Long Beach	0.659	B
	PM		0.622	B
21. Bellflower Boulevard at Spring Street	AM	Long Beach	0.842	D
	PM		0.765	C

Notes:

s/v = seconds per vehicle

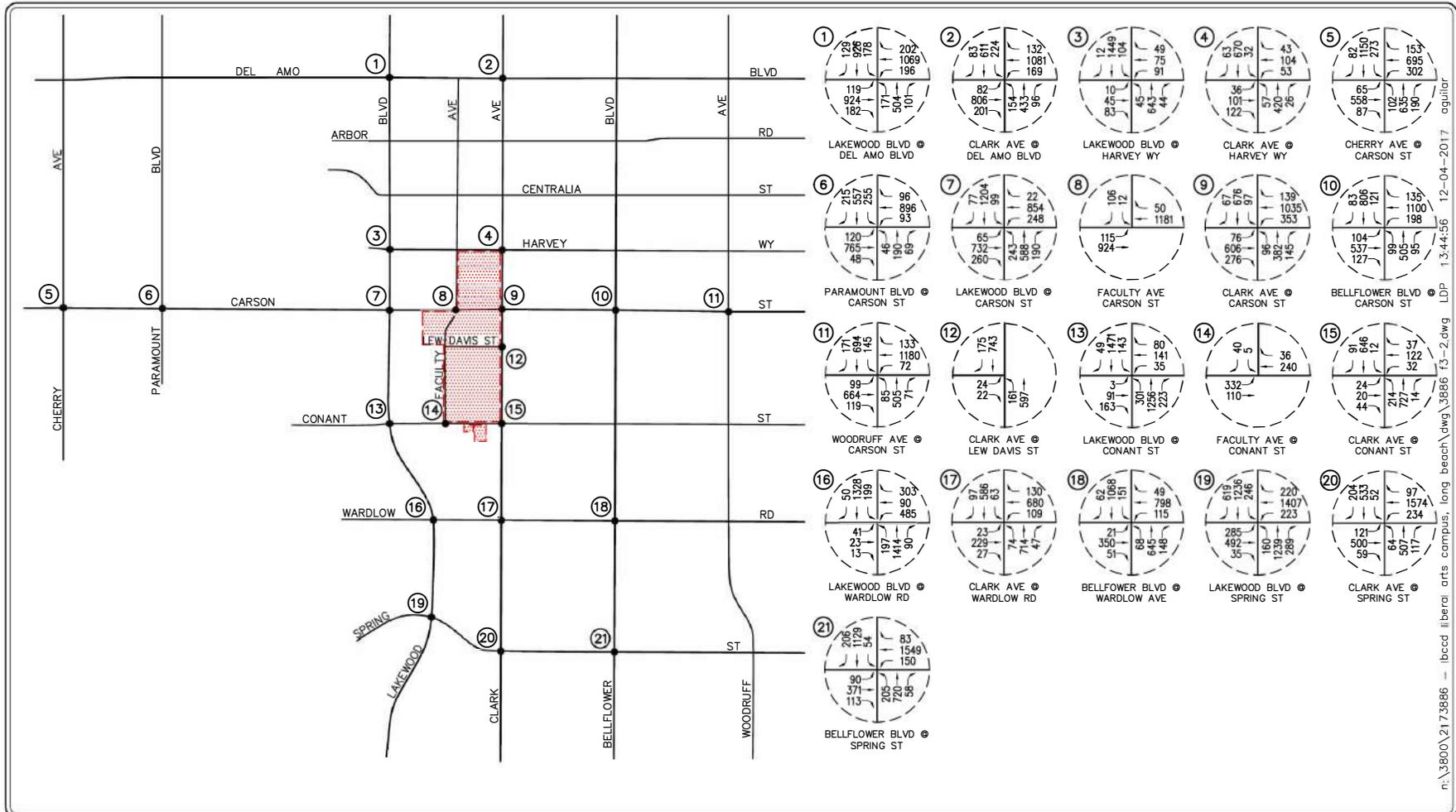
**Bold ICU/LOS or HCM/LOS** values indicate adverse service levels

Under the existing scenario, the data within Table 3-26 indicates that three of the 21 study intersections currently operate at poor LOS values of E or F during weekday peak hours.

- Lakewood Boulevard and Del Amo Boulevard – operates at LOS E in both the AM and PM peak hours.
- Faculty Avenue and Carson Street – operates at LOS E in both the AM and PM peak hours.
- Bellflower Boulevard and Carson Street – operates at LOS E in the PM peak hour.

The existing (Year 2017) peak-hour traffic volumes at the study intersections are provided on Figure 3-3 (AM peak) and Figure 3-4 (PM peak).

Figure 3-3: Existing AM Peak-Hour Traffic Volumes



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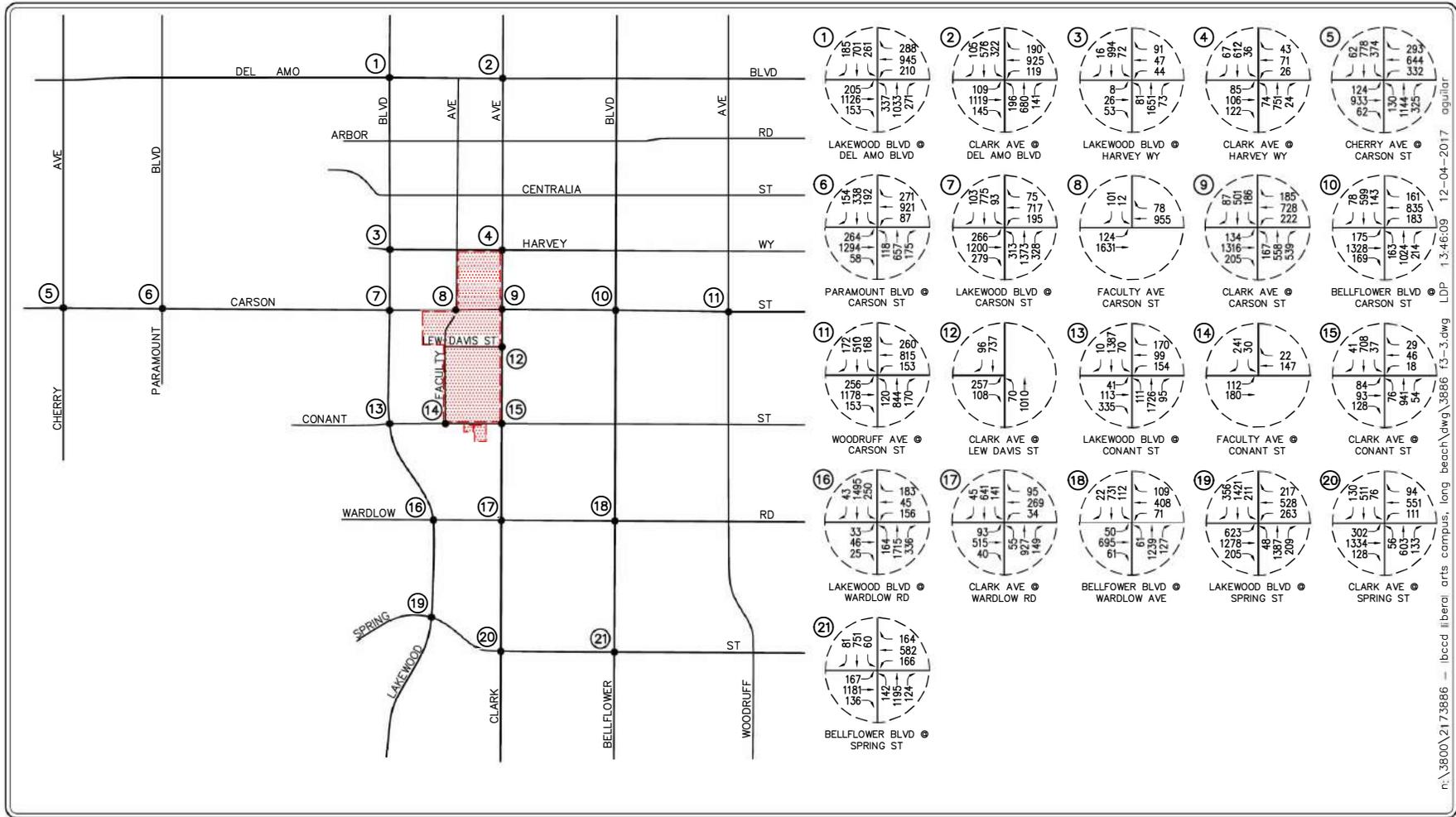


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 (Symbol) = PROJECT SITE

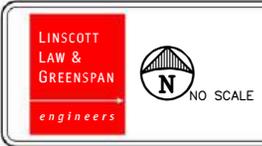
FIGURE 3-3

EXISTING AM PEAK HOUR TRAFFIC VOLUMES  
LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH

Figure 3-4: Existing PM Peak-Hour Traffic Volumes



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FIGURE 3-4

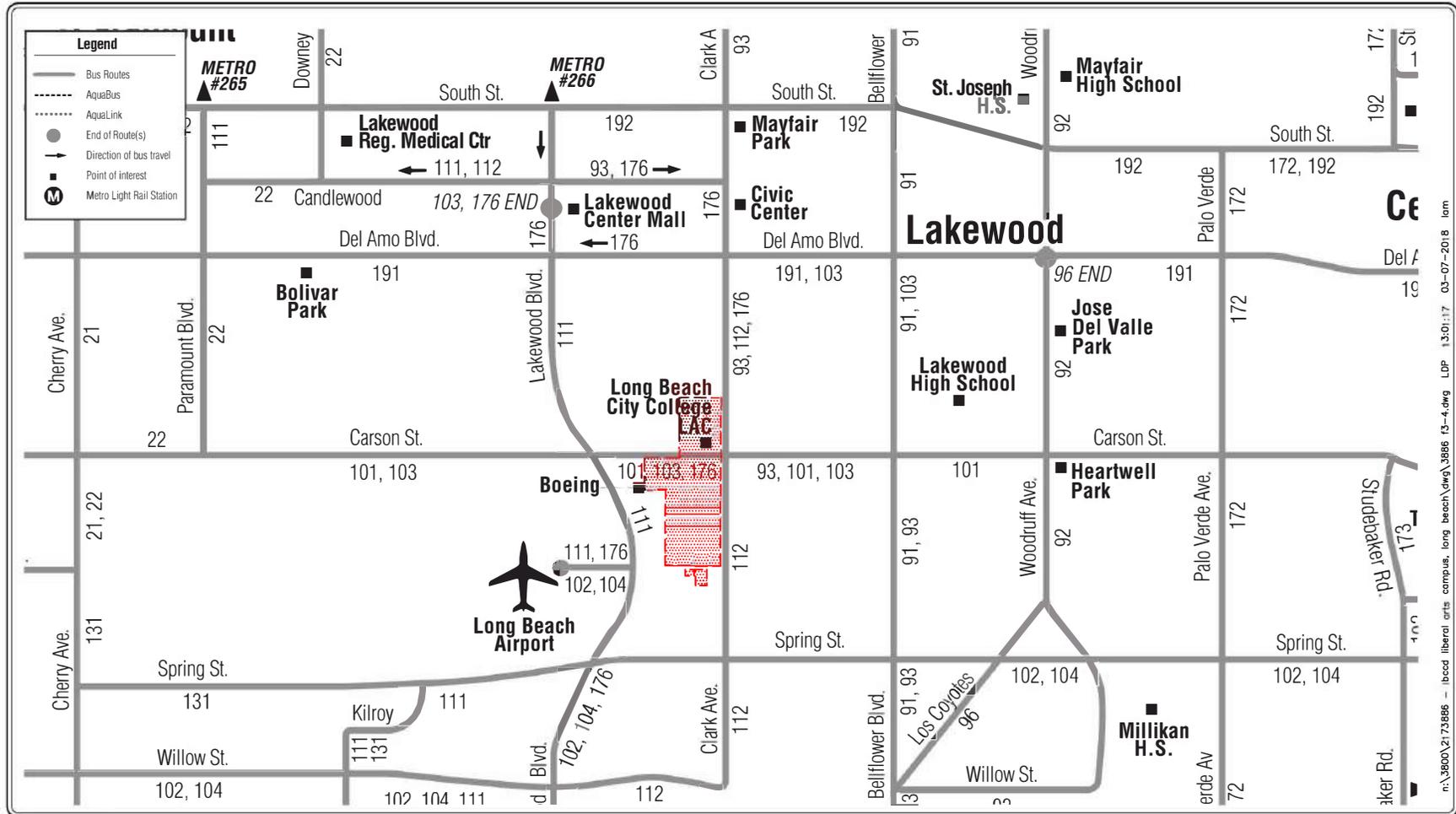
EXISTING PM PEAK HOUR TRAFFIC VOLUMES  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH

### Existing Alternative Transit Conditions

Long Beach Transit (LBT) provides public transit services in the vicinity of the Proposed Project. Figure 3-5 graphically illustrates the LBT routes within the project study area, respectively. Figure 3-6 identifies the location of the existing bus stops in proximity to the Project Site.

The City of Long Beach promotes bicycling as a means of mobility and a way in which to improve the quality of life within its community. The Bicycle Master Plan recognizes the needs of bicycle users and aims to create a complete and safe bicycle network throughout the City. The City of Long Beach Bicycle Facilities in the vicinity of the Project Site (existing and proposed) are shown on Figure 3-7.

Figure 3-5: Existing Long Beach Transit Routes



SOURCE: CITY OF LONG BEACH

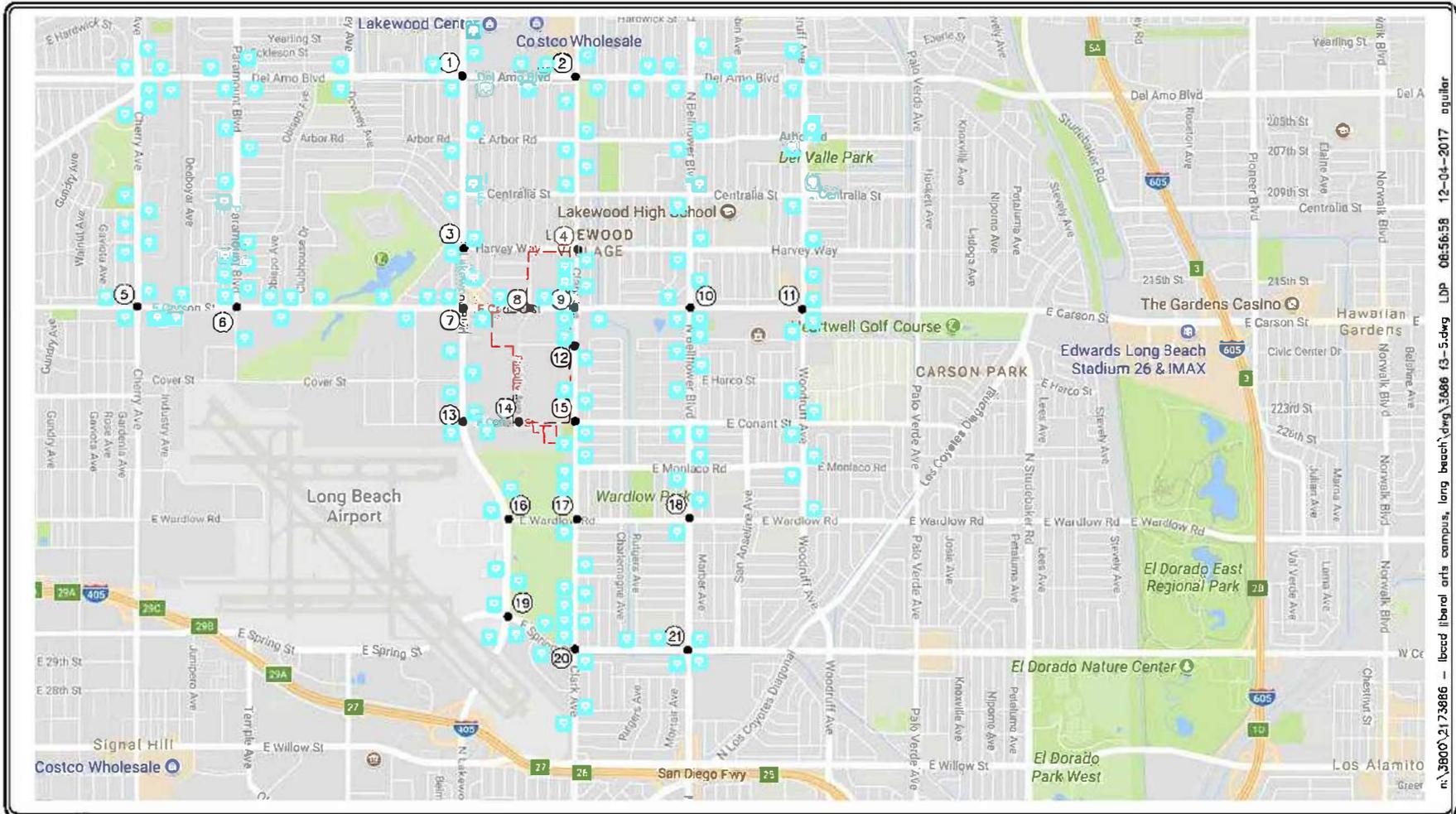
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FIGURE 3-5

EXISTING LONG BEACH TRANSIT MAP

LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH

Figure 3-6: Transit Stop Locations



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NO SCALE

SOURCE: GOOGLE

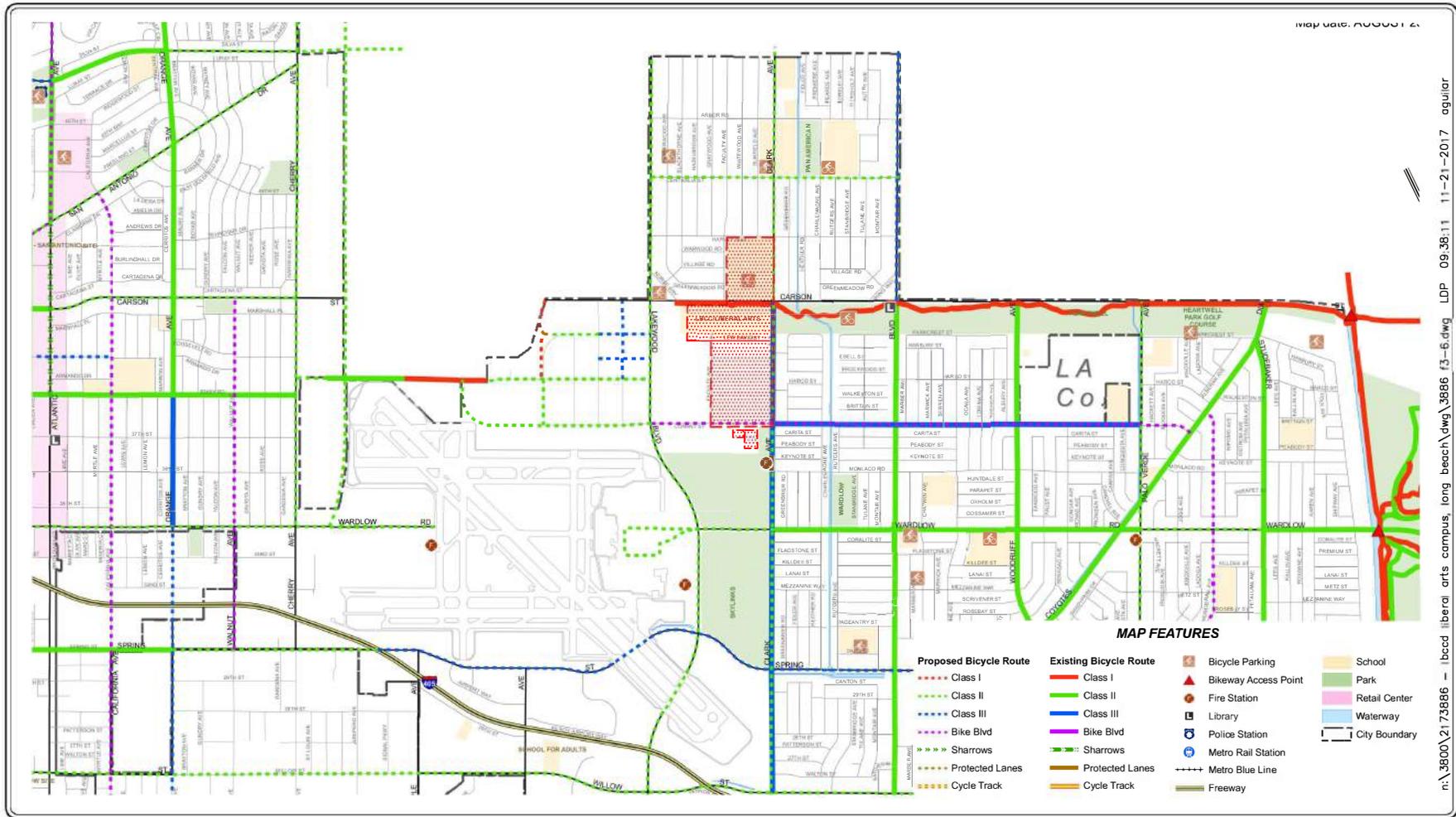
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- ⊙ - TRANSIT STOP
- PROJECT SITE

**FIGURE 3-6**

**TRANSIT STOP LOCATIONS**  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

Figure 3-7: Long Beach Bikeway Facilities



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 LAW &  
 GREENSPAN  
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NO SCALE

SOURCE: CITY OF LONG BEACH

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FIGURE 3-7

LONG BEACH BIKEWAY FACILITIES  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

### 3.8.3 Impacts and Mitigation

#### Methodology

In order to estimate the traffic impact characteristics of the Proposed Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak-hour and daily basis. The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

#### Existing Intersection Conditions

Existing AM and PM peak-hour operating conditions for the key signalized study intersections were evaluated using the *Intersection Capacity Utilization* (ICU) methodology. All unsignalized intersections were evaluated using the *Highway Capacity Manual* (HCM) Operations methodology.

#### ***Intersection Capacity Utilization (ICU) Method of Analysis (Signalized Intersections)***

In conformance with City of Long Beach, City of Lakewood and Los Angeles County Congestion Management Program (CMP) requirements, existing weekday peak-hour operating conditions for the key signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method. The ICU technique is intended for signalized intersection analysis and estimates the V/C relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time and, thus, capacity required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing.

Per City of Long Beach and City of Lakewood requirements, the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes and dual left turn capacity of 2,880 vph. A clearance adjustment factor of 0.10 was added to each LOS calculation.

The ICU value translates to a LOS estimate, which is a relative measure of the intersection performance. The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements.

#### ***Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)***

The HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the LOS for each movement. For all-way stop-controlled intersections, the overall average control delay measured in seconds per vehicle, and LOS, is calculated for the entire intersection. For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this

methodology estimates the worst side street delay, measured in seconds per vehicle, and determines the level of service for that approach. The HCM control delay value translates to a LOS estimate, which is a relative measure of the intersection performance.

Level of Service Criteria

According to the City of Long Beach, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours, or the current LOS if the existing LOS is worse than LOS D (i.e., LOS E or F). For the study intersections in the City of Lakewood, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours.

**Project Traffic Distribution**

Project traffic volumes both entering and exiting the Project Site have been distributed and assigned to the adjacent street system based on the following considerations:

- the site's proximity to major traffic carriers (i.e., Carson Street, Lakewood Boulevard, etc.)
- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals
- location of existing parking spaces
- ingress/egress availability at the Project Site

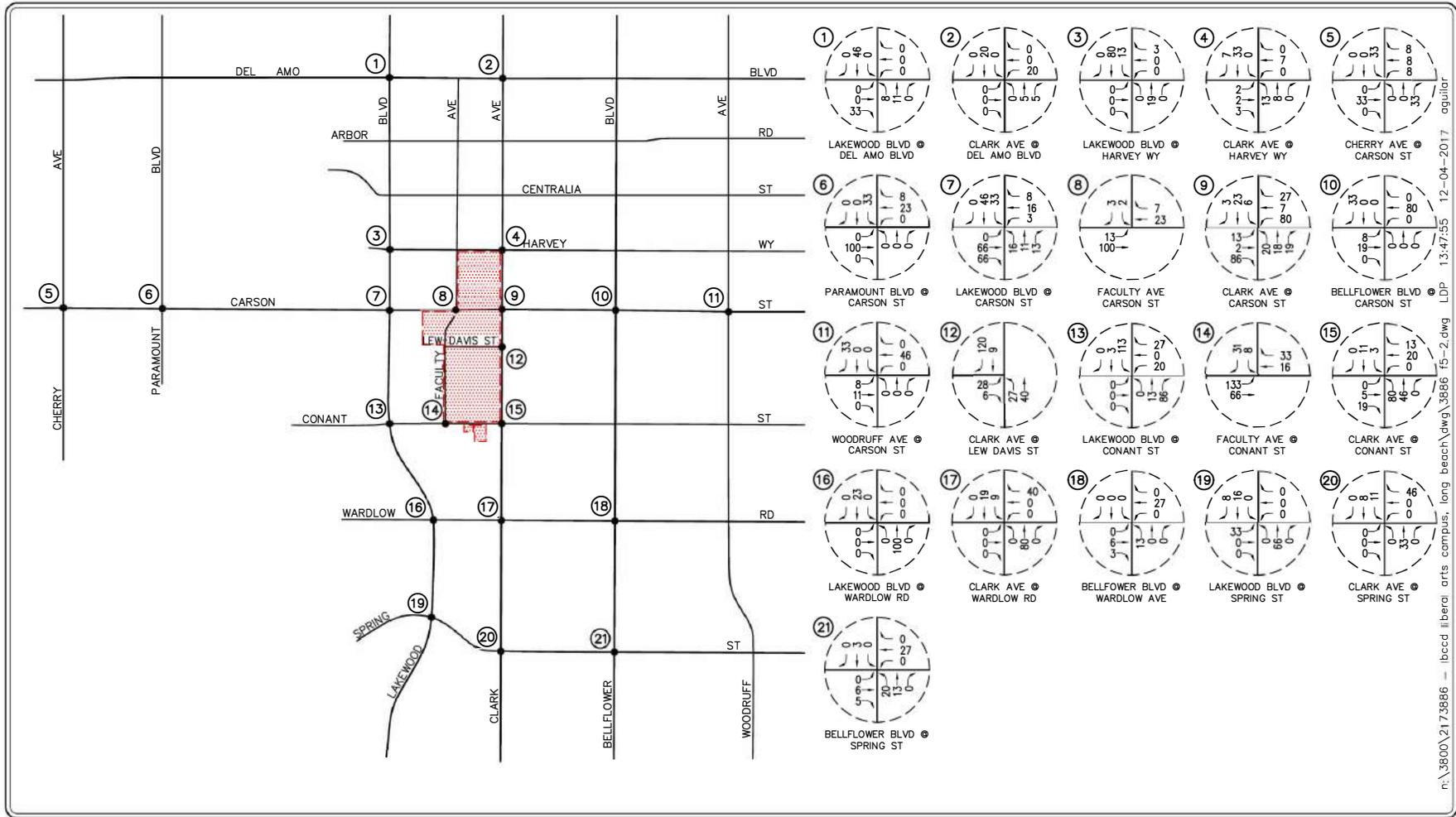
The traffic generation forecast is presented in Table 3-27.

**Table 3-35: Project Trip Generation**

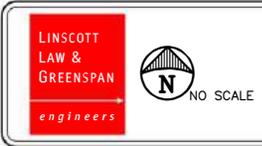
ITE Land Use Code / Project Description	Weekday						
	Daily 2-way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<b>Generation Factors</b>							
540: Junior/Community College (TE/Student)	1.15	81%	19%	0.11	56%	44%	0.11
<b>Generation Forecasts</b>							
LBCCD – Liberals Arts Campus (Net Increase 7,458 Students)	8,577	664	156	820	459	361	820

Notes: ITE = Institute of Transportation Engineers; TE = Trip ends per student

Figure 3-8: AM Peak-Hour Project Traffic Volumes



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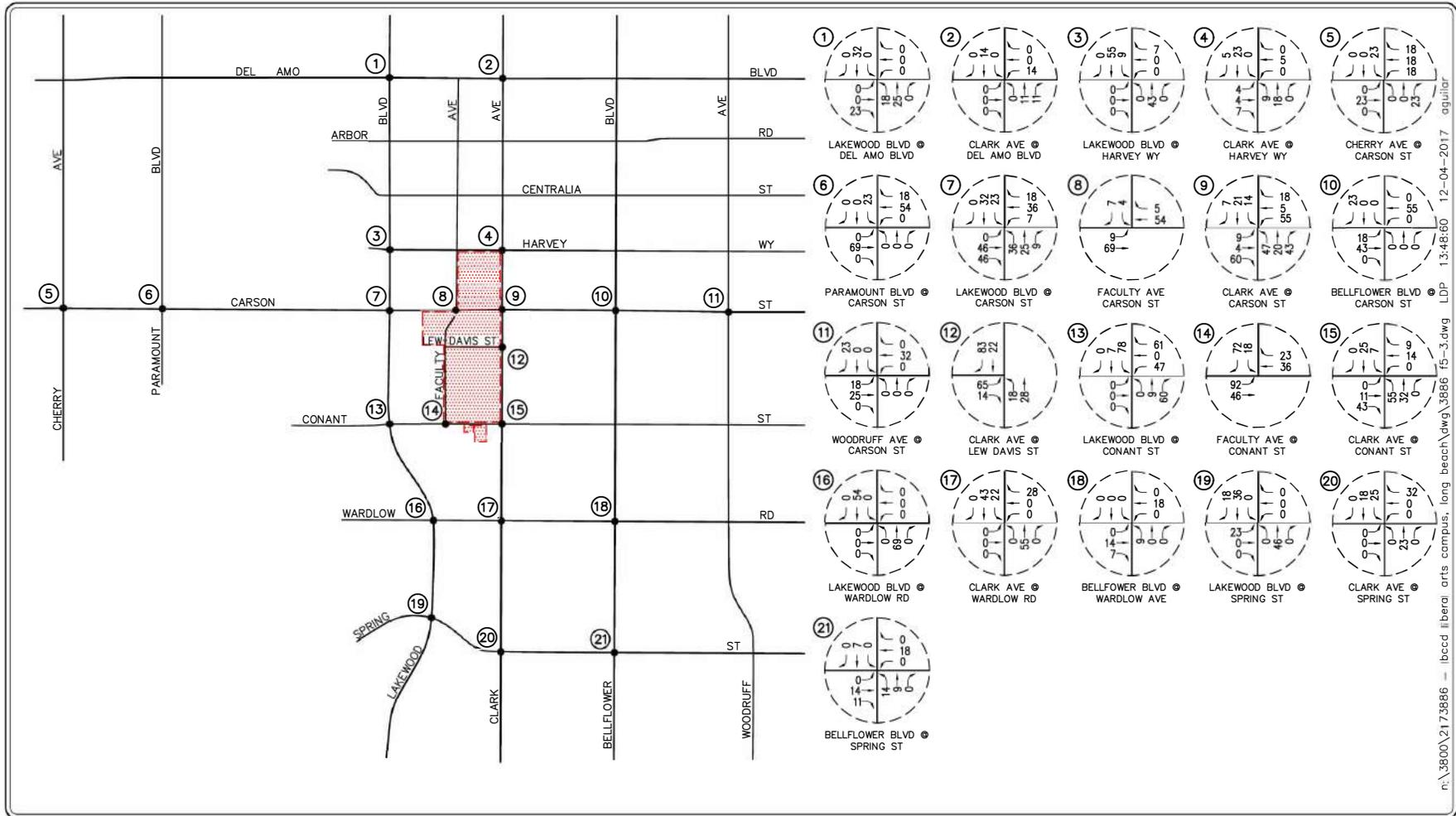


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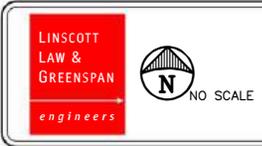
**FIGURE 3-8**

**AM PEAK HOUR PROJECT TRAFFIC VOLUMES**  
LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

Figure 3-9: PM Peak-Hour Project Traffic Volumes



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**FIGURE 3-9**

**PM PEAK HOUR PROJECT TRAFFIC VOLUMES**  
LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

### **Existing Plus Project Traffic Conditions**

The existing plus project traffic conditions have been generated based upon existing conditions and the estimated project traffic. These forecast traffic conditions have been prepared pursuant to the *CEQA Guidelines*, which require that the potential impacts of a project be evaluated upon the circulation system as it currently exists. This traffic volume scenario and the related intersection capacity analyses will identify the roadway improvements necessary to mitigate the direct traffic impacts of the Project, if any.

Figures 3-8 and 3-9 present projected AM and PM peak-hour traffic volumes at the 21 key study locations with the addition of the trips generated by the Proposed Project to existing traffic volumes, respectively. Figures 3-10 and 3-11 present existing plus project AM and PM peak-hour traffic volumes at the 21 key study locations.

### **Future Traffic Conditions**

#### Ambient Traffic Growth

Horizon year, background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown and future cumulative projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at 0.708 percent per year. Applied to the Year 2017 existing traffic volumes, this factor results in a 16.992 percent growth in existing volumes to the planning horizon Year 2041. Please note that the recommended ambient growth factor is consistent with the background traffic growth estimates contained in the most current *Congestion Management Program for Los Angeles County (1992)*.

#### Cumulative Traffic Characteristics

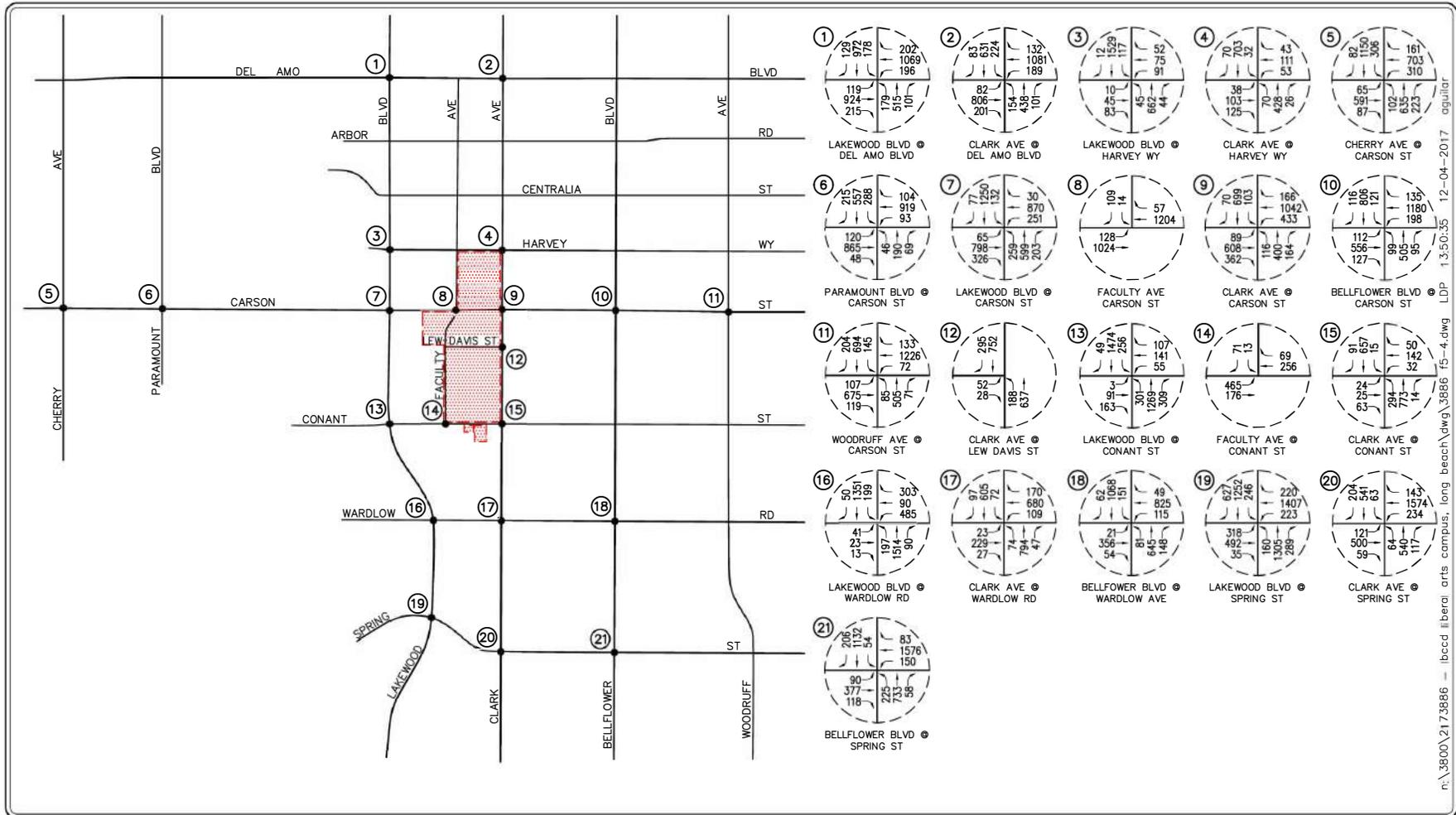
In order to make a realistic estimate of future on-street conditions prior to implementation of the Proposed Project, the status of other known development projects (cumulative projects) has been researched at the Cities of Long Beach and Lakewood. With this information, the potential impact of the Proposed Project can be evaluated within the context of the cumulative impact of all ongoing development. Based on research conducted for the Traffic Impact Analysis, four cumulative projects are located in the City of Long Beach and 22 cumulative projects are located in the City of Lakewood that have either been built but are not yet fully occupied, or are being processed for approval. These 26 cumulative projects have been included as part of the cumulative background setting.

#### Year 2041 Cumulative Traffic Volumes

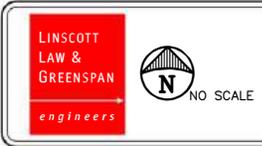
Figures 3-12 and 3-13 present the Year 2041 AM and PM peak-hour cumulative traffic volumes at the key study intersections, respectively. Please note that the cumulative traffic volumes represent the accumulation of existing traffic, ambient growth traffic, and cumulative projects traffic.

Figures 3-14 and 3-15 illustrate the Year 2041 forecast AM and PM peak-hour traffic volumes, with the inclusion of the trips generated by the Proposed Project, respectively.

Figure 3-10: Existing Plus Project AM Peak-Hour Traffic Volumes



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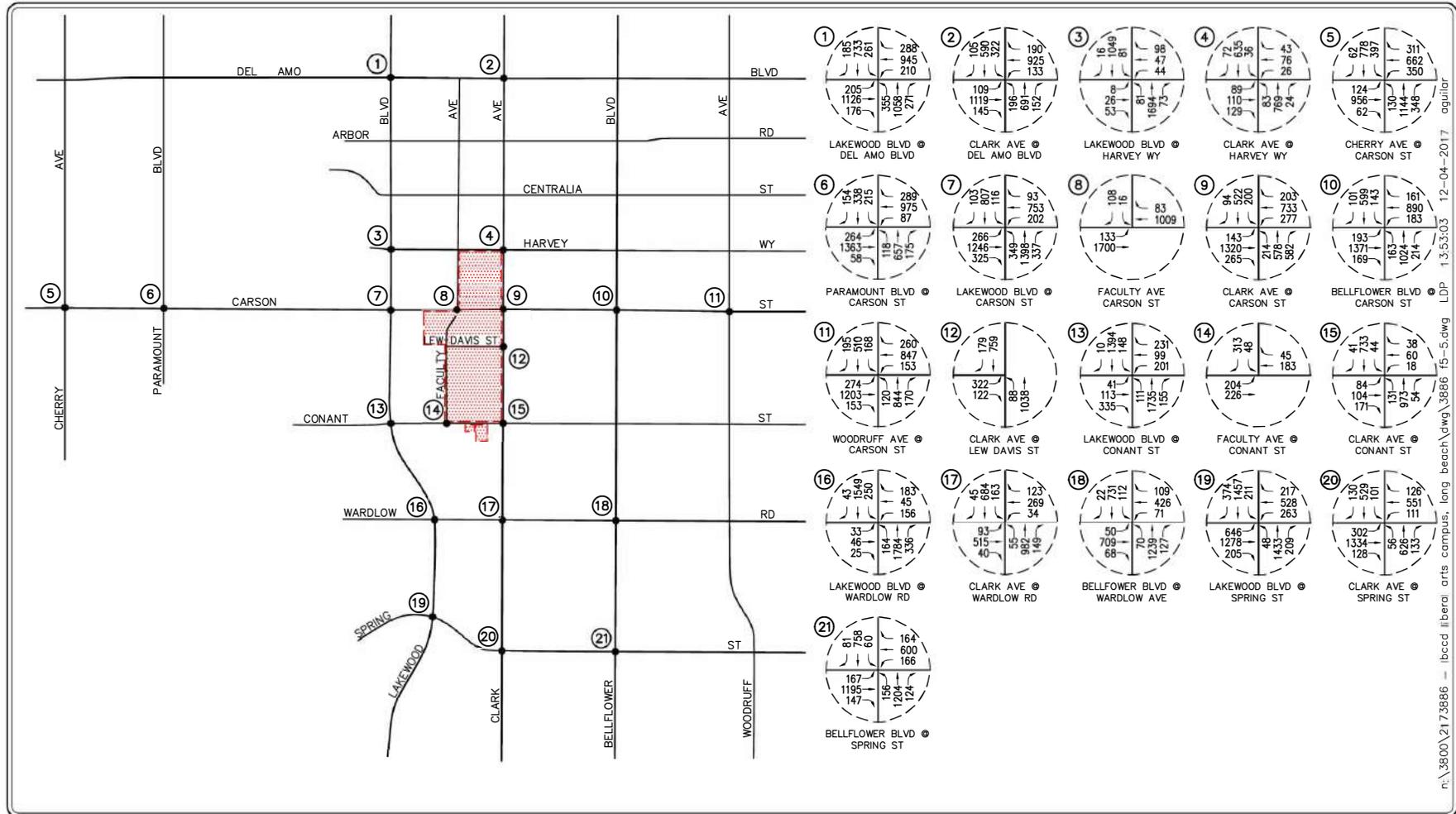


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 (Red hatched box) = PROJECT SITE

**FIGURE 3-10**

**EXISTING PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

Figure 3-11: Existing Plus Project PM Peak-Hour Traffic Volumes



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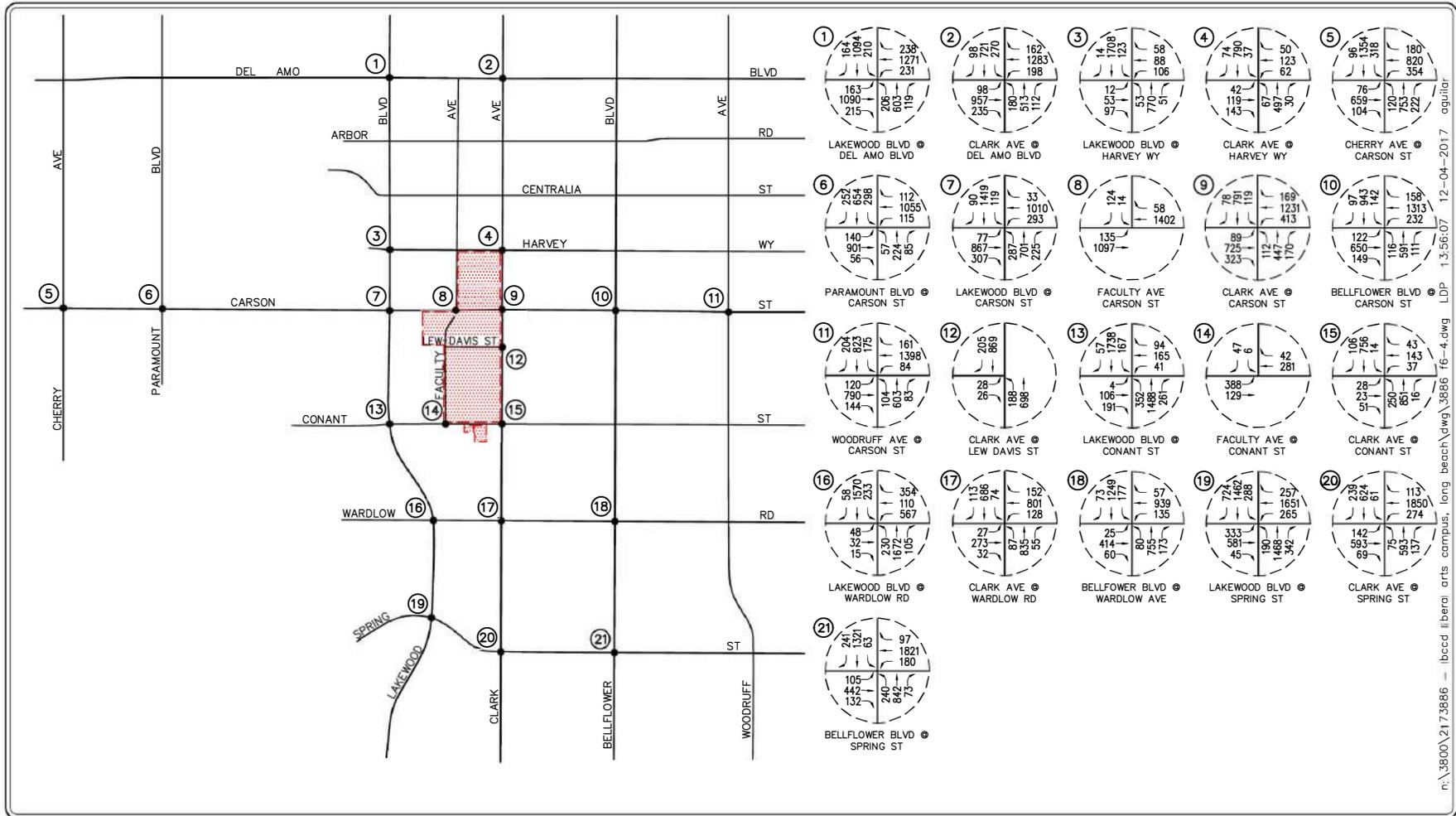


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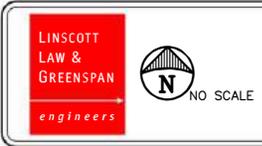
FIGURE 3-11

EXISTING PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH

Figure 3-12: Year 2041 Buildout AM Peak-Hour Traffic Volumes



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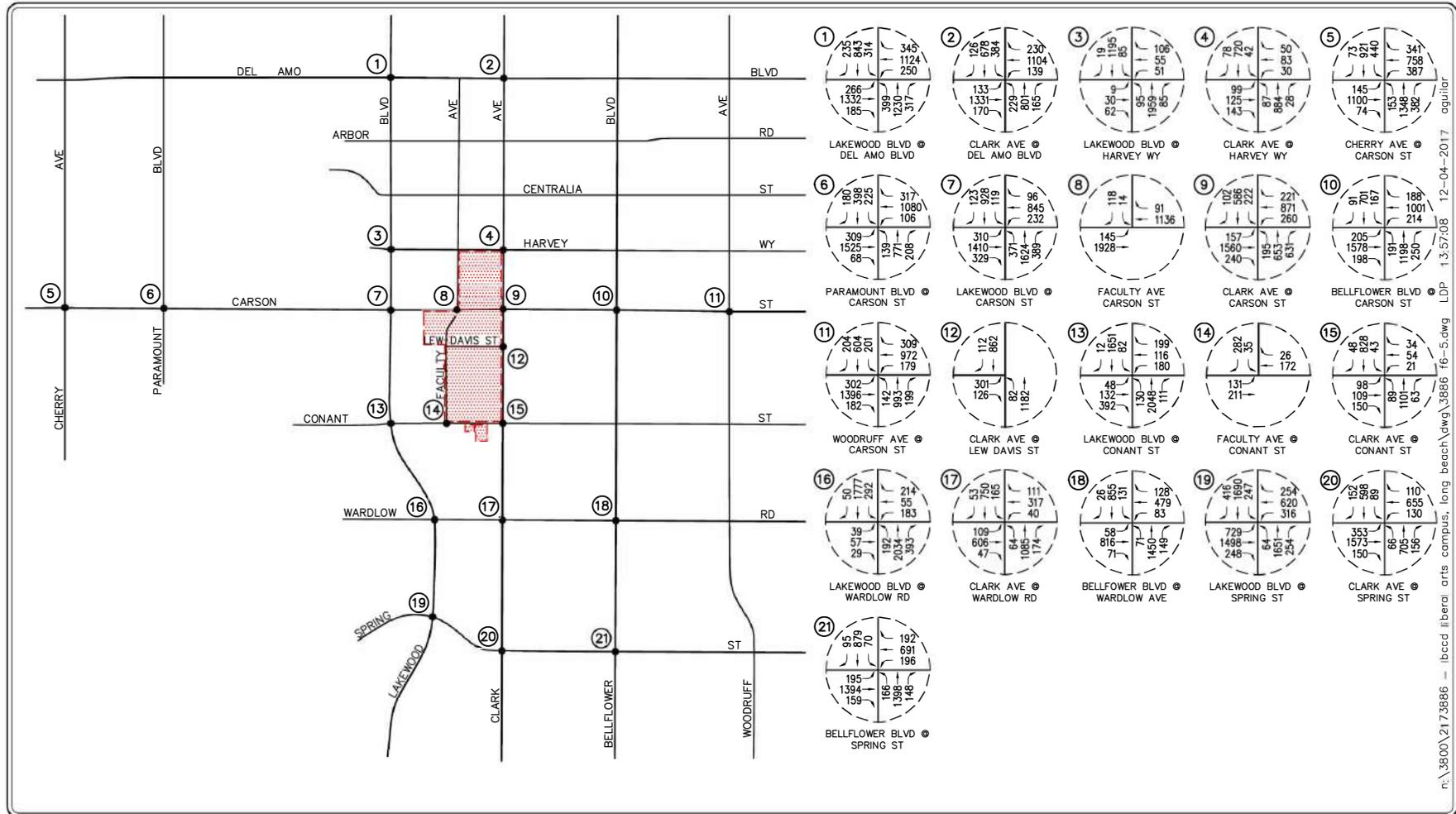


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 ⊕ = STUDY INTERSECTION  
 = PROJECT SITE

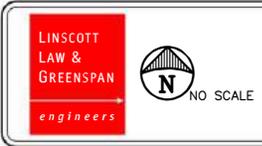
**FIGURE 3-12**

**YEAR 2041 BUILDOUT AM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

Figure 3-13: Year 2041 Buildout PM Peak-Hour Traffic Volumes



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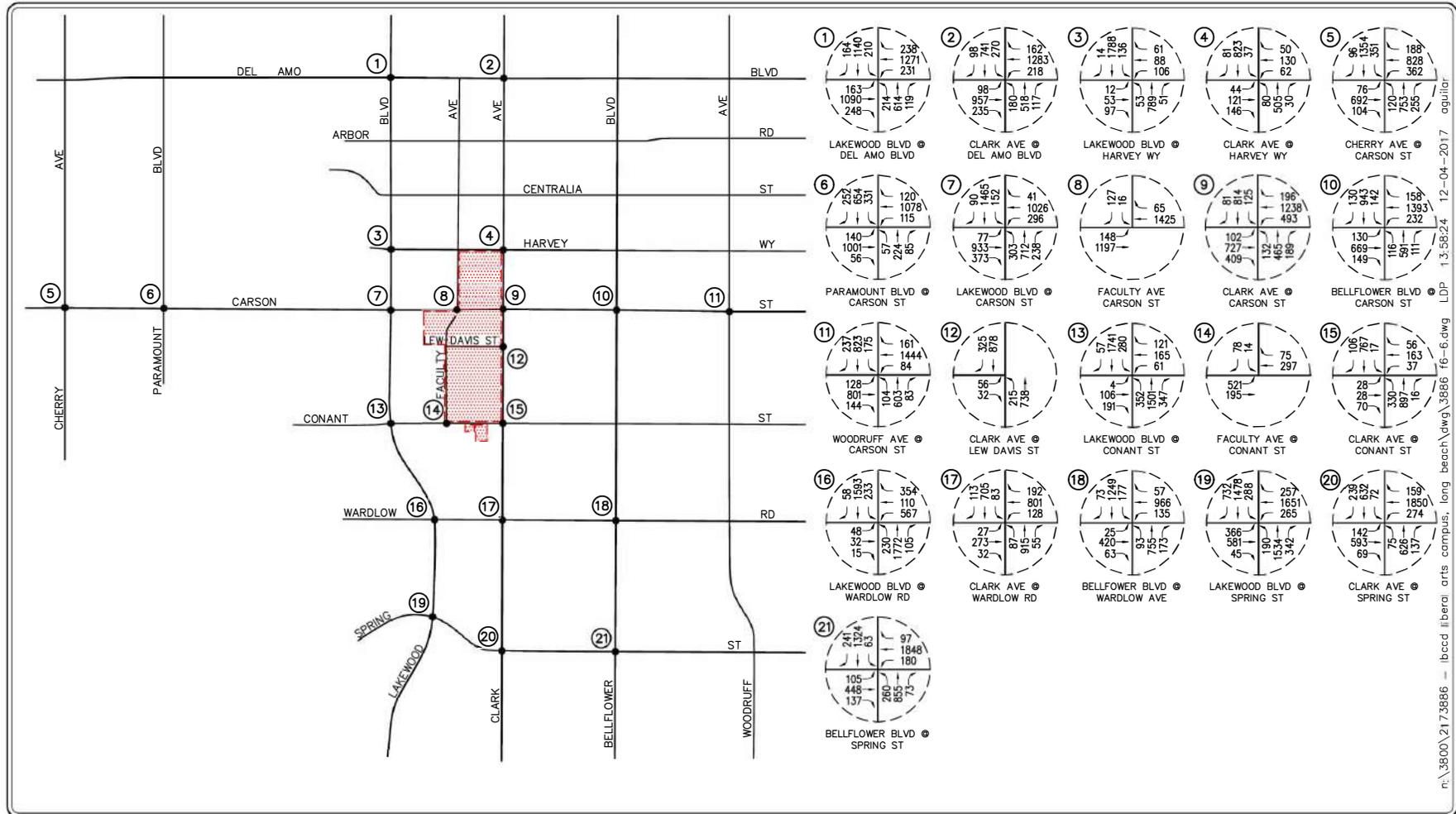


KEY  
 (P) = STUDY INTERSECTION  
 [Hatched Box] = PROJECT SITE

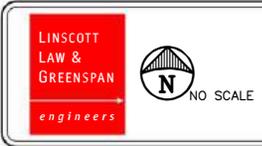
FIGURE 3-13

YEAR 2041 BUILDOUT PM PEAK HOUR TRAFFIC VOLUMES  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH

Figure 3-14: Year 2041 Buildout Plus Project AM Peak-Hour Traffic Volumes



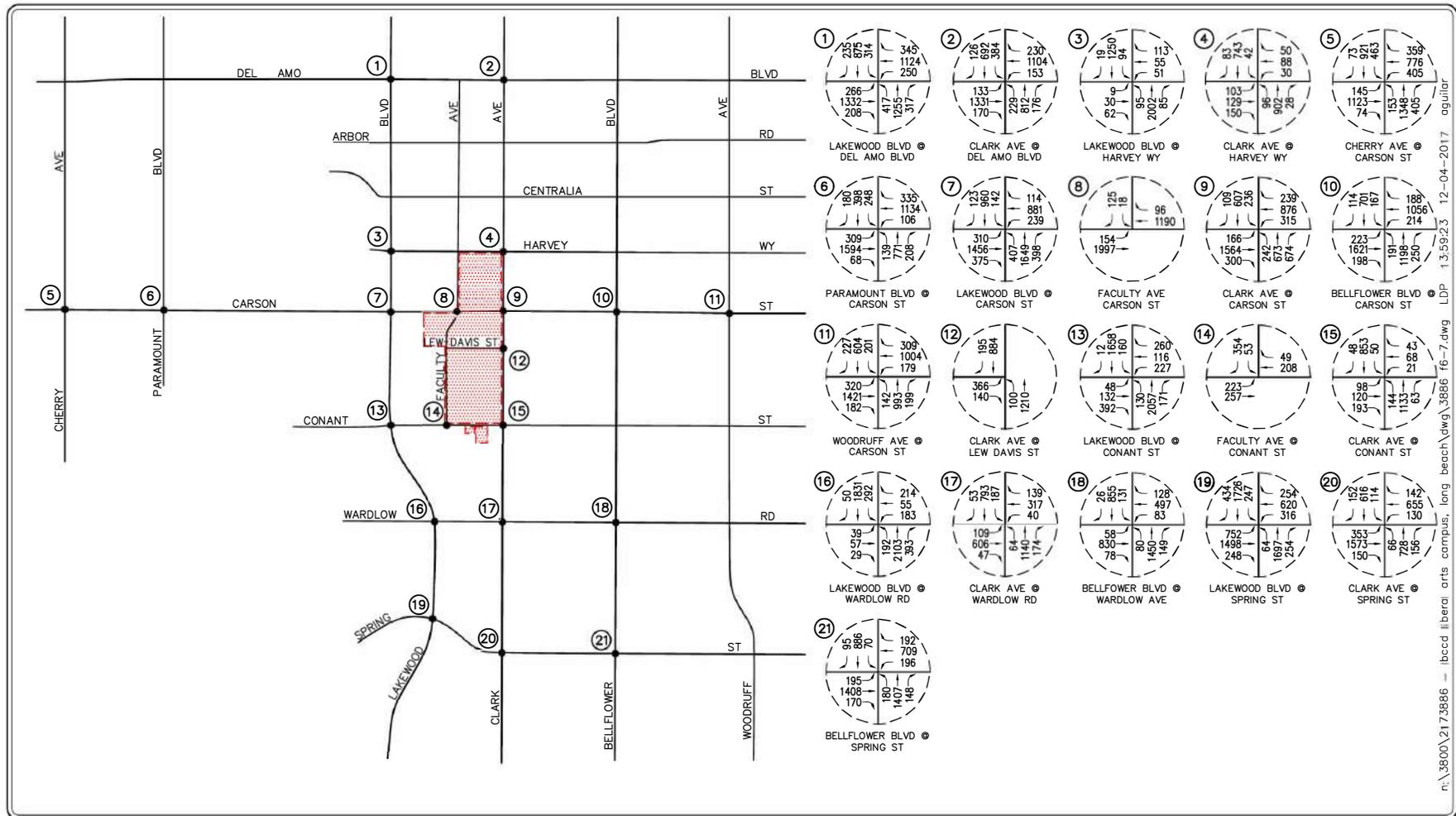
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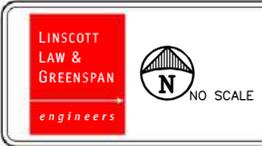
**KEY**  
 ⊕ = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 3-14**  
**YEAR 2041 BUILDOUT PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

Figure 3-15: Year 2041 Buildout Plus Project PM Peak-Hour Traffic Volumes



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**KEY**  
 (P) = STUDY INTERSECTION  
 = PROJECT SITE

**FIGURE 3-15**

**YEAR 2041 BUILDOUT PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

## Traffic Impact Analysis Methodology

The relative impacts of the Proposed Project during the AM peak hour and PM peak hour were evaluated based on analysis of future operating conditions at the 21 key study intersections, without, then with, the Proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future V/C relationships and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using the following traffic impact criteria.

### Impact Criteria and Thresholds

Impacts to City of Long Beach intersections are considered significant if:

- An unacceptable peak-hour LOS (i.e., LOS E or F) at any of the key intersections is projected. The City of Long Beach considers LOS D (ICU = 0.801 – 0.900) to be the minimum acceptable LOS for all intersections. For the City of Long Beach, the current LOS, if worse than LOS D (i.e., LOS E or F), should also be maintained; and
- The project increases traffic demand at the study intersection by 2 percent of capacity (ICU increase  $\geq 0.020$ ), causing or worsening LOS E or F (ICU > 0.901).
- At unsignalized intersections, an impact is considered to be significant if the project causes an intersection operating at LOS D or better to degrade to LOS E or F, and the traffic signal warrant analysis determines that a traffic signal is justified.

Impacts to City of Lakewood intersections are considered significant if:

- An unacceptable peak-hour LOS (i.e., LOS E or F) at any of the key intersections is projected. The City of Lakewood considers LOS D (ICU = 0.801 – 0.900) to be the minimum acceptable LOS for all intersections; and
- The project increases traffic demand at the study intersection by 2 percent of capacity (ICU increase  $\geq 0.020$ ), causing or worsening LOS E or F (ICU > 0.901).
- At unsignalized intersections, an impact is considered to be significant if the project causes an intersection operating at LOS D or better to degrade to LOS E or F, and the traffic signal warrant analysis determines that a traffic signal is justified.

### Traffic Impact Analysis Scenarios

The following scenarios are those for which volume/capacity calculations have been performed at the 21 key study intersections for existing plus project and Year 2041 traffic conditions:

- A. Existing Traffic Conditions
- B. Existing Plus Project Traffic Conditions
- C. Scenario (B) with Improvements, if necessary

- D. Year 2041 Cumulative Traffic Conditions
- E. Year 2041 Cumulative Plus Project Traffic Conditions
- F. Scenario (E) with Improvements, if necessary

### **Project Impacts**

**Impact 3.8-1:** Conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths.

### **Overview of Senate Bill 743**

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 creates a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code section 21000 and following), which could include analysis based on project vehicle miles traveled (VMT) rather than impacts to intersection Level of Service. On December 30, 2013, the State of California Governor’s Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis. The intent of the original guidance documentation was geared first towards projects located within areas that are designated as transit priority areas, to be followed by other areas of the State. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting some new revisions to the state CEQA Guidelines. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State’s Natural Resources Agency (that include a proposed new Guidelines section 15064.3 which governs how VMT-based analyses of potential traffic impacts should be conducted). On January 26, 2018, the Natural Resource Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. Over the coming months, the Natural Resources Agency will conduct a formal administrative rulemaking process on the CEQA Guidelines. That rulemaking process will entail additional public review and may lead to further revisions. OPR then will update a technical advisory that accompanies the revised CEQA Guidelines. OPR has therefore not issued any final revisions to the state CEQA Guidelines to implement the CEQA traffic analysis component of SB 743; thus, the analysis in this study utilizes existing, long-established protocols in accordance with CEQA, the existing state CEQA Guidelines, and the City’s CEQA Thresholds Guide. (See Public Resources Code section 21099(b).) However, to address the intent of the legislation and the guidance received from the State, the following analysis was conducted using the best available methodologies.

Because the Project is considered a “land use project”, its consistency with CEQA Guidelines section 15064.3, subdivision (b)(1) should be evaluated. Section 15064.3 is a new section of the CEQA Guidelines proposed by OPR and the Natural Resource Agency within the draft updates. At the time of publication, this represents the best available guidelines and has been analyzed as such. Section 15064.3, subdivision (b)(1) reads as follows:

(b) Criteria for Analyzing Transportation Impacts.

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area

compared to existing conditions should be considered to have a less than significant transportation impact.

Not only is the Project located along an existing transit corridor and served by several transit stops, but the implementation of the 2041 Facilities Master Plan for this campus will accommodate forecasted growth in school enrollment, allowing local students attendance at this campus and reducing the need to travel further to attend community college. This will decrease vehicle miles traveled as compared to existing conditions and therefore the project is considered to have a less than significant impact to this aspect of transportation, under the proposed CEQA Guidelines updates.

#### Existing Plus Project Analysis and Traffic Conditions

Table 3-28 summarizes the peak-hour Level of Service results at the 21 key study intersections for existing plus project traffic conditions. The first column of ICU/LOS values and HCM/LOS values in Table 3-28 presents a summary of existing AM and PM peak-hour traffic conditions (which were also presented in Table 3-26). The second column lists existing plus project traffic conditions. The third column shows the increase in ICU value and/or HCM value due to the added peak-hour project trips and indicates whether the traffic associated with the Project will have a significant impact based on the LOS standards and significant impact criteria defined in this report. The fourth column indicates the anticipated level of service with recommended improvements, discussed later in this report.

Review of columns 2 and 3 of Table 3-28 indicates that traffic associated with the Proposed Project, when added to only existing traffic volumes, will significantly impact three of the 21 key study intersections when compared to the LOS standards and significant impact criteria specified in this report. Although the intersections of Lakewood Boulevard/Del Amo Boulevard and Bellflower Boulevard/Carson Street are forecast to operate at unacceptable LOS E during the AM and/or PM peak hours with the addition of project traffic, the Proposed Project is expected to add less than 0.020 to the ICU value, which results in a less than significant impact. The remaining 16 key study intersections currently operate and are forecast to continue to operate at an acceptable service level during the AM and PM peak hours with the addition of project-generated traffic to existing traffic.

As shown in column 4, the implementation of improvements (discussed later in this report) at the impacted key study intersection of Faculty Avenue/Carson Street completely offsets the impact of project traffic, and the key study intersection is forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining two impacted key study intersections of Clark Avenue/Del Amo Boulevard and Clark Avenue/Carson Street, additional capacity-enhancing improvements at these two key study intersections do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these two locations will remain significant.

**Table 3-36: Existing Plus Project Peak-Hour Intersection Capacity Analysis Summary**

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact		(4) Existing Plus Project Traffic Conditions with Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
1. Lakewood Boulevard at Del Amo Boulevard	AM	<b>0.905</b>	E	<b>0.924</b>	E	0.019	No	--	--
	PM	<b>0.958</b>	E	<b>0.974</b>	E	0.016	No	--	--
2. Clark Avenue at Del Amo Boulevard	AM	0.729	C	0.747	C	0.018	No	--	--
	PM	0.896	D	<b>0.911</b>	E	<b>0.015</b>	Yes	N.F.	--
3. Lakewood Boulevard at Harvey Way	AM	0.728	C	0.753	C	0.025	No	--	--
	PM	0.803	D	0.826	D	0.023	No	--	--
4. Clark Avenue at Harvey Way	AM	0.749	C	0.783	C	0.034	No	--	--
	PM	0.819	D	0.839	D	0.020	No	--	--
5. Cherry Avenue at Carson Street	AM	0.643	B	0.652	B	0.009	No	--	--
	PM	0.791	C	0.810	D	0.019	No	--	--
6. Paramount Boulevard at Carson Street	AM	0.600	B	0.628	B	0.028	No	--	--
	PM	0.839	D	0.868	D	0.029	No	--	--
7. Lakewood Boulevard at Carson Street	AM	0.623	B	0.651	B	0.028	No	--	--
	PM	0.762	C	0.793	C	0.031	No	--	--
8. Faculty Avenue at Carson Street	AM	<b>47.7 s/v</b>	E	<b>77.0 s/v</b>	F	<b>29.3 s/v</b>	Yes	18.5 s/v	C
	PM	<b>40.0 s/v</b>	E	<b>78.7 s/v</b>	F	<b>38.7 s/v</b>	Yes	15.3 s/v	C
9. Clark Avenue at Carson Street	AM	0.665	B	0.726	C	0.061	No	--	--
	PM	0.865	D	<b>0.902</b>	E	<b>0.037</b>	Yes	N.F.	N.F.
10. Bellflower Boulevard at Carson Street	AM	0.762	C	0.794	C	0.032	No	--	--
	PM	<b>0.936</b>	E	<b>0.945</b>	E	0.009	No	--	--
11. Woodruff Avenue at Carson Street	AM	0.705	C	0.720	C	0.015	No	--	--
	PM	0.853	D	0.871	D	0.018	No	--	--
12. Clark Avenue at Lew Davis Street	AM	0.503	A	0.577	A	0.074	No	--	--
	PM	0.576	A	0.649	B	0.073	No	--	--
13. Lakewood Boulevard at Conant Street	AM	0.611	B	0.613	B	0.002	No	--	--
	PM	0.685	B	0.743	C	0.058	No	--	--
14. Faculty Avenue at Conant Street	AM	0.419	A	0.537	A	0.118	No	--	--
	PM	0.373	A	0.494	A	0.121	No	--	--
15. Clark Avenue at Conant Street	AM	0.598	A	0.673	B	0.075	No	--	--
	PM	0.545	A	0.573	A	0.028	No	--	--
16. Lakewood Boulevard at Wardlow Road	AM	0.608	B	0.623	B	0.015	No	--	--
	PM	0.633	B	0.644	B	0.011	No	--	--
17. Clark Avenue at Wardlow Road	AM	0.599	A	0.634	B	0.035	No	--	--
	PM	0.607	B	0.632	B	0.025	No	--	--
18. Bellflower Boulevard at Wardlow Road	AM	0.790	C	0.807	D	0.017	No	--	--
	PM	0.853	D	0.860	D	0.007	No	--	--
19. Lakewood Boulevard at Spring Street	AM	0.805	D	0.820	D	0.015	No	--	--
	PM	0.813	D	0.820	D	0.007	No	--	--
20. Clark Avenue at Spring Street	AM	0.659	B	0.661	B	0.002	No	--	--
	PM	0.622	B	0.636	B	0.014	No	--	--
21. Bellflower Boulevard at Spring Street	AM	0.842	D	0.861	D	0.019	No	--	--
	PM	0.765	C	0.772	C	0.007	No	--	--

Notes:

s/v = seconds per vehicle

Bold ICU/LOS or HCM/LOS values indicate adverse service levels

## Year 2041 Traffic Conditions

Table 3-28 summarizes the peak-hour Level of Service results at the 21 key study intersections for the Year 2041 horizon year. The first column of ICU/LOS and HCM/LOS values in Table 3-28 presents a summary of existing AM and PM peak-hour traffic conditions (which were also presented in Table 3-26). The second column lists projected Year 2041 traffic conditions (existing plus ambient plus cumulative projects traffic) based on existing intersection geometry but without any traffic generated from the Proposed Project. The third column presents forecast Year 2041 traffic conditions with the addition of project traffic. The fourth column shows the increase in ICU value and/or HCM value due to the added peak-hour project trips and indicates whether the traffic associated with the Project will have a significant impact based on the LOS standards and significant impact criteria defined in this report. The fifth column indicates the anticipated level of service with recommended improvements, discussed later in this report.

### Year 2041 Buildout Traffic Conditions (without Project)

An analysis of future (Year 2041) cumulative traffic conditions indicates that the addition of ambient traffic growth and cumulative projects traffic will adversely impact 13 of the 21 key study intersections. The remaining eight key study intersections are forecast to continue to operate at acceptable LOS during the AM and PM peak hours with the addition of ambient traffic growth and cumulative projects traffic.

### Year 2041 Buildout Plus Project Conditions

Review of Columns 3 and 4 of Table 3-28 indicates that the added traffic associated with the Proposed Project will significantly impact seven of the 21 key study intersections when compared to the LOS standards and significant impact criteria specified in this report. Although the intersections of Lakewood Boulevard/Del Amo Boulevard, Clark Avenue/Del Amo Boulevard, Cherry Avenue/Carson Street, Woodruff Avenue/Carson Street, Bellflower Boulevard/Wardlow Road, Lakewood Boulevard/Spring Street, and Bellflower Boulevard/Spring Street are forecast to operate at unacceptable LOS E and/or F during the AM and/or PM peak hours with the addition of project traffic, the Proposed Project is expected to add less than 0.020 to the ICU value, which results in a less than significant impact. The remaining seven key study intersections are forecast to continue to operate at an acceptable LOS with the addition of project-generated traffic in the Year 2041.

As shown in column 5, the implementation of improvements (discussed later in this report) at the impacted key study intersection of Lakewood Boulevard/Harvey Way offsets the impact of project traffic; however, this location is still forecast to operate at unacceptable LOS E during the PM peak hour. The implementation of improvements at the impacted key study intersections of Clark Avenue/Harvey Way and Faculty Avenue/Carson Street completely offsets the impact of project traffic, and the key study intersections are forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining four impacted key study intersections of Paramount Boulevard/Carson Street, Lakewood Boulevard/Carson Street, Clark Avenue/Carson Street, and Bellflower Boulevard/Carson Street, additional capacity-enhancing improvements at these four key study intersections do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these four locations will remain significant.

**Table 3-37: Year 2041 Plus Project Peak Hour Intersection Capacity Analysis Summary**

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Year 2041 Buildout Traffic Conditions		(3) Year 2041 Buildout Plus Project Traffic Conditions		(4) Significant Impact		(5) Year 2041 Buildout Plus Project Traffic Conditions with Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
1. Lakewood Boulevard at Del Amo Boulevard	AM	<b>0.905</b>	<b>E</b>	<b>1.070</b>	<b>F</b>	<b>1.089</b>	<b>F</b>	0.019	No	--	--
	PM	<b>0.958</b>	<b>E</b>	<b>1.136</b>	<b>F</b>	<b>1.152</b>	<b>F</b>	0.016	No	--	--
2. Clark Avenue at Del Amo Boulevard	AM	0.729	C	0.841	D	0.859	D	0.018	No	--	--
	PM	0.896	D	<b>1.041</b>	<b>F</b>	<b>1.057</b>	<b>F</b>	0.016	No	--	--
3. Lakewood Boulevard at Harvey Way	AM	0.728	C	0.839	D	0.864	D	0.025	No	0.864	D
	PM	0.803	D	<b>0.930</b>	<b>E</b>	<b>0.953</b>	<b>E</b>	<b>0.023</b>	<b>Yes</b>	<b>0.906</b>	<b>E</b>
4. Clark Avenue at Harvey Way	AM	0.749	C	0.864	D	0.898	D	0.034	No	0.843	D
	PM	0.819	D	<b>0.944</b>	<b>E</b>	<b>0.965</b>	<b>E</b>	<b>0.021</b>	<b>Yes</b>	0.877	D
5. Cherry Avenue at Carson Street	AM	0.643	B	0.793	C	0.749	C	0.010	No	--	--
	PM	0.791	C	<b>0.913</b>	<b>E</b>	<b>0.932</b>	<b>E</b>	0.019	No	--	--
6. Paramount Boulevard at Carson Street	AM	0.600	B	0.687	B	0.714	C	0.027	No	--	--
	PM	0.839	D	<b>0.966</b>	<b>E</b>	<b>0.995</b>	<b>E</b>	<b>0.029</b>	<b>Yes</b>	N.F.	N.F.
7. Lakewood Boulevard at Carson Street	AM	0.623	B	0.718	C	0.745	C	0.027	No	--	--
	PM	0.762	C	0.887	D	<b>0.919</b>	<b>E</b>	<b>0.032</b>	<b>Yes</b>	N.F.	N.F.
8. Faculty Avenue at Carson Street	AM	<b>47.7 s/v</b>	<b>E</b>	<b>192.3 s/v</b>	<b>F</b>	<b>346.4 s/v</b>	<b>F</b>	<b>154.1 s/v</b>	<b>Yes</b>	24.2 s/v	C
	PM	<b>40.0 s/v</b>	<b>E</b>	<b>254.9 s/v</b>	<b>F</b>	<b>538.3 s/v</b>	<b>F</b>	<b>283.4 s/v</b>	<b>Yes</b>	19.6 s/v	C
9. Clark Avenue at Carson Street	AM	0.665	B	0.768	C	0.820	D	0.052	No	--	--
	PM	0.865	D	<b>1.000</b>	<b>F</b>	<b>1.038</b>	<b>F</b>	<b>0.038</b>	<b>Yes</b>	N.F.	N.F.
10. Bellflower Boulevard at Carson Street	AM	0.762	C	0.880	D	<b>0.912</b>	<b>E</b>	<b>0.032</b>	<b>Yes</b>	N.F.	N.F.
	PM	<b>0.936</b>	<b>E</b>	<b>1.083</b>	<b>F</b>	<b>1.091</b>	<b>F</b>	0.008	No	N.F.	N.F.
11. Woodruff Avenue at Carson Street	AM	0.705	C	0.822	D	0.837	D	0.015	No	--	--
	PM	0.853	D	<b>0.992</b>	<b>E</b>	<b>1.009</b>	<b>F</b>	0.017	No	--	--
12. Clark Avenue at Lew Davis Street	AM	0.503	A	0.571	A	0.645	B	0.074	No	--	--
	PM	0.576	A	0.658	B	0.728	C	0.070	No	--	--
13. Lakewood Boulevard at Conant Street	AM	0.611	B	0.702	C	0.702	C	0.000	No	--	--
	PM	0.685	B	0.790	C	0.848	D	0.058	No	--	--
14. Faculty Avenue at Conant Street	AM	0.419	A	0.473	A	0.591	A	0.118	No	--	--
	PM	0.373	A	0.420	A	0.541	A	0.121	No	--	--
15. Clark Avenue at Conant Street	AM	0.598	A	0.683	B	0.757	C	0.074	No	--	--
	PM	0.545	A	0.620	B	0.649	B	0.029	No	--	--
16. Lakewood Boulevard at Wardlow Road	AM	0.608	B	0.696	B	0.712	C	0.016	No	--	--
	PM	0.633	B	0.728	C	0.739	C	0.011	No	--	--

**Table 3-37: Year 2041 Plus Project Peak Hour Intersection Capacity Analysis Summary**

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Year 2041 Buildout Traffic Conditions		(3) Year 2041 Buildout Plus Project Traffic Conditions		(4) Significant Impact		(5) Year 2041 Buildout Plus Project Traffic Conditions with Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
17. Clark Avenue at Wardlow Road	AM	0.599	A	0.686	B	0.721	C	0.035	No	--	--
	PM	0.607	B	0.694	B	0.720	C	0.026	No	--	--
18. Bellflower Boulevard at Wardlow Road	AM	0.790	C	<b>0.909</b>	E	<b>0.926</b>	E	0.017	No	--	--
	PM	0.853	D	<b>0.982</b>	E	<b>0.989</b>	E	0.007	No	--	--
19. Lakewood Boulevard at Spring Street	AM	0.805	D	<b>0.930</b>	E	<b>0.945</b>	E	0.015	No	--	--
	PM	0.813	D	<b>0.948</b>	E	<b>0.955</b>	E	0.007	No	--	--
20. Clark Avenue at Spring Street	AM	0.659	B	0.756	C	0.758	C	0.002	No	--	--
	PM	0.622	B	0.714	C	0.728	C	0.014	No	--	--
21. Bellflower Boulevard at Spring Street	AM	0.842	D	<b>0.970</b>	E	<b>0.989</b>					
	PM	0.765	C	0.881	D	0.888					

Notes:

s/v = seconds per vehicle

**Bold ICU/LOS or HCM/LOS values indicate adverse service levels**

### *Mitigation Measures*

**MM TRA-1: Lakewood Boulevard at Harvey Way:** Restripe Harvey Way to provide an exclusive westbound right-turn lane. Given that this key study intersection is located jointly in the Cities of Long Beach and Lakewood, the installation of this improvement is subject to the approval of the City of Long Beach and the City of Lakewood. It should be noted that these improvements cannot be guaranteed by the Proposed Project or the City of Long Beach, as the improvements would also require approval from the City of Lakewood. As such, the impact at this location is considered ***significant and unavoidable***, and a statement of overriding considerations will be required for this location.

**MM TRA-2: Clark Avenue at Harvey Way:** Restripe Harvey Way to provide an exclusive eastbound right-turn lane. The installation of this improvement is subject to the approval of the City of Long Beach.

**MM TRA-3: Faculty Avenue at Carson Street:** Install signage to restrict southbound left-turn movements during the AM peak period (7:00 AM – 9:00 AM) and during the PM peak period (4:00 PM – 6:00 PM). The installation of this improvement is subject to the approval of the City of Long Beach.

For the following intersections which would experience significant impacts, no physical mitigation measures are feasible:

- Clark Avenue at Del Amo Boulevard
- Clark Avenue at Carson Street
- Lakewood Boulevard at Harvey Way
- Paramount Boulevard at Carson Street
- Lakewood Boulevard at Carson Street
- Clark Avenue at Carson Street
- Bellflower Boulevard at Carson Street

### *Residual Impacts*

For the Existing Plus Project Analysis, the implementation of improvements at the impacted key study intersection of Faculty Avenue/Carson Street completely offsets the impact of project traffic and the key study intersection is forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining two impacted key study intersections of Clark Avenue/Del Amo Boulevard and Clark Avenue/Carson Street, additional capacity-enhancing improvements at these two key study intersections do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these two locations will remain significant.

For the Year 2041 Buildout Plus Project Analysis, the implementation of improvements at the impacted key study intersection of Lakewood Boulevard/Harvey Way offsets the impact of project traffic; however, this location is still forecast to operate at unacceptable LOS E during the PM peak hour. The implementation of improvements at the impacted key study intersections of Clark Avenue/Harvey Way and Faculty Avenue/Carson Street completely offsets the impact of project traffic, and the key study intersections are forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining four impacted key study intersections of Paramount Boulevard/Carson Street, Lakewood Boulevard/Carson Street, Clark Avenue/Carson Street, and Bellflower Boulevard/Carson Street, additional capacity-enhancing improvements at these four key study intersections do not appear feasible due to

physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these four locations will remain significant.

### **3.8.4**      **Cumulative Impacts**

**Impact 3C-3:**    Result in cumulatively considerable impact with respect to traffic.

Cumulative impacts are considered in the Project impact analysis above, as the transportation analysis includes cumulative project traffic in the area as well as future growth at LBCCD LAC. Future traffic volumes are identified in Figures 3-14 and 3-15, and impacts regarding Year 2041 Buildout Plus Project conditions are portrayed in Table 3-28.

Based on this analysis (see Impact 3.8-1 above), traffic generated as a result of cumulative growth projects is included in the analysis for the Proposed Project, which resulted in a significant and unavoidable impact.

#### *Mitigation Measures*

See Mitigation Measures TRA-1, TRA-2, and TRA-3, above.

#### *Residual Impacts*

For the Existing Plus Project Analysis, the implementation of improvements at the impacted key study intersection of Faculty Avenue/Carson Street completely offsets the impact of project traffic and the key study intersection is forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining two impacted key study intersections of Clark Avenue/Del Amo Boulevard and Clark Avenue/Carson Street, additional capacity-enhancing improvements at these two key study intersections do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these two locations will remain significant.

For the Year 2041 Buildout Plus Project Analysis, the implementation of improvements at the impacted key study intersection of Lakewood Boulevard/Harvey Way offsets the impact of project traffic; however, this location is still forecast to operate at unacceptable LOS E during the PM peak hour. The implementation of improvements at the impacted key study intersections of Clark Avenue/Harvey Way and Faculty Avenue/Carson Street completely offsets the impact of project traffic, and the key study intersections are forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining four impacted key study intersections of Paramount Boulevard/Carson Street, Lakewood Boulevard/Carson Street, Clark Avenue/Carson Street, and Bellflower Boulevard/Carson Street, additional capacity-enhancing improvements at these four key study intersections do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these four locations will remain significant.

## CHAPTER 4.0 – ALTERNATIVES ANALYSIS

### 4.1 INTRODUCTION AND OVERVIEW

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. An EIR should also evaluate the comparative merits of the alternatives. This chapter describes potential alternatives to the Proposed Project that were considered, identifies alternatives that were eliminated from further consideration and reasons for dismissal, and analyzes available alternatives in comparison to the potential environmental impacts associated with the Proposed Project.

Key provisions of the *CEQA Guidelines* pertaining to the alternatives analysis are summarized below:

- The discussion of alternatives shall focus on alternatives to the Proposed Project or its location that are capable of avoiding or substantially lessening any significant effects of the Proposed Project, even if these alternatives would impede to some degree the attainment of the Proposed Project objectives, or would be more costly.
- The No Project Alternative shall be evaluated along with its impact. The No Project analysis shall discuss the existing conditions at the time the Notice of Preparation is published. Additionally, the analysis shall discuss what would be reasonably expected to occur in the foreseeable future if the Proposed Project were not approved, based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a “rule of reason”; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. Alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the Proposed Project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the Proposed Project need to be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives are environmental impacts; site suitability; economic viability; availability of infrastructure; general plan contingency; regulatory limitation; jurisdictional boundaries; and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site. An EIR need not consider an alternative whose effects cannot be reasonably identified, whose implementation is remote or speculative, and that would not achieve the basic project objectives.

## **4.2 PROJECT OBJECTIVES**

As discussed in Chapter 2, Project Description and Environmental Setting, the Proposed Project is intended to implement the 2041 Facilities Master Plan to provide for a portion of the educational needs of students at LBCC's Liberal Arts Campus.

The District's goal as part of the California Community College system is to offer academic and vocational education to students at the lower college division level. In addition, the District's goal is to advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement.

The objective of the 2041 Facilities Master Plan is to provide plans to implement proposed necessary construction, renovation, and general capital improvements at the campus in order to meet the District's goals. The improvements are intended to update and improve existing technological and program services in order to meet the increasing needs of students and faculty. Specific objectives that have been identified by the LBCCD include the following:

- Provide equitable student learning and achievement, academic excellence, and workforce development by delivering high quality education programs and support services to diverse communities
- Provide clear pathways to students to achieve their career and educational goals through providing adequate facilities to support the ability for students to earn an associate degree or certificate solely within each campus, without having to take classes at both campuses
- Provide upgraded athletic facilities that support physical activity on campus and provide opportunities for organized recreational use for the community
- Provide renovated classrooms and educational facilities in order to properly serve current and future students on campus
- Ensure a sustainable and state-of-the-art facilities infrastructure

## **4.3 ALTERNATIVES TO THE PROPOSED PROJECT**

The alternatives identified below, with the exception of the mandatory No Project Alternative, were selected due to their potential to attain the basic project objectives discussed above and to lessen or avoid significant environmental effects resulting from implementation of the Proposed Project. Alternatives considered in this EIR include:

- No Project Alternative
- Reduced Project Alternative

In summary, the purpose of this section is to discuss feasible alternatives and to evaluate the ability of each alternative to reduce or avoid significant adverse environmental impacts while achieving the basic project objective. The reader is referred to the individual sections of the EIR (Chapter 3) and to the

Executive Summary for a detailed discussion of environmental impacts, by each issue area, that would result from implementation of the Proposed Project.

#### **4.3.1 No Project Alternative**

Section 15126.6(e) of the *CEQA Guidelines* requires analysis of a No Project alternative that (1) discusses existing site conditions at the time the Notice of Preparation (NOP) is prepared or the SEIR is commenced, and (2) analyzes what is reasonably to be expected to occur in the foreseeable future based on current plans if the Proposed Project were not approved.

Under this alternative, the Proposed Project would not be implemented. The Proposed Project would not be implemented, but the campus would be developed with improvements that have been approved under the 2041 Facilities Master Plan LAC Improvements.

Potential effects for the No Project Alternative were compared to the areas of potentially significant effects prior to mitigation that could be a result of the Proposed Project.

#### **Aesthetics**

Aesthetic and lighting impacts would be less under the No Project Alternative than for the Proposed Project, since no new lights would be installed at the Kinesiology Lab fields as well as the Aquatic Center. Existing lights would remain on campus, however, and existing fields would continue to be used during nighttime hours, with some portable lights being brought in for certain events. The No Project Alternative would have reduced impacts in comparison to the Proposed Project. This alternative is considered environmentally superior to the Proposed Project with respect to lighting and glare impacts.

#### **Air Quality**

Construction air quality impacts would be less under the No Project Alternative than for the Proposed Project, since less construction would result in lower construction emissions. During the operational phase, this alternative would result in a lower number of vehicle trips compared to the Proposed Project, thereby resulting in lower vehicle emissions. The No Project Alternative would have reduced air quality impacts in comparison to the Proposed Project. This alternative is considered environmentally superior to the Proposed Project with respect to air quality impacts.

#### **Greenhouse Gas Emissions**

Construction greenhouse gas emissions impacts would be less under the No Project Alternative than for the Proposed Project, since less construction would result in lower construction emissions. During the operational phase, this alternative would result in a lower number of vehicle trips compared to the Proposed Project, thereby resulting in lower vehicle emissions. The No Project Alternative would have reduced greenhouse gas emissions impacts in comparison to the Proposed Project. This alternative is considered environmentally superior to the Proposed Project with respect to greenhouse gas emissions impacts.

## Noise

Under the No Project Alternative, while length of construction activities could be shorter, daily noise associated with construction would be the same as for the Proposed Project. In addition, this alternative would involve the introduction of new traffic to the site as a result of the increase in instructional building square footage associated with the buildout of the 2020 Unified Master Plan for the LAC. However, the project traffic would be reduced due to reduction in instructional building square footage and associated college population. Therefore, the No Project Alternative would have reduced noise impacts in comparison to the Proposed Project. This alternative is considered environmentally superior to the Proposed Project with respect to noise impacts.

## Transportation

The No Project Alternative will not limit the traffic increase that LBCC LAC will experience due to regional growth. However, short-term traffic impacts caused by construction will be reduced. Also, due to the reduced size of this alternative, the increase in traffic volume would be lower. Therefore, the No Project Alternative would reduce transportation and traffic impacts in comparison to the Proposed Project. This alternative is considered environmentally superior to the Proposed Project with respect to transportation and traffic impacts.

## Conclusion and Relationship to Project Objectives

The No Project Alternative would result in the development of the LBCC LAC as described in the 2020 Unified Master Plan, as described in Chapter 2.1, Project Background. Compared to the Proposed Project, the No Project Alternative is environmentally superior in the areas of aesthetics, air quality, greenhouse gas emissions, noise, and transportation and traffic. While the overall impacts associated with the No Project Alternative are considered to be environmentally superior to the Proposed Project, under the No Project Alternative project objectives provided in Section 4.2, above, would be achieved at a lower level.

### 4.3.2 Reduced Project Alternative

The Reduced Project Alternative assumes that the campus would be developed consistent with planned improvements outlined in the LBCCD 2041 Facilities Master Plan LAC Improvements, but the Aquatic Center and Kinesiology Lab would not be implemented. These two elements have the greatest potential to cause an increase in traffic within and around the campus due to events at these facilities.

After the reduction of the eliminated Facilities Master Plan improvements, the Reduced Project Alternative would result in an estimated decrease from the Proposed Project of 64,796 square feet of new construction in addition to the new pool and fields associated with the Kinesiology Labs. Table 4-1 presents the improvements that would take place under the Reduced Project Alternative. Table 4-2 presents the improvements that would be eliminated under the Reduced Project Alternative.

**Table 4-1: Reduced Project Master Plan LAC Improvements**

Project	Scope/Usage	Square Feet (GSF)/ Features
Building B Classroom	Renovate Building with electrical upgrades, data and communication, larger lecture halls, better lighting, and additional lab functions	Renovation – 44,357
Building D Science Building	Renovate Science Building for improved classroom learning environments, new fiber data backbone, and enhanced signage	Renovation – 16,000
Building E College Center	Campus-wide Student Support	New Construction – 50,276
Building F Family/Consumer Education	Outdated building that will be replaced with new landscape and hardscape	Demolition – 15,968
Building G Performing Arts	New Performing Arts Building replaces the existing and outmoded Music Building.	New Construction – 42,857
Building J Auditorium	Complete renovation of Auditorium building with expansion of the building as well as general refurbishment and updates	Renovation – 37,878 Expansion – 14,119
Building K Art Building	Fine Arts building needs complete renovation and modernization	Retrofit/Renovation – 29,479
Building M Liberal Arts	Replace Buildings M&N with new building for classrooms, laboratory facilities, and technology center	New Construction – 81,970
Building O1 IITS/Warehouse	Structural enhancements to obtain certification by Division of State Architect	Renovation – 26,560
Building O2 Economic & Workforce Development/Foundation	Structural enhancements to obtain certification by Division of State Architect	Renovation – 51,302
Building P Language Arts	Upgrade building's functional systems with upgraded power systems, HVAC, plumbing, storm drainage, fire alarm, and telecommunication systems	Renovation – 16,016
Building Q Secondary Gymnasium	Renovation and upgrading to address issues related to instructional space, training needs, seismic upgrades, ADA compliance, and other upgrades	Renovation – 30,270
Building R Primary Gymnasium	Comprehensive structural and seismic renovation, ADA access, HVAC upgrades	Renovation – 78,024 New Construction – 10,000
Building S Stadium	Renovation including ADA access, structural upgrades	Renovation – 57,455
Walkways and Wayfinding	New and revised walkways, installation of uniform signage program	New construction/renovation

**Table 4-2: Eliminated 2041 Facilities Master Plan LAC Improvements**

<b>Project</b>	<b>Function/Support</b>	<b>Scope (GSF)</b>
Building W Aquatic Center	Construction of a new 50-meter by 25-yard pool, with a new support building	New Construction – 50,881 and pool area
Outdoor Kinesiology Labs	New construction of physical education outdoor playing fields to include softball relocation, two soccer fields, six tennis courts, five sand volleyball courts, and supporting facilities, restrooms, field house, storage.	New Construction Supporting Facilities – 13,915

ADA: Americans with Disabilities Act; HVAC: heating, ventilation, and air conditioning

### **Aesthetics**

Aesthetic and lighting impacts would be less under the Reduced Project Alternative than for the Proposed Project, since no new lights would be installed at the Kinesiology Lab fields as well as the Aquatic Center. Existing lights would remain on campus, however, and existing fields would continue to be used during nighttime hours, with some portable lights being brought in for certain events. The Reduced Project Alternative would have reduced impacts in comparison to the Proposed Project. This alternative is considered environmentally superior to the Proposed Project with respect to lighting and glare impacts.

### **Air Quality**

Construction air quality impacts would be less under the Reduced Project Alternative than for the Proposed Project, since less construction would result in lower construction emissions. During the operational phase, this alternative would result in a lower number of vehicle trips compared to the Proposed Project, thereby resulting in lower vehicle emissions. The Reduced Project Alternative would have reduced air quality impacts in comparison to the Proposed Project. This alternative is considered environmentally superior to the Proposed Project with respect to air quality impacts.

### **Greenhouse Gas Emissions**

Construction greenhouse gas emissions impacts would be less under the Reduced Project Alternative than for the Proposed Project, since less construction would result in lower greenhouse gas construction emissions. During the operational phase, this alternative would result in a lower number of vehicle trips compared to the Proposed Project, thereby resulting in lower greenhouse gas vehicle emissions. The Reduced Project Alternative would have reduced greenhouse gas emissions impacts in comparison to the Proposed Project. This alternative is considered environmentally superior to the Proposed Project with respect to greenhouse gas emissions impacts.

### **Noise**

Under the Reduced Project Alternative, while length of construction activities could be shorter, daily noise associated with construction would be the same as for the Proposed Project. Compared to the Proposed Project, the Reduced Project Alternative traffic would be less due to reduction in instructional building square footage and associated college population. In addition, the Reduced Project Alternative would not

involve increased noise levels at the Aquatic Center, as no increase in frequency of events would occur. Since the Olympic-sized pool would not be built, community use of the facility would also be less. In addition, the field relocation and new Kinesiology Labs would not be constructed; and, therefore, noise at the fields on campus would remain consistent with current levels. Therefore, the Reduced Project Alternative would have reduced noise impacts in comparison to the Proposed Project. This alternative is considered environmentally superior to the Proposed Project with respect to noise impacts.

**Transportation and Traffic**

The Reduced Project Alternative would generate new traffic on the surrounding roadway network both during construction and operation. However, due to the reduced size of this alternative, and the removal of updates to the Aquatic Center and fields associated with the Kinesiology Lab, the increase in traffic volume would be lower. Fewer sports events and community events at these facilities would occur under the Reduced Project Alternative. Therefore, the Reduced Project Alternative would reduce transportation and traffic impacts in comparison to the Proposed Project. However, due to student enrollment projections and estimations of future traffic, the significant unavoidable impacts associated with transportation and traffic would likely remain. This alternative is considered environmentally superior to the Proposed Project with respect to transportation and traffic impacts.

**Conclusion and Relationship to Project Objectives**

Compared to the Proposed Project, the Reduced Project Alternative is environmentally superior in the areas of aesthetics, air quality, noise, and transportation and traffic. While the overall impacts associated with the Reduced Project Alternative are considered to be environmentally superior to the Proposed Project, under the Reduced Project Alternative, many of the project objectives provided in Section 4.2, above, would not be achieved. For example, the Reduced Project Alternative would not provide upgraded athletic facilities that would support physical activity on campus or recreational facilities for community use.

**Table 4-3: Comparison of Alternatives**

<b>Environmental Issue Area</b>	<b>Proposed Project</b>	<b>No Project Alternative</b>	<b>Reduced Project Alternative</b>
Aesthetics/Lighting	Less than Significant	Reduced Less than Significant	Reduced Less than Significant
Air Quality	Less than Significant	Reduced Less than Significant	Reduced Less than Significant
Greenhouse Gas Emissions	Less than Significant	Reduced Less than Significant	Reduced Less than Significant
Noise	Less than Significant with Mitigation	Reduced Less than Significant	Reduced Less than Significant
Transportation	Significant and Unavoidable	Reduced Less than Significant	Reduced Significant and Unavoidable

#### **4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

Of the alternatives analyzed in the SEIR, the No Project Alternative is considered the environmentally superior alternative as it would avoid or reduce most of the potential impacts associated with construction and operation of the Proposed Project (see Table 4-3). However, the No Project Alternative would not meet the objectives of the Proposed Project, as it would not provide essential educational facilities at the LBCC LAC.

*CEQA Guidelines* requires that if the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives. As such, the Reduced Project Alternative would result in the fewest environmental impacts as compared to the Proposed Project, while still achieving some of the objectives of the Proposed Project.

## CHAPTER 5.0 – OTHER CEQA CONSIDERATIONS

This chapter presents the evaluation of other types of environmental impacts required by CEQA that are not covered within the other chapters of this SEIR. The other CEQA considerations include environmental effects that were found not to be significant, growth-inducing impacts, and significant and unavoidable adverse impacts.

### 5.1 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

The Initial Study (IS) for the Proposed Project, completed in February 2018, which is included in the EIR as Appendix A, determined that the Proposed Project would result in no impact or a less than significant impact to 14 of 19 environmental issue areas. The IS for the Proposed Project discusses why the Project would have no impact or less than significant impacts for these issue areas, which are subsequently not discussed in detail in this SEIR. The issue areas determined to have no impact or a less than significant impact in the IS analysis include the following:

- Agricultural Resources
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation and Parks
- Utilities and Service Systems
- Wildfire

After a more detailed evaluation of the environmental issues associated with the Proposed Project, the SEIR determined that impacts would be less than significant with incorporation of project design features and mitigation measures for the following environmental issue areas:

- Aesthetics (light and glare)
- Air Quality
- Greenhouse Gas Emissions
- Noise
- Transportation and Traffic

### 5.2 IRREVERSIBLE ENVIRONMENTAL CHANGES

According to the *CEQA Guidelines*, “[u]ses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated

with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.” Therefore, the purpose of this analysis is to identify any significant irreversible environmental effects of project implementation that cannot be avoided.

Both construction and operation of the Proposed Project would lead to the consumption of limited, slowly renewable and nonrenewable resources, committing such resources to uses that future generations would be unable to reverse. The new development would require the commitment of resources that include: (1) building materials, (2) fuel and operational materials/resources, and (3) the transportation of goods and people to and from the Proposed Project Site.

Construction of the Proposed Project would consume certain types of lumber and other forest products, the raw materials in steel, metals such as copper and lead, aggregate materials used in concrete and asphalt such as sand and stone, water, petrochemical construction materials such as plastic, petroleum-based construction materials, and other similar slowly renewable or nonrenewable resources. Additionally, fossil fuels for construction vehicles and equipment would also be consumed. In terms of project operations, the following slowly renewable or nonrenewable resources would be required: natural gas and electricity, petroleum-based fuels, fossil fuels, and water. Title 24 of the California Administrative Code regulates the amount of energy consumed by new development for heating, cooling, ventilation, and lighting purposes. Nevertheless, the consumption of such resources would represent a long-term commitment of those resources.

The commitment of resources required for the construction and operation of the Proposed Project would limit the availability of such resources for future generations or for other uses during the life of the Project. However, continued use of such resources is consistent with the anticipated growth and planned changes on the Proposed Project Site and within the general vicinity. Furthermore, impacts to the energy supply would be less than significant given the existing levels of development within the City of Long Beach and the County of Los Angeles.

Future generations will likely continue to use LBCC LAC for educational and community purposes. The Proposed Project will not preclude use of the site for other purposes in the future to any degree greater than the No Project Alternative. Additionally, these same resources will be required for the development of the Proposed Project in an available alternative location. In the long term, compared to initial implementation of the Proposed Project, the level of resource commitment for continued operation and maintenance of the LBCC LAC will be minimal.

### **5.3 GROWTH-INDUCING IMPACTS**

Pursuant to the *CEQA Guidelines*: an EIR must address whether a project will directly or indirectly foster growth as follows:

*An EIR shall discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of wastewater treatment plant, might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact. Also, discuss the characteristic of some projects, which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be*

*assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

As discussed below, this analysis evaluates whether the Proposed Project would directly, or indirectly, induce economic, population, or housing growth in the surrounding environment.

### **5.3.1 Direct Growth-Inducing Impacts in the Surrounding Environment**

Direct growth-inducing impacts occur when the development of a project induces population growth or the construction of additional developments in the same area of a proposed project and produces related growth-associated impacts. Growth-inducing projects, such as the construction of a new road into an undeveloped area, a wastewater treatment plant expansion, and projects that allow new development in the service area, remove physical obstacles to population growth. Constructions of such infrastructure projects are considered in relation to the potential development and the potential environmental impacts.

Implementation of the LBCCD 2041 Facilities Master Plan will affect the construction of new buildings, renovation and modernization of and additions to existing facilities, demolition of existing buildings, and landscaping and open space on campus designed to accommodate projected growth in student population by the LBCCD and regional planning agencies. However, the Proposed Project does not include residential development and does not directly induce population growth. Additionally, a low potential exists that the Proposed Project will directly induce construction of similar college-level facilities in the Project Area and cause growth-related impacts. The Proposed Project will not remove obstacles to regional growth and related development.

### **5.3.2 Indirect Growth-Inducing Impacts in the Surrounding Environment**

Although the Proposed Project will result in additional employment in response to projected enrollment growth, increase in employment has been accounted for by local and regional planning agencies (i.e., City of Long Beach Planning Department and the SCAG), prior to design of the Proposed Project. The purpose of the Proposed Project is to respond to anticipated growth in student enrollment and the need to upgrade the quality of campus educational facilities. The Proposed Project does not contain components likely to indirectly induce employment or an employment-related increase in population.

## **5.4 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACT**

The potentially adverse effects of the Proposed Project are discussed in Chapter 3.0 of this SEIR. Project design features and mitigation measures have been recommended that would reduce impacts to air quality, greenhouse gas, and noise impacts to less than significant based on each set of significance criteria.

However, a significant and unavoidable transportation and traffic impact associated with cumulative increase in traffic levels would occur. These impacts are discussed further in Section 3.8.

## CHAPTER 6.0 – FINAL SEIR INTRODUCTION

This Final Environmental Impact Report (Final EIR) has been prepared pursuant to requirements of the California Environmental Quality Act (CEQA) and the CEQA Guidelines for the LBCCD 2041 Facilities Master Plan LAC Improvements, State Clearinghouse Number 2004051060. The Final EIR includes: a description of the Community Outreach and Public Review Process for preparing and receiving comments on the Draft EIR (Chapter 7); Response to Comments, which includes LBCCD's responses to all written comments received by agencies, private organizations, and the public for the Draft EIR (Chapter 8); the Draft EIR with changes shown in strikethrough for deletions and underline for additions (Chapter 9); and the Mitigation Monitoring and Reporting Plan (Chapter 10), which lists all the mitigation measures required for implementation of the project, the phase in which the measures will be implemented, and the enforcement agency responsible for compliance.

### Environmental Review Process

In accordance with the requirements of CEQA Guidelines Section 15162 and based on the findings of the IS, LBCCD determined that a Draft SEIR should be prepared to analyze the potential impacts associated with the proposed the LBCCD 2041 Facilities Master Plan LAC Improvements.

On February 8, 2018, LBCCD distributed the IS and a Notice of Preparation (NOP) describing the Proposed Project and potential environmental affects, and determined that LBCCD would prepare a Draft SEIR. As listed in Appendix A, the IS/NOP was distributed to the State Clearinghouse and various other local agencies and organizations. In accordance with the requirements of CEQA, LBCCD provided a 30-day scoping/comment period between February 8, 2018 and March 9, 2018; and requested stakeholders to identify specific topics of environmental concern that should be studied in the Draft EIR.

The Draft SEIR was prepared and circulated for a 45-day public review period as required by CEQA, beginning September 19, 2018 and ending November 2, 2018. The Notice of Completion (NOC) and the Draft SEIR was distributed to the State Clearinghouse and various other local agencies and organizations. The CEQA Guidelines require that the Lead Agency responsible for the preparation of the SEIR evaluate comments on environmental issues received from parties who reviewed the Draft SEIR and prepare a written response addressing each of the comments, as described in Chapter 8 of this Final SEIR.

This Final SEIR assembles in one document, all of the environmental information and analysis prepared for the Proposed Project, including comments on the information and analysis contained in the Draft SEIR, and responses by LBCCD to those comments. The intent of the Final ESIR is to provide a forum to address comments pertaining to the information and analysis contained within the Draft SEIR and to provide an opportunity for clarifications, corrections, or minor revisions to the Draft SEIR, as needed.

## CHAPTER 7.0 – PUBLIC REVIEW PROCESS

Information about the environmental document and public review periods were distributed to the surrounding community using three methods: the NOP and NOC were mailed, and each notice was published in newspaper legal section. The NOP and NOA included information on where to view the Initial Study (IS) and Draft SEIR, and how to comment on the IS and Draft SEIR. The public review period for the NOP/IS (see Appendix A) was from February 8, 2018 to March 9, 2018, and the public review period for the Draft SEIR was from September 19, 2018 to November 2, 2018.

### Notice of Preparation

Per CEQA Guidelines Section 15082, a NOP was prepared. Public outreach for the IS/NOP included distribution of the NOP using the following methods:

#### Newspaper Publication

- Published legal announcement of the NOP in the Long Beach Press-Telegram

#### Notices Delivered at Key Community Places

- LBCCD Bond Management Team office, Building O-1, 4901 E. Carson Street, Long Beach, California 90808
- LAC Library, Building L, LBCC LAC, 4901 E. Carson Street, Long Beach, California, 90808
- Ruth Bach Library located at 4055 North Bellflower Boulevard, Long Beach, California 90808

In addition, the NOP was available online at the LBCCD website (<https://www.lbcc.edu/pod/facilities-master-plans>).

### Notice of Completion and Draft Environmental Impact Report

Upon completion of the Draft EIR, and in accordance with CEQA Guidelines Section 15087(a), the NOC was prepared. Public outreach for the Draft EIR included distribution of the NOC using the following methods.

#### Newspaper Publications

- Published legal announcement of the NOP in the Long Beach Press-Telegram

### Draft SEIR

The Draft SEIR was sent to the Office of Planning and Research, State Clearinghouse for distribution to State agencies. During the public review period, the Draft SEIR was made available for review at the following locations:

- LBCCD Bond Management Team office, Building O-1, 4901 E. Carson Street, Long Beach, California 90808
- LAC Library, Building L, LBCC LAC, 4901 East Carson Street, Long Beach, California 90808
- Ruth Bach Library located at 4055 North Bellflower Boulevard, Long Beach, California 90808

In addition, the SEIR was available online at the LBCCD website (<https://www.lbcc.edu/pod/facilities-master-plans/>).

## CHAPTER 8.0 – RESPONSE TO COMMENTS

This chapter includes written comments received on the Draft SEIR and LBCCD’s response to each comment. Comment letters and specific comments are given numbers for reference purposes. Table 8-1, below, provides a list of agencies and persons that submitted comments on the Draft SEIR during the public review period.

**Table 8-1: List of Agencies and Persons Submitting Comments**

Comment Reference	Commenting Agency/Person	Date of Comment	Page	Type of Comment
Comment Letter #1	South Coast Air Quality Management District	November 2, 2018	Pg. 143	Letter
Comment Letter #2	State Clearinghouse	November 2, 2018	Pg. 148	Letter

Comment Letter #1 - SCAQMD



Comment Letter #1

SENT VIA E-MAIL AND USPS:  
[CEQA@lbcc.edu](mailto:CEQA@lbcc.edu)

November 2, 2018

Farzam Fathi  
Bond Management Team  
Long Beach Community College District  
4901 East Carson Street – G21  
Long Beach, CA 90808

**Draft Supplemental Environmental Impact Report (DSEIR) for the Proposed  
2041 Facilities Master Plan Liberal Arts Campus Improvements Project**

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the lead agency and should be incorporated into the final CEQA document.

Comment  
1-1

SCAQMD Staff's Summary of Project Description

The lead agency proposes to update the Long Beach Community College District Facilities Master Plan. Updates to the plan will result in an estimated 109,156 square feet of demolition, 387,341 square feet of renovations and 264,018 square feet of new construction on 29.84 acres (proposed project). The project is located at 4901 East Carson Street on the northwest corner of East Carson Street and Clark Avenue in the City of Long Beach.

Comment  
1-2

SCAQMD Staff's Summary of Air Quality Analysis

The lead agency determined the proposed project would have less than significant impacts to regional and localized air quality during construction and operation.<sup>1</sup> However, the lead agency did not adequately analyze the proposed project's air quality impacts from construction and operation. Please see SCAQMD staff's detailed comments below.

Comment  
1-3

SCAQMD Staff's Comments

*Overlapping Construction and Operation*

The proposed project is expected to be built-out over the next 20 years according to Table ES-2: 2041 Facilities Master Plan Construction by Planned Construction Years.<sup>2</sup> Since the implementation of the proposed project is expected to take place over an extended period of time, an overlapping construction and operation scenario is reasonably foreseeable. However, the lead agency did not analyze a scenario where construction activities overlap with operational activities. Therefore, to analyze the worst-case impact scenario, SCAQMD staff recommends that the lead agency identify the overlapping years, combine construction emissions (including emissions from demolition) with operational emissions, and compare the combined emissions to SCAQMD's air quality CEQA operational thresholds of significance to determine the level of significance in the final CEQA document.

Comment  
1-4

*Interim Milestone Years - Operation*

The lead agency used the full build-out year of 2041 for their operational analysis; however, the proposed project will be operational prior to year 2041. Although year 2041 assumes that the project is at its peak operational capacity, utilizing a single future operational year for emissions analysis improperly credits

<sup>1</sup> DSEIR, Air Quality and Greenhouse Gases Assumptions, Pages 13-14.

<sup>2</sup> DSEIR, Executive Summary, page 6.

Comment Letter #1 - SCAQMD

Farzam Fathi

November 2, 2018

Comment  
1-4  
continued

the project's operational emissions with reductions that are expected to occur independent of the proposed project. Specifically, the overall emission rates of vehicles, trucks, and equipment are generally higher in earlier years as more stringent emissions standards and cleaner technologies have not been fully implemented and fleets have not been fully turned over. Therefore, SCAQMD staff recommends that the lead agency incorporate interim milestone years (i.e., year 2020, 2025, 2030, 2035, and 2040) into the air quality analysis to properly disclose the proposed project's peak daily operational emissions during the entirety of operation.

*Mitigation Measures*

In the event that, after revising the air quality analysis, the lead agency determines that the proposed project will have significant impacts to air quality, mitigation measures will be required. The following mitigation measures are meant as guidance for the lead agency and should be considered for incorporation into the final CEQA document:

Construction Mitigation Measures

- Require all off-road diesel-powered construction equipment meet or exceed Tier 4 off-road emissions standards. A copy of the fleet's tier compliance documentation, and CARB or SCAQMD operating permit shall be provided to the Lead Agency at the time of mobilization of each applicable unit of equipment. In the event that all construction equipment cannot meet the Tier 4 engine certification, the Lead Agency must demonstrate through future study with written findings supported by substantial evidence before using other technologies/strategies. Alternative strategies may include, but would not be limited to, reduction in the number and/or horsepower rating of construction equipment, limiting the number of daily construction haul truck trips to and from the Proposed Project, and/or limiting the number of individual construction project phases occurring simultaneously. Include this requirement as a bid or contract specification with contractors. Require periodic reporting and provision of written documents by contractors to prove and ensure compliance.
- Require all diesel-fueled trucks including, but not limited to, construction hauling trucks and/or material delivery trucks, accessing the proposed project meet the U.S. Environmental Protection Agency (EPA)/California Air Resource Board (CARB) truck engine standard for Model Year 2010 or better. Additionally, consider other measures such as incentives, phase-in schedules for clean trucks, etc.
- Implement performance standards-based technology review during the development phase of the proposed project. Since the proposed project will be built over a 20-year period, and as technology continues to advance, the lead agency should take this opportunity to develop a pathway to deploy lowest emission technologies possible in the development life of the proposed project. To facilitate this requirement, SCAQMD staff recommends that the lead agency develop a plan to assess equipment availability, equipment fleet mixtures, and best available emissions control devices periodically after the proposed project is approved, and specify performance standards for the technology assessment. A performance standards-based technology review is generally feasible at a programmatic level for an area-wide and long-range plan such as the proposed project.

Comment  
1-5

Operational Mitigation Measures

*Transportation and Parking*

- Provide incentives for employees in order to encourage the use of public transportation or carpooling, such as discounted transit passes or carpool rebates.
- Implement a rideshare program for employees and set a goal to achieve a certain participation rate over a period of time.

Comment 1-6

Comment Letter #1 – SCAQMD

Farzam Fathi

November 2, 2018

Comment  
1-6  
continued

- Provide a parking system that allows for quick entry and exit in order to reduce vehicle idling time. A system should also be installed that provides sufficient signage or communication for available parking. A real time information system on parking availability in the parking lot can minimize the amount of time it takes to find available parking.

*Other Mitigation Measures*

- Require the use of electric landscaping equipment, such as lawn mowers and leaf blowers.
- Require the use of electric or alternatively fueled sweepers with HEPA filters.
- Maximize the planting of trees in landscaping and parking lots.
- Use of water-based or low VOC cleaning products.

Response to Comments

Comment  
1-7

Pursuant to California Public Resources Code Section 21092.5(a) and CEQA Guidelines Section 15088(b), SCAQMD staff requests that the lead agency provide SCAQMD staff with written responses to all comments contained herein prior to the certification of the final supplemental EIR. In addition, issues raised in the comments should be addressed in detail giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice (CEQA Guidelines Section 15088(c)). Conclusory statements do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful or useful to decision makers and to the public who are interested in the proposed project. Further, when the lead agency makes the finding that the recommended mitigation measures are not feasible, the lead agency should describe the specific reasons for rejecting them in the final supplemental EIR (CEQA Guidelines Section 15091).

SCAQMD staff is available to work with the lead agency to address any air quality questions that may arise from this comment letter. Please contact Alina Mullins, Assistant Air Quality Specialist, at [amullins@aqmd.gov](mailto:amullins@aqmd.gov) or (909) 396-2402, should you have any questions.

Sincerely,

*Daniel Garcia*

Daniel Garcia  
Program Supervisor  
Planning, Rule Development & Area Sources

DG/AM  
LAC180918-03  
Control Number

## **Response to Comment Letter #1 (SCAQMD)**

### **Response to Comment 1-1:**

The comments by the South Coast Air Quality Management District's (SCAQMD) have been noted as guidance for Long Beach Community College District, as the Lead Agency. The District notes the details regarding the Proposed Project including the square footage of demolition, renovation, and new building construction.

### **Response to Comment 1-2:**

The District notes SCAQMD's comment that the analysis did not analyze the overlap of construction and operation. The District has revised the air quality and greenhouse gas analysis to respond the SCAQMD's comments. More detailed responses are included below.

### **Response to Comment 1-3:**

Since implementation of the Proposed Project is expected to occur over an extended period of time the air quality analysis has been revised to account for an overlapping construction and operation scenario. Construction activities were modeled in five-year increments and interim operational activities were determined for the interim years of 2020, 2025, 2030, and 2035 and Master Plan buildout year 2041, that was analyzed as year 2040 due to CalEEMod model limitations. The revised analysis analyzed the overlapping years, combined construction emissions with operational emissions, and compared the combined emissions to SCAQMD's air quality CEQA operational thresholds of significance to determine level of significance. The revised analysis found that the 5-year increments provided a more-realistic timeframe of construction activities and lowered the amount of construction that would occur at any one time. The analysis for overlapping construction and operational emissions for the five-year increments showed that the emissions were below SCAQMD's air quality CEQA operational thresholds of significance.

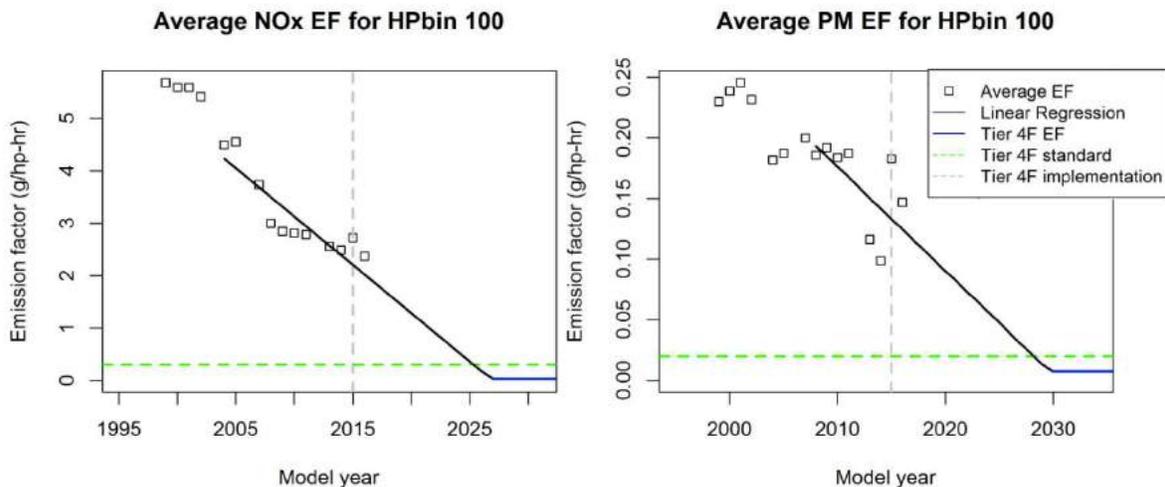
The air emissions calculations were primarily based on the CalEEMod model default parameters; however, the following changes to the default parameters were utilized in the emissions calculations. Since the CalEEMod model utilizes the OFFROAD2011 model for off-road equipment emissions rates and the OFFROAD2011 model only provides emissions rates out to the year 2023, the OFFROAD2017 model was utilized for the years 2030, 2035, and 2040. For operational emissions, mitigation of "Increase Transit Accessibility with a 0.1 mile distance to the nearest transit station" was selected since the majority of the LAC is located within 0.1 mile of the existing bus stops on Clark Avenue and Carson Street. In addition, the mitigation of "Improve Pedestrian Network on the project site and connecting offsite" was selected to account for the existing onsite sidewalks that connect to the offsite sidewalks along the nearby public roads. Since both of these CalEEMod mitigation measures represent existing conditions, they are not required to be listed as mitigation measures for the Proposed Project. As such, the revisions to the air emissions modeling would not require the Proposed Project to implement any additional mitigation measures.

**Response to Comment 1-4:**

Since portions of the Proposed Project will be operational prior to the buildout year of 2041, the air quality analysis has been revised to incorporate interim milestone years of 2020, 2025, 2030, and 2035, (buildout year 2041 was analyzed as year 2040, due to CalEEMod model limitations) to properly disclose the Proposed Project’s peak daily operational emissions during the entirety of operation. As discussed in Response to Comment 1-3, above, the overlapping construction and operational emissions were found to be below SCAQMD’s air quality CEQA operational thresholds of significance.

**Response to Comment 1-5:**

Since the revised air quality analysis found that combined construction and operational emissions for the interim years were below SCAQMD’s air quality CEQA operational thresholds of significance, no air quality mitigation measures were determined necessary. In addition, as noted in Response to Comment 1-1, above the OFFROAD 2017 model was used to more accurately account for industry adoption of Tier 4 engines. According to *2017 Off-Road Diesel Emission Factor Update for NOx and PM*, prepared by CARB, the California off-road equipment fleet average emissions rates are anticipated to meet or exceed the Tier 4 emissions by 2030 as shown in the below graph. As such, none of the construction mitigation measures noted in the comment are necessary to reduce impacts, as construction air quality impacts are less than significant.



**Response to Comment 1-6:**

Since the revised air quality analysis found that combined construction and operational emissions for the interim years were below SCAQMD’s air quality CEQA operational thresholds of significance, no air quality mitigation measures were determined necessary. In addition, the District participates in the SCAQMD Rule 2202 On-Road Vehicle Mitigation Program, in which the District determines the number of staff members at the campus and then purchases credits to offset emissions and meet SCAQMD requirements. None of the operational mitigation measures noted in the comment are necessary to reduce impacts, as construction air quality impacts are less than significant.

**Response to Comment 1-7:**

Written responses will be provided to SCAQMD after completion of the Response to Comments document. These will be provided before the Final EIR is adopted, as the Response to Comments document will be finished as part of the Final Environmental Impact Report (EIR) process. The District notes that Alina Mullins is the contact person regarding this comment letter.

Comment Letter #2: State Clearinghouse

Comment Letter #2



EDMUND G. BROWN JR.  
GOVERNOR

STATE OF CALIFORNIA  
GOVERNOR'S OFFICE of PLANNING AND RESEARCH



KEVIN ALEX  
DIRECTOR

November 2, 2018

Farzam Fathi  
Long Beach Community College District  
4901 E. Carson Street - G21  
Long Beach, CA 90808

Subject: 2041 Facilities Master Plan LAC Improvements  
SCH#: 2004051060

Dear Farzam Fathi:

Comment 2-1

The State Clearinghouse submitted the above named Supplemental EIR to selected state agencies for review. The review period closed on November 1, 2018, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Comment 2-2

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

  
Scott Morgan  
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044  
1-916-322-2318 FAX 1-916-558-3184 www.opr.ca.gov

Comment Letter #2 – State Clearinghouse

**Document Details Report  
 State Clearinghouse Data Base**

**SCH#** 2004051060  
**Project Title** 2041 Facilities Master Plan LAC Improvements  
**Lead Agency** Long Beach Community College District

**Type** SIR Supplemental EIR  
**Description** The 2041 Facilities Master Plan provides a prioritized program of work incorporating the 2004 LAC Master Plan, the 2020 Unified Master Plan for LAC, and the space and building needs identified to the year 2041. The LBCCD 2041 Facilities Master Plan LAC improvements would result in an estimated increase over the 2020 Unified Master Plan of 15,877 sf of renovation, and 69,564 sf removed, and estimated increase of 30,035 sf of new construction.

**Lead Agency Contact**

**Name** Farzam Fathi  
**Agency** Long Beach Community College District  
**Phone** (562) 938-5089 **Fax**  
**email**  
**Address** 4901 E. Carson Street - G21  
**City** Long Beach **State** CA **Zip** 90808

**Project Location**

**County** Los Angeles  
**City** Long Beach  
**Region**  
**Lat / Long** 33° 49' 50.2" N / 118° 08' 4.38" W  
**Cross Streets** E. Carson Street & Clark Avenue  
**Parcel No.**  
**Township** **Range** **Section** **Base**

**Proximity to:**

**Highways** I-405, SH-19  
**Airports** Long Beach Municipal  
**Railways**  
**Waterways**  
**Schools** Twain Elementary, Bancroft  
**Land Use** Institutional and School District/Public Facilities

**Project Issues** Aesthetic/Visual; Air Quality; Noise; Traffic/Circulation

**Reviewing Agencies** Resources Agency; Department of Fish and Wildlife, Region 5; Cal Fire; Department of Parks and Recreation; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 7; California Department of Education; Department of General Services; State Water Resources Control Board, Division of Drinking Water; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; Native American Heritage Commission; San Gabriel & Lower Los Angeles Rivers & Mountains Conservancy

**Date Received** 09/18/2018 **Start of Review** 09/18/2018 **End of Review** 11/01/2018

Note: Blanks in data fields result from insufficient information provided by lead agency.

**Response to Comment Letter #2 (State Clearinghouse)**

**Response to Comment 2-1:**

This comment from the Governor's Office of Planning and Research confirms the dissemination of the Subsequent EIR to selected state agencies by the State Clearinghouse. The comment also acknowledges that the District has complied with State Clearinghouse review requirements for draft environmental documents. No further response is required.

**Response to Comment 2-2:**

This comment provides contact information for the State Clearinghouse. No further response is required.

## CHAPTER 9.0 – CHANGES TO DRAFT SEIR

This errata section identifies changes made to the Draft SEIR to correct or clarify the information contained in the document. Changes made to the Draft SEIR are identified here, in strikeout text to indicate deletions and ***bold italics*** to signify additions.

The changes to the Draft SEIR are listed by section and page number.

Executive Summary, page ES-3 to ES-5

**Table ES-1: Updated 2041 Facilities Master Plan Improvements**

Project	Scope/Usage	Gross Square Feet (GSF)/ Features
Building B Classroom	Renovate Building with electrical upgrades, data and communication, larger lecture halls, better lighting, and additional lab functions	Renovation – 44,357
Building D Science Building	Renovate Science Building for improved classroom learning environments, new fiber data backbone, and enhanced signage	Renovation – 16,000
Building E College Center	Campus-wide Student Support	Demolition – 50,276 New Construction – 50,276
Building F Family/Consumer Education	Outdated building that will be replaced with new landscape and hardscape	Demolition – 15,968
Building G Performing Arts	New Performing Arts Building replaces the existing and outmoded Music Building.	Demolition – 27,792 New Construction – 42,857
Building J Auditorium	Complete renovation of Auditorium building with expansion of the building as well as general refurbishment and updates	Renovation – 37,878 Expansion – 14,119
Building K Art Building	Fine Arts building needs complete renovation and modernization	Retrofit/Renovation – 29,479
Building M Liberal Arts	Replace Buildings M and N with new building for classrooms, laboratory facilities, and technology center	Demolition – 48,768 New Construction – 81,970
Building O1 IITS/Warehouse	Structural enhancements to obtain certification by Division of State Architect	Renovation – 26,560
Building O2 Economic & Workforce Development/Foundation	Structural enhancements to obtain certification by Division of State Architect	Renovation – 51,302

**Table ES-1: Updated 2041 Facilities Master Plan Improvements**

Project	Scope/Usage	Gross Square Feet (GSF)/ Features
Building P Language Arts	Upgrade building's functional systems with upgraded power systems, HVAC, plumbing, storm drainage, fire alarm, and telecommunication systems	Renovation – 16,016
Building Q Secondary Gymnasium	Renovation and upgrading to address issues related to instructional space, training needs, seismic upgrades, AHA compliance, and other upgrades	Renovation – 30,270
Building R Primary Gymnasium	Comprehensive structural and seismic renovation, ADA access, HVAC upgrades	Renovation – 78,024 New Construction – 10,000
Building S Stadium	Renovation including ADA access, structural upgrades	Renovation – 57,455
Building W Aquatic Center	Construction of a new 50-meter by 25-yard pool, with a new support building	New Construction – <del>50,881</del> and <b>54,660 including pool area</b>
Outdoor Kinesiology Labs	New construction of physical education outdoor playing fields to include softball relocation, two soccer fields, six tennis courts, five sand volleyball courts, and supporting facilities, restrooms, field house, storage.	New Construction Supporting Facilities – <del>13,915</del> - <b>15,014</b>
Walkways and Wayfinding	New and revised walkways, installation of uniform signage program	New construction/renovation

ADA: Americans with Disabilities Act; HVAC: heating, ventilation, and air conditioning

The LBCCD 2041 Facilities Master Plan LAC improvements would result in an estimated increase over the 2020 Unified Master Plan of 15,877 square feet of renovation, 69,564 square feet removed, and an estimated increase of ~~30,035~~ **34,913<sup>2</sup>** square feet of new construction.

The following descriptions identify specific improvements recommended for the 2041 Facilities Master Plan LAC Improvements that were not part of the 2020 Unified Master Plan or the original 2004 LAC Master Plan Program EIR.

- Building D, Science Building, renovation will be expanded from 9,326 square feet to 16,000 square feet

<sup>2</sup> The increase in square footage included in the revisions to the Draft SEIR are already accounted for in the analysis as worst-case assumptions were made in the modeling scenario.

- Building E, the Existing College Center, will be demolished (50,276 gross square feet [GSF]) and a new building will be constructed with approximately the same GSF of 50,276. The new construction will be in lieu of major renovation of Building E that was previously shown on the 2020 Master Plan.
- Building F will be demolished and replaced with new landscape and hardscape.
- The Performing Arts Building (Building G, previously shown as Building 3 on 2020 Master Plan) will replace the existing Buildings G and H, consisting of approximately 42,857 square feet instead of 46,671 square feet, which was shown on the 2020 Master Plan.
- Building M, Liberal Art, (Previously shown as building 2 & 6 on 2020 Master Plan) will replace the existing buildings M & N, consisting of approximately 81,970 GSF instead of 77,693 GSF, which was shown on the 2020 Master Plan.
- Building O1 will undergo structural enhancements to the 26,560-square-foot building to obtain Division of State Architect certification.
- Building O2 will undergo structural enhancements to the 51,302-square-foot building to obtain Division of State Architect certification.
- Building R, Primary Gymnasium, is anticipated to have an expansion with new construction to the south of 10,000 GSF to accommodate program needs.
- In order to meet programmatic needs, a new 10,000 GSF structure may be built between Buildings Q and R to accommodate swing space and Title IX needs while the buildings are being renovated.
- Building W, Aquatics Center, will be **31,692 GSF and** approximately ~~20,000~~ **21,871** GSF of building structure ~~for~~ **will be allocated to the pool facility including** restrooms, locker rooms, team rooms, classroom and offices and will have a capacity of approximately 800 spectator seats. (An Olympic-sized swimming pool with grandstands to accommodate a 3,000-spectator-seat capacity was shown in the 2020 Master Plan.)
- Outdoor Kinesiology Labs, renovation and new construction of physical education outdoor playing fields to include softball relocation, two soccer fields, six tennis courts, and five sand volleyball courts and supporting facilities, such as restrooms, field house, and storage facilities. Approximately 9,821 square feet of Building W will be allocated to The Outdoor Kinesiology Labs as supporting facilities. Also, the existing field house for Softball Field will be removed and replaced with approximately ~~4,098~~ **5,193** square feet of new supporting facilities. (Outdoor Physical Education Labs, including softball field relocation, were previously shown in the 2020 Master Plan.)
- In order for the District to meet the state requirements and Executive Order B-18-12 for Zero-Net-Energy, the LAC campus will be studied for possible Solar Photovoltaic systems at various locations. Parking Lot M as well as other parking lots may have two-thirds of the lot covered with photovoltaic carport structures to meet the statewide requirements for energy production and achieve a Zero Net Energy District.

Section 2.3.1, Page 20-22

**Table 2-1: Updated 2041 Facilities Master Plan Improvements**

Project	Scope/Usage	Square Feet (GSF)/ Features
Building B Classroom	Renovate Building with electrical upgrades, data and communication, larger lecture halls, better lighting, and additional lab functions	Renovation – 44,357
Building D Science Building	Renovate Science Building for improved classroom learning environments, new fiber data backbone, and enhanced signage	Renovation – 16,000
Building E College Center	Campus-wide Student Support	Demolition – 50,276 New Construction – 50,276
Building F Family/Consumer Education	Outdated building that will be replaced with new landscape and hardscape	Demolition – 15,968
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Building O1 IITS/Warehouse	Structural enhancements to obtain certification by Division of State Architect	Renovation – 26,560
Building O2 Economic & Workforce Development/Foundation	Structural enhancements to obtain certification by Division of State Architect	Renovation – 51,302
Building P Language Arts	Upgrade building's functional systems with upgraded power systems, HVAC, plumbing, storm drainage, fire alarm, and telecommunication systems	Renovation – 16,016
Building Q Secondary Gymnasium	Renovation and upgrading to address issues related to instructional space, training needs, seismic upgrades, AHA compliance, and other upgrades	Renovation – 30,270
Building R Primary Gymnasium	Comprehensive structural and seismic renovation, ADA access, HVAC upgrades	Renovation – 78,024 New Construction – 10,000
Building S Stadium	Renovation including ADA access, structural upgrades	Renovation – 57,455
Building W Aquatic Center	Construction of a new 50 meter by 25-yard pool, with a new support building	New Construction – <del>50,881</del> and <b>54,660</b> <b>including</b> pool area

**Table 2-1: Updated 2041 Facilities Master Plan Improvements**

Project	Scope/Usage	Square Feet (GSF)/ Features
Outdoor Kinesiology Labs	New construction of physical education outdoor playing fields to include softball relocation, two soccer fields, six tennis courts, five sand volleyball courts, and supporting facilities, restrooms, field house, storage.	New Construction Supporting Facilities – <del>13,915</del> <b>15,014</b>
Walkways and Wayfinding	New and revised walkways, installation of uniform signage program	New construction/renovation

ADA: Americans with Disabilities Act; HVAC: heating, ventilation, and air conditioning

The LBCCD 2041 Facilities Master Plan LAC improvements would result in an estimated increase over the 2020 Unified Master Plan of 15,877 square feet of renovation, 69,564 square feet removed, and an estimated increase of ~~30,035~~ **34,913** square feet of new construction.

The following descriptions identify specific improvements recommended for the 2041 Facilities Master Plan LAC Improvements that were not part of the 2020 Unified Master Plan or the original 2004 LAC Master Plan Program EIR.

- Building D, Science Building, renovation will be expanded from 9,326 square feet to 16,000 square feet
- Building E, the Existing College Center, will be demolished (50,276 gross square feet); and a new building will be constructed with approximately the same gross square footage of 50,276. The new construction will be in lieu of major renovation of Building E that was previously shown on the 2020 Master Plan.
- Building F will be demolished and replaced with new landscape and hardscape.
- The Performing Arts Building (Building G, previously shown as Building 3 on 2020 Master Plan) will replace the existing Buildings G and H, consisting of approximately 42,857 square feet instead of 46,671 square feet, which was shown on the 2020 Master Plan.
- Building O1 will undergo structural enhancements to the 26,560-square-foot building to obtain Division of State Architect certification.
- Building O2 will undergo structural enhancements to the 51,302-square-foot building to obtain Division of State Architect certification.
- Building R, Primary Gymnasium, is anticipated to have an expansion with new construction to the south of 10,000 gross square feet to accommodate program needs.
- In order to meet programmatic needs a new 10,000-gross-square-foot structure may be built between Buildings Q and R to accommodate swing space and Title IX needs while the buildings are being renovated.

- Building W, Aquatics Center, will be **31,692 GSF** approximately ~~20,000~~ **21,871** gross square footage of building structure **will be allocated for to the pool facility including** restrooms, locker rooms, team rooms, classrooms, and offices and will have a capacity of approximately 800 spectator seats. (An Olympic-sized swimming pool with grandstands to accommodate a 3,000-spectator-seat capacity was shown in the 2020 Master Plan.)
- Outdoor Kinesiology Labs, Renovation and New construction of physical education outdoor playing fields to include softball relocation, two soccer fields, six tennis courts, and five sand volleyball courts, and supporting facilities, such as restrooms, field house, and storage facilities. Approximately 9,821 square feet of Building W will be allocated to The Outdoor Kinesiology Labs as supporting facilities. Also, the existing field house for Softball Field will be removed and replaced with approximately ~~4,098~~ **5,193** square feet of new supporting facilities. (Outdoor Physical Education Labs, including softball field relocation, were previously shown in the 2020 Master Plan.)

In order for the District to meet the state requirements and Executive Order B-18-12 for Zero-Net-Energy, the LAC campus will be studied for possible solar photovoltaic systems at various locations. Parking Lot M, as well as other parking lots, may have two-thirds of the lot covered with photovoltaic carport structures to meet the statewide requirements for energy production and achieve a Zero Net Energy District.

Section 3.5.3, Page 38

**Rule 2202 – On-Road Motor Vehicle Mitigation Options**

**Rule 2202 requires employers who employ 250 or more employees on a full or part-time basis at a worksite, to reduce vehicle emissions generated from employee commutes. Rule 2202 was developed by SCAQMD in order to comply with federal and state Clean Air Act requirements from Health & Safety Code Section 40458 and Section 182(d)(1)(B) of the federal Clean Air Act. LAC has been required to pay an annual fee of \$30,000 for the last several years to SCAQMD per Rule 2202 requirements in order to offset emissions created by LAC employee commutes.**

**Section 3.5.4, Page 45**

**The worst-case summer or winter daily construction-related criteria pollutant emissions from the Proposed Project for each phase of construction activities are shown below in Table 3-6 for years 2019-2021, Table 3-7 for years 2021-2025, Table 3-8 for years 2026-2030, Table 3-9 for years 2031-2035, and Table 3-10 for years 2036-2041.**

**Section 3.5.4, Page 45 and 46**

**Table 3-6: Projected Years 2019-2021 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition<sup>1</sup></b>						
On site <sup>2</sup>	<del>3.723.51</del>	<del>38.3235.78</del>	<del>22.3022.06</del>	0.04	<del>2.642.73</del>	<del>1.911.81</del>
Off site <sup>3</sup>	<del>0.200.22</del>	<del>3.514.20</del>	<del>1.561.64</del>	0.01	<del>0.370.42</del>	<del>0.110.13</del>

**Table 3-6: Projected Years 2019-2021 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Total</b>	<b>3.923.73</b>	<b>41.8339.98</b>	<b>23.8623.70</b>	<b>0.05</b>	<b>3.013.15</b>	<b>2.021.94</b>
<b>Grading<sup>1</sup></b>						
On site	5.092.58	59.5228.35	35.0916.29	0.060.03	6.023.95	3.832.60
Off site	0.150.11	0.830.76	1.280.91	0.00	0.270.21	0.080.06
<b>Total</b>	<b>5.242.69</b>	<b>60.3529.11</b>	<b>36.3717.20</b>	<b>0.060.03</b>	<b>6.294.16</b>	<b>3.912.66</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
On site	13.1712.02	22.9122.92	19.0119.00	0.03	1.42	1.34
Off site	4.040.96	24.275.77	33.877.99	0.120.03	7.911.87	2.260.53
<b>Total</b>	<b>17.2113.00</b>	<b>47.1828.69</b>	<b>52.8726.99</b>	<b>0.150.06</b>	<b>9.333.29</b>	<b>3.601.87</b>
<b>Paving</b>						
On site	1.261.36	12.9214.07	14.65	0.02	0.680.75	0.620.69
Off site	0.070.08	0.05	0.600.66	0.00	0.17	0.05
<b>Total</b>	<b>1.331.44</b>	<b>12.9714.12</b>	<b>15.2515.31</b>	<b>0.02</b>	<b>0.850.92</b>	<b>0.670.74</b>
<b>Maximum Daily Emissions</b>	<b>13.00</b>	<b>39.98</b>	<b>26.99</b>	<b>0.06</b>	<b>4.16</b>	<b>2.66</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently.

Source: CalEEMod Version 2016.3.2 (see Appendix B).

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**Table 3-7: Projected Years 2021-2025 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition<sup>1</sup></b>						
On site <sup>2</sup>	3.17	31.44	21.57	0.04	2.52	1.59
Off site <sup>3</sup>	0.19	3.74	1.48	0.01	0.42	0.12
<b>Total</b>	<b>3.36</b>	<b>35.18</b>	<b>23.05</b>	<b>0.05</b>	<b>2.94</b>	<b>1.71</b>
<b>Grading<sup>1</sup></b>						
On site	2.29	24.74	15.86	0.03	3.72	2.38
Off site	0.09	0.63	0.76	0.00	0.21	0.06
<b>Total</b>	<b>2.38</b>	<b>25.37</b>	<b>16.62</b>	<b>0.03</b>	<b>3.93</b>	<b>2.44</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
On site	6.32	18.96	18.40	0.03	1.05	0.99

**Table 3-7: Projected Years 2021-2025 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Off site</b>	<b>0.57</b>	<b>3.32</b>	<b>4.69</b>	<b>0.02</b>	<b>1.30</b>	<b>0.36</b>
<b>Total</b>	<b>6.89</b>	<b>22.28</b>	<b>23.09</b>	<b>0.05</b>	<b>2.35</b>	<b>1.35</b>
<b>Paving</b>						
<b>On site</b>	<b>0.98</b>	<b>9.52</b>	<b>12.19</b>	<b>0.02</b>	<b>0.49</b>	<b>0.45</b>
<b>Off site</b>	<b>0.09</b>	<b>0.06</b>	<b>0.74</b>	<b>0.00</b>	<b>0.23</b>	<b>0.06</b>
<b>Total</b>	<b>1.07</b>	<b>9.59</b>	<b>12.93</b>	<b>0.02</b>	<b>0.72</b>	<b>0.51</b>
<b>Maximum Daily Emissions</b>	<b>6.89</b>	<b>35.18</b>	<b>23.09</b>	<b>0.05</b>	<b>3.93</b>	<b>2.44</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently.

Source: CalEEMod Version 2016.3.2 (see Appendix B).

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**Table 3-8: Projected Years 2026-2030 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition<sup>1</sup></b>						
<b>On site<sup>2</sup></b>	<b>1.34</b>	<b>9.46</b>	<b>13.33</b>	<b>0.02</b>	<b>1.08</b>	<b>0.59</b>
<b>Off site<sup>3</sup></b>	<b>0.09</b>	<b>1.44</b>	<b>0.85</b>	<b>0.01</b>	<b>0.30</b>	<b>0.08</b>
<b>Total</b>	<b>1.43</b>	<b>10.90</b>	<b>14.18</b>	<b>0.03</b>	<b>1.38</b>	<b>0.67</b>
<b>Grading<sup>1</sup></b>						
<b>On site</b>	<b>1.19</b>	<b>9.10</b>	<b>8.49</b>	<b>0.02</b>	<b>3.05</b>	<b>1.77</b>
<b>Off site</b>	<b>0.05</b>	<b>0.43</b>	<b>0.40</b>	<b>0.00</b>	<b>0.15</b>	<b>0.04</b>
<b>Total</b>	<b>1.24</b>	<b>9.53</b>	<b>8.89</b>	<b>0.02</b>	<b>3.20</b>	<b>1.81</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
<b>On site</b>	<b>4.82</b>	<b>9.65</b>	<b>15.82</b>	<b>0.03</b>	<b>0.52</b>	<b>0.50</b>
<b>Off site</b>	<b>0.35</b>	<b>2.01</b>	<b>2.82</b>	<b>0.01</b>	<b>1.10</b>	<b>0.30</b>
<b>Total</b>	<b>5.17</b>	<b>11.66</b>	<b>18.64</b>	<b>0.04</b>	<b>1.62</b>	<b>0.80</b>
<b>Paving</b>						
<b>On site</b>	<b>0.79</b>	<b>7.44</b>	<b>11.67</b>	<b>0.02</b>	<b>0.35</b>	<b>0.32</b>
<b>Off site</b>	<b>0.05</b>	<b>0.03</b>	<b>0.39</b>	<b>0.00</b>	<b>0.17</b>	<b>0.05</b>
<b>Total</b>	<b>0.84</b>	<b>7.47</b>	<b>12.06</b>	<b>0.02</b>	<b>0.52</b>	<b>0.37</b>
<b>Maximum Daily</b>	<b>5.17</b>	<b>11.66</b>	<b>18.64</b>	<b>0.04</b>	<b>3.20</b>	<b>1.81</b>

**Table 3-8: Projected Years 2026-2030 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Emissions</b>						
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently.

Source: CalEEMod Version 2016.3.2 (see Appendix B).

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**Table 3-9: Projected Years 2031-2035 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Grading<sup>1</sup></b>						
<b>On site</b>	<b>1.62</b>	<b>4.54</b>	<b>14.45</b>	<b>0.04</b>	<b>2.79</b>	<b>1.55</b>
<b>Off site</b>	<b>0.05</b>	<b>0.41</b>	<b>0.42</b>	<b>0.00</b>	<b>0.21</b>	<b>0.06</b>
<b>Total</b>	<b>1.67</b>	<b>4.95</b>	<b>14.87</b>	<b>0.04</b>	<b>3.00</b>	<b>1.61</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
<b>On site</b>	<b>8.11</b>	<b>5.15</b>	<b>17.96</b>	<b>0.03</b>	<b>0.17</b>	<b>0.17</b>
<b>Off site</b>	<b>0.43</b>	<b>2.87</b>	<b>3.34</b>	<b>0.02</b>	<b>1.70</b>	<b>0.46</b>
<b>Total</b>	<b>8.54</b>	<b>8.02</b>	<b>21.30</b>	<b>0.05</b>	<b>1.87</b>	<b>0.63</b>
<b>Paving</b>						
<b>On site</b>	<b>1.15</b>	<b>6.23</b>	<b>13.09</b>	<b>0.02</b>	<b>0.25</b>	<b>0.25</b>
<b>Off site</b>	<b>0.05</b>	<b>0.02</b>	<b>0.38</b>	<b>0.00</b>	<b>0.22</b>	<b>0.06</b>
<b>Total</b>	<b>1.20</b>	<b>6.25</b>	<b>13.47</b>	<b>0.02</b>	<b>0.47</b>	<b>0.31</b>
<b>Maximum Daily Emissions</b>	<b>8.54</b>	<b>8.02</b>	<b>21.30</b>	<b>0.05</b>	<b>3.00</b>	<b>1.61</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently.

Source: CalEEMod Version 2016.3.2 (see Appendix B).

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**Table 3-10: Projected Years 2036-2041 Construction Emissions Without CEQA Mitigation(lbs/day)**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Demolition<sup>1</sup></b>						
On site <sup>2</sup>	1.83	3.36	18.71	0.05	0.53	0.27
Off site <sup>3</sup>	0.06	0.93	0.56	0.01	0.27	0.07
<b>Total</b>	<b>1.89</b>	<b>4.29</b>	<b>19.27</b>	<b>0.06</b>	<b>0.80</b>	<b>0.34</b>
<b>Grading<sup>1</sup></b>						
On site	1.46	2.91	14.33	0.04	2.71	1.47
Off site	0.04	0.40	0.35	0.00	0.21	0.06
<b>Total</b>	<b>1.50</b>	<b>3.31</b>	<b>14.68</b>	<b>0.04</b>	<b>2.92</b>	<b>1.53</b>
<b>Building Construction &amp; Architectural Coating<sup>4</sup></b>						
On site	4.83	3.85	17.91	0.03	0.10	0.10
Off site	0.24	1.95	1.88	0.01	1.18	0.32
<b>Total</b>	<b>5.07</b>	<b>5.80</b>	<b>19.79</b>	<b>0.04</b>	<b>1.28</b>	<b>0.42</b>
<b>Paving</b>						
On site	0.99	4.74	13.07	0.02	0.15	0.15
Off site	0.04	0.02	0.32	0.00	0.22	0.06
<b>Total</b>	<b>1.03</b>	<b>4.76</b>	<b>13.39</b>	<b>0.02</b>	<b>0.37</b>	<b>0.21</b>
<b>Maximum Daily Emissions</b>	<b>5.07</b>	<b>5.80</b>	<b>19.79</b>	<b>0.06</b>	<b>2.92</b>	<b>1.53</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: CO = carbon monoxide; lbs = pounds; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Demolition and Grading based on adherence to the SCAQMD Rule 403 fugitive dust suppression requirements.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

<sup>4</sup> This analysis assumed that Building Construction and application of architectural coatings would occur concurrently. Source: CalEEMod Version 2016.3.2 (see Appendix B).

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As shown in Table 3-6, **Table 3 7, Table 3 8, Table 3 9, and Table 3 10**, the emissions from construction activities associated with implementation of the 2041 Facilities Master Plan would be below the significance thresholds for all phases of construction. A less than significant impact would occur.

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~~Table 3-8 presents the estimated operational emissions at LAC. The estimated operational and construction emissions at LAC are shown in Table 3 12 for interim year 2020, Table 3 13 for interim year 2025, Table 3 14 for interim year 2030, Table 3 15 for interim year 2035, and Table 3 16 for buildout year 2041.~~

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**Table 3-12: Summary of Total Estimated Buildout Year 2020 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Area Sources<sup>1</sup></b>	<b>5.20</b>	<b>0.00</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Energy Usage<sup>2</sup></b>	<b>0.14</b>	<b>1.31</b>	<b>1.10</b>	<b>0.01</b>	<b>0.10</b>	<b>0.10</b>
<b>Mobile Sources<sup>3</sup></b>	<b>1.94</b>	<b>9.14</b>	<b>25.25</b>	<b>0.08</b>	<b>6.30</b>	<b>1.74</b>
<b>Construction<sup>4</sup></b>	<b>13.00</b>	<b>39.98</b>	<b>26.99</b>	<b>0.06</b>	<b>4.16</b>	<b>2.66</b>
<b>Total</b>	<b>20.28</b>	<b>50.43</b>	<b>53.42</b>	<b>0.15</b>	<b>10.56</b>	<b>4.50</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2020 from **Error! Reference source not found..**

Source: CalEEMod Version 2016.3.2.

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**Table 3-13: Summary of Total Estimated Buildout Year 2025 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Area Sources<sup>1</sup></b>	<b>7.53</b>	<b>0.00</b>	<b>0.31</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Energy Usage<sup>2</sup></b>	<b>0.22</b>	<b>2.05</b>	<b>1.72</b>	<b>0.01</b>	<b>0.16</b>	<b>0.16</b>
<b>Mobile Sources<sup>3</sup></b>	<b>3.58</b>	<b>15.71</b>	<b>45.97</b>	<b>0.19</b>	<b>16.46</b>	<b>4.50</b>
<b>Construction<sup>4</sup></b>	<b>6.89</b>	<b>35.18</b>	<b>23.09</b>	<b>0.05</b>	<b>3.93</b>	<b>2.44</b>
<b>Total</b>	<b>18.22</b>	<b>52.94</b>	<b>71.09</b>	<b>0.25</b>	<b>20.55</b>	<b>7.10</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2025 from Table 3-7.

Source: CalEEMod Version 2016.3.2.

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**Table 3-14: Summary of Total Estimated Buildout Year 2030 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Area Sources<sup>1</sup></b>	<b>9.22</b>	<b>0.01</b>	<b>0.69</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Energy Usage<sup>2</sup></b>	<b>0.28</b>	<b>2.58</b>	<b>2.16</b>	<b>0.02</b>	<b>0.20</b>	<b>0.20</b>
<b>Mobile Sources<sup>3</sup></b>	<b>5.98</b>	<b>22.11</b>	<b>50.21</b>	<b>0.22</b>	<b>21.47</b>	<b>5.87</b>
<b>Construction<sup>4</sup></b>	<b>5.17</b>	<b>11.66</b>	<b>18.64</b>	<b>0.04</b>	<b>3.20</b>	<b>6.07</b>
<b>Total</b>	<b>20.65</b>	<b>36.35</b>	<b>71.69</b>	<b>0.28</b>	<b>24.87</b>	<b>7.88</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2030 from Table 3-8.

Source: CalEEMod Version 2016.3.2.

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**Table 3-15: Summary of Total Estimated Buildout Year 2035 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Area Sources<sup>1</sup></b>	<b>12.94</b>	<b>0.01</b>	<b>1.23</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Energy Usage<sup>2</sup></b>	<b>0.41</b>	<b>3.76</b>	<b>3.15</b>	<b>0.03</b>	<b>0.29</b>	<b>0.29</b>
<b>Mobile Sources<sup>3</sup></b>	<b>5.82</b>	<b>32.91</b>	<b>75.66</b>	<b>0.39</b>	<b>39.88</b>	<b>10.86</b>
<b>Construction<sup>4</sup></b>	<b>8.54</b>	<b>8.02</b>	<b>21.30</b>	<b>0.05</b>	<b>3.00</b>	<b>1.61</b>
<b>Total</b>	<b>27.71</b>	<b>44.71</b>	<b>101.34</b>	<b>0.47</b>	<b>43.17</b>	<b>12.76</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2035 from Table 3-9.

Source: CalEEMod Version 2016.3.2.

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**Table 3-16: Summary of Total Estimated Buildout Year 2041 Operational and Construction Emissions.**

Source	Maximum Daily Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources <sup>1</sup>	17.09	0.01	0.76	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.56	5.11	4.29	0.03	0.39	0.39
Mobile Sources <sup>3</sup>	<del>7.21</del> <b>6.36</b>	<del>46.43</del> <b>42.34</b>	<del>92.74</del> <b>74.56</b>	<del>0.52</del> <b>0.41</b>	<del>55.32</del> <b>42.71</b>	<del>14.95</del> <b>11.54</b>
<b>Construction<sup>4</sup></b>	<b>5.07</b>	<b>5.80</b>	<b>19.79</b>	<b>0.06</b>	<b>2.92</b>	<b>1.53</b>
<b>Total</b>	<b>24.86</b> <b>29.08</b>	<b>51.55</b> <b>53.26</b>	<b>97.79</b> <b>99.40</b>	<b>0.55</b> <b>0.50</b>	<b>55.71</b> <b>46.02</b>	<b>15.34</b> <b>13.46</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	No	No	No	No	No	No

Notes: CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM = particulate matter; SO<sub>x</sub> = sulfur oxides; VOC = volatile organic compounds.

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2041 from Table 3-10.

Source: CalEEMod Version 2016.3.2.

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As shown in ~~Table 3-8~~ **Table 3 12, Table 3 13, Table 3 14, Table 3 15, and Table 3 16**, the emissions associated with the 2041 Facilities Master Plan for the LAC Improvements would be less than the daily significance thresholds, and no significant impacts are anticipated.

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**Table 3-19: Project Related Greenhouse Gas Annual Emissions**

Sector	Greenhouse Gas Emissions (Metric Tons per Year)			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Area Sources <sup>1</sup>	0.19	0.00	0.00	0.20
Energy Uses <sup>2</sup>	3,256.76	0.11	0.04	3,270.81
Mobile Sources <sup>3</sup>	6,627.71	0.25	0.00	6,634.06
Solid Waste <sup>4</sup>	278.02	16.43	0.00	688.79
Water and Wastewater <sup>5</sup>	160.32	0.53	0.01	177.63
<b>Construction Year 2020<sup>6</sup></b>	<b>12.20</b>	<b>0.00</b>	<b>0.00</b>	<b>12.24</b>
<b>Construction Year 2025<sup>6</sup></b>	<b>10.65</b>	<b>0.00</b>	<b>0.00</b>	<b>10.70</b>
<b>Construction Year 2030<sup>6</sup></b>	<b>8.53</b>	<b>0.00</b>	<b>0.00</b>	<b>8.56</b>
<b>Construction Year</b>	<b>11.63</b>	<b>0.00</b>	<b>0.00</b>	<b>11.64</b>

**Table 3-19: Project Related Greenhouse Gas Annual Emissions**

Sector	Greenhouse Gas Emissions (Metric Tons per Year)			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
<b>2035<sup>6</sup></b>				
Construction <i>Year</i> <b>2041<sup>6</sup></b>	<del>57.69</del> <b>10.40</b>	<del>0.01</del> <b>0.00</b>	0.00	<del>57.80</del> <b>10.41</b>
<b>Total 2040 Emissions</b>	<del>10,380.69</del> <b>10,376.41</b>	17.33	0.05	<del>10,829.29</del> <b>10,825.04</b>
<b>Service Population<sup>7</sup></b>				<b>7,458</b>
<b>Metric Tons CO<sub>2</sub>e per Service Population</b>				<b>1.45</b>
<b>SCAQMD Modified Draft Threshold of Significance<sup>8</sup> (Metric Tons CO<sub>2</sub>e per Service Population)</b>				<b>3.96</b>

Notes:

<sup>1</sup> Area sources consist of GHG emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of GHG emissions from electricity and natural gas usage. It should be noted the energy usage rates are based on a worst-case analysis as LBCCD is committed to achieving net zero energy usage for LAC by 2041.

<sup>3</sup> Mobile sources consist of GHG emissions from vehicles.

<sup>4</sup> Waste includes the CO<sub>2</sub> and CH<sub>4</sub> emissions created from the solid waste placed in landfills.

<sup>5</sup> Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

<sup>6</sup> Construction emissions amortized over 30 years as recommended in the SCAQMD GHG Working Group on November 19, 2009.

<sup>7</sup> Service population based on the anticipated increase of students to the LAC campus.

<sup>8</sup> SCAQMD's Year 2020 threshold of 6.6 MTCO<sub>2</sub>e per year was reduced by 40 percent to account for AB 197 and SB 32.

Source: CalEEMod Version 2016.3.2 (see Appendix B)

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~~Table 3-11~~ **Table 3-19** shows that implementation of the proposed 2041 Facilities Master Plan would create ~~10,829.29~~ **10,825.04** MTCO<sub>2</sub>e per year, which is equivalent to 1.45 MTCO<sub>2</sub>e per year per SP, which would be within SCAQMD's modified draft threshold of 3.96 MTCO<sub>2</sub>e per year per SP that has been modified to account for the more stringent GHG emissions reduction required by AB 197 and SB 32.

## CHAPTER 10.0 – MITIGATION MONITORING AND REPORTING PLAN

### Project Location and Description

The LBCC LAC is located at 4901 East Carson Street in the City of Long Beach (City), California. The City of Long Beach is in the southwestern portion of Los Angeles County, adjacent to the northern border of Orange County. The LAC is bounded by Harvey Way on the north, Clark Avenue on the east, Skylinks Golf Course on the south, and Faculty Avenue on the west. Figure 2-1 illustrates the City in its regional and local contexts. Figure 2-2 depicts the site on the United States (U.S.) Geological Survey (USGS) Long Beach 7.5-minute quadrangle topographic map.

The Proposed Project Site is approximately 3.0 miles west of the Interstate 605 San Gabriel River Freeway, 3.0 miles east of Interstate 710 (Long Beach Freeway), 1.5 miles north of Interstate 405 (San Diego Freeway), and less than 0.5 mile east of Lakewood Boulevard, State Highway 19. In addition, the Proposed Project Site is located approximately one-third mile northeast of the Long Beach Municipal Airport.

Since the 2020 Unified Master Plan, the District prepared the LBCCD 2041 Facilities Master Plan to provide an understanding of the projects envisioned to be constructed in the near future. This Facilities Master Plan breaks down the type and size of each project for both campuses, as well as estimating the probable cost of each project. The 2041 Facilities Master Plan allowed the District to re-evaluate available funds and expanded details of priority projects that the District is working to complete. Enrollment and the production of weekly student contact hours (WSCH) were used as the basis for quantifying growth as well as for determining the space needs of the future. Physical capacity was defined in the 2041 Facilities Master Plan as achieving student enrollment of 28,100 and 349,844 WSCH at LAC. At this point in time, the campus will have effectively reached its physical limit for available land area, for parking, and the ability to effectively serve students.

Looking to the year of 2041, LAC's priorities will lie with addressing the key areas for academic growth. These include the Life Sciences (Biology), Mathematics, Language Arts, Performing Arts, and Construction Trade facilities. From the Student Services side of the equation, an economic and workforce development center is a high priority. LAC will also need to address its Physical Education facilities including a new Aquatic Center, renovation of the stadium and gymnasiums, and outdoor kinesiology labs. Lastly, the provision of parking that is close and usable to the primary academic areas will also be a high priority at LAC.

The LBCCD 2041 Facilities Master Plan LAC improvements would result in an estimated increase over the 2020 Unified Master Plan of 15,877 square feet of renovation, 69,564 square feet removed, and an estimated increase of 30,035 square feet of new construction.

### Mitigation Monitoring and Reporting Plan Description

The purpose of this Mitigation Monitoring and Reporting Plan (MMRP) is to ensure the effective implementation of the mitigation measures imposed by the LBCCD for the Proposed Project. In addition, this MMRP provides a means of identifying corrective actions, if necessary, before irreversible environmental damage occurs. This plan includes the following:

- A brief description of each impact expected to occur from the proposed project
- Mitigation measure/s associated with each impact

- Responsible monitoring party
- Responsible implementing party
- Implementation phase (i.e., pre-construction, construction, prior to occupancy, post-occupancy)
- Completion date / initials of reviewing party

As the Lead Agency for the Proposed Project, the LBCCD will be required to comply with all applicable plans, permits, and conditions of approval for the Proposed Project, in addition to implementation of this MMRP. The mitigation measures presented in Table 10-1, below, will be implemented as indicated to avoid or minimize environmental impacts of the Proposed Project.

**Table 10-1: LBCCD 2041 Facilities Master Plan PCC Improvements Mitigation Monitoring and Reporting Plan**

Impact	Mitigation Measure	Responsible Monitoring Party	Responsible Implementing Party	Implementation Phase	Completion Date/Initials
Noise					
<p><b>Impact 3.7-1:</b> Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies.</p>	<p><b>MM N-1:</b> The site plan and project design for the Swim Pool Facility shall include construction of a minimum 16 foot-high wall along the northern edge of the Swim Pool Facility that is adjacent to Carson Street. There shall be no cut outs or openings in the noise barrier.</p>	LBCCD	LBCCD	Prior to construction	
	<p><b>MM N-2:</b> The LBCCD shall restrict any swimming or water polo competitions from occurring in the Swim Pool Facility between the hours of 10:00 p.m. and 7:00 a.m. This restriction shall not apply to swim and water polo practices and other non-intensive uses of the Swim Pool Facility.</p>	LBCCD	LBCCD	Prior to construction	
Transportation					
<p><b>Impact 3.8-1:</b> Conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths.</p>	<p><b>MM TRA-1: Lakewood Boulevard at Harvey Way:</b> Restripe Harvey Way to provide an exclusive westbound right-turn lane. Given that this key study intersection is located jointly in the cities of Long Beach and Lakewood, the installation of this improvement is subject to the approval of the City of Long Beach and the City of Lakewood. It should be noted that these improvements cannot be guaranteed by the Proposed Project or the City of Long Beach as the improvements would also require approval from the City of Lakewood. As such, the impact at this location is considered <b>significant and unavoidable</b>; and a statement of overriding considerations will be required for this location.</p>	LBCCD	LBCCD	Prior to operation	

	<p><b>MM TRA-2: Clark Avenue at Harvey Way:</b> Restripe Harvey Way to provide an exclusive eastbound right-turn lane. The installation of this improvement is subject to the approval of the City of Long Beach.</p>	LBCCD	LBCCD	Prior to operation	
	<p><b>MM TRA-3: Faculty Avenue at Carson Street:</b> Install signage to restrict southbound left-turn movements during the AM peak period (7:00 AM – 9:00 AM) and during the PM peak period (4:00 PM – 6:00 PM). The installation of this improvement is subject to the approval of the City of Long Beach.</p>	LBCCD	LBCCD	Prior to operation	
<p><b>Impact 3.C-3:</b> Result in cumulatively considerable impact with respect to traffic.</p>	<p>See <b>MM TRA-1, MM TRA-2, and MM TRA-3</b>, above</p>	LBCCD	LBCCD	Prior to operation	

## CHAPTER 11.0 – ACRONYMS AND ABBREVIATIONS

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ADA	Americans with Disabilities Act
Air Basin	South Coast Air Basin
AQMP	Air Quality Management Plan
ASF	Assignable Square Footage
BMP	Best Management Practice
Board	Long Beach Community College Board of Trustees
°C	Degrees Celsius
C <sub>6</sub> F <sub>6</sub>	hexafluoroethane
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
Cal EPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH <sub>4</sub>	methane
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
dB/dBA	Decibel(s)
District	Long Beach Community College District
DOT	Department of Transportation
DPM	diesel particulate matter
Draft SEIR	Draft Supplemental Environmental Impact Report
EIR	Environmental Impact Report
EO	Executive Order
EV	electric vehicle
°F	degrees Fahrenheit

FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	greenhouse gas
GP	General Plan
GSF	Gross Square Footage
GWP	global warming potential
HAP	hazardous air pollutant
HCM	Highway Capacity Manual
HFC	hydrofluorocarbon
HI	hazard index
HVAC	heating, ventilation, and air conditioning
ICU	Intersection Capacity Manual
IPCC	Intergovernmental Panel On Climate Change
IS	Initial Study
LAC	Liberal Arts Campus
LACMTA	Los Angeles County Metropolitan Transportation Authority
LBCC	Long Beach Community College
LBCCD	Long Beach Community College District
LBJC	Long Beach Junior College
LBMA	Long Beach Municipal Airport
LBT	Long Beach Transit
Ldn	Day-Night Sound Level
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
LST	Localized Significance Threshold
MATES	Multiple Air Toxics Exposure Study
MND	Mitigated Negative Declaration
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MTCO <sup>2</sup> e	million tons of carbon dioxide equivalent
Mwh	megawatt hours
µg/m <sup>3</sup>	micrograms per meters cubed
NAAQS	National Ambient Air Quality Standards
ND	Negative Declaration
NHTSA	National Highway Traffic Safety Administration
NO <sub>x</sub>	nitrogen oxides
NO <sub>2</sub>	nitrogen dioxide
N <sub>2</sub> O	nitrous oxide
NOP	Notice of Preparation

O <sub>3</sub>	Ozone
ONC	Office of Noise Control
ONAC	Office of Noise Abatement and Control
OEHHA	California Office of Health Hazard Assessment
OSHA	Occupational Safety and Health Administration
Pb	lead
PCC	Pacific Coast Campus
PCH	Pacific Coast Highway
PEIR	Program Environmental Impact Report
PFC	perfluorocarbon
PM <sub>2.5</sub>	Particulate Matter Less than 2.5 Microns in Diameter
PM <sub>10</sub>	Particulate Matter Less than 10 Microns in Diameter
ppb	parts per billion
ppm	parts per million
ppt	parts per trillion
REL	reference exposure level
RCNM	Roadway Construction Noise Model
RWQCB	Regional Water Quality Control Board
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SEIR	Supplemental Environmental Impact Report
SF <sub>6</sub>	sulfur hexafluoride
SIP	California State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>4</sub>	sulfates
SOC	Statement of Overriding Considerations
SO <sub>x</sub>	sulfur oxides
SP	service population
SRA	Source Receptor Area
SWPPP	Stormwater Pollution Prevention Program
TAC	toxic air contaminant
TIA	Transportation Impact Assessment
UMTA	Urban Mass Transit Administration
UNFCCC	United Nations' Framework Convention on Climate Change
URBEMIS	Urban Emissions Model
U.S.	United States
U.S.C.	U.S. Code
USDOT	U. S. Department of Transportation
USEPA	U. S. Environmental Protection Agency

USGS	U.S. Geological Survey
VdB	Velocity Levels in Decibels
V/C	Volume-to-Capacity
VMT	Vehicle miles traveled
VOC	Volatile Organic Compound
vph	vehicles per hour
WSCH	Weekly Student Contact Hours

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**CHAPTER 13.0 – REPORT PREPARATION**

Name	Project Role/EIR Chapter
<b>Lead Agency/Reviewers</b>	
Marlene Dunn	Vice President of Business Services
Brendan Hayes	Interim Deputy Director of Planning & Construction
Medhanie Ephrem	Deputy Director of Facilities & Maintenance
Bob Rapoza	Business Support Services, Director
Farzam Fathi	Bond Management Team, Construction Manager
Terrance DeGray	Bond Management Team, Program Director
<b>CEQA Consultant: Chambers Group, Inc</b>	
Meghan Gibson	Project Manager, Project Environmental Planner
Corinne Lytle Bonine	Managing Environmental Planner
Eunice Bagwan	Assistant Environmental Planner
Thomas Strand	Environmental Planner
<b>Chambers Group Inc. Subconsultant</b>	
Greg Tonkovich (Vista Environmental)	Air Quality, Greenhouse Gas, Noise Analysis
Dan Kloos (Linscott, Law, and Greenspan)	Traffic Impact Analysis

**APPENDIX A – NOTICE OF PREPARATION, INITIAL STUDY, AND COMMENTS**

**LONG BEACH COMMUNITY COLLEGE  
DISTRICT  
NOTICE OF PREPARATION/  
INITIAL STUDY  
FOR THE 2041 FACILITIES MASTER PLAN  
LIBERAL ARTS CAMPUS IMPROVEMENTS**

*Prepared for:*

**LONG BEACH COMMUNITY COLLEGE DISTRICT**  
4901 East Carson Street  
Long Beach, California 90808

*Prepared by:*

**CHAMBERS GROUP, INC.**  
5 Hutton Centre Drive, Suite 750  
Santa Ana, California 92707

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## SECTION 1.0 – INTRODUCTION

### 1.1. PURPOSE OF THE NOTICE OF PREPARATION AND INITIAL STUDY

The Long Beach Community College District (LBCCD or District) proposes to update the 2020 Unified Master Plan Liberal Arts Campus (LAC) Master Plan as described in the 2041 Facilities Master Plan, Liberal Arts Campus Improvements.

All “projects” within the State of California are required to undergo environmental review to determine the environmental impacts associated with implementation of the project in accordance with the California Environmental Quality Act (CEQA). CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of a Proposed Project and identify possible ways to avoid or minimize significant environmental effects of a project by requiring implementation of mitigation measures or recommending feasible alternatives. CEQA applies to all California governmental agencies at all levels, including local, regional and state, as well as boards, commissions, and special districts (such as LBCCD). As such, LBCCD is required to conduct an environmental review to analyze the potential environmental effects associated with the Proposed Project.

The findings in this Initial Study have determined that a Supplemental Environmental Impact Report (SEIR) is the appropriate level of environmental documentation. The Proposed Project could result in potential impacts in aesthetics, air quality, greenhouse gas emissions, noise, and transportation issue areas. These issues areas shall be further addressed in the SEIR.

LBCCD will be the Lead Agency for the CEQA process related to this Proposed Project and for the SEIR that is recommended in this Notice of Preparation (NOP) / Initial Study (IS). The attached IS analyzes the potential for environmental impacts resulting from updates to the 2020 Unified Master Plan, LAC Improvements as described in the 2041 Facilities Master Plan, LAC Improvements.

LBCCD needs to know the views of your agency regarding the scope and content of the environmental information that should be included in the SEIR. The document will be prepared by LBCCD and will include any information necessary for your agency to meet any statutory responsibilities related to the Proposed Project. Your agency will need to use the SEIR when considering any permit or other approvals necessary to implement the project. A preliminary list of the environmental topics identified for study in this SEIR is provided in the IS checklist (Section 4). If the topics of concern to your agency have already been identified for analysis in the IS, your agency need not provide a response to this notice.

The project description, location, and the environmental issues to be addressed in the SEIR are contained in the attached materials.

**Due to the time limits mandated by state law, your comments must be sent to LBCCD at the earliest possible date but not later than 30 days after receipt of this notice. Please send your response to:**

Farzam Fathi  
Long Beach Community College District – Bond Management Team  
4901 E. Carson Street – G21  
Long Beach, CA 90808

Your comments may also be sent via facsimile to (562) 938-5065 or by email to CEQA@lbcc.edu and include “2041 Facilities Master Plan LAC Improvements” in the subject line. Agency responses to the NOP should include the name of a contact person within the commenting agency.

### **1.2. USE OF MASTER PLAN PROGRAM EIR**

LBCCD prepared a Program Environmental Impact Report (PEIR) which provided environmental review for the Long Beach City College (LBCC) LAC Master Plan in accordance with the requirements of CEQA. The objective of the Master Plan is to meet increasing enrollment needs, evolving demands for post-secondary educational institutions, and the needs of the Long Beach community. LBCCD Board of Trustees certified the Program EIR on January 25, 2005. The PEIR provides general analysis and guidance on the Master Plan; project specific analysis is provided in later CEQA documents through a process known as “tiering.” LBCCD has utilized the PEIR in the preparation of this IS to determine the appropriate CEQA document needed to evaluate the environmental effects of the project. The PEIR is available for review at the LBCCD Bond Management Team office, Building O1 – First Floor, and LAC Library, Building L, both at the LBCC LAC, located at 4901 E. Carson Street, Long Beach, California 90808.

### **1.3. AVAILABILITY OF THE NOP/IS**

The NOP/IS for the 2041 Facilities Master Plan LAC Improvements project is being distributed through the State Clearinghouse and directly to numerous agencies, organizations, and interested groups and persons for comment during the scoping period. The NOP/IS is also available for review at the following locations:

- LBCCD Bond Management Team office, Building O1 – First Floor, LBCC LAC, 4901 E. Carson Street, Long Beach, California 90808
- LAC Library, Building L, LBCC LAC, 4901 E. Carson Street, Long Beach, California 90808
- Ruth Bach Library located at 4055 N. Bellflower Boulevard, Long Beach, California 90808.

In addition, the NOP/IS is available online at the LBCCD website (<https://www.lbcc.edu/pod/facilities-master-plans>).

## **SECTION 2.0 – PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING**

### **2.1 PROJECT BACKGROUND AND OBJECTIVES**

The LBCCD, founded in 1927, is one of the largest of the 114 California community college districts. The District is comprised of two campuses: the Pacific Coast Campus (PCC) located at 1305 East Pacific Coast Highway, and the Liberal Arts Campus (LAC), the subject of this Supplemental EIR. Together, the campuses currently serve a student population of more than 24,000.

The District's goal as part of the California Community College system is to offer academic and vocational education to students at the lower college division level. In addition, the District's goal is to advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement. Long Beach City College is committed to providing equitable student learning and achievement, academic excellence, and workforce development by delivering high quality educational programs and support services to their diverse communities.

The objective of the 2041 Facilities Master Plan is to provide plans to implement proposed necessary construction, renovation, and general capital improvements at the campus in order to meet the District's goals and to support the District's Strategic Plan. The improvements are intended to create and improve building space to support the LBCCD Strategic Plan and Student Learning Outcomes in all areas.

#### **Location**

The LBCC LAC is located at 4901 East Carson Street in the City of Long Beach (City), California. The City of Long Beach is in the southwestern portion of the Los Angeles County, adjacent to the northern border of Orange County. The LAC is bounded by Harvey Way on the north; Clark Avenue on the east; Skylinks Golf Course on the south; and Faculty Avenue on the west. Figure 2-1 illustrates the City in its regional and local contexts. Figure 2-2 depicts the site on the USGS Long Beach Quadrangle topographic map.

The Proposed Project Site is approximately 3.0 miles west of the Interstate 605 San Gabriel River Freeway, 3.0 miles east of the Interstate 710 Long Beach Freeway, 1.5 miles north of the Interstate 405 San Diego Freeway, and less than one-half mile east of Lakewood Boulevard, State Highway 19. In addition, the Proposed Project Site is located approximately one-third mile northeast of the Long Beach Municipal Airport.

#### **Adjacent Land Uses**

The Proposed Project Site is located along Carson Street between Bellflower and Lakewood Boulevards in the City of Long Beach, California. The campus is within the City of Long Beach General Plan Land Use District No. 10 – Institutions/Schools, and is zoned Institutional (I).

As shown in Figure 2-3, existing land uses surrounding the LAC are single-family residences to the north, single-family residences and parkland to the east; parkland, Long Beach Fire Department Station No. 19, and the Skylinks Golf Course to the south; and large aerospace industrial, automotive and storage facilities to the west.

Figure 2-1 Regional and Local Settings

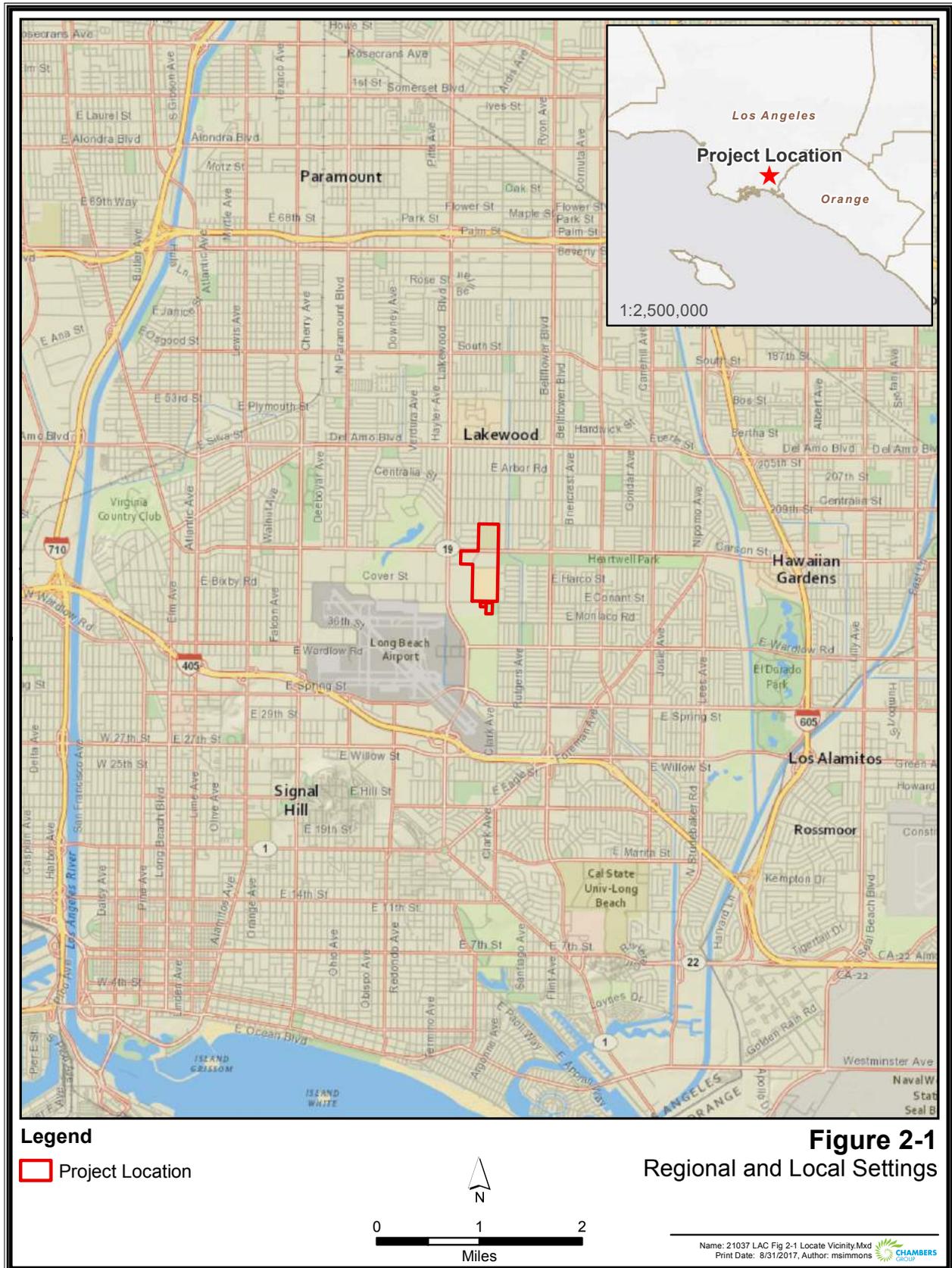


Figure 2-2 USGS Topographic Map

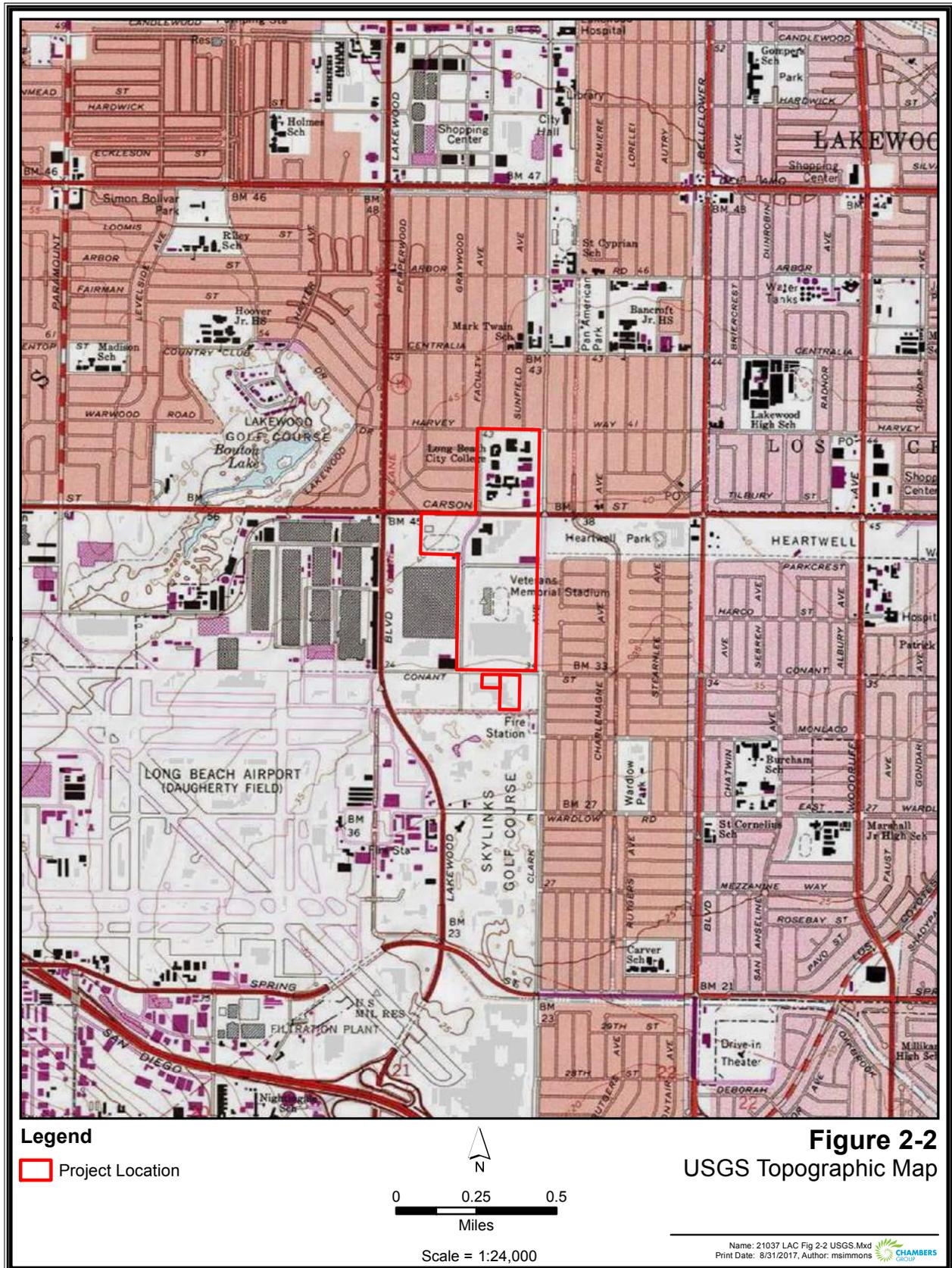


Figure 2-3 Existing Campus and Adjacent Land



**LAC Land Uses**

The approximately 112-acre LAC site is improved with 33 buildings constructed between 1935 and 2017 that contain approximately 1,285,337 square feet of gross area. The LAC is transected by Carson Street, and is organized into three general areas: the North Campus, which contains administrative and classroom buildings; the Central Campus, which contains administrative buildings, classroom buildings, and physical education facilities, and the South Campus, which includes the Veterans Memorial Stadium complex, facilities buildings and information technology/bond management team offices. The LAC also includes ancillary structures such as athletic fields, landscaped areas, parking lots, and pedestrian walkways. Table 2-1 provides a building inventory including age of construction, use, and square footage.

**Table 2-1 LAC Existing Building Inventory**

<b>Building Letter</b>	<b>Building Name</b>	<b>Gross Square Footage</b>	<b>Year Built</b>	<b>Last Addition</b>
A	ADMINISTRATION	33,967	1940	2013
B	TECHNICAL	44,357	1971	
C	NURSING HEALTH-TECHNOLOGY	23,250	1969	2016
D	SCIENCE BUILDING	81,132	1973	2000
E	COLLEGE CENTER	50,276	1968	1991
F	FAMILY- CONSUMER STUDIES	15,387	1952	1974
G	MUSIC	20,530	1952	1993
H	THEATER ARTS BLDG	7,262	1980	
I	CAMPUS BOOKSTORE	8,544	1992	2012
J	AUDITORIUM	37,878	1956	
K	ART	29,479	1952	1995
L	LIBRARY LEARNING CENTER	79,053	1958	2009
M	BUSINESS-SOCIAL SCIENCE-FOREIGN LANGUAGE	36,476	1935	1975
N	ENGLISH–JOURNALISM–LANGUAGE ARTS	12,292	1935	1975
O1	INSTRUCTIONAL & INFORMATIONAL TECHNOLOGY SERVICES	26,560	2001	2009
O2	COLLEGE ADVANCEMENT AND ECONOMIC DEVELOPMENT	51,302	2001	2009
P	LANGUAGE ARTS	16,016	1935	1984
PS	PARKING STRUCTURE	295,485	2011	
Q	GYMNASIUM WOMEN	30,270	1952	
R	GYMNASIUM MEN	78,024	1952	1963
S	VETERANS' STADIUM	57,694	1950	1991
	STADIUM PRESS BOX	1,920	1949	

Building Letter	Building Name	Gross Square Footage	Year Built	Last Addition
T	ACADEMIC SERVICES	108,312	2009	
TS	TENNIS STORAGE	200	1960	
	FACILITIES STORAGE	988	1980	
RR	ATHLETIC FIELD HOUSE	1,656	1960	
TW	TW MODULAR	960	2007	
U	GROUNDS SHOP	4,800	1975	
V	MATH-TECHNOLOGY-CULINARY ARTS	73,650	2015	
X	CAMPUS SAFETY/CENTRAL PLANT	9,000	2009	
XT	PHYSICAL EDUCATION OFFICE	2,160	1989	
Y	MAINTENANCE SHOP	7,000	1989	
Z	MAINTENANCE/WAREHOUSE	39,457	2005	

Source: FUSION database 2017

### **2.1.1 LBCC and LAC History**

Long Beach City College, formerly known as Long Beach Junior College (LBJC), celebrated its 90<sup>th</sup> Anniversary in 2017. LBJC opened at Woodrow Wilson High School in September 1927. LBJC was the second two-year college established in the metropolitan area of Los Angeles. LBJC served students not only from Long Beach, but also as far away as Redondo Beach to the north and Laguna Beach to the south. LBJC was offered 25 acres on Carson Street for a new campus in 1933 from the Montana Land Company. The area was then known as “Lakewood Village.” The Montana Land Company donated additional land parcels in 1934. The new campus with a total of 29.844 acres, now referred to as the Liberal Arts Campus, opened in 1935 with Mission architecture with tile roofs, white exterior walls, and patios. Bean, alfalfa, and carrot fields surrounded the new campus on Carson. The first mailing address of the Carson campus was Route No. 1, Clark and Carson Streets. The enrollment in 1935-36 was 1,603 students with 51 full-time faculty members. By 1942-43, the middle of the war years (1941-45), enrollment had climbed to 2,966 students with 56 full-time faculty members. In the postwar expansion period from 1945-52, the College acquired an additional 38.379 acres south of Carson Street.

In response to the postwar increase in enrollment, LBJC also acquired the former Hamilton Junior High School site at Pacific Coast Highway and Alamitos Avenue in 1949 for the newly formed Business and Technology Division of Long Beach City College. This site is now the Pacific Coast Campus of LBCC.

### **2.1.2 2004 Master Plan Elements**

A general obligation bond election (Measure “E”/Proposition 39) was approved in March 2002 for both general and specific improvements at the LBCC at both the PCC and the LAC. The District is undertaking an extensive improvement and building program at the two campuses to meet increasing enrollment needs, evolving demands for post-secondary educational institutions, and the needs of the Long Beach community. Additionally, the District will be using capital improvement funds from the State of California for renovation and new construction projects.

In 2004, the District prepared the LBCC LAC Master Plan to reflect LBCC’s projected instructional and programmatic needs for the Liberal Arts Campus. The 2004 LBCC LAC Master Plan outlined capital improvements through 2015 and proposed construction of new buildings, renovation, modernization and additions to existing facilities, demolition of existing buildings, and landscaping enhancements. Improvements are intended to update existing technological and program services to meet increasing needs of students and faculty.

The District prepared a Program Environmental Impact Report (PEIR) to address implementation of the 2004 LBCC LAC Master Plan. The Board of Trustees of the LBCCD certified the Final PEIR for the 2004 LBCC LAC Master Plan, State Clearinghouse No. 2004051060, on January 25, 2005. Since the adoption of the PEIR, two Addendums to the PEIR were completed to address updates to the original project description. The September 2008 Addendum addressed a revision to the location of the parking structure proposed in the PEIR to one of three alternative locations on the LAC campus. This Addendum was approved by the Board of Trustees of the LBCCD on September 23, 2008. The May 2009 Addendum addressed a revision to the renovation/retrofit of Buildings M & N proposed in the PEIR to their replacement with an approximately 49,000 gross square foot building. This Addendum was approved by the Board of Trustees of the LBCCD on May 19, 2009. In addition, an Initial Study/Negative Declaration (IS/ND) was prepared for the acquisition of the property and buildings at 4900 & 4910 E. Conant Street for use by LBCCD as classroom and administrative space. This IS/ND was approved by the Board of Trustees of the LBCCD on November 11, 2008. Table 2-2 presents LAC Master Plan Improvements previously approved under the PEIR, its Addendums, and/or the Final IS/MND for the Conant Street Project.

**Table 2-2 2004 LAC Master Plan Improvements**

<b>Project</b>	<b>Function/Support</b>	<b>Scope (GSF)</b>
Building A Administration/ Student Services	Reuse for Student Services	Retrofit/Renovation – 37,058
Building B Tech Studies	Technical Education Program	Retrofit/Renovation – 44,536
Building C Nursing/Health Technology	Nursing/Health Technology	Retrofit/Renovation – 22,260
Building E College Center	Campus-wide Student Support	Retrofit/Renovation – 50,276
Building F	Replace existing Building F with new Multi-Disciplinary building	New Construction – 15,968
Building G Music Building	Music	Retrofit/Renovation – 27,591
Building H Theater Arts	Drama, Dance	Retrofit/Renovation – 7,262
Building J Auditorium	Performing Arts	Retrofit/Renovation – 28,214
Library/ Learning Resource Center (LRC)	Library/ LRC Functions	Renovation – 73,521 Expansion – 13,384
Liberal Arts Building	Replace existing Buildings M & N with building. Language Arts, Speech	New Construction - 67,948

Notice of Preparation/Initial Study for the 2041 Facilities Master Plan LAC Improvements  
Long Beach Community College District Liberal Arts Campus

Project	Function/Support	Scope (GSF)
	Communication, CIS, Construction Education	
Trailers O	Speech relocated to SQC	Demolition/Removal – 5,760
Building O1	ACIT, Bond Management Team, Warehouse	Retrofit/Renovation – 40,892
Building O2	LBCCD Foundation Organization, Economic Resource Development	Retrofit/Renovation – 70,972
Building P Language Arts	Language Arts	Retrofit/Renovation - 16,016
Building Q Secondary Gymnasium	Physical Education	Retrofit/Renovation – 30,270
Building R Primary Gymnasium	Physical Education	Retrofit/Renovation – 77,916
Trailers T	Relocate uses to Liberal Arts Building	Remove – 6,240
Building U	Relocate Grounds Shop to Building Z	Remove – 4,800
Building V	Relocate Human Resources/Purchasing to SQC	Remove – 8,160
Trailers W	Relocate uses to SQC	Remove – 23,167
Building X Campus Police Facility	Campus Safety/ Central Plant/ Physical Education	New Construction – 18,859
Building Y	Relocate Maintenance Shop to Building Z	Remove – 7,000
Building Z Maintenance/ Warehouse	Maintenance Operations/ Warehousing	New Construction - 36,606
South Quad Complex (SQC)	Business, Social Sciences, Child Development, Administration	New Construction – 121,722
Child Development Center	Child Development	New Construction - 15,102
Outdoor Performance Area	Outdoor performance area and seating in Building 3 courtyard	New Construction - 31,250
Pedestrian Promenade	Renovate, widen, and extend Pedestrian Promenade	Retrofit/Renovation - 5,970 linear ft.
Entry Plazas	Pedestrian entry plazas between parking lots and buildings	New Construction - 90,000
Swim Pool Facility	Infrastructure Support	Retrofit/Upgrades – 12,080
Sculpture Garden	Sculpture Garden between Buildings J and K	New Construction 13,727
Landscape Improvements	Campus-wide	Retrofit/Renovation
Circulation Improvements	Campus-wide including closure of Faculty Drive at Carson Street	Retrofit/Renovation
Infrastructure Improvements	Campus-wide	Retrofit/Renovation
Office/ Classroom Buildings (3 Buildings)	Office/ Classroom/ Lab	New Construction – 271,791
Parking Structure	Replace Surface Parking N with 4-story Parking Structure	New Construction – 175,000

(Note: These square footage numbers have been changed from assignable square footage (ASF) to gross square footage (GSF) for purposes of analysis within this Supplemental EIR. Only conversions from ASF to GSF or clarifications in numbers were made here.)

### **2.1.3 2020 Unified Master Plan Elements**

The Measure E Bond Program approved in March 2002 provided a jump start to the District's capital facilities program; however, it was never intended to address all building/facilities needs for the campus. The age of the existing facilities coupled with the need to meet both current and future growth of the academic program of instruction required improvements that go beyond Measure E.

The District addressed this need in 2006 when it requisitioned the Long Beach Community College Resource and Facilities Plan. The Resource and Facilities Plan identified the growth rates vis-à-vis the academic programs of instruction at LAC and PCC. Enrollment and the production of weekly student contact hours (WSCH) were used as the basis for quantifying growth as well as for determining the space needs of the future. The year 2020 was selected as the "target year." Based on the growth rates, the vectors for enrollment and WSCH were determined to intersect with the physical capacity of the two campuses at or about year 2020. Physical capacity was defined as achieving student enrollment of 27,500 and 238,000 WSCH at LAC. At this point in time, the campus will have effectively reached its physical limit for available land area, for parking, and the ability to effectively serve students.

While the 2020 target year is somewhat relative, the enrollment and WSCH benchmarks are not. Enrollment and WSCH projections may be reached prior to the year 2020 or after that point in time. However, when 238,000 WSCH are reached at LAC, the campus will effectively be operating at maximum capacity.

While looking to 2020, LAC's priorities focused on addressing the key areas for academic growth. These included the Life Sciences (Biology), Mathematics, Language Arts, Performing Arts, and Child Development. From the Student Services side of the equation, a comprehensive student center for educational support was a high priority. LAC also addressed its Physical Education facilities. With the exception of cosmetic treatment, these facilities had remained unchanged since the 1940s and 1950s. Additionally, the physical capacity of the outdoor laboratories was understated for the enrollment served, the expansion of the athletics program, and the impacts of the Title IX program. LAC also focused on the renovation of its buildings north of Carson Street. While the structural integrity of the selected buildings to be retained were in good condition, the teaching/learning environments and the technology support offered are outdated for today's methods of instructional delivery. Additionally, these buildings have utility and mechanical systems that have been extended well beyond their intended life span. The provision of parking that is close and usable to the primary academic areas will also be a high priority at LAC.

The District prepared a Supplemental Environmental Impact Report (SEIR) to address implementation of the 2020 Unified Master Plan. The Board of Trustees of the LBCCD certified the Final SEIR for the 2020 Unified Master Plan, State Clearinghouse No. 2004051060, on December 8, 2009. Table 2-3 presents the updates to the Master Plan through eliminated projects. Table 2-4 and Figure 2-4 presents LAC Master Plan Improvements previously approved under the SEIR.

**Table 2-3 Eliminated Master Plan Improvements**

<b>Project</b>	<b>Function/Support</b>	<b>Scope (GSF)</b>
Building E	Campus-wide Student Support	Retrofit/Renovation - 50,276
Building F	Replace existing Building F with	New Construction – 15,968

	new building	
Building G Music Building	Music	Retrofit/Renovation – 27,591
Building H Theater Arts	Drama, Dance	Retrofit/Renovation – 7,262
Office/ Classroom Building	Office/ Classroom/ Lab	New Construction – 271,791
Parking Structure	Replace Surface Parking N with 4-story Parking Structure	New Construction – 175,000

(Note: These square footage numbers have been changed from ASF to GSF for purposes of analysis within this Supplemental EIR. Only conversions from ASF to GSF or clarifications in numbers were made here.)

**Table 2-4 2020 LAC Master Plan Improvements**

Project	Function/Support	Scope (GSF)
Building A	Reuse for Student Services	New Construction – 9,279
Building D Science Building	Renovate bottom floor for Biology	Retrofit/Renovation - 9,326
Building E College Center	Campus-wide Student Support	Renovation – 50,276
Building F	Multi-Disciplinary	Retrofit/Renovation – 15,968
Building I Foundations Building	Conversion to Bookstore. LBCC Foundations Organization moves to Building O2	Retrofit/Renovation – 4,994 Expansion – 4,994
Building K Art Building	Fine Arts	Retrofit/Renovation – 29,479
Building S Stadium Building	Health/ Safety & Fitness/ Wellness	Retrofit/Renovation – 57,455 Expansion – 57,455
Building 1 Math Tech	Math, Culinary Arts, Health, Instructional Support	New Construction - 83,202
Building 3 Performing Arts	Replace existing Buildings G & H. Drama, Dance, Music	New Construction – 46,671 Remove – 27,792
Parking Structure 7	Replace Surface Parking J with 950 space Parking Structure	New Construction - 310,000
MPOE Building	Telecommunications	New Construction – 450
Outdoor Physical Education Labs	Physical Education	Relocation/Reconstruction
Olympic-sized Pool	Physical Education	New Construction – 37,062
Signage Improvements	Campus-wide improvement of directional signage; new electronic informational sign adjacent to Carson Street	New Construction/Renovation
Circulation Improvements	Closure of Faculty Avenue at Lew Davis Drive	Reconstruction
Photovoltaic Projects	LAC buildings will be studied for possible Solar Photovoltaic systems.	New Construction

(Note: These square footage numbers have been changed from ASF to GSF for purposes of analysis within this Supplemental EIR. Only conversions from ASF to GSF or clarifications in numbers were made here.)

The following descriptions identify specific improvements recommended for the 2020 Unified Master Plan LAC Improvements, that were not part of the 2004 LAC Master Plan.

- The bottom floor of Building D will be renovated for Biology.
- Building E, the College Center (Student Center) will be renovated.
- Building F will be renovated for Multi-Disciplinary uses.
- Building I will be renovated and expanded by 4,994 square feet for use as the new Bookstore. The LBCCD Foundation organization will be moved to Building O2, located south of Conant Street.
- Building K, the Fine Arts Building will be renovated.
- A new Math Tech Building (Building 1) will be built on the northwest portion of the existing surface Parking Lot J. This building will support Math, Culinary Arts, Health, and Instructional Support. It would consist of two stories and approximately 83,202 square feet in size.
- A new Performing Arts Building (Building 3) will replace the existing Buildings G and H, consisting of approximately 46,671 square feet.
- The proposed Parking Structure 7 will be built on a portion of surface Parking Lot J, immediately southeast of the proposed Building 1. It would consist of five stories and approximately 310,000 square feet. It would contain approximately 900 parking spaces with a maximum 950 parking spaces. The proposed structure would be accessed from two locations off Clark Street and one location off Lew Davis Street. These entrances would provide vehicle queuing space for eight cars entering and exiting the garage to reduce congestion on Clark Avenue. A solar photovoltaic system will be installed on the roof of the Proposed parking structure to supply electricity to the structure. The Proposed Project will also include secure bicycle parking at ground level for 100 bicycles.
- A new telecommunications building will be built adjacent to Building P. This 400 square feet building will consolidate the telecommunications network, most of which is currently housed in Building N. This will include one or two parking spaces for electronic vehicles.
- An Olympic-sized swimming pool will be constructed between Buildings R and Q. It will include grandstands to accommodate 3,000 people.
- Improvements to directional signage will take place campus-wide. This will include monument, directional, and an electronic information sign adjacent to the north side of Carson Street, midway between Faculty Avenue and Clark Avenue. The electronic information sign will be approximately 22 feet tall and 16 feet wide.
- Closure of Faculty Drive between Lew Davis Street and Carson Street. Convert closed area to athletic field. Possible drop-off zone at Faculty Drive and Lew Davis Street.
- LAC buildings will be studied for possible Solar Photovoltaic systems. The first system will be placed on the roof of the new Parking Structure 7, and others may be added if appropriate

rooftops are identified. Potential candidates include the new Math Tech Building (Building 1) and the new Performing Arts Building (Building 3).

Figure 2-4: 2020 Unified Master Plan

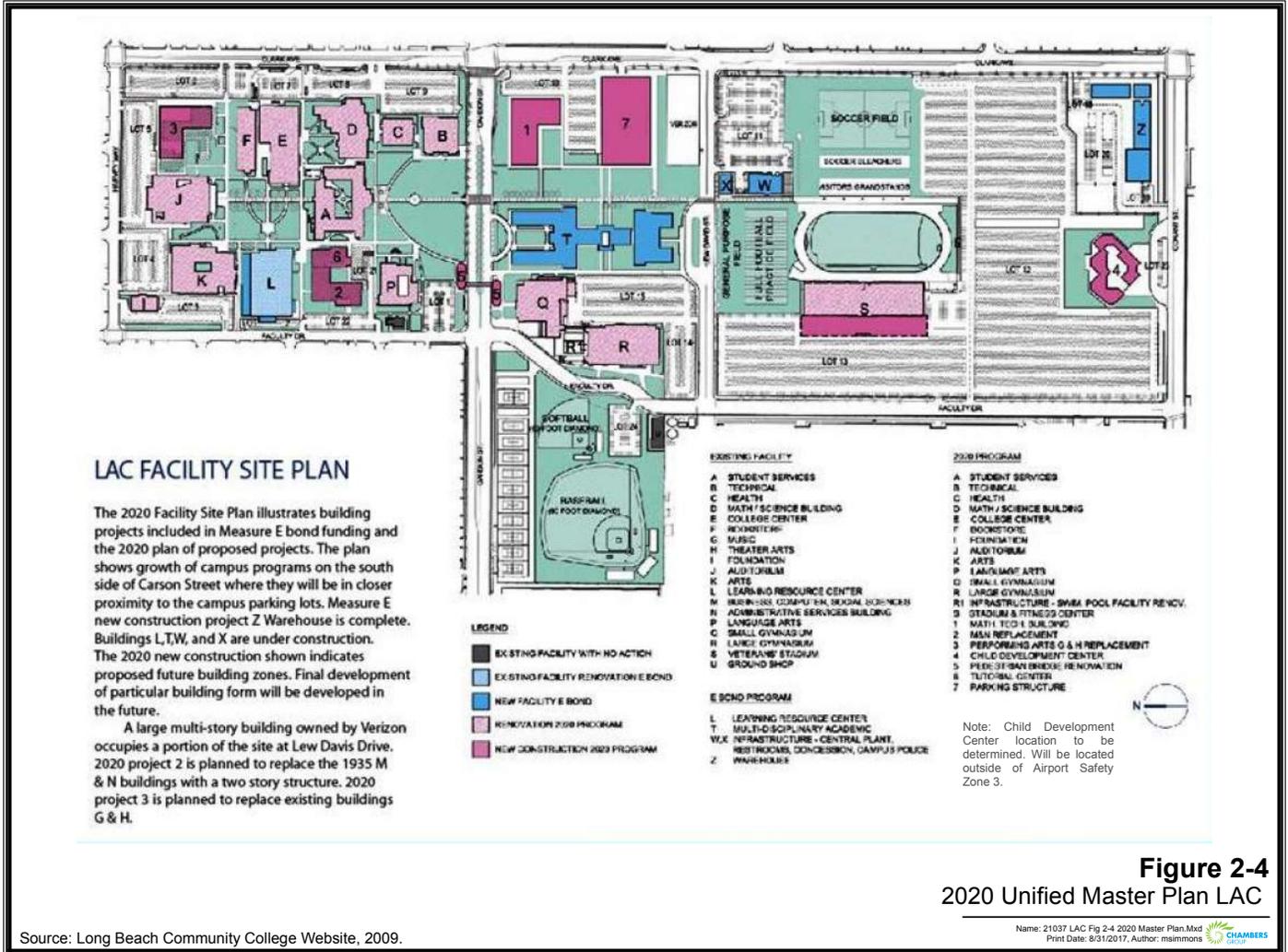


Figure 2-4  
 2020 Unified Master Plan LAC

Source: Long Beach Community College Website, 2009.

Name: 21037 LAC Fig 2-4 2020 Master Plan.Mxd  
 Print Date: 8/31/2017, Author: maimmons



## **2.2 PROJECT DESCRIPTION**

### **2.2.1 2041 Facilities Master Plan LAC Improvements**

Since the 2020 Unified Master Plan, the District prepared the LBCCD 2041 Facilities Master Plan to provide an understanding of the projects envisioned to be constructed in the near future. This Facilities Master Plan breaks down the type and size of each project for both campuses, as well as estimating the probable cost of each project. The 2041 Facilities Master Plan allowed the District to re-evaluate available funds and expanded details of priority projects that the District is working to complete. Enrollment and the production of weekly student contact hours (WSCH) were used as the basis for quantifying growth as well as for determining the space needs of the future. Physical capacity was defined as achieving student enrollment of 28,100 and 349,844 WSCH at LAC. At this point in time, the campus will have effectively reached its physical limit for available land area, for parking, and the ability to effectively serve students.

Looking to the year of 2041, LAC's priorities will lie with addressing the key areas for academic growth. These include the Life Sciences (Biology), Mathematics, Language Arts, Performing Arts, and Construction Trade facilities. From the Student Services side of the equation, an economic and workforce development center is a high priority. LAC will also need to address its Physical Education facilities including a new Aquatic Center, renovation of the stadium and gymnasiums, and outdoor kinesiology labs. Lastly, the provision of parking that is close and usable to the primary academic areas will also be a high priority at LAC.

## **2.3 PROJECT DESIGN FEATURES**

### **Master Plan Updates**

The 2041 Facilities Master Plan provides updates to the 2020 Unified Master Plan and provides updated construction dates and budgets for the facilities projects. The projects incorporate the space and building needs identified to the year 2041. Figure 2-5 presents the LBCC 2041 Facilities Master Plan LAC improvements. Table 2-5 presents the updates to the Master Plan through new project details determined since the previous SEIR.

Figure 2-5 LBCC 2041 Facilities Master Plan LAC Improvements



**Table 2-5 Updated 2041 Facilities Master Plan Improvements**

Project	Scope/Usage	Square Feet (GSF)/ Features
Building B Classroom	Renovate Building with electrical upgrades, data and communication, larger lecture halls, better lighting, and additional lab functions	Renovation – 44,357
Building D Science Building	Renovate Science Building for improved classroom learning environments, new fiber data backbone, and enhanced signage	Renovation – 16,000
Building E College Center	Campus-wide Student Support	New Construction – 50,276
Building F Family/Consumer Education	Outdated building that will be replaced	Demolition – 15,968
Building G Performing Arts	New Performing Arts Building replaces the existing and outmoded Music Building.	New Construction – 42,857
Building J Auditorium	Complete renovation of Auditorium building with expansion of the building as well as general refurbishment and updates	Renovation – 37,878 Expansion – 14,119
Building K Art Building	Fine Arts building needs complete renovation and modernization	Retrofit/Renovation – 29,479
Building M Liberal Arts	Replace Buildings M&N with new building for classrooms, laboratory facilities, and technology center	New Construction – 81,970
Building O1 IITS/Warehouse	Structural enhancements to obtain certification by Division of State Architect	Renovation – 26,560
Building O2 Economic & Workforce Development/Foundation	Structural enhancements to obtain certification by Division of State Architect	Renovation – 51,302
Building P Language Arts	Upgrade building's functional systems with upgraded power systems, HVAC, plumbing, storm drainage, fire alarm, and telecommunication systems	Renovation – 16,016
Building Q Secondary Gymnasium	Renovation and upgrading to address issues related to instructional space, training needs, seismic upgrades, AHA compliance, and other upgrades	Renovation – 30,270
Building R Primary Gymnasium	Comprehensive structural and seismic renovation, ADA access, HVAC upgrades	Renovation – 78,024 New Construction – 10,000

<b>Project</b>	<b>Scope/Usage</b>	<b>Square Feet (GSF)/ Features</b>
Building S Stadium	Renovation including ADA access, structural upgrades	Renovation – 57,455
Building W Aquatic Center	Construction of a new 50 meter by 25-yard pool, with a new support building	New Construction – 50,881 and pool area
Outdoor Kinesiology Labs	New construction of physical education outdoor playing fields to include softball relocation, two soccer fields, 6 tennis courts, 5 sand volleyball courts, and supporting facilities, restrooms, field house, storage. .	New Construction Supporting Facilities – 13,915
Walkways and Wayfinding	New and revised walkways, installation of uniform signage program	New construction/renovation

The LBCCD 2041 Facilities Master Plan LAC improvements would result in an estimated increase over the 2020 Unified Master Plan of 15,877 square feet of renovation, and 69,564 square feet removed, and estimated increase of 30,035 square feet of new construction.

The following descriptions identify specific improvements recommended for the 2041 Facilities Master Plan LAC Improvements, that were not part of the 2020 Unified Master Plan or the original 2004 LAC Master Plan Program EIR.

- Building D, Science Building renovation will be expanded from 9,326 square feet to 16,000 square feet
- Building E, the Existing College Center will be demolished (50,276 GSF) and a new building will be constructed with approximately the same GSF of 50,276. The new construction will be in lieu of major renovation of building E that was previously shown on 2020 Master Plan.
- Building F will be demolished and replaced with new landscape and hardscape.
- The Performing Arts Building (Building G previously shown as Building 3 on 2020 Master Plan) will replace the existing G and H, consisting of approximately 42,857 square feet instead of 46,671 square feet which was shown on 2020 Master Plan.
- Building O1 will undergo structural enhancements to the 26,560-square foot building to obtain Division of State Architect certification.
- Building O2 will undergo structural enhancements to the 51,302-square foot building to obtain Division of State Architect certification.
- Building R, Primary Gymnasium is anticipated to have an expansion with new construction to the south of 10,000 gross square feet to accommodate program needs.

- In order to meet programmatic needs a new 10,000 gross square foot structure may be built between Buildings Q and R to accommodate swing space and title IX needs while the buildings are being renovated.
- Building W, aquatics center, will be approximately 20,000 GSF of building structure for restrooms, locker rooms, team rooms, classroom and offices and will have approximately 800 spectator seat capacity. (An Olympic sized swimming pool with grandstands to accommodate a 3,000-spectator seat capacity was shown in the 2020 Master Plan.)
- Outdoor Kinesiology Labs, Renovation and New construction of physical education outdoor playing fields to include softball relocation, two soccer fields, 6 tennis courts, and 5 sand volleyball courts, and supporting facilities, such as restrooms, field house, and storage facilities. Approximately 9,821 SF of the building W will be allocated to The Outdoor Kinesiology Labs as supporting facilities. Also, the existing field house for Softball Field will be removed and replaced with approximately 4,098 SF of new supporting facilities. (Outdoor Physical Education Labs, including softball field relocation, were previously shown in the 2020 Master Plan.)
- In order for the District to meet the state requirements and Executive Order B-18-12 for Zero-Net-Energy, LAC campus will be studied for possible Solar Photovoltaic systems at various locations. Parking Lot M as well as other parking lots may have two thirds of the lot covered with photovoltaic carport structures to meet the statewide requirements for energy production and achieve a Zero Net Energy District.

### **Master Plan Schedule**

The 2041 Facilities Master Plan provides an approximate schedule sequence that identifies timelines for construction and project scope. Table 2-5 summarizes the 2041 Facilities Master Plan Improvements building renovation, expansion, and/or new construction. To determine the projects and sequencing in the 2041 Facilities Master Plan, the Board of Trustees of the Long Beach Community College District evaluated the District's urgent and critical capital needs, including school and student safety issues, enrollment trends, class size reduction, overcrowding, energy efficiency and computer technology, seismic safety requirements, and aging, outdated or deteriorating school buildings in developing the scope of projects to be funded. In developing the scope of projects, the District has prioritized the key health and safety and sustainability needs so that the most critical school site needs are addressed.

The timing of certain projects will be dependent on the completion of other projects and will ultimately occur over the different phases. For example, improvements to utilities will occur across the LAC. However, these improvements will be completed in portions following building construction or renovation. Other projects like this include the Photovoltaic Projects, Landscape Master Plan Projects, and Wayfinding/Walkway Projects.

The Master Plan projects called out the projects identified with the 2041 Facilities Master Plan and the timeframe that is most likely to occur during these time periods. However, the timeframe in which a project is planned may change if the priority characteristics change for an individual project due to program needs or state funding allocation. The general building scope by phase is shown in Table 2-6 for the 2041 Facilities Master Plan Updates.

**Table 2-6 2041 Facilities Master Plan Construction by Planned Construction Years**

Construction Start Year	Projects Planned
Ongoing	Building P – Language Arts (Renovation), Building D – Science (Renovation), Minor Campus Improvements, Energy/Water Conservation Projects, Infrastructure Projects, Campus Landscaping
To be Determined	Walkways & Wayfinding, Surface Parking Improvement
2017/2018	Building J – Auditorium (Renovation)
2017/2018	Building J - Auditorium
2018/2019	Kinesiology Lab & Aquatic Center (Renovation)
2019/2020	Building M – Liberal Arts Classroom Building
2022/2023	Building E – College Center
2022/2023	Building E – College Center (new construction)
2024/2025	Building O2 – Economic & Workforce Development/Foundation (Renovation)
2026/2027	Building G – Performing Arts (New Construction)
2029/2030	Building K – Art (Renovation)
2030/2031	Building R – Primary Gymnasium (Renovation)
2033/2034	Building Q – Secondary Gymnasium (Renovation)
2034/2035	Building B – Classroom (Renovation)
2037/2038	Building F – Family/Consumer Education (Demolition), Building S – Stadium (Renovation), Building O1 – IITS/Warehouse

### Design Guidelines

The Design Guidelines of the 2004 LAC Master Plan are incorporated by reference into the 2041 Facilities Master Plan. The Design Guidelines include “Guiding Principles” that govern the design of the proposed campus improvements, including the buildings, parking area, planting scheme, pavement and courtyards, traffic/circulation, signage, lighting, site furnishings, and screening (LBCCD 2004). The Long Beach City College Liberal Arts Campus has outstanding examples of Spanish Colonial Revival architecture that serve as the physical and emotional core of its campus. Additions to the campus should build on this strength and extend the underlying values of this historical core. According to the Design Guidelines:

- The design objectives and guidelines used for the improvement of the architectural character at the Liberal Arts Campus are based on new construction, rehabilitation of existing buildings, and demolition or removal of obsolete or deteriorated facilities.
- New facility design should contribute to a unified campus appearance with a consistent architectural character. All future construction shall employ a single, unifying architectural vernacular based on a contemporary interpretation of the original Spanish Colonial Revival Style.
- All new buildings shall be sited in groups or clusters to define interior public courtyards protected from public ways and parking areas. All new construction shall be sited to relate to existing or future buildings so that strongly defined edges to outdoor rooms are formed. These outdoor rooms should be simple and comprehensible in shape, and pedestrian connections between the clustered buildings should be carefully articulated.

## **Best Management Practices**

All Best Management Practices (BMPs) from the PEIR will be incorporated by reference in this NOP/IS, as well as the proposed SEIR for the 2041 Facilities Master Plan.

## **STATEMENT OF PROJECT GOALS AND OBJECTIVES**

The District's goal as part of the California Community College system is to offer academic and vocational education to students at the lower college division level. In addition, the District's goal is to advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement.

The objective of the 2041 Facilities Master Plan is to provide plans to implement proposed necessary construction, renovation, and general capital improvements at the campus in order to meet the District's goals. The improvements are intended to update and improve existing technological and program services in order to meet the increasing needs of students and faculty.

## **2.4 REQUIRED PERMITS AND APPROVALS**

As required by the *CEQA Guidelines*, this section provides, to the extent the information is known to LBCCD, the CEQA Lead Agency, a list of the agencies that are expected to use this SEIR in their decision making and a list of permits and other approvals required to implement the project.

### **2.4.1 Lead Agency Approval**

The Final SEIR must be certified by the LBCCD Board of Trustees (Board) as to its adequacy in complying with the requirements of CEQA before taking any action on the Proposed Project. The Board will consider the information contained in the SEIR in making a decision to approve or deny the 2041 Facilities Master Plan LAC Improvements that were not previously addressed under the 2020 Unified Master Plan SEIR or the 2004 PEIR (Proposed Project). The analysis in the SEIR is intended to provide environmental review for the whole of the Proposed Project, including the project planning, site acquisition, demolition of existing structures, site clearance, site excavation, and construction of school buildings and appurtenant facilities in accordance with CEQA requirements.

### **2.4.2 Required Permits and Approvals**

A Responsible Agency is a public agency, other than the lead agency, that has discretionary approval power over a project. The Responsible Agencies, and their corresponding approvals, for this project include the following:

#### **California Department of General Services**

- Division of the State Architect (Approval of architectural plans)

#### **City of Long Beach**

- Department of Public Works (Approval of on- and off-site drainage infrastructure and roadway improvements)

### **2.4.3 Reviewing Agencies**

Reviewing Agencies include those agencies that do not have discretionary powers, but that may review the SEIR for adequacy and accuracy. Potential Reviewing Agencies include the following:

#### **State Agencies**

- Department of Transportation (Caltrans)
- Environmental Protection Agency (Cal EPA)
- Department of Fish and Wildlife (CDFW)

#### **Regional Agencies**

- Southern California Association of Governments
- South Coast Air Quality Management District

## **2.5 CUMULATIVE SCENARIO**

Cumulative impacts refer to the combined effect of Proposed Project impacts with the impacts of other past, present and reasonably foreseeable future projects. Both CEQA and the CEQA Guidelines require that cumulative impacts be analyzed in an EIR. As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, “a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable.”

According to the CEQA Guidelines:

“Cumulative impacts” refer to two or more individual effects which, when considered together, are considerable and which compound or increase other environmental impacts.

- The individual effects may be changes resulting from a single project or a number of separate projects.
- The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the Proposed Project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”

In addition, as stated in the CEQA Guidelines, it should be noted that:

“The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the Proposed Project’s incremental effects are cumulatively considerable.”

Cumulative impact discussions for each issue area are provided in the technical analyses contained within Section 4.0 – Environmental Impacts.

As previously stated, and as set forth in the CEQA Guidelines, related projects consist of, “closely related, past, present, and reasonable foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area.” An area of influence, defined by an approximate 1.5-mile radius from the Proposed Project site, was utilized in order to capture specific locations of other approved and pending projects. Based on coordination with the City of Long Beach, an area projects list was created. Responses that were received from the city were incorporated in the analysis. A majority of the study area is located in a highly urbanized area. The ability to develop new major projects within or adjacent to the study area is limited. Twenty-six pending/approved developments were identified by the City of Lakewood and City of Long Beach within the study area:

- Staybridge Suites Hotel – 2640 North Lakewood Boulevard
- Retail/Carwash Project – 4201 E. Willow Street
- New Coffee Shop – 5861-5865 Spring Street
- Northgate Market Expansion – 4700 Cherry Avenue
- Law Office of Jeff Lung – 4909 Lakewood Boulevard #302
- Sparx Logistics – 4909 Lakewood Boulevard #303
- Thrivent – 4909 Lakewood Boulevard #305
- Image 2000 – 4909 Lakewood Boulevard #540
- McDonalds – 4910 Lakewood Boulevard
- Petco – 5215 Lakewood Boulevard
- Kinecta Federal Credit Union – 4055 Hardwick Street
- Raising Cane’s Chicken Fingers – 4624 Candlewood Street
- Dickey’s Barbeque Pit – 5125 Candlewood Street
- Outback Steakhouse – 5305 Clark Avenue
- Journey’s – 500 Lakewood Center Mall #20
- Miniso – 500 Lakewood Center Mall #39
- Play Live Nation – 500 Lakewood Center Mall #127
- Box Lunch – 500 Lakewood Center Mall #307
- Burgerim – 4131 Woodruff Avenue

- Morey's Music Store – 4834 Woodruff Avenue
- Piggie's Adobo Taco Bar – 2700 Carson Street
- Carwood Carwash – 2729-35 Carson Street
- Stone Yoga Studio – 3219 Carson Street
- Bubble Express Car Wash – 2711 Del Amo Boulevard
- Starbucks – 5906 Del Amo Boulevard
- Laborers Local 1309 – 3971 Pixie Avenue

### SECTION 3.0 – ENVIRONMENTAL DETERMINATION

#### 3.1. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> Aesthetics       | <input type="checkbox"/> Agriculture & Forestry Resources    | <input checked="" type="checkbox"/> Air Quality                        |
| <input type="checkbox"/> Biological Resources        | <input type="checkbox"/> Cultural Resources                  | <input type="checkbox"/> Energy  |
| <input type="checkbox"/> Geology & Soils             | <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials                 |
| <input type="checkbox"/> Hydrology & Water Quality   | <input type="checkbox"/> Land Use & Planning                 | <input type="checkbox"/> Mineral Resources                             |
| <input checked="" type="checkbox"/> Noise            | <input type="checkbox"/> Population & Housing                | <input type="checkbox"/> Public Services                               |
| <input type="checkbox"/> Recreation                  | <input checked="" type="checkbox"/> Transportation           | <input type="checkbox"/> Tribal Cultural Resources                     |
| <input type="checkbox"/> Utilities & Service Systems | <input type="checkbox"/> Wildfire                            | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

#### 3.2. DETERMINATION

On the basis of this initial evaluation:

I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the Proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

Signature 

Date 2-7-18

## SECTION 4.0 – ENVIRONMENTAL IMPACTS

### 4.1. Organization of Environmental Analysis

Sections 4.4 through 4.24 provide a discussion of the potential environmental impacts of the Proposed Project. The evaluation of environmental impacts follows the questions provided in the Checklist provided in the CEQA Guidelines and annotated to meet requirements of Title 5 of the California Code of Regulations for school facilities.

### 4.2. Terminology Used in this Analysis

For each question listed in the IS checklist, a determination of the level of significance of the impact is provided. Impacts are categorized in the following categories:

- **No Impact.** A designation of *no impact* is given when no adverse changes in the environment are expected.
- **Less Than Significant Impact.** A *less than significant impact* would cause no substantial adverse change in the environment.
- **Less than Significant Impact with Mitigation.** A *potentially significant (but mitigable) impact* would have a substantial adverse impact on the environment but could be reduced to a less-than-significant level with incorporation of mitigation measure(s).
- **Potentially Significant Impact.** A *significant and unavoidable impact* would cause a substantial adverse effect on the environment and no feasible mitigation measures would be available to reduce the impact to a less-than-significant level.

### 4.3. Evaluation of Environmental Impacts

A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to the project (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

Once the Lead Agency has determined that a particular physical impact may occur the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant.

“Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

“Less than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant

Impact.” Mitigation measures are identified and explain how they reduce the effect to a less than significant level (mitigation measures may be cross-referenced).

Earlier analyses may be used where, pursuant to the Program EIR or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. (Section 15063[c] [3][D]). In this case, a brief discussion should identify the following:

- a) Earlier analyses used where they are available for review
- b) Which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and whether such effects were addressed by mitigation measures based on the earlier analysis
- c) The mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project, for effects that are “Less than Significant with Mitigation Measures Incorporated.

References and citations have been incorporated into the checklist references to identify information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document, where appropriate, includes a reference to the page or pages where the statement is substantiated. Source listings and other sources used or individuals contacted are cited in the discussion.

The explanation of each issue identifies:

- a) The significance criteria or threshold, if any, used to evaluate each question.
- b) The mitigation measure identified, if any, to reduce the impact to less than significant.

**4.4. AESTHETICS**

a) Would the Project have a substantial adverse effect on a scenic vista?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LBCCD LAC is located in an urbanized residential area and is a developed site. There are no designated scenic resources on the campus, nor is the campus part of a state, county, or municipally designated scenic vista (City 1975). The opportunities for long distance views are limited. From most directions, the visual horizon is limited by existing manmade features. Primary views of the site are in the immediate area from adjacent streets and land uses. Figure 4.4-1 shows the location and orientation of photographs of the Proposed Project site. Figures 4.4-2 through 4.4-5 show views of the Proposed Project site from surrounding locations. Overall views from surrounding areas would not be significantly impacted due to the existing surrounding development which currently obscures or limits views to and from the LAC. With the implementation of the Proposed Project, some immediate views of the LAC would be of increased building density, however, the new structures would be consistent visually with the surrounding structures. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project site is not a scenic resource within State scenic highway corridors. Pacific Coast Highway, the closest local state highway, is not a designated scenic highway in this area (Caltrans 2017). Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

Figure 4.4-1: Site Photograph Locations





**Figure 4.4-2a**  
View of LAC looking north across E. Conant Street



**Figure 4.4-2b**  
View of LAC from corner looking south across E. Conant Street



**Figure 4.4-2c**  
**View of LAC from corner of Clark Avenue and E. Conant Street**



**Figure 4.4-3a**  
**View of LAC from Faculty Avenue east**



**Figure 4.4-3b**  
**View of New Parking Structure on LAC**



**Figure 4.4-3c**  
**View of LAC looking across Carson Street**



**Figure 4.4-4a**  
**View of LAC from corner of Clark Avenue and Carson Street looking north**



**Figure 4.4-5a**  
**View of LAC from corner of Clark Avenue and E. Harvey Way looking south**

c) Would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The visual character of the LAC and surrounding area is that of a fully developed urban corridor, developed with a mix of institutional, commercial, residential, and park uses. Implementation of the Proposed Project would involve redevelopment, renovation, demolition, and new construction on the LAC. The 2041 Facilities Master Plan LAC Improvements incorporate the design features of the 2004 LBCC LAC Master Plan and the 2020 Unified Master Plan LAC Improvements. The LBCC LAC Master Plan

has been developed to support the Long Beach Community College District vision, mission, and values. New design will contribute to a unified campus appearance with a consistent architectural character. Future construction will employ a unifying architectural vernacular, based on contemporary interpretation of the original Spanish Colonial Revival architectural style. The Proposed Project will be designed per the guidelines of the Master Plan to be compatible with the existing LAC structures and to contribute to a unified campus appearance with a consistent architectural character. The construction of buildings consistent with existing architectural style would avoid impacts associated with regulations governing scenic quality.

Development of the Proposed Project would result in the redevelopment, renovation, or replacement of existing LAC structures and the addition of new structures. The new or replacement structure would be similar in size and mass to the adjacent buildings. The design of the new or replacement structures would incorporate many of the architectural elements of the existing LAC structures and would appear as a continuation of existing background features. The new development would help unify the visual character of the LAC and would be consistent with the existing style and image of the area. Implementation of the Proposed Project will also improve the visual character of the LAC by removing features which are not consistent with the original architectural style. In addition, implementation of landscape and signage improvements will complement existing buildings and integrate future projects. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

d) Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** LBCCD LAC is an existing source of light in an urbanized area of the City of Long Beach. Sources of illumination on the LAC include street lighting, interior building lighting, lighting in parking lots, and security lighting.

The Proposed Project would provide additional sources of nighttime illumination. Lighting associated with renovated or new buildings would be similar to that of the existing surrounding buildings. Pedestrian lighting will be coordinated with other elements such as signage, security, paving materials, and street furniture. In addition, lighting would be added to soccer fields at the northern portion of the campus, and new lights would be installed as part of the new Aquatic Center. All lighting will be shielded and directed onto the Proposed Project site. However, with the addition of field and stadium lighting, potential impacts may result. Lighting impacts will be further analyzed in the SEIR.

**Further Study Required:** Light and glare impacts will be further analyzed in the SEIR.

**4.5. AGRICULTURE AND FORESTRY RESOURCES**

a) Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporation <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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**No Impact.** The LAC is classified as “Urban and Built Up Land” by the California Department of Conservation Farmland Mapping (California Department of Conservation 2016). Since the Proposed Project site is currently developed, no farmland activities or resources will be converted to non-agricultural uses. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporation <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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**No Impact.** The LBCCD LAC has a zoning designation of Institutional and School District. Surrounding properties are zoned Residential, Park, or Planned Development (City 1998). The LAC is not zoned for agricultural use and Williamson Act contracts do not occur on or near the Proposed Project site. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

c) Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporation <input type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input checked="" type="checkbox"/>
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**No Impact.** No forest land exists on or around the LBCCD LAC. Implementation of the Proposed Project will have no direct or indirect impact related to timberland conversion. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

d) Would the Project result in the loss of forest land or conversion of forest land to non-forest use?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** No forest land exists on or around the LBCCD LAC. Implementation of the Proposed Project will have no direct or indirect impact related to forest land conversion. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

e) Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** No agricultural or forest land exists on or around the LBCCD LAC. Implementation of the Proposed Project will have no direct or indirect impact related to Farmland or forest land conversion. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** Further evaluation of the potential agriculture and forestry impacts is not required.

#### 4.6. AIR QUALITY

a) Would the Project result in conflict with or obstruct implementation of the applicable air quality plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** A project is deemed inconsistent with air quality plans if it results in population and/or employment growth that exceed growth estimates in the applicable air quality plan. The Proposed Project will not induce growth but will accommodate projected growth in student population. Long-term operational emissions resulting from the Proposed Project may potentially result in exceedance of air quality standards related to the applicable air quality plan. Two types of air pollutant sources are considered in respect to the Proposed Project; stationary and mobile sources. Operational emissions would primarily be generated by mobile sources in the form of vehicle trips. An increase in emissions from stationary sources associated with natural gas and electrical consumption

may also result due to the Proposed Project. An air quality study is being prepared and this issue will be analyzed and discussed in the SEIR.

b) Would the Project violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** The Proposed Project may have a potentially significant impact on air quality standards or contribute substantially to an existing or projected air quality violation. The Proposed Project site is located in the South Coast Air Basin (SCAB), within the SCAQMD. The SCAQMD has established standards for air quality constituents generated by construction and by operational activities for such pollutants as ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and particulate matter smaller than or equal to 10 microns in diameter (PM<sub>10</sub>). The SCAQMD maintains an extensive air quality-monitoring network to measure criteria pollutant concentrations throughout the SCAB. The SCAB is designated a non-attainment area for O<sub>3</sub>, PM<sub>10</sub>, and particulate matter smaller than or equal to 2.5 microns in diameter (PM<sub>2.5</sub>). The construction and operation of the Proposed Project would contribute to an increase in air pollutant emissions for which the region is non-attainment.

Construction emissions would be generated by the demolition of existing structures, grading/excavation, construction workers traveling to and from the Proposed Project site, delivery and hauling of construction supplies and debris, fuel combustion by on-site construction equipment, or the application of architectural coatings and other building materials that release emissions. Construction emissions would be short-term in nature and would be limited only to the time period when construction activity is taking place. However, construction related emissions might exceed SCAQMD daily emissions thresholds. Therefore, these temporary construction emissions will be analyzed in the SEIR.

Long-term operational emissions resulting from the Proposed Project may potentially result in exceedance of air quality standards. Two types of air pollutant sources are considered in respect to the Proposed Project; stationary and mobile sources. Operational emissions would primarily be generated by mobile sources in the form of vehicle trips. An increase in emissions from stationary sources associated with natural gas and electrical consumption may also result due to the Proposed Project. An air quality study is being prepared and this issue will be analyzed and discussed in the SEIR.

c) Would the Project expose sensitive receptors to substantial pollutant concentrations?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** The Proposed Project could potentially create or contribute to a non-stationary source CO “hotspot.” A CO hotspot, or areas of high CO concentration, can occur at traffic congested roadway intersections as a result of accumulating vehicle emissions. The SCAQMD has established concentration thresholds to assess Proposed Project impacts associated with CO hotspots that would be created by vehicle trips. This impact will be analyzed in the SEIR.

d) Would the Project result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** Potential sources that may emit odors are from the application of asphalt and paint and diesel-fueled equipment during the construction period and from diesel-fueled trucks during the operation of the facility. Odors generated during construction would be short-term and would not result in long-term impacts to the surrounding area. Therefore, no significant impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Issues Requiring Further Study.** The SEIR will include further study related to conflicts with applicable air quality management plans, short-term construction emissions, long-term operational emissions, a cumulatively considerable net increase of any criteria pollutant, non-stationary source CO hotspot, and exposure of sensitive receptors to substantial pollutant concentrations. Cumulative impacts to global climate change will be further discussed in the SEIR.

#### 4.7. BIOLOGICAL RESOURCES

a) Would the Project have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The LBCCD LAC campus is a developed site and is located in an urbanized area in the City of Long Beach. Campus vegetation is limited to introduced landscaping. There are no known candidates, sensitive or special status species on or around the LAC. Additionally, the Open Space and Recreation Element of the City of Long Beach General Plan does not identify LAC as open space for the preservation of natural resources (City 2002). Therefore, a less than significant impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LBCCD LAC is an existing campus in an urbanized area with introduced landscaping. There are no known riparian habitats or other sensitive natural community on the Proposed Project site. Since no wetlands exist on or around the LAC, no adverse effects on any riparian habitat identified in local or regional plans, policies, and regulations or by the CDFW or the USFWS will occur. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

c) Would the Project have a substantially adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LBCCD LAC is an existing campus in an urbanized area with introduced landscaping. There are no known wetlands on the site. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The LBCCD LAC is an existing campus in an urbanized area. There are no known native resident or migratory fish or wildlife species, established wildlife corridors, or native wildlife nursery sites on the site. As discussed previously in the SEIR and PEIR, LBCCD intends to avoid the removal of mature ornamental trees; implementation of the Master Plan may require the removal of large trees that could support raptor nesting. As stated previously in the SEIR and PEIR, LBCCD shall attempt to limit removal of mature trees. As part of the Master Plan Best Managements Practices (BMPs), if removal is to occur between March 1 through July 30, a survey to identify active raptor nests shall be conducted by a qualified biologist no more than two weeks before the start of construction. Removal of any mature trees with active raptor nests will be delayed until a qualified biologist

determines that the subject raptor(s) are no longer nesting or until juveniles have fledged. No significant impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

e) Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The Proposed Project will incorporate landscaping improvements. As discussed previously in the SEIR and PEIR, LBCCD intends to avoid the removal of mature ornamental trees; implementation of the Master Plan may require the removal of large trees that could support raptor nesting. As stated previously in the SEIR and PEIR, LBCCD shall attempt to limit removal of mature trees. The City of Long Beach has a Tree Maintenance Policy that applies to planting, maintenance, and removal of street trees located in the public rights-of-way (City 2006). The LBCCD will comply with this Tree Maintenance Policy. The Proposed Project will not conflict with any local policies or ordinances protecting biological resources. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

f) Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** No habitat conservation, natural community conservation, or other approved local, regional, or state habitat conservation plans apply to the LBCCD LAC. The Proposed Project will not conflict with any habitat conservation plans. Therefore, no impact would result, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** Further evaluation of the potential biological resource impacts is not required.

#### 4.8. CULTURAL RESOURCES

a) Would the Project cause a substantial adverse change in significance of a historical resource pursuant to State CEQA Section 15064.5?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** A cultural resources memo report was prepared for the LAC and is included in Appendix A of this document (Chambers Group 2017). The memo was prepared to assess potential changes to the Cultural Resources Inventory Report prepared by Chambers Group in 2009

(Chambers Group 2009) and included an updated cultural resources records search/literature review. The memo found the previous survey data to be correct.

On the 2009 study, buildings were surveyed based on a 45-year age threshold by calendar year 2020. Using these criteria, buildings built in or before 1975 were considered as part of this survey. Nine buildings were determined as eligible for survey on Long Beach City College District’s LAC According to the cultural resources inventory report, Buildings A, F, G, J, K, L, P, Q, and R were constructed between 1935 and 1956, with subsequent additions and alterations made to most of the original structures. The surveyed buildings do not provide for architectural stylistic or artistic integrity and do not appear to be associated with significant events, themes or persons in history and the properties are unlikely to yield future information about the past. None of the structures are known to have been directly associated with any persons or events significant to the broad patterns of local, state, or national history. The buildings therefore failed to meet any requirement for eligibility as a historical resource for either California Register of Historical Resources (CRHR) or local register listing.

On November 11, 2017, Chambers Group, Inc. received the results of the updated records search from the South Central Coastal Information Center (SCCIC) housed at the California State University, Fullerton. These results found no historical resources listed or eligible for listing on the CRHR or local register within the Project area.

Based the 2004 and 2017 findings there are no historical resources present within the Project area, and therefore the Proposed Project as planned with have no impact on Historical Resources.

b) Would the Project cause a substantial adverse change in significance of an archaeological resource pursuant to State CEQA Section 15064.5?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporation <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
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**Less than Significant Impact with Mitigation.** The LBCC LAC is located in an urbanized area that has been previously disturbed by past activities. A Chambers Group archaeologist visited the subject property in 2004 and determined that no open ground was present for a viable archaeological survey due to the presence of buildings, hardscape, and landscaped areas that cover the project area. Results of the 2004 records search and field visit found no archaeological resources present on the LAC campus (Chambers Group 2004). Additionally, the previous results found the area to be heavily disturbed with a considerable amount of fill present due to past development in the area, and therefore found there to be very low potential for buried archaeological materials in the Project area (Chambers Group 2004).

On November 11, 2017, Chambers Group, Inc. received the results of the updated records search from the SCCIC housed at the California State University, Fullerton. These results found no archaeological resources within the Project area have been identified since the previous assessment in 2004.

Based the 2004 and 2017 findings there are no archaeological resources present within the Project area, and little to no potential for buried archaeological deposits based on the past disturbance and development of the campus. However, in the event archaeological resources are uncovered during earth moving construction activities the following measure has been provided to ensure less than significant impacts to archaeological resources.

**CUL-1** In the event that a concentration of artifacts or culturally modified soil deposits (including trash pits older than 50 years) should be encountered at any time during ground disturbing activities, all work must stop until a qualified archaeologist views the finds and makes a preliminary evaluation. If warranted, further archaeological work in the discovery area should be performed.

c) Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporation <input checked="" type="checkbox"/>	Less than Significant Impact <input type="checkbox"/>	No Impact <input type="checkbox"/>
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**Less than Significant Impact with Mitigation.** No known human remains are located on the LAC. The LAC is located in an urbanized area previously disturbed by past activities. In addition to the updated records search completed for the 2017 cultural resources memo report, Chambers Group contacted the Native American Heritage Commission (NAHC) to conduct a Sacred Lands File (SLF) search of the Project area to determine if resources significant to Native American groups are located within the Project area. The NAHC responded that the review of the SLF returned negative results for the Project area (Chambers Group 2017). Based on the results of the updated records search, review of historic maps, and the NAHC SLF search conducted for the 2017 cultural resources memo report, there has been no change to the potential for human remains within the project area from the 2009 report. However, in the event human remains are uncovered during earth moving construction activities the following measure has been provided to ensure less than significant impacts to such resources.

**CUL-2** Although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovery until the County Coroner and a qualified archaeologist evaluate the remains in accordance with California Public Resource Code 5097.98 and Health and Safety code 7050.5.

**Further Study Required:** Further evaluation of the potential cultural resource impacts is not required.

**4.9. ENERGY**

a) Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporation <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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**Less Than Significant Impact.** The Proposed Project includes the demolition, construction, and/or renovation of buildings located on the LBCC LAC. Construction associated with the Proposed Project would result in a temporary increase in energy consumption due to the energy requirements associated with operating construction equipment. All construction activities would implement BMPs to reduce

construction related emissions, which would minimize the energy needed to implement the Proposed Project. Additionally, many of the buildings identified in Table 2-4 have inefficient utility and mechanical systems that have been extended well beyond their intended life span. The Proposed Project would implement California Code of Regulations Title 24 Part 6: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings. Compliance with this regulation would result in LAC buildings that require less electricity, natural gas, and other fuels for operational purposes. Additionally, LBCCD has adopted strategies to reduce energy consumption. These strategies include, but are not limited to, maximizing energy efficiencies to reduce both electrical consumption and peak demand, and promoting renewable power sources for offsetting peak demand. Therefore, the Proposed Project would result in less than significant impacts associated with wasteful or inefficient energy consumption during construction or operation.

b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Potentially Significant Impact <input type="checkbox"/>	Less than Significant With Mitigation Incorporation <input type="checkbox"/>	Less than Significant Impact <input checked="" type="checkbox"/>	No Impact <input type="checkbox"/>
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**Less Than Significant Impact.** The Proposed Project would comply with California Code of Regulations Title 24, which regulates the amount of energy consumed by new development for heating, cooling, ventilation, and lighting. Additionally, the Proposed Project would implement the District wide strategy of promoting renewable energy sources. Therefore, the Proposed Project would result in less than significant impacts associated with renewable energy or energy efficiency plans.

**Further Study Required:** Further evaluation of the potential energy impacts is not required.

**4.10. GEOLOGY AND SOILS**

a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** Although the LAC is located within a seismically active region of southern California, the LAC is not located within a state-designated Alquist-Priolo Special Study Zone (City 1988,

Figure 2). The Alquist-Priolo Special Study Zone prevents construction of buildings used for human occupancy on the surface trace of active faults. The nearest designated Alquist-Priolo Earthquake Fault Zone is the Newport-Inglewood Fault Zone located approximately 2.5 miles southwest of the Proposed Project site. Construction activities for the Proposed Project will be conducted in accordance with California and City of Long Beach regulations and ordinances pertaining to the mitigation of potential geologic and seismic impacts. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

ii) Strong seismic ground shaking?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The four main fault systems most likely to cause potentially significant seismic damage in the Proposed Project area are the San Andreas Fault, the Santa Monica-Hollywood/Malibu Coast Fault, the Newport-Inglewood Fault, and the Palos Verdes Fault (City 1988, Figure 6).

The Proposed Project design will conform to the standards and requirements of the California Building Code, the Long Beach Municipal Code, and recommendations from Structural Engineers Association of California, including strict compliance with procedures for development in areas of ground shaking and engineered fill. In addition, the Division of State Architect (DSA) will review the Proposed Project site engineering geology and geotechnical reports and approve plans prior to issuing building permits. Conformance with applicable building and seismic codes will reduce impacts associated with seismic ground shaking to a less than significant level. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

iii) Seismic-related ground failure, including liquefaction?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** Building-specific geotechnical studies have indicated that the potential for ground failure, specifically liquefaction and seismically-induced settlement, is possible onsite (Amec Foster Wheeler 2015a, 2015b). These geotechnical studies include construction recommendations for site-specific geological conditions. Conformance with these recommendations and all applicable building and seismic codes will reduce impacts associated with seismic-related ground failure, including liquefaction, to a level of less than significant. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

iv) Landslides?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact

	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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**No Impact.** The LAC is not shown on the City of Long Beach Slope Stability Study Areas map (City 1988, pp 46). The LAC is relatively flat and is not adjacent to a hillside. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Would the Project result in substantial soil erosion or the loss of topsoil?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The LAC has been previously graded, developed, and paved. Construction activities will involve minimal soil disruption. Conformance with applicable erosion control regulations during construction activities will reduce impacts to a level of less than significant. The Proposed Project would also include BMPs outlined in the PEIR including compliance with SWPPP and SUSMP. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

c) Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The LAC has been previously graded and developed. Conformance with applicable building and seismic codes and implementation of geotechnical recommendations, will reduce impacts associated with unstable geologic units or soils to a level of less than significant (LBCC 2015a, 2015b). Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

d) Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The LAC has been previously graded and developed. Conformance with applicable building and seismic codes and implementation of geotechnical recommendations, will reduce impacts associated with expansive soils to a level of less than significant (Amec Foster Wheeler

2015a, 2015b). Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

e) Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LAC relies on sewers for waste water disposal and would not involve the use of alternative wastewater disposal systems. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact with Mitigation.** No known paleontological resources are located on the LAC. The LAC is located in an urbanized area previously disturbed by past activities. Furthermore, the 2004 Master Plan PEIR defines mitigation measures to reduce any impacts to paleontological resources discovered during construction to less than significant. Additionally, the LAC does not contain any unique geologic features. Therefore, no significant impacts will result from construction activities, no significant change is anticipated from previous analyses, and no further study of the issue is required. The mitigation included in the PEIR for the 2004 Master Plan includes the following:

**MM PALEO 1 (MM 4.8-1a in PEIR):** Prior to earthmoving that will reach depths of more than 10 feet bgs, a Project paleontologist will be retained by LBCC and will develop a mitigation plan and a discovery clause/treatment plan to be implemented during earthmoving on the Project Site. At a minimum, the treatment plan will require the recovery and subsequent treatment of any fossil remains and associated data uncovered by earthmoving activities. As part of the plan, the Project paleontologist will develop a storage agreement with the Natural History Museum of Los Angeles County, Vertebrate Paleontology Section, San Bernardino County Museum, or another acceptable museum repository to allow for the permanent storage and maintenance of any fossil remains recovered as a result of the mitigation program, and for the archiving of associated specimen data and corresponding geologic and geographic site data at the museum repository.

**MM PALEO-2: (MM 4.8-1b)** The paleontologist and a paleontologic construction monitor shall attend a pre-grade meeting to explain the mitigation program to grading contractor staff and to develop procedures and lines of communication to be implemented if fossil remains are uncovered by earthmoving.

**MM PALEO-3: (MM 4.8-1c)** Paleontologic monitoring of earthmoving will be conducted by the monitor in areas of the Project Site underlain by previously undisturbed strata that will be disturbed by earthmoving extending 10 feet bgs.

**MM PALEO-4: (MM 4.8-1d)** If fossil remains are found by the monitor, earthmoving will be diverted temporarily around the fossil site until the remains have been recovered and the monitor agrees to allow earthmoving to proceed.

**MM PALEO-5: (MM 4.8-1e)** If Pliocene-Pleistocene marine sediments are encountered, up to 6,000 pounds of fossiliferous rock will be recovered from each fossil-bearing site and processed to allow for the recovery of smaller fossil remains.

**MM PALEO-5: (MM 4.8-1f)** Any recovered fossil remains will be prepared to the point of identification and identified to the lowest taxonomic level possible by knowledgeable paleontologists. The remains then will be curated and catalogued, and associated specimen data and corresponding geologic and geographic site data will be archived at the museum repository by a laboratory technician. The remains then will be accessioned into the museum repository fossil collection, where they will be permanently stored, maintained, and, along with associated specimen and site data, made available for future study by qualified investigators.

**MM PALEO-6: (MM 4.8-1g)** A final report of findings will be prepared by the paleontologist for submission to LBCC and the museum repository following accessioning of the specimens into the museum repository fossil collection. The report will describe geology/stratigraphy; summarize field and laboratory methods used; include a faunal list and an inventory of curated/catalogued fossil specimens; evaluate the scientific importance of the specimens; and discuss the relationship of any newly recorded fossil site in the parcel to relevant fossil sites previously recorded from other areas.

**Further Study Required:** Further evaluation of the potential geology and soils impacts is not required.

**4.11. Greenhouse Gas Emissions**

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** The Proposed Project will generate emissions of greenhouse gases (GHGs) from mobile sources mostly related to the operation of machinery on site associated with demolition, renovation, and construction of new buildings on site. Additionally, the Proposed Project has the potential to generate emission of GHGs from stationary sources related to the operation of buildings and facilities at the LBCC LAC campus. The California Air Resources Board (CARB) has statutory responsibility to maintain a statewide inventory of GHG emissions. The California GHG inventory compiles statewide anthropogenic GHG emissions and sinks. An analysis of GHG emissions from the

Proposed Project is being prepared as part of the EIR. The EIR will further analyze impacts related to the generation of GHG emissions.

b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** An analysis of the Proposed Project’s impacts on applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs will be included in the EIR.

**Issues Requiring Further Study.** The SEIR will include further study related to short-term construction emissions, long-term operational emissions, and GHG emissions, including compliance with plans or policies related to GHG emissions.

**4.12. HAZARDS AND HAZARDOUS MATERIALS**

a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Less than Significant with Mitigation.** As previously discussed in the PEIR, asbestos inspections conducted by CF Environmental, Inc., in April 2002 identified the presence and quantity of asbestos containing materials (ACM) in all permanent buildings at LBCC LAC. Compliance with federal and state law ensures that, prior to demolition, alteration, or renovation, (1) proper notification is given to the SCAQMD, (regulates airborne pollutants), and the local California OSHA office; and (2) the LBCCD will certify that ACM’s have been removed or mitigated by a licensed asbestos abatement contractor certified by the State of California Contractors Licensing Board. Because these permitting requirements automatically apply to Project development, they are considered standard conditions for Project approval that will reduce potential effects to a less than significant level during construction and operation. In addition, the Proposed Project would include the mitigation measures as outlined in the 2004 Master Plan PEIR and included below.

The use of hazardous materials (i.e., fuel, cleaning solvents, paint, etc.) during construction activities will be minimal and in compliance with applicable City, State, and Federal regulations. The use of hazardous materials post-construction will include minimal amounts of cleaning solvents and fuel for janitorial purposes and landscaping maintenance. Limited amounts of these types of hazardous materials will be transported or disposed of during routine day-to-day operations. Therefore, no significant impacts are expected and no further study of the issue is required. The mitigation measure included in the 2004 Master Plan PEIR includes the following:

**MM HAZ-1: (MM 4.10-1 and 2 in the PEIR)** Prior to demolition, alteration, or renovation of structures at LAC, a LBP sampling and analysis survey of buildings and appurtenances will be conducted to assess the presence of LBP. If found, prior to demolition, alteration, or renovation, the LBP will be removed and disposed of by a licensed LBP abatement contractor certified by the State of California Contractors Licensing Board in compliance with state and federal policy.

b) Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** Hazardous or flammable substances that may be used during the construction phase of the Proposed Project would include vehicle fuels and oils for the operation of heavy equipment. Diesel and/or other construction equipment and vehicle fuels would be used; however, the transport, storage, and usage of hazardous materials such as fuels are regulated by the State. The Proposed Project would comply with all State regulations during construction reducing any impacts to be less than significant. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** Twain Elementary School is located approximately 0.25-mile north of the LBCCD LAC. Construction of the Proposed Project will result in the storage and use of minimal amounts of hazardous materials for routine cleaning and landscaping on LAC. The use of hazardous materials (i.e., fuel, cleaning solvents, paint, etc.) during construction activities will be minimal. The Proposed Project would comply with applicable City, State, and Federal regulations reducing any impacts to less than significant. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

d) Would the Project be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and, as a result, would it create a significant hazard to the public or the environment?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project site is not included on the list of hazardous material sites compiled by the government (California Department of Toxic Substances Control 2017, California State Water Resources Control Board 2017). Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LBCCD LAC is located approximately 0.3-mile northeast of the Long Beach Municipal Airport; however, the LAC is located well outside the 65 dB CNEL contour for the airport (Chambers Group 2009). Additionally, the LBCC LAC is not located within any of the nine Runway Protection Zones (RPZ) identified in the Airport Land Use Compatibility Plan (ALUCP) of the Long Beach Municipal Airport. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project will be designed to provide unobstructed access at all times. Permitting requirements require the Long Beach Fire Department and the Division of State Architect (DSA) to perform an Access Compliance review and a Fire and Life Safety review, respectively, prior to approval of the Proposed Project drawings and specification documents. Emergency access will be ensured and the Proposed Project will not interfere with adopted emergency response or evacuation plans. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

g) Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LAC is located in an urbanized area of the City of Long Beach that does not include wildlands or high fire hazard terrain or vegetation. The Proposed Project will not expose persons or structures to the risk of wildland fires during construction or operation. Therefore, no impacts are

expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** Further evaluation of the potential hazards and hazardous materials impacts is not required.

**4.13. HYDROLOGY AND WATER QUALITY**

a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** Surface water runoff from LBCCD LAC is regulated under the City of Long Beach National Pollutant Discharge Elimination System (NPDES) permit (NPDES Permit No. 99-060, CAS004003/CI 8052) for municipal stormwater discharges. Surface water runoff from LAC for construction activities is regulated under the statewide NPDES General Permit for Stormwater Discharges Associated with Construction Activity (General Construction Permit, Order No. 99-08-DWQ; Permit No. CAS000002). Pollutants from construction activities have the potential to enter the LAC storm drain system. To reduce potential impacts to water quality and to comply with the requirements of the NPDES General Construction Permit, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared. The SWPPP outlines BMPs that prevent such impacts. BMPs would be implemented prior to initiation of construction activities and throughout the duration of construction reducing any impacts to less than significant. Additionally, the LAC is developed and not identified as a groundwater recharge basin. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The Proposed Project is located on a developed site and will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Construction of the Proposed Project will not significantly alter existing groundwater recharge patterns. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

c) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
i. Result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The LAC is an existing campus in an urbanized location. The drainage pattern of the LAC and surrounding area is established and there are no streams or rivers on the LAC. The drainage system for LAC and the City of Long Beach is also established. Construction activities will conform to regulatory requirements and will not result in substantial erosion or siltation on or off site. Additionally, the Proposed Project would not result in a significant increase in impervious surface on the LAC. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The drainage pattern of the LAC and surrounding area is established and there are no streams or rivers on the LAC. The drainage system for LAC and the City of Long Beach is also established. The Proposed Project would not substantially increase the amount of impervious surface on the LAC. The amount of surface runoff resulting from implementation of the Proposed Project would be similar to the existing condition. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** Implementation of the Proposed Project will not exceed the capacity of the existing stormwater drainage system or result in additional sources of polluted runoff. As part of implementation of the Proposed Project, improvements will be made to the existing campus drainage system. The District will also prepare a Standard Urban Stormwater Mitigation Plan (SUSMP) for LAC. SUSMP requirements require “treatment” of 85 percent of the total annual runoff. The BMPs identified

in the SUSMP will reduce impacts to water quality to less than significant level. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

iv. Impede or redirect flood flows?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LAC is a developed site and is not located in a Flood Hazard Zone or 100-year or 500-year flood plain (FEMA 2008). Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

d) In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** Seiche is not an assumed hazard in the Proposed Project area. Tsunamis have the potential to impact the coastal area; however, LAC is located five miles inland and is not located in an inundation or tsunami hazard area (City 1988). Additionally, the LAC is not located in a Flood Hazard Zone. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less Than Significant Impact.** The Regional Water Board’s Basin Plan is the applicable water quality control plan for the Proposed Project area. The Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. As mentioned above, the Proposed Project would comply with the NPDES General Construction Permit, which required the preparation of a SWPPP. The SWPPP outlines BMPs that prevent impacts to water quality. BMPs would be implemented prior to initiation of construction activities and throughout the duration of construction reducing any impacts to less than significant. Additionally, the operation use of the Proposed Project area will remain the same as the existing use and rate and amount of runoff would be substantially similar to existing conditions. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** Further evaluation of the potential hydrology and water quality impacts is not required.

**4.14. LAND USE AND PLANNING**

a) Would the Project physically divide an established community?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project is located within an established institutional setting and is a continuation of existing educational uses. The Proposed Project will not physically divide an established community. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project is in conformance with the Land Use Element of the City of Long Beach General Plan’s land use designation of “Institutions/Schools.” Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** Further evaluation of the potential land use impacts is not required.

**4.15. MINERAL RESOURCES**

a) Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** LBCC LAC is located northeast of the Wilmington Oil Field (LBCCD 2004). There is no extraction of oil on the LAC, and there will be no loss of availability of oil to the region or state. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LAC is not designated as an important mineral resource recovery site in the City of Long Beach General Plan or any other land use plan (City 1973). There is no extraction of mineral resources on the LAC. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** Further evaluation of the mineral resource impacts is not required.

#### 4.16. NOISE

a) Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** Construction and operation of the Proposed Project could potentially expose nearby sensitive uses (such as the adjacent residences) to noise levels above established noise standards. The Proposed Project would create noise on a temporary basis during construction due to the use of construction equipment. Permanent operational impacts associated with the redistribution of traffic in the area, and mechanical equipment associated with heating, ventilation, air conditioning, and building operations could also be significant sources of noise. Noise impacts associated with the exposure to or generation of noise levels in excess of standards established by the City of Long Beach are considered potentially significant. Analysis of the Proposed Project's consistency with local noise standards and guidelines based on existing and proposed land uses within and surrounding the sites will be completed. Therefore, this impact will be analyzed in the SEIR.

b) Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** The Proposed Project may result in generation of groundborne vibration or noise levels. Construction activities typically create an increase in groundborne vibrations and noise levels. Groundborne vibrations and noise generated by construction activities associated with the Proposed Project would increase noise levels intermittently at nearby sensitive receptors. The California Department of Transportation (Caltrans) has established groundborne vibration thresholds expressed in Peak Particle Velocity (PPV) for residences and buildings. Therefore, sensitive uses may be subjected to vibration attributable to construction activities in excess of these standards. As such, this impact would be evaluated further in the SEIR.

**Issues Requiring Further Study.** Issues requiring further study in the SEIR include construction and operation noise impacts, vibration impacts, and potential to expose sensitive receptors to noise above ambient noise levels.

**4.17. POPULATION AND HOUSING**

a) Would the Project induce unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The 2041 Facilities Master Plan identifies capital improvement strategies to accommodate future program needs based on enrollment growth through 2041 and is designed to respond to projected increases in population in the LBCCD through 2041. The Proposed Project will facilitate the Master Plan capital improvements. The LAC Facilities Master Plan does not induce population growth, employment growth, or housing growth. The enrollment growth is expected to come from local residences and is not expected to draw significantly from out of town students who would require additional housing. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** There is no removal or addition of housing related to the Proposed Project. The Proposed Project will not result in the displacement of housing or people. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** No further study of population and housing is required.

**4.18. PUBLIC SERVICES**

<p>a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</p>				
<p>Fire Protection?</p>	<p>Potentially Significant Impact</p>	<p>Less than Significant With Mitigation Incorporation</p>	<p>Less than Significant Impact</p>	<p>No Impact</p>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Long Beach Fire Department serves the LBCC LAC. The closest fire station to the LAC is Fire Station 19, located one-half mile south. The Proposed Project will be implemented in compliance with applicable state and municipal code requirements that regulate construction, emergency access, water main capacity, fire flows, and fire hydrant capacity and location. The Proposed Project will be designed to provide unobstructed access to the Proposed Project Site at all times. Emergency access will be ensured through an Access Compliance review by the appropriate fire department and a Fire and Life Safety review by the Division of State Architect (DSA). Existing fire safety compliance will be enforced through established state and municipal project review and permitting procedures. The Proposed Project’s compliance with these procedures will ensure that it does not exceed a fire department’s ability to provide adequate fire protection and emergency services to the LAC during construction and operation. Therefore, the Proposed Project will not result in short-term or long-term impacts to a fire department’s ability to provide fire protection and emergency services to the LAC. No impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

<p>b) Police Protection?</p>				
	<p>Potentially Significant Impact</p>	<p>Less than Significant With Mitigation Incorporation</p>	<p>Less than Significant Impact</p>	<p>No Impact</p>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** Campus security is provided by the Long Beach Police Department (LBPD) City College Section, comprised of a Lieutenant, police officers, and security officers assigned to both LBCC LAC and PCC. Security is provided 24 hours a day, seven days a week. The City College Section is responsible for campus law enforcement, security, safety escorts, and emergency response. Proposed Project construction will comply with campus security emergency access, site lighting, and crime prevention requirements and procedures. Compliance with these procedures will ensure that the Proposed Project will not increase the need for police protection services. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

c) Schools?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LBCC LAC Facilities Master Plan identifies capital improvement strategies to accommodate future program needs based on enrollment growth through 2041 and is designed to respond to projected increases in population in the LBCCD through 2041. The Proposed Project will facilitate the Facilities Master Plan capital improvements and will not induce population growth that would result in long-term impacts to public schools. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

d) Parks?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**No Impact.** The Proposed Project includes new construction of a new swimming pool along with physical education outdoor playing fields to include a relocated softball field, two soccer fields, six tennis courts, five sand volleyball courts, and supporting facilities, restrooms, field house, and storage. During relocation of the softball field, a temporary lack of public access to the softball field would occur. Demands for access to these fields can be satisfied at other recreation facilities located in the City of Long Beach with little, if any, impact to those facilities. After construction, the new swimming pool facility and outdoor playing fields would better serve the college and the public. This and the other improvements to recreational facilities would result in a beneficial long-term impact to parks and recreation facilities in the Project Area. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

e) Other public facilities?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project would not result in any impacts to other public facilities. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** No further study of public services is required.

**4.19. Recreation**

a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The Proposed Project includes new construction of a new swimming pool along with physical education outdoor playing fields to include a relocated softball field, two soccer fields, six tennis courts, five sand volleyball courts, and supporting facilities, restrooms, field house, storage. During relocation of the softball field, a temporary lack of public access to the softball field would occur. Demands for access to these fields can be satisfied at other recreation facilities located in the City of Long Beach with little, if any, impact to those facilities. After construction, the new swimming pool facility and outdoor playing fields would better serve the college and the public. This and the other improvements to recreational facilities would result in a beneficial long-term impact to parks and recreation facilities in the Project Area. Therefore, less than significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less-than-Significant Impact.** See discussion regarding recreational facilities in Section 4.19 Impact a), above. The Proposed Project would not require the construction or expansion of off-site recreational facilities. The Proposed Project would include upgrades to existing recreational facilities. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** No further study of recreation is required.

**4.20. TRANSPORTATION**

a) Would the Project conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** The Proposed Project has no components that will cause conflict or alter adopted policies, plans, or programs supporting alternative transportation. The Proposed Project includes upgrades to the LAC pedestrian and bicycle circulation system. However, implementation of the Proposed Project has the potential to cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. This could result in a corresponding increase in the volume to capacity ratio on these roadways or increased congestion at intersections and, therefore, represents a potentially significant impact. The SEIR will document the results of a detailed traffic study, including the analysis of traffic impacts at local intersections and roadway segments and access to the LAC.

b) For a land use project, would the project conflict or be consistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less Than Significant Impact.** The Proposed Project area is located within one-half mile of numerous transit stops. Although the Proposed Project would not likely reduce vehicle miles travelled in the project area compared to existing conditions, the proximity to multiple transit stops would result in a less than significant impact associated with transportation. Therefore, no significant impacts are expected, and no further analysis is required.

c) For a transportation project, would the project conflict or be consistent with CEQA Guidelines section 15064.3, subdivision (b)(2)?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project is not a transportation project. Therefore, no impacts are expected, and no further study of the issue is required.

d) Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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**No Impact.** The LAC is located in a developed urban area characterized by moderate traffic levels. The Proposed Project will involve upgrades and improvements to vehicular and pedestrian access and circulation. The Proposed Project will not pose traffic hazards to motor vehicles, bicyclists, or pedestrians. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

e) Would the Project result in inadequate emergency access?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** Implementation of the Proposed Project will be designed to provide unobstructed access at all times. Permitting requirements require the Long Beach Fire Department and the DSA to perform an Access Compliance review and a Fire and Life Safety review prior to approval of Proposed Project drawings and specification documents. Therefore, emergency access will be ensured and the Proposed Project will not interfere with adopted emergency response or evacuation plans. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** Further study of transportation especially related to policies or plans related to the circulation system is required and will be addressed in the SEIR.

#### 4.21. TRIBAL CULTURAL RESOURCES

##### 4.21.1 Evaluation

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:  i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k),	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact:** The LBCC LAC is in an urbanized area that has been previously disturbed by past activities. A Chambers Group archaeologist visited the subject property in 2004 and determined that no open ground was present for viable for archaeological survey due to the presence of buildings, hardscape, and landscaped areas that cover the project area. Results of the 2004 records search and assessment found no previously recorded historical resources (or local register historical resources) present on the LAC campus (Chambers Group 2004).

On November 11, 2017, Chambers Group, Inc. received the results of the updated records search from the SCCIC housed at the California State University, Fullerton. The results with the SCCIC found no listed or eligible for listing CRHR historical resources or local register resources present within the Project area. Additionally, a search with the NAHC failed to identify any SLF within the Project area.

On December 14, 2017, LBCCD submitted an AB 52 project notification letter to Mr. Anthony Morales (Chief, San Gabriel Band of Mission Indians), which is the only Tribe that has requested notification of projects for this area under AB 52 from LBCCD. The notification letter included project information, location, point of contact for the District, and requested that the Tribe respond within 30 days if they would like to consult on this Project. As of January 30, 2018, no response has been received from the Tribe requesting consultation on the Project. The 30-day request for consultation ended January 13, 2018. As a result, AB 52 tribal consultation efforts are considered closed for this Project.

Based on the 2004 and 2017 findings there are no tribal cultural resources present within the Project area, and little to no potential for buried tribal cultural resources based on the past disturbance and development of the campus. However, in the event tribal cultural resources are uncovered during earth moving construction activities the mitigation measures presented above for cultural resources shall be in effect (CUL-1 and CUL-2).

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe	Potentially Significant Impact  <input type="checkbox"/>	Less than Significant With Mitigation Incorporation  <input type="checkbox"/>	Less than Significant Impact  <input type="checkbox"/>	No Impact  <input checked="" type="checkbox"/>
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**No Impact:** The LBCC LAC is in an urbanized area that has been previously disturbed by past activities. A Chambers Group archaeologist visited the subject property in 2004 and determined that no open ground was present for viable for archaeological survey due to the presence of buildings, hardscape, and landscaped areas that cover the project area. Results of the 2004 records search and assessment found no previously recorded cultural resources present on the LAC campus (Chambers Group 2004).

On November 11, 2017, Chambers Group, Inc. received the results of the updated records search from the SCCIC housed at the California State University, Fullerton. The results with the SCCIC found Native

American cultural resources recorded within the project area. Additionally, a search with the NAHC SLF search, did not identify any SLFs within the Project area.

On December 14, 2017, LBCCD submitted an AB 52 project notification letter to Mr. Anthony Morales (Chief, San Gabriel Band of Mission Indians), which is the only Tribe that has requested notification of projects for this area under AB 52 from LBCCD. The notification letter included Project information, location, point of contact for the District, and requested that the Tribe respond within 30 days if they would like to consult on this Project.

As of January 30, 2018, no response has been received from the Tribe requesting consultation on the Project. The 30-day request for consultation ended January 13, 2018. As a result, AB 52 tribal consultation efforts are considered closed for this Proposed Project.

Therefore, based on the 2004 and 2017 findings there are no tribal cultural resources present within the Project area, and little to no potential for buried tribal cultural resources based on the past disturbance and development of the campus. However, in the event tribal cultural resources are uncovered during earth moving construction activities the mitigation measures presented above for cultural resources shall be in effect (CUL-1 and CUL-2).

**Further Study Required:** No further study of tribal cultural resources is required.

#### 4.22. UTILITIES AND SERVICE SYSTEMS

a) Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?	Potentially Significant Impact  <input type="checkbox"/>	Less than Significant With Mitigation Incorporation  <input type="checkbox"/>	Less than Significant Impact  <input checked="" type="checkbox"/>	No Impact  <input type="checkbox"/>
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**Less Than Significant Impact.** The Proposed Project would not be expected to place an undue burden on existing water, wastewater treatment, electric power, natural gas, or telecommunication facilities. The Proposed Project would be developed on a site where the LAC is already established in an urbanized setting. The Proposed Project will not induce growth, but will accommodate a regional growth in population. Such development was taken into account by regional water purveyors and wastewater treatment facilities in their regional planning for upgrading facilities (LBWD 2015, LBWD 2014). Additionally, electric and natural gas utilities are considered on demand utilities and service is provided as needed.

The Proposed Project will involve upgrades to the existing on-site stormwater conveyance system. Short-term impacts to site drainage during construction will be mitigated through the use of BMPs. Long-term impacts will not result to the storm drain system as the Proposed Project will not significantly increase impervious surfaces that would contribute to additional stormwater flow. Therefore, no

impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project will not induce growth, but will accommodate a regional growth in population for which future water use has been accounted by regional water purveyors (LBWD 2015). Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

c) Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project’s projected demand in addition to the provider’s existing commitments?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project will not induce growth, but will accommodate a projected growth in student population for which future demand on regional wastewater facilities has been projected by local and regional planning agencies. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

d) Would the Project generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less than Significant Impact.** The Sanitation Districts of Los Angeles County (LACSD) and private waste management collectors and disposal facilities manage solid waste in the county. The LACSD operates a comprehensive solid waste management system that includes three active sanitary landfills, three closed landfills, two materials recovery/transfer stations, three gas-to-energy facilities, a clean-fuel facility, two full-service recycle centers, multiple landfill recycling programs, and, in conjunction with the County's Department of Public Works, an extensive program of household hazardous waste and electronic waste collection round-ups.

The active landfills and the materials recovery/transfer stations receive approximately 19,000 tons of nonhazardous solid waste per day, of which approximately 15,500 tons per day is disposed, with the remainder being reused or recycled. This disposal represents approximately 40 percent of the total solid

waste disposed of by the residents and businesses of the county. The remaining 60 percent is disposed of at privately owned landfills. In general, solid waste is hauled directly to Class III landfills, transfer stations, resource recovery centers, and refuse-to-energy facilities.

The Proposed Project will not significantly affect the volume of solid waste. Construction of the Proposed Project would result in the generation of solid waste including scrap lumber, concrete, residual waste, packaging material, plastics, and vegetation. To ensure optimal diversion of solid waste resources by the Proposed Project, the District will require contractors to recycle or salvage nonhazardous waste materials generated during demolition and/or construction, to foster material recovery and reuse, and to minimize disposal in landfills. Furthermore, impacts from construction activities will be short-term and intermittent, and will be mitigated by compliance with existing state solid waste reduction statutes. A less than significant impact to regional landfills is expected to result from the Proposed Project. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

e) Would the Project negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Less Than Significant Impact.** As discussed above, construction of the Proposed Project would result in the generation of solid waste including scrap lumber, concrete, residual waste, packaging material, plastics, and vegetation. To ensure optimal diversion of solid waste resources by the Proposed Project, the District will require contractors to recycle or salvage nonhazardous waste materials generated during demolition and/or construction, to foster material recovery and reuse, and to minimize disposal in landfills. Furthermore, impacts from construction activities will be short-term and intermittent, and will be mitigated by compliance with existing state solid waste reduction statutes. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

f) Would the Project comply with federal, state, and local statutes and regulations related to solid waste?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The Proposed Project will comply with all applicable federal, state, and local statutes and regulations relating to solid waste. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** No further study of utilities is required.

**4.23. WILDFIRE**

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Impair an adopted emergency response plan or emergency evacuation plan?

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LAC is not located within a state or locally classified very high fire hazard severity zone (Cal Fire 2007, 2011). Additionally, emergency access will be ensured and the Proposed Project will not interfere with adopted emergency response or evacuation plans. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LAC is located in an urbanized area of the City of Long Beach that does not include wildlands or high fire hazard terrain or vegetation. Additionally, the Proposed Project area is relatively flat and does not contain perceptible slopes on site. The Proposed Project will not expose occupants to pollutant concentrations from a wildfire during construction or operation. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LAC is located in an urbanized area of the City of Long Beach that does not include wildlands or high fire hazard terrain or vegetation. Additionally, the Proposed Project does not include the installation or maintenance of structures associated with fire prevention or control. Therefore, no

impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**No Impact.** The LAC is located in an urbanized area of the City of Long Beach that does not include wildlands or high fire hazard terrain or vegetation. Additionally, the Proposed Project area is relatively flat. Therefore, no impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

**Further Study Required:** No further study of risk associated with wildfire is required.

**4.24. MANDATORY FINDINGS OF SIGNIFICANCE**

a) Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Less than Significant with Mitigation.** The Proposed Project site does not contain any sensitive natural resources, which could be disturbed as a result of the Proposed Project. Due to the highly urbanized nature of the Proposed Project area, the Proposed Project would not reduce the habitat of fish and wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of a rare or endangered plant or animal. Additionally, the Proposed Project would not significantly impact examples of the major periods of California history or prehistory with the incorporation of mitigation measures mentioned above. Therefore, no significant impacts are expected, no significant change is anticipated from previous analyses, and no further study of the issue is required.

b) Does the Project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** Implementation of the Proposed Project would have the potential to have impacts that are individually limited, but cumulatively considerable. Where the Proposed Project would have no impact, specifically with respect to agricultural resources, biological resources, mineral resources, and population and housing, it would not contribute to cumulative impacts. In addition, issues specific to site conditions, such as site geology and soils, do not have cumulative effects. The Proposed Project is not growth inducing; thus, it would not contribute to the cumulative effects of population growth. The incremental effects of the Proposed Project that could contribute to cumulative impacts include air, noise, and traffic impacts associated with vehicle trips generated by the project and construction impacts. These issues will be further analyzed in the SEIR, and, subsequently, their cumulative effects will also be analyzed in the SEIR.

c) Does the Project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Potentially Significant Impact.** The Proposed Project could potentially result in environmental effects that may cause adverse effects on human beings with regard to the following environmental areas discussed in this NOP/IS: air quality, noise, and traffic. These issues will be studied further in the SEIR.

## SECTION 5.0 – REFERENCES

### Amec Foster Wheeler

- 2015a Geotechnical Investigation Proposed Auditorium Renovation and Additions. September 2015
- 2015b Report of Geotechnical Investigation Proposed Building P Renovation. August 2015.

### California Department of Conservation

- 2016 Important Farmland in California, Farmland Mapping and Monitoring Program Map <http://www.conservation.ca.gov/dlrp/FMMP/Pages/Index.aspx>

### California Department of Forestry and Fire Protection (Cal Fire)

- 2007 Los Angeles County Fire Hazard Severity Zone Map. State Responsibility Area.
- 2011 Los Angeles County Fire Hazard Severity Zone Map. Local Responsibility Area.

### California Department of Transportation (Caltrans).

- 2004 Transportation-and Construction-Induced Vibration Guidance Manual, June 2004.
- 2017 *California Scenic Highway Mapping System.*  
[http://www.dot.ca.gov/hq/LandArch/16\\_livability/scenic\\_highways/](http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/)

### California Department of Toxic Substances Control

- 2017 <http://www.envirostor.dtsc.ca.gov/public/>

### California State Water Resources Control Board

- 2017 <http://geotracker.waterboards.ca.gov>

### Chambers Group Inc.

- 2004 Long Beach City College Draft PEIR for Liberal Arts College Master Plan
- 2009 Draft Supplemental EIR Long Beach City College Unified 2020 Master Plan Liberal Arts Campus
- 2017 Cultural Resources Memo Report

### City of Long Beach General Plan (City)

- 1973 Conservation Element
- 1975 Scenic Highways Element

- 1988 Seismic Safety Element
- 1989 Land Use Element
- 1991 Transportation Element
- 1996 Air Quality Element
- 1998 Department of Building and Planning, Zoning Map
- 2002 Open Space and Recreation Element

City of Long Beach Public Works Department

- 2006 Tree Maintenance Policy

Federal Emergency Management Agency (FEMA)

- 2008 National Flood Insurance Rate Map

Long Beach Community College District (LBCCD)

- 2004 Long Beach City College Master Plan Liberal Arts Campus
- 2007 Long Beach City College 2020 Unified Master Plan
- 2016 2041 Facilities Master Plan

Long Beach Water Department

- 2014 Long Beach Sewer System Management Plan (SSMP) Final Report
- 2015 Long Beach Water 2015 Urban Water Management Plan

## **SECTION 6.0 – REPORT AUTHORS AND CONSULTANTS**

### **Long Beach Community College District (LBCCD)**

*Ann-Marie Gabel, Executive Vice President, Finance, Facilities and Technology Services*

*Timothy Wootton, Facilities & Maintenance, Director*

*Margie Padron, Business Support Services, Director*

*Medhanie Ephrem, Facilities & Maintenance, Deputy Director of Planning & Construction*

### **Long Beach Community College District (LBCCD) Bond Management Team**

*Farzam Fathi, Construction Manager*

*Terrance DeGray, Program Director*

### **Chambers Group, Inc.**

*Meghan Directo  
Project Manager/Project Environmental Planner*

*Corinne Lytle-Bonine  
Managing Environmental Planner*

*Eunice Bagwan  
Environmental Planner*

*Thomas Strand  
Environmental Planner*

*Rachael Nixon  
Managing Cultural Resources Specialist*

*Justin Castells  
Senior Architectural Historian*

## APPENDIX A – CULTURAL RESOURCES MEMO



**To:** Long Beach Community College District (LBCCD) and Interested Parties

**From:** Rachael Nixon, MA, RPA

**Date:** February 5, 2018

**RE:** Long Beach Community College District 2041 Facilities Master Plan – Liberal Arts Campus Cultural Resources Records Search Update

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In July 2009, Chambers Group, Inc. (Chambers Group) prepared a Cultural Resources Inventory for Liberal Arts and Pacific Coast campuses of Long Beach City College as part of Long Beach Community College District 2020 Unified Master Plan. As part of the report, a cultural resources records search/literature review was conducted on April 6, 2009 at the South Central Coastal Information Center (SCCIC), located at California State University, Fullerton Campus. The purpose of this review was to examine any existing cultural resources survey reports, archaeological site records, and historic maps to determine whether previously documented prehistoric or historic archaeological sites, architectural resources, cultural landscapes, or ethnic resources exist within or near the property. The records search/literature review was also conducted to determine whether any historic properties listed on or determined eligible for listing on the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) exist within a one-mile radius of property. The following update is for the Liberal Arts campus.

The results of the 2009 records search indicated that seven prior cultural resource studies and one historical resource are located within a 1-mile search radius of the project location. No prior cultural resource surveys or historic or cultural resources were identified within the project area.

An updated records search was conducted on November 11, 2017 at the SCCIC. Based on the results of the updated records search, 16 prior cultural resources reports are located within the 1-mile search radius and five of those reports are located within the project area. Three cultural resources have been identified within the 1-mile search radius, one prehistoric resource and two built environment resources. None of the previously recorded prehistoric or historic resources are located within the project area.

In addition to the updated records search, Chambers Group contacted the Native American Heritage Commission (NAHC) to conduct a Sacred Lands File (SLF) search of the project area to determine if resources significant to Native American groups are located within the project area. In a letter dated November 28, 2017, the NAHC responded that the review of the SLF returned negative results for the project area.

Based on the results of the updated records search and NAHC SLF search, there has been no change to the potential for cultural resources within the project area from the 2009 report. Chambers Group recommends that no further cultural resources work is required for this project.

## NATIVE AMERICAN HERITAGE COMMISSION

Environmental and Cultural Department  
1550 Harbor Blvd., Suite 100  
West Sacramento, CA 95691  
Phone (916) 373-3710



February 12, 2018

Farzam Fathi  
Long Beach Community College District  
4901 E. Carson Street – G21  
Long Beach, CA 90808

Sent via e-mail: CEQA@lbcc.edu

RE: SCH# 2004051060; 2041 Facilities Master Plan Liberal Arts Campus Improvements Project, City of Long Beach; Los Angeles County, California

Dear Mr. Fathi:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for Draft Environmental Impact Report for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd. (a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

**CEQA was amended significantly in 2014.** Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a **separate category of cultural resources**, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code § 21084.2). Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," <http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf>. Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends **lead agencies consult with all California Native American tribes** that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

## AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
  - a. A brief description of the project.
  - b. The lead agency contact information.
  - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
  - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).
2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
  - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).
3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
  - a. Alternatives to the project.
  - b. Recommended mitigation measures.
  - c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).
4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
  - a. Type of environmental review necessary.
  - b. Significance of the tribal cultural resources.
  - c. Significance of the project's impacts on tribal cultural resources.
  - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).
5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).
6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
  - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
  - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. **Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
  - b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).
8. **Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).
9. **Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).
10. **Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- a. Avoidance and preservation of the resources in place, including, but not limited to:
    - i. Planning and construction to avoid the resources and protect the cultural and natural context.
    - ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
  - b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
    - i. Protecting the cultural character and integrity of the resource.
    - ii. Protecting the traditional use of the resource.
    - iii. Protecting the confidentiality of the resource.
  - c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
  - d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
  - e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
  - f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).
11. **Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
  - b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
  - c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

*This process should be documented in the Cultural Resources section of your environmental document.*

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: [http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation\\_CalEPAPDF.pdf](http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf)

## SB 18

SB 18 applies to local governments and requires **local governments** to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: [https://www.opr.ca.gov/docs/09\\_14\\_05\\_Updated\\_Guidelines\\_922.pdf](https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf)

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>

## NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([http://ohp.parks.ca.gov/?page\\_id=1068](http://ohp.parks.ca.gov/?page_id=1068)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have been already been recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.





**Matthew Rodriguez**  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Barbara A. Lee, Director  
5796 Corporate Avenue  
Cypress, California 90630



**Edmund G. Brown Jr.**  
Governor

February 28, 2018

Mr. Farzam Fathi  
Bond Management Team  
Long Beach Community College District  
4901 East Carson Street – G21  
Long Beach, California 90808  
[CEQA@lbcc.edu](mailto:CEQA@lbcc.edu)

**NOTICE OF PREPARATION (NOP) FOR AN ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE 2041 FACILITIES MASTER PLAN LIBERAL ARTS CAMPUS IMPROVEMENTS PROJECT, LONG BEACH COMMUNITY COLLEGE DISTRICT (SCH# 2004051060)**

Dear Mr. Fathi:

The Department of Toxic Substances Control (DTSC) has reviewed the subject NOP. The following project description is stated in the NOP: "The 2041 Facilities Master Plan provides a prioritized program of work incorporating the 2004 LAC Master Plan, the 2020 Unified Master Plan for LAC, and the space and building needs identified to the year 2041. The LBCCD 2041 Facilities Master Plan LAC improvements would result in an estimated increase over the 2020 Unified Master Plan of 15,877 square feet of renovation, and 69,564 square feet removed, and estimated increase of 30,035 square feet of new construction."

Based on the review of the submitted document, DTSC has the following comments:

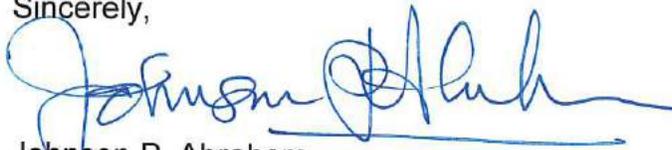
1. The EIR should identify and determine whether current or historic uses at the project site may have resulted in any release of hazardous wastes/substances. A Phase I Environmental Site Assessment may be appropriate to identify any recognized environmental conditions.
2. If there are any recognized environmental conditions in the project area, then proper investigation, sampling and remedial actions overseen by the appropriate regulatory agencies should be conducted prior to the new development or any construction.

3. If the project plans include discharging wastewater to a storm drain, you may be required to obtain an NPDES permit from the overseeing Regional Water Quality Control Board (RWQCB).
4. If the proposed project involves the demolition of existing structures, lead-based paints or products, mercury, and asbestos containing materials (ACMs) should be addressed in accordance with all applicable and relevant laws and regulations.
5. If the site was used for agricultural or related activities, residual pesticides may be present in onsite soil. DTSC recommends investigation and mitigation, as necessary, to address potential impact to human health and environment from residual pesticides.
6. DTSC recommends evaluation, proper investigation and mitigation, if necessary, of onsite areas with current or historic PCB-containing transformers.
7. If the project development involves soil export/import, proper evaluation is required. If soil contamination is suspected or observed in the project area, then excavated soil should be sampled prior to export/disposal. If the soil is contaminated, it should be disposed of properly in accordance with all applicable and relevant laws and regulations. In addition, if imported soil was used as backfill onsite and/or backfill soil will be imported, DTSC recommends proper evaluation/sampling as necessary to ensure the backfill material is free of contamination.
8. If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil and/or groundwater exist, the EIR should identify how any required investigation and/or remediation will be conducted and the appropriate government agency to provide regulatory oversight.

Mr. Farzam Fathi  
February 28, 2018  
Page 3

If you have any questions regarding this letter, please contact me at (714) 484-5380 or by email at [Johnson.Abraham@dtsc.ca.gov](mailto:Johnson.Abraham@dtsc.ca.gov).

Sincerely,



Johnson P. Abraham  
Project Manager  
Brownfields Restoration and School Evaluation Branch  
Site Mitigation and Restoration Program – Cypress

kl/sh/ja

cc: Governor's Office of Planning and Research (via e-mail)  
State Clearinghouse  
P.O. Box 3044  
Sacramento, California 95812-3044  
[State.clearinghouse@opr.ca.gov](mailto:State.clearinghouse@opr.ca.gov)

Mr. Dave Kereazis (via e-mail)  
Office of Planning & Environmental Analysis  
Department of Toxic Substances Control  
[Dave.Kereazis@dtsc.ca.gov](mailto:Dave.Kereazis@dtsc.ca.gov)

Mr. Shahir Haddad, Chief (via e-mail)  
Brownfields Restoration and School Evaluation Branch  
Site Mitigation and Restoration Program - Cypress  
[Shahir.Haddad@dtsc.ca.gov](mailto:Shahir.Haddad@dtsc.ca.gov)

CEQA# 2004051060

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 7- OFFICE OF REGIONAL PLANNING

100 S. MAIN STREET, SUITE 100

LOS ANGELES, CA 90012

PHONE (213) 897-6536

FAX (213) 897-1337

TTY 711

www.dot.ca.gov



*Serious Drought.  
Making Conservation  
a California Way of Life.*

March 9, 2018

Farzam Fathi  
Long Beach Community College District  
4901 E. Carson Street –G21  
Long Beach, Ca 90808

RE: 2041 Facilities Master Plan Liberal Arts  
SCH#2004051060  
GTS#07-LA-2018-01342ME-NOP

Dear Mr. Fathi:

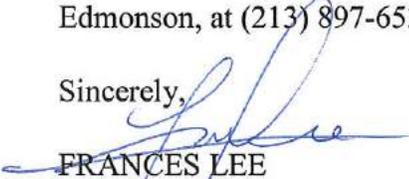
Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The 2041 Facilities Master Plan provides updates to the 2020 Unified Master Plan and provides updated construction dates and budgets for the facilities projects. The projects incorporate the space and building needs identified to the year 2041.

We note that proposed project may have potentially significant impacts to the state highway system as stated in the documents provided. Please make effort to mitigate direct and cumulative impacts to a level of no significance. In the Spirit of mutual cooperation, Caltrans staff is available to work with your planners and traffic engineers for this project, if needed.

We encourage the Lead Agency to integrate transportation and land use in a way that reduces Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) emissions by facilitating the provision of more proximate goods and services to shorten trip lengths, and achieve a high level of non-motorized travel and transit use. We also encourage the Lead Agency to evaluate the potential of Transportation Demand Management (TDM) strategies and Intelligent Transportation System (ITS) applications in order to better manage the transportation network, as well as transit service and bicycle or pedestrian connectivity improvements.

Caltrans looks forward to reviewing the Supplemental Environmental Impact Report containing the detailed traffic study. If you have any questions, please contact project coordinator Ms. Miya Edmonson, at (213) 897-6536 and refer to GTS# LA-2018-01342ME.

Sincerely,



FRANCES LEE

IGR/CEQA Acting Branch Chief

cc: Scott Morgan, State Clearinghouse

## **APPENDIX B – AIR QUALITY AND GHG MODELING ASSUMPTIONS**



**AIR QUALITY AND GREENHOUSE GAS MODELING  
ASSUMPTIONS**

**LONG BEACH CITY COLLEGE 2041 FACILITIES MASTER  
PLAN FOR THE  
LIBERAL ARTS CAMPUS IMPROVEMENTS**

**LONG BEACH COMMUNITY COLLEGE DISTRICT**

---

**LEAD AGENCY:**  
LONG BEACH COMMUNITY COLLEGE DISTRICT

**PREPARED BY:**  
VISTA ENVIRONMENTAL  
1021 DIDRIKSON WAY  
LAGUNA BEACH, CALIFORNIA 92651  
MARISA JUE  
GREG TONKOVICH, AICP  
TELEPHONE (949) 510-5355  
FACSIMILE (949) 494-3150

PROJECT NO. 17053

~~NOVEMBER 26~~ ~~FEBRUARY 13~~, 2018

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## ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
Air Basin	South Coast Air Basin
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	Climate Action Team
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFCs	chlorofluorocarbons
Cf <sub>4</sub>	tetrafluoromethane
C <sub>2</sub> F <sub>6</sub>	hexafluoroethane
C <sub>2</sub> H <sub>6</sub>	ethane
CH <sub>4</sub>	Methane
City	City of Moreno Valley
CO	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
CPUC	California Public Utilities Commission
DPM	Diesel particulate matter
EPA	Environmental Protection Agency
EV	Electric vehicle
°F	Fahrenheit
FTIP	Federal Transportation Improvement Program
GHG	Greenhouse gas
GWP	Global warming potential
HAP	Hazardous Air Pollutants
HFCs	Hydrofluorocarbons

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HOV	High occupancy vehicle
IPCC	International Panel on Climate Change
LAC	Language Arts Campus
LBCCD	Long Beach Community College District
LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
MATES	Multiple Air Toxics Exposure Study
MMTCO <sub>2e</sub>	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
MWh	Megawatt-hour
NAAQS	National Ambient Air Quality Standards
NO <sub>x</sub>	Nitrogen oxides
NO <sub>2</sub>	Nitrogen dioxide
O <sub>3</sub>	Ozone
OPR	Office of Planning and Research
Pb	Lead
Pfc	Perfluorocarbons
PM	Particle matter
PM <sub>10</sub>	Particles that are less than 10 micrometers in diameter
PM <sub>2.5</sub>	Particles that are less than 2.5 micrometers in diameter
PPM	Parts per million
PPB	Parts per billion
PPT	Parts per trillion
RTIP	Regional Transportation Improvement Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SAR	Second Assessment Report
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
SCS	Sustainable communities strategy
SF <sub>6</sub>	Sulfur Hexafluoride
SIP	State Implementation Plan
SO <sub>x</sub>	Sulfur oxides

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TAC	Toxic air contaminants
UNFCCC	United Nations' Framework Convention on Climate Change
VOC	Volatile organic compounds

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## 1.0 INTRODUCTION

### *1.1 Purpose of Report and Study Objectives*

This Air Quality and Greenhouse Gas (GHG) Modeling Assumptions Report has been completed to determine the air quality and greenhouse gas (GHG) emissions impacts associated with the proposed Long Beach City College 2041 Facilities Master Plan for the Liberal Arts Campus Improvements project (proposed project). The following is provided in this report:

- A description of the proposed project;
- A description of the criteria pollutants and GHGs;
- A description of the construction and operational emissions modeling parameters utilized in the CalEEMod model; and
- The short-term construction related and long-term operational air quality and GHG emissions data as calculated through use of the CalEEMod model.

### *1.2 Site Location and Study Area*

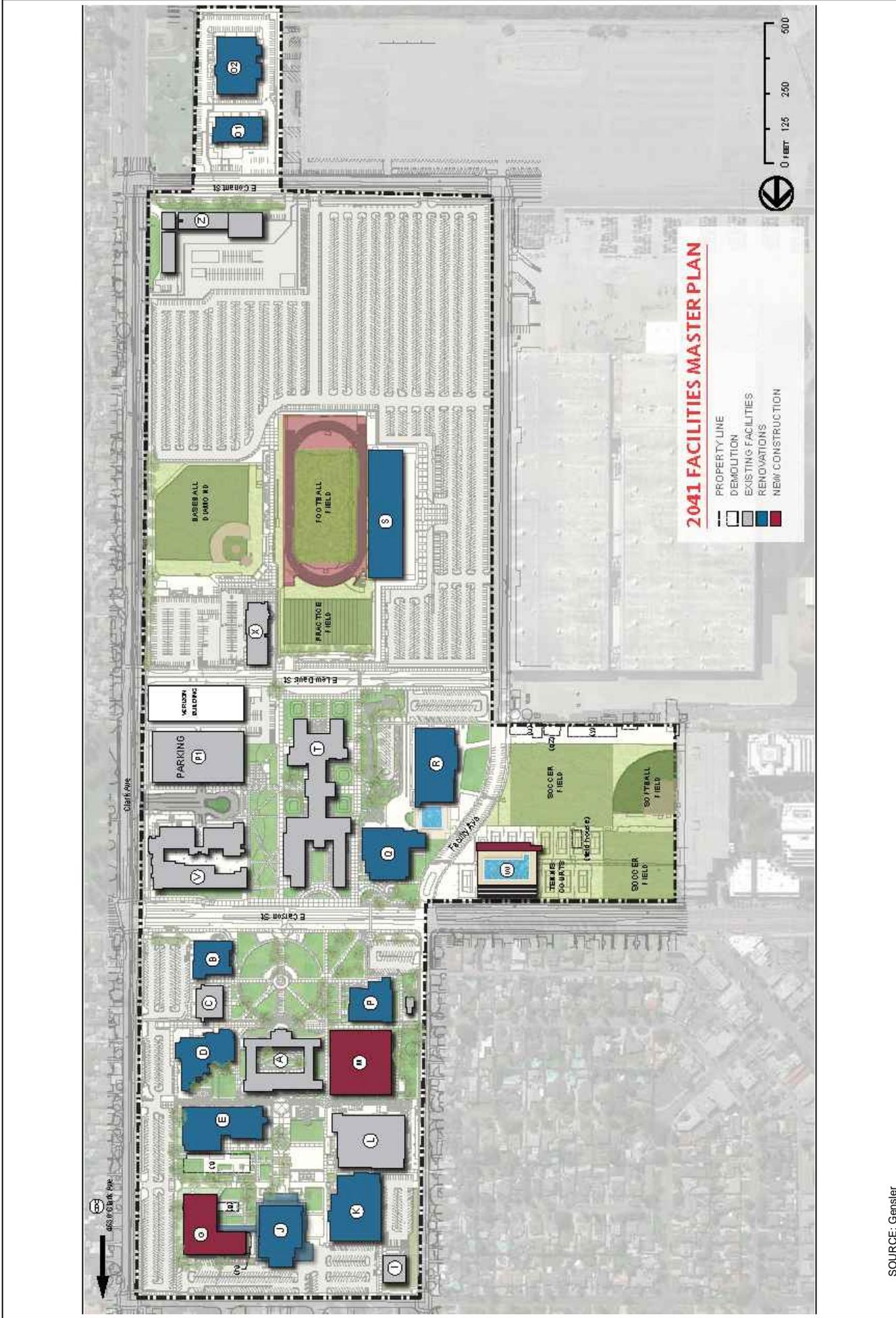
The project site is located in the northeastern portion of the City of Long Beach (City) on the northwest and southwest corners of Clark Avenue and East Carson Street. The approximately 20.84-acre project site is currently developed with existing Long Beach City College LAC facilities. The northern portion of the LAC is bounded by Harvey Way and residential uses to the north, Clark Avenue and residential uses to the east, East Carson Street and the southern portion of the LAC to the south, and Faculty Avenue and residential uses to the west. The southern portion of the LAC is bounded by East Carson, residential uses, and the northern portion of the LAC to the north, Clark Avenue, recreational open space, and residential uses to the east, industrial and recreational uses to the south, and commercial uses and North Lakewood Boulevard to the west.

### **Sensitive Receptors in Project Vicinity**

The nearest sensitive receptor to the project site are single-family homes located approximately 130 feet north of the proposed recreational swimming pool, which would be located along East Carson Street. There are also nearby homes to the LAC campus on the west side of Faculty Avenue, north side of Harvey Way, and east side of Clark Avenue. The nearest school to the project site is Mark Twain Elementary School which is located approximately 0.27 miles north of the project site.

### *1.3 Proposed Project Description*

The Long Beach Community College District (LBCCD) is proposing the Long Beach City College (LBCC) 2041 Facilities Master Plan for the Liberal Arts Campus (LAC) Improvements. Development of the 2041 Facilities Master Plan would result in the demolition of 109,156-square feet of existing structures, renovation of 387,341-square feet of existing buildings, and construction of 264,018-square feet of new building space. In addition, the student enrollment size is anticipated to increase by 7,458 students by 2041 (Linscott, Law & Greenspan, 2018). The project study area and proposed site plan is shown in Figure 1.



SOURCE: Genster

**VISTA ENVIRONMENTAL**

Figure 1  
Project Local Study Area and Proposed Site Plan

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## 2.0 AIR POLLUTANTS

Air pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions).

### *2.1 Criteria Pollutants and Ozone Precursors*

The criteria pollutants consist of: ozone, NO<sub>x</sub>, CO, SO<sub>x</sub>, lead (Pb), and particulate matter (PM). The ozone precursors consist of NO<sub>x</sub> and VOC. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants “criteria” air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants and ozone precursors.

#### **Nitrogen Oxides**

Nitrogen Oxides (NO<sub>x</sub>) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NO<sub>x</sub> are colorless and odorless, concentrations of NO<sub>2</sub> can often be seen as a reddish-brown layer over many urban areas. NO<sub>x</sub> form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NO<sub>x</sub> are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NO<sub>x</sub> reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO<sub>2</sub>, which cause respiratory problems. NO<sub>x</sub> and the pollutants formed from NO<sub>x</sub> can be transported over long distances, following the patterns of prevailing winds. Therefore, controlling NO<sub>x</sub> is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

#### **Ozone**

Ozone is not usually emitted directly into the air but in the vicinity of ground-level is created by a chemical reaction between NO<sub>x</sub> and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NO<sub>x</sub> and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NO<sub>x</sub> and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NO<sub>x</sub> and VOC emissions.

#### **Carbon Monoxide**

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes approximately 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath

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a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

### **Sulfur Oxides**

Sulfur Oxide (SOx) gases are formed when fuel containing sulfur, such as coal and oil is burned, as well as from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

### **Lead**

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants and children to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

### **Particulate Matter**

Particle matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. PM is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) have been designated as a subset of PM10 due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

### **Volatile Organic Compounds**

Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O<sub>3</sub> are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

VOC is not classified as a criteria pollutant, since VOCs by themselves are not a known source of adverse health effects. The primary health effects of VOCs result from the formation of O<sub>3</sub> and its related health

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effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered toxic air contaminants (TACs). There are no separate health standards for VOCs as a group.

## ***2.2 Other Pollutants of Concern***

### **Toxic Air Contaminants**

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. TACs is a term that is defined under the California Clean Air Act and consists of the same substances that are defined as Hazardous Air Pollutants (HAPs) in the Federal Clean Air Act. There are over 700 hundred different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different toxic air contaminants. The most important of these TACs, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to TACs can result from emissions from normal operations as well as from accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

TACs are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to *The California Almanac of Emissions and Air Quality 2013 Edition*, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important of which is DPM. DPM is a subset of PM<sub>2.5</sub> because the size of diesel particles are typically 2.5 microns and smaller. The identification of DPM as a TAC in 1998 led the CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in DPM by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of DPM as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

### **Asbestos**

Asbestos is listed as a TAC by CARB and as a HAP by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. The nearest likely locations of naturally occurring asbestos, as identified in the *General Location Guide for Ultramafic Rocks in California*, prepared by the California Division of Mines and Geology, is located in Santa Barbara County. The nearest historic asbestos mine to the project site, as identified in the *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California*, prepared by U.S. Geological Survey, is located at Asbestos Mountain, which is approximately

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97 miles southeast of the project site in the San Jacinto Mountains. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

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## 3.0 GREENHOUSE GASES

### 3.1 Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHGs), play a critical role in the Earth's radiation amount by trapping infrared radiation from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), ozone (O<sub>3</sub>), water vapor, nitrous oxide (N<sub>2</sub>O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO<sub>2</sub> and N<sub>2</sub>O are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO<sub>2</sub>, where CO<sub>2</sub> is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

#### Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

#### Carbon Dioxide

The natural production and absorption of CO<sub>2</sub> is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid 1700s, each of these activities has increased in scale and distribution. CO<sub>2</sub> was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20<sup>th</sup> century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC) indicates that concentrations were 379 ppm in 2005, an increase of more than 30 percent. Left unchecked, the IPCC projects that concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. This could result in an average global temperature rise of at least two degrees Celsius or 3.6 degrees Fahrenheit.

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## **Methane**

CH<sub>4</sub> is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO<sub>2</sub>. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO<sub>2</sub>, N<sub>2</sub>O, and Chlorofluorocarbons (CFCs)). CH<sub>4</sub> has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

## **Nitrous Oxide**

Concentrations of N<sub>2</sub>O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration of this GHG was documented at 314 parts per billion (ppb). N<sub>2</sub>O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N<sub>2</sub>O is also commonly used as an aerosol spray propellant (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and race cars).

## **Chlorofluorocarbons**

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C<sub>2</sub>H<sub>6</sub>) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

## **Hydrofluorocarbons**

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF<sub>3</sub>), HFC-134a (CF<sub>3</sub>CH<sub>2</sub>F), and HFC-152a (CH<sub>3</sub>CHF<sub>2</sub>). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

## **Perfluorocarbons**

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF<sub>4</sub>) and hexafluoroethane (C<sub>2</sub>F<sub>6</sub>). Concentrations of CF<sub>4</sub> in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

## **Sulfur Hexafluoride**

Sulfur Hexafluoride (SF<sub>6</sub>) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF<sub>6</sub> has the highest global warming potential of any gas evaluated; 23,900 times that of CO<sub>2</sub>. Concentrations in the

1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

## Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

### 3.2 Global Warming Potential

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to the reference gas, CO<sub>2</sub>. The GHGs listed by the IPCC and the CEQA Guidelines are discussed in this section in order of abundance in the atmosphere. Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic (human-made) sources. To simplify reporting and analysis, GHGs are commonly defined in terms of their GWP. The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO<sub>2</sub>e. As such, the GWP of CO<sub>2</sub> is equal to 1. The GWP values used in this analysis are based on the IPCC Second Assessment Report (SAR) and United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines, and are detailed in Table A. The SAR GWPs are used in CARB’s California inventory and Assembly Bill (AB) 32 Scoping Plan estimates.

**Table A – Global Warming Potentials, Atmospheric Lifetimes and Abundances of GHGs**

Gas	Atmospheric Lifetime (years) <sup>1</sup>	Global Warming Potential (100 Year Horizon) <sup>2</sup>	Atmospheric Abundance
Carbon Dioxide (CO <sub>2</sub> )	50-200	1	379 ppm
Methane (CH <sub>4</sub> )	9-15	25	1,774 ppb
Nitrous Oxide (N <sub>2</sub> O)	114	298	319 ppb
HFC-23	270	14,800	18 ppt
HFC-134a	14	1,430	35 ppt
HFC-152a	1.4	124	3.9 ppt
PFC: Tetrafluoromethane (CF <sub>4</sub> )	50,000	7,390	74 ppt
PFC: Hexafluoroethane (C <sub>2</sub> F <sub>6</sub> )	10,000	12,200	2.9 ppt
Sulfur Hexafluoride (SF <sub>6</sub> )	3,200	22,800	5.6 ppt

Notes:

<sup>1</sup> Defined as the half-life of the gas.

<sup>2</sup> Compared to the same quantity of CO<sub>2</sub> emissions and is based on the Intergovernmental Panel On Climate Change (IPCC) 2007 standard, which is utilized in CalEEMod (Version 2016.3.2), that is used in this report (CalEEMod user guide: Appendix A).

Definitions: ppm = parts per million; ppb = parts per billion; ppt = parts per trillion

Source: IPCC 2007, EPA 2015

## 4.0 MODELING PARAMETERS AND ASSUMPTIONS

### 4.1 CalEEMod Model Input Parameters

The criteria air pollution and GHG emissions impacts created by the proposed project have been analyzed through use of CalEEMod Version 2016.3.2. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2014 computer program to calculate the emission rates specific for South Coast Air Basin portion of Riverside County for employee, vendor and haul truck vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy equipment operations. EMFAC2014 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour.

The project characteristics in the CalEEMod were set to a project location of the South Coast Air Basin portion of Los Angeles County, a Climate Zone of 10, and utility company of Southern California Edison. ~~Since the proposed improvements in the Master Plan would be completed over a 20 year period, the SCAQMD has requested that the interim milestone years of 2020, 2025, 2030, 2035, and 2040 to be analyzed and that the combined construction and operational emissions be compared against SCAQMD's operational criteria pollutant thresholds (SCAQMD, 2018), and the opening year of 2040 was utilized, which is the closest year available to the proposed project's buildout year of 2041 in the CalEEMod model.~~

#### Land Use Parameters

The proposed project would consist of the ~~renovation and new construction of up to development of a 702,240-square foot of building space that would include a 50,881-square foot aquatic building with a recreational swimming pool, and 10.34-acres of paved areas, which would include onsite sidewalks, curbs, and parking lots junior college. Implementation of the proposed Master Plan is also for an estimated to increase the student population by of 7,458 students, a 50,881-square foot aquatic building with a recreational swimming pool, and 10.34 acres of paved areas, which would include onsite sidewalks, curbs, and parking lots.~~ The proposed project's land use parameters that were entered into the CalEEMod model are shown in ~~Table B~~ Table B.

**Table B – CalEEMod Land Use Parameters**

Proposed Land Use	Land Use Subtype in CalEEMod	Land Use Size <sup>1</sup>	Lot Acreage <sup>2</sup>	Building/Paving <sup>3</sup> (square feet)
<b><u>Year 2020 (Years 2019 to 2020 Construction Activities and Year 2020 Student Population)</u></b>				
Junior College Facilities	Junior College (2 Years)	<u>8067,458 ST</u>	<u>8.502.18</u>	<u>702,240179,898</u>
Aquatic Building	Recreational Swimming Pool	1,500 SF	2.0	50,881
Paved Areas <sup>4</sup>	Other Non-Asphalt Surfaces	<u>2.0710.34 AC</u>	<u>10.342.07</u>	<u>450,41090,169</u>
<b><u>Year 2025 (Years 2021 to 2025 Construction Activities and Year 2025 Student Population)</u></b>				
Junior College Facilities	Junior College (2 Years)	<u>2,211 ST</u>	<u>1.23</u>	<u>101,578</u>
Paved Areas	Other Non-Asphalt Surfaces	<u>2.07 AC</u>	<u>2.07</u>	<u>90,169</u>
<b><u>Year 2030 (Years 2026 to 2030 Construction Activities and Year 2030 Student Population)</u></b>				
Junior College Facilities	Junior College (2 Years)	<u>3,736 ST</u>	<u>0.88</u>	<u>72,336</u>
Paved Areas	Other Non-Asphalt Surfaces	<u>2.07 AC</u>	<u>2.07</u>	<u>90,169</u>
<b><u>Year 2035 (Years 2031 to 2035 Construction Activities and Year 2035 Student Population)</u></b>				
Junior College Facilities	Junior College (2 Years)	<u>5,362 ST</u>	<u>1.97</u>	<u>162,651</u>
Paved Areas	Other Non-Asphalt Surfaces	<u>2.07 AC</u>	<u>2.07</u>	<u>90,169</u>

**Year 2041 (Years 2036 to 2041 Construction Activities and Year 2041 Student Population)**

<u>Junior College Facilities</u>	<u>Junior College (2 Years)</u>	<u>7,458 ST</u>	<u>1.02</u>	<u>84,015</u>
<u>Paved Areas</u>	<u>Other Non-Asphalt Surfaces</u>	<u>2.07 AC</u>	<u>2.07</u>	<u>90,169</u>

Notes:

<sup>1</sup> ST = Students, SF = Thousand Square Foot, AC = Acres

<sup>2</sup> Lot acreage calculated based on a total lot acreage of 20.84.

<sup>3</sup> Building/Paving square feet represent area where architectural coatings will be applied. Square footage of the Recreational Swimming Pool obtained from the project applicant.

<sup>4</sup> A total of 10.34 acres of new hardscaped or paved areas from implementation of Master Plan. Estimated that 1/5 of the new paved areas would be constructed every five years.

**Construction Parameters**

Construction activities are anticipated to start ~~around Summer 2018 in 2019~~ and would occur until buildout of the proposed Facilities Master Plan in 2041. Construction activities were modeled in five year increments that are detailed above in Table B. Since the OFFROAD2011 model only provides emissions rates out to 2023, every year after 2023 utilizes the year 2023 emissions rates in the CalEEMod model. As such, the CalEEMod model does not account for the industry adoption of Tier 4 engines that have been required for all horsepower levels for all model years 2015 or newer as well as the phase out of older engines that will occur well after 2023. CARB has recently released OFFROAD 2017 that provides off-road equipment emissions rates past 2040. In order to provide a more accurate representation of the NOx emissions created by the off-road equipment in the future years of 2030, 2035, and 2040, the OFFROAD2017 model was run for off-road equipment that was modeled in CalEEMod for all analysis years and then the percent reduction over year 2025 emissions were calculated for the years 2030, 2035 and 2040 and are shown in Table C. The calculated percent reduction in NOx emissions was then applied to the off-road equipment exhaust emissions calculations for the year 2030, 2035 and 2040 CalEEMod model runs. The OFFROAD2017 model run printouts and associated calculations are shown in Appendix A.

**Table C – OFFROAD2017 NOx Emissions Calculations**

<u>Off-Road Equipment</u>	<u>OFFROAD2017 NOx Emissions (Grams per HorsePower-Hour)<sup>1</sup></u>							
	<u>Year 2020</u>	<u>Year 2025</u>	<u>Year 2030</u>	<u>Reduction (2025 to 2030)</u>	<u>Year 2035</u>	<u>Reduction (2025 to 2035)</u>	<u>Year 2040</u>	<u>Reduction (2025 to 2040)</u>
<u>ConstMin - Cranes</u>	<u>1.295</u>	<u>0.753</u>	<u>0.538</u>	<u>28.6%</u>	<u>0.416</u>	<u>44.8%</u>	<u>0.329</u>	<u>56.3%</u>
<u>ConstMin - Excavators</u>	<u>0.809</u>	<u>0.448</u>	<u>0.341</u>	<u>23.9%</u>	<u>0.288</u>	<u>35.8%</u>	<u>0.249</u>	<u>44.4%</u>
<u>ConstMin - Graders</u>	<u>1.966</u>	<u>1.095</u>	<u>0.676</u>	<u>38.2%</u>	<u>0.454</u>	<u>58.5%</u>	<u>0.315</u>	<u>71.3%</u>
<u>ConstMin - Other Construction Equipment</u>	<u>1.399</u>	<u>0.856</u>	<u>0.635</u>	<u>25.8%</u>	<u>0.502</u>	<u>41.3%</u>	<u>0.412</u>	<u>51.9%</u>
<u>ConstMin - Pavers</u>	<u>1.347</u>	<u>0.780</u>	<u>0.557</u>	<u>28.5%</u>	<u>0.437</u>	<u>44.0%</u>	<u>0.353</u>	<u>54.7%</u>
<u>ConstMin - Paving Equipment</u>	<u>1.099</u>	<u>0.600</u>	<u>0.477</u>	<u>20.5%</u>	<u>0.388</u>	<u>35.4%</u>	<u>0.342</u>	<u>43.1%</u>
<u>ConstMin - Rollers</u>	<u>1.269</u>	<u>0.840</u>	<u>0.699</u>	<u>16.9%</u>	<u>0.617</u>	<u>26.6%</u>	<u>0.557</u>	<u>33.7%</u>
<u>ConstMin - Rubber Tired Dozers</u>	<u>2.327</u>	<u>1.475</u>	<u>1.116</u>	<u>24.3%</u>	<u>0.869</u>	<u>41.1%</u>	<u>0.674</u>	<u>54.3%</u>
<u>ConstMin - Scrapers</u>	<u>1.868</u>	<u>1.032</u>	<u>0.706</u>	<u>31.7%</u>	<u>0.534</u>	<u>48.3%</u>	<u>0.406</u>	<u>60.6%</u>
<u>ConstMin - Tractors/Loaders/Backhoes</u>	<u>1.144</u>	<u>0.709</u>	<u>0.581</u>	<u>18.1%</u>	<u>0.528</u>	<u>25.4%</u>	<u>0.491</u>	<u>30.7%</u>
<u>Industrial - Forklifts</u>	<u>0.788</u>	<u>0.483</u>	<u>0.357</u>	<u>26.1%</u>	<u>0.307</u>	<u>36.4%</u>	<u>0.278</u>	<u>42.5%</u>
<u>Portable Equipment - Rental Compressor</u>	<u>0.366</u>	<u>0.174</u>	<u>0.089</u>	<u>48.5%</u>	<u>0.081</u>	<u>53.3%</u>	<u>0.085</u>	<u>50.9%</u>
<b><u>Average (All Equipment)</u></b>	<b><u>1.307</u></b>	<b><u>0.770</u></b>	<b><u>0.564</u></b>	<b><u>26.7%</u></b>	<b><u>0.452</u></b>	<b><u>41.4%</u></b>	<b><u>0.374</u></b>	<b><u>51.4%</u></b>

Notes:

<sup>1</sup> NOx grams per HorsePower-Hour calculated by converting OFFROAD 2017 NOx emissions (tons per day) to tons per year, then dividing by total horsepower hours per year for each piece of equipment. Finally the emission rates were converted from tons to grams for readability. Source OFFROAD2017 Version 1.0.1 (see Appendix A)

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~~However, in order to provide a conservative analysis, all construction activities were modelled based on occurring over the shortest feasible amount of time that it would take to complete the proposed improvements, if all proposed improvements were to occur concurrently. This was calculated at approximately four years of construction activities.~~

The construction-related GHG emissions were based on a 30-year amortization rate as recommended in the SCAQMD GHG Working Group meeting on November 19, 2009. The phases of construction activities that have been analyzed are detailed below and include: 1) demolition, 2) grading, 3) building construction, 4) application of architectural coatings and 5) paving. As the painting and construction activities are anticipated to occur simultaneously, the architectural coatings phases ~~were~~ set to the same length as the building construction phases, since application of architectural coatings would occur concurrently with ~~the building construction~~ activities phase.

### Demolition

~~The demolition phase would consist of demolishing: (1) Building M (48,768 square feet) in years 2019-2020; (2) approximately Building E (50,276 square feet) in years 2021-2025; (3) Building G (27,792 square feet) in years 2026-2030; and (4) Building F (15,968 square feet) in years 2031-2035. 109,156 square feet of existing structures. For the existing structures, CalEEMod utilizes a factor of 0.046 tons of debris of building material per building square foot. Therefore, the demolition of the 109,156 square feet of building space would result in 5,021 tons of building debris and would require 496 haul truck trips.~~

~~The demolition phase is anticipated to start around June 2018 and was modeled as occurring over 12 weeks. The demolition activities would require 15 worker trips per day. In order to account for water truck emissions, six vendor truck emissions were added to the demolition phases. The onsite equipment and worker trips were based would consist of one concrete/industrial saw, two rubber tired dozer, and three excavators, which is based on the CalEEMod default value equipment mix for each demolition scenario analyzed. The mitigation of water all exposed areas three times per day was chosen in order to account for the fugitive dust reduction that would occur through adhering to SCAQMD Rule 403, which requires that the Best Available Control Measures be utilized to reduce fugitive dust emissions.~~

### Grading

~~The grading phase was modelled as occurring after the demolition phase was modelled and as occurring over approximately one six months for each scenario analyzed. The proposed grading is balanced, which would result in no dirt being imported or exported from the project site. The onsite equipment and worker trips were based would consist of one grader, one rubber tired dozer, two excavators, two scrapers, and two tractors, loaders, or backhoes, which is based on the CalEEMod default values equipment mix for each grading scenario analyzed. The grading activities would require 20 worker trips per day. In order to account for water truck emissions, six daily vendor truck trips were added to the grading phase. The mitigation of water all exposed areas three times per day was chosen in order to account for the fugitive dust reduction that would occur through adhering to SCAQMD Rule 403, which requires that the Best Available Control Measures be utilized to reduce fugitive dust emissions.~~

### Building Construction

~~The building construction was modelled as occurring after the grading phase and was modelled as occurring over approximately 11 32 months for each scenario analyzed. The building construction would require up to 485 worker trips and 189 vendor trips per day. The onsite equipment, worker trips and vendor trips were would consist of the simultaneous operation of one crane, one generator set, one~~

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~~welder, three forklifts, and three tractors, loaders, or backhoes, which is based on the CalEEMod default values for equipment mix each building construction scenario analyzed.~~

### Architectural Coating

The application of architectural coatings was modeled as occurring concurrently with ~~each~~ the building construction phase ~~that was modelled as occurring over approximately 32 months~~. The architectural coating phases ~~from all scenarios was~~ modeled ~~were~~ based on covering a total of 1,129,682 square feet of nonresidential interior area, 376,561 square feet of nonresidential exterior area, and 27,025 square feet of parking area that includes striping of parking lots, painting of signs, and other architectural coatings in public areas. The architectural coating phases would require up to 15 worker trips per day. The onsite equipment ~~and worker trips were~~ ~~would consist of one air compressor, which is~~ based on the CalEEMod default ~~value~~ ~~equipment mix~~ for each architectural coating phase analyzed.

### Paving

The paving was modeled as occurring after the building construction and architectural coating phases. The paving activities was modeled as occurring over approximately one month ~~12 weeks for each scenario analyzed~~ ~~and would require up to 97 worker trips per day~~. The onsite equipment ~~and worker trips were~~ ~~would consist of the simultaneous operation of two pavers, two paving equipment, and two rollers, which is~~ based on the CalEEMod default ~~equipment mix~~ values for each paving phase analyzed.

### **Operational Emissions Modeling**

The operations-related criteria air pollutant emissions and GHG emissions created by the proposed project have been analyzed through use of the CalEEMod model. The proposed project was analyzed in the CalEEMod model based on the land use parameters provided above.

### Mobile Sources

Mobile sources include emissions the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been obtained from the *Traffic Impact Analysis Report LBCCD 2041 Master Plan Liberal Arts Campus Long Beach, California* (Traffic Impact Analysis), prepared by Linscott, Law & Greenspan, Engineers, January 19, 2018. The Traffic Impact Analysis found that implementation of the proposed project would result in an increase of approximately 7,458 students at the LAC campus and a trip generation rate of 1.15 two-way trips per student at the junior college and of 0.0 daily trips at the proposed recreational swimming pool was used in the CalEEMod Model. This resulted in a total of 8,577 daily trips generated by the proposed project. No other changes were made to the CalEEMod default mobile source parameters.

In addition, mitigation of Increase Transit Accessibility with a 0.1 mile distance to the nearest transit station was selected since the majority of the LAC is located within 0.1 mile of the existing bus stops on Clark Avenue and Carson Street. The mitigation of Improve Pedestrian Network on the project site and connecting offsite selected to account for the existing onsite sidewalks that connect to the offsite sidewalks along the nearby public roads. Since both of these CalEEMod mitigation measures already exist in the vicinity of the project site, they are not required mitigation measures for the proposed project.

### Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. The area source emissions were based on the on-going use of the proposed junior college, recreational swimming pool, and paved areas in the CalEEMod model. No changes were made to the default area source parameters in the CalEEMod model.

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### Energy Usage

Energy usage includes emissions from electricity and natural gas used onsite. The energy usage was based on the ongoing use of the proposed junior college, recreational swimming pool, and paved areas in the CalEEMod Model. No changes were made to the default energy usage parameters in the CalEEMod model.

### Solid Waste

Waste includes the GHG emissions associated with the processing of waste from the proposed project as well as the GHG emissions from the waste once it is interred into a landfill. The analysis was based on the default CalEEMod waste generation rates of 1,370 tons of solid waste per year from the proposed project. No changes were made to the default solid waste parameters or mitigation measures in the CalEEMod model.

### Water and Wastewater

Water includes the water used for the interior of the building as well as for landscaping and is based on the GHG emissions associated with the energy used to transport and filter the water. The analysis was based on the default CalEEMod water usage rate of 16,057,039 gallons per year of indoor water usage and 25,030,470 gallons per year of outdoor water usage. No changes were made to the default water and wastewater parameters in the CalEEMod model.

## 5.0 MODELING RESULTS

### 5.1 Criteria Pollutant Emissions

The following section calculates the potential air emissions associated with the construction and operations of the proposed project. The CalEEMod model has been utilized to calculate the construction-related and operational regional emissions based on the input parameters detailed above in Section 4.1.

#### Construction Emissions

The worst-case summer or winter daily construction-related criteria pollutant emissions from the proposed project for each phase of construction activities are shown below in ~~Table D~~ Table C for years 2019-2020, Table E for years 2021-2025, Table F for years 2026-2030, Table G for years 2031-2035, and Table H for years 2036-2041. The ~~and the~~ CalEEMod daily printouts are shown in Appendix ~~BA~~ BA for years 2019-2020, Appendix C for years 2021-2025, Appendix D for years 2026-2030, Appendix E for years 2031-2035, and Appendix F for years 2036-2041. Since it is anticipated that building construction and architectural coating activities would occur concurrently, ~~the Tables~~ Table C shows the combined criteria pollutant emissions from the building construction and architectural coating phases of construction.

**Table ~~DE~~ – Construction-Related Regional Criteria Pollutant Emissions for Years 2019-2021**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
<b>Demolition<sup>1</sup></b>						
Onsite <sup>2</sup>	<u>3.723.51</u>	<u>38.3235.</u> <u>78</u>	<u>22.3022</u> <u>.06</u>	0.04	<u>2.642.73</u>	<u>1.911.81</u>
Offsite <sup>3</sup>	<u>0.200.22</u>	<u>3.514.20</u>	<u>1.561.6</u> <u>4</u>	0.01	<u>0.370.42</u>	<u>0.110.13</u>
	<b><u>3.923.73</u></b>	<b><u>41.8339.</u></b> <b><u>98</u></b>	<b><u>23.8623</u></b> <b><u>.70</u></b>	<b>0.05</b>	<b><u>3.013.15</u></b>	<b><u>2.021.94</u></b>
<b>Demolition Total</b>						
<b>Grading<sup>1</sup></b>						
Onsite	<u>5.092.58</u>	<u>59.5228.</u> <u>35</u>	<u>35.0916</u> <u>.29</u>	<u>0.060.03</u>	<u>6.023.95</u>	<u>3.832.60</u>
Offsite	<u>0.150.11</u>	<u>0.830.76</u>	<u>1.280.9</u> <u>1</u>	0.00	<u>0.270.21</u>	<u>0.080.06</u>
	<b><u>5.242.69</u></b>	<b><u>60.3529.</u></b> <b><u>11</u></b>	<b><u>36.3717</u></b> <b><u>.20</u></b>	<b><u>0.060.03</u></b>	<b><u>6.294.16</u></b>	<b><u>3.912.66</u></b>
<b>Grading Total</b>						
<b>Building Construction &amp; Architectural Coating</b>						
Onsite	<u>13.1712.</u> <u>04</u>	<u>22.9122.</u> <u>92</u>	<u>19.0119</u> <u>.00</u>	0.03	1.42	1.34
Offsite	<u>4.040.96</u>	<u>24.275.7</u> <u>7</u>	<u>33.877.</u> <u>99</u>	<u>0.120.03</u>	<u>7.911.87</u>	<u>2.260.53</u>
	<b><u>17.2113.</u></b> <b><u>00</u></b>	<b><u>47.1828.</u></b> <b><u>69</u></b>	<b><u>52.8726</u></b> <b><u>.99</u></b>	<b><u>0.150.06</u></b>	<b><u>9.333.29</u></b>	<b><u>3.601.87</u></b>
<b>Building and Painting Total</b>						
<b>Paving</b>						
Onsite	<u>1.261.36</u>	<u>12.9214.</u> <u>07</u>	14.65	0.02	<u>0.680.75</u>	<u>0.620.69</u>
Offsite	<u>0.070.08</u>	0.05	<u>0.600.6</u> <u>6</u>	0.00	0.17	0.05
	<b><u>1.331.44</u></b>	<b><u>12.9714.</u></b> <b><u>12</u></b>	<b><u>15.2515</u></b> <b><u>.31</u></b>	<b>0.02</b>	<b><u>0.850.92</u></b>	<b><u>0.670.74</u></b>
<b>Paving Total</b>						

<b>Maximum Daily Emissions</b>	<b>13.00</b>	<b>39.98</b>	<b>26.99</b>	<b>0.06</b>	<b>4.16</b>	<b>2.66</b>
<b>SCQAMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Threshold?	No	No	No	No	No	No

Notes:

<sup>1</sup> Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

Source: CalEEMod Version 2016.3.2.

**Table E – Construction-Related Regional Criteria Pollutant Emissions for Years 2021-2025**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
<b>Demolition<sup>1</sup></b>						
Onsite <sup>2</sup>	3.17	31.44	21.57	0.04	2.52	1.59
Offsite <sup>3</sup>	0.19	3.74	1.48	0.01	0.42	0.12
<b>Demolition Total</b>	<b>3.36</b>	<b>35.18</b>	<b>23.05</b>	<b>0.05</b>	<b>2.94</b>	<b>1.71</b>
<b>Grading<sup>1</sup></b>						
Onsite	2.29	24.74	15.86	0.03	3.72	2.38
Offsite	0.09	0.63	0.76	0.00	0.21	0.06
<b>Grading Total</b>	<b>2.38</b>	<b>25.37</b>	<b>16.62</b>	<b>0.03</b>	<b>3.93</b>	<b>2.44</b>
<b>Building Construction &amp; Architectural Coating</b>						
Onsite	6.32	18.96	18.40	0.03	1.05	0.99
Offsite	0.57	3.32	4.69	0.02	1.30	0.36
<b>Building and Painting Total</b>	<b>6.89</b>	<b>22.28</b>	<b>23.09</b>	<b>0.05</b>	<b>2.35</b>	<b>1.35</b>
<b>Paving</b>						
Onsite	0.98	9.52	12.19	0.02	0.49	0.45
Offsite	0.09	0.06	0.74	0.00	0.23	0.06
<b>Paving Total</b>	<b>1.07</b>	<b>9.59</b>	<b>12.93</b>	<b>0.02</b>	<b>0.72</b>	<b>0.51</b>
<b>Maximum Daily Emissions</b>	<b>6.89</b>	<b>35.18</b>	<b>23.09</b>	<b>0.05</b>	<b>3.93</b>	<b>2.44</b>
<b>SCQAMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Threshold?	No	No	No	No	No	No

Notes:

<sup>1</sup> Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.

<sup>2</sup> Onsite emissions from equipment not operated on public roads.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

Source: CalEEMod Version 2016.3.2.

**Table F – Construction-Related Regional Criteria Pollutant Emissions for Years 2026-2030**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
<b>Demolition<sup>1</sup></b>						
Onsite <sup>2</sup>	1.34	9.46	13.33	0.02	1.08	0.59
Offsite <sup>3</sup>	0.09	1.44	0.85	0.01	0.30	0.08
<b>Demolition Total</b>	<b>1.43</b>	<b>10.90</b>	<b>14.18</b>	<b>0.03</b>	<b>1.38</b>	<b>0.67</b>
<b>Grading<sup>1</sup></b>						
Onsite	1.19	9.10	8.49	0.02	3.05	1.77
Offsite	0.05	0.43	0.40	0.00	0.15	0.04
<b>Grading Total</b>	<b>1.24</b>	<b>9.53</b>	<b>8.89</b>	<b>0.02</b>	<b>3.20</b>	<b>1.81</b>
<b>Building Construction &amp; Architectural Coating</b>						

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
Onsite	4.82	9.65	15.82	0.03	0.52	0.50
Offsite	0.35	2.01	2.82	0.01	1.10	0.30
<b>Building and Painting Total</b>	<b>5.17</b>	<b>11.66</b>	<b>18.64</b>	<b>0.04</b>	<b>1.62</b>	<b>0.80</b>
<b>Paving</b>						
Onsite	0.79	7.44	11.67	0.02	0.35	0.32
Offsite	0.05	0.03	0.39	0.00	0.17	0.05
<b>Paving Total</b>	<b>0.84</b>	<b>7.47</b>	<b>12.06</b>	<b>0.02</b>	<b>0.52</b>	<b>0.37</b>
<b>Maximum Daily Emissions</b>	<b>5.17</b>	<b>11.66</b>	<b>18.64</b>	<b>0.04</b>	<b>3.20</b>	<b>1.81</b>
<b>SCQAMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Threshold?	No	No	No	No	No	No

Notes:

<sup>1</sup> Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.

<sup>2</sup> Onsite emissions from equipment not operated on public roads. A 26.7% reduction was applied to the onsite NOx emissions per the OFFROAD2017 model results shown above in Table C.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

Source: CalEEMod Version 2016.3.2.

**Table G – Construction-Related Regional Criteria Pollutant Emissions for Years 2031-2035**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
<b>Grading<sup>1</sup></b>						
Onsite	1.62	4.54	14.45	0.04	2.79	1.55
Offsite	0.05	0.41	0.42	0.00	0.21	0.06
<b>Grading Total</b>	<b>1.67</b>	<b>4.95</b>	<b>14.87</b>	<b>0.04</b>	<b>3.00</b>	<b>1.61</b>
<b>Building Construction &amp; Architectural Coating</b>						
Onsite	8.11	5.15	17.96	0.03	0.17	0.17
Offsite	0.43	2.87	3.34	0.02	1.70	0.46
<b>Building and Painting Total</b>	<b>8.54</b>	<b>8.02</b>	<b>21.30</b>	<b>0.05</b>	<b>1.87</b>	<b>0.63</b>
<b>Paving</b>						
Onsite	1.15	6.23	13.09	0.02	0.25	0.25
Offsite	0.05	0.02	0.38	0.00	0.22	0.06
<b>Paving Total</b>	<b>1.20</b>	<b>6.25</b>	<b>13.47</b>	<b>0.02</b>	<b>0.47</b>	<b>0.31</b>
<b>Maximum Daily Emissions</b>	<b>8.54</b>	<b>8.02</b>	<b>21.30</b>	<b>0.05</b>	<b>3.00</b>	<b>1.61</b>
<b>SCQAMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Threshold?	No	No	No	No	No	No

Notes:

<sup>1</sup> Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.

<sup>2</sup> Onsite emissions from equipment not operated on public roads. A 41.4% reduction was applied to the onsite NOx emissions per the OFFROAD2017 model results shown above in Table C.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

Source: CalEEMod Version 2016.3.2.

**Table H – Construction-Related Regional Criteria Pollutant Emissions for Years 2036-2041**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
<b>Demolition<sup>1</sup></b>						

Onsite <sup>2</sup>	1.83	3.36	18.71	0.05	0.53	0.27
Offsite <sup>3</sup>	0.06	0.93	0.56	0.01	0.27	0.07
<b>Demolition Total</b>	<b>1.89</b>	<b>4.29</b>	<b>19.27</b>	<b>0.06</b>	<b>0.80</b>	<b>0.34</b>
<b>Grading<sup>1</sup></b>						
Onsite	1.46	2.91	14.33	0.04	2.71	1.47
Offsite	0.04	0.40	0.35	0.00	0.21	0.06
<b>Grading Total</b>	<b>1.50</b>	<b>3.31</b>	<b>14.68</b>	<b>0.04</b>	<b>2.92</b>	<b>1.53</b>
<b>Building Construction &amp; Architectural Coating</b>						
Onsite	4.83	3.85	17.91	0.03	0.10	0.10
Offsite	0.24	1.95	1.88	0.01	1.18	0.32
<b>Building and Painting Total</b>	<b>5.07</b>	<b>5.80</b>	<b>19.79</b>	<b>0.04</b>	<b>1.28</b>	<b>0.42</b>
<b>Paving</b>						
Onsite	0.99	4.74	13.07	0.02	0.15	0.15
Offsite	0.04	0.02	0.32	0.00	0.22	0.06
<b>Paving Total</b>	<b>1.03</b>	<b>4.76</b>	<b>13.39</b>	<b>0.02</b>	<b>0.37</b>	<b>0.21</b>
<b>Maximum Daily Emissions</b>	<b>5.07</b>	<b>5.80</b>	<b>19.79</b>	<b>0.06</b>	<b>2.92</b>	<b>1.53</b>
<b>SCQAMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Threshold?	No	No	No	No	No	No

Notes:

<sup>1</sup> Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.

<sup>2</sup> Onsite emissions from equipment not operated on public roads. A 51.4% reduction was applied to the onsite NOx emissions per the OFFROAD2017 model results shown above in Table C.

<sup>3</sup> Offsite emissions from vehicles operating on public roads.

Source: CalEEMod Version 2016.3.2.

## Operational Emissions

The worst-case summer or winter VOC, NOx, CO, SO<sub>2</sub>, PM10, and PM2.5 daily emissions created from the proposed project's long-term operations have been calculated and are summarized below in [Table I](#) for year 2020, [Table J](#) for year 2025, [Table K](#) for year 2030, [Table L](#) for year 2035, and [Table M](#) for year 2041. Since Construction activities would be occurring simultaneously with operational activities, the maximum daily construction emissions are also included for each year analyzed. The CalEEMod daily emissions printouts are shown in [Appendix B](#) for year 2020, [Appendix C](#) for year 2025, [Appendix D](#) for year 2030, [Appendix E](#) for year 2035, and [Appendix F](#) for year 2041.

**Table I — Operational and Construction Regional Criteria Pollutant Emissions for Year 2020**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
Area Sources <sup>1</sup>	17.095.2 0	0.010.0 0	0.760.08	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.560.14	5.111.3 1	4.291.10	0.030.01	0.390.10	0.390.10
Mobile Sources <sup>3</sup>	1.94	9.14	25.25	0.08	6.30	1.74
Construction <sup>4</sup> Mobile Sources <sup>3</sup>	7.2113.0 0	46.4339 .98	92.7426. 99	0.520.06	55.324.16	14.952.66
<b>Total Emissions for Year 2020</b>	<b>24.8620. 28</b>	<b>51.5550 .43</b>	<b>97.7953. 42</b>	<b>0.550.15</b>	<b>55.7110.5 6</b>	<b>15.344.50</b>
<b>SCQAMD Operational Thresholds</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>

Exceeds Threshold?	No	No	No	No	No	No
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Notes:

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consist of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2020 from Table D.

Source: Calculated from CalEEMod Version 2016.3.2.

**Table J – Operational and Construction Regional Criteria Pollutant Emissions for Year 2025**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
Area Sources <sup>1</sup>	7.53	0.00	0.31	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.22	2.05	1.72	0.01	0.16	0.16
Mobile Sources <sup>3</sup>	3.58	15.71	45.97	0.19	16.46	4.50
Construction <sup>4</sup>	6.89	35.18	23.09	0.05	3.93	2.44
<b>Total Emissions for Year 2025</b>	<b>18.22</b>	<b>52.94</b>	<b>71.09</b>	<b>0.25</b>	<b>20.55</b>	<b>7.10</b>
<b>SCQAMD Operational Thresholds</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Threshold?	No	No	No	No	No	No

Notes:

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment. Emissions are combined year 2020 and year 2025 model run totals.

<sup>2</sup> Energy usage consist of emissions from natural gas usage (excluding hearths). Emissions are combined year 2020 and year 2025 model run totals.

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2025 from Table E.

Source: Calculated from CalEEMod Version 2016.3.2.

**Table K – Operational and Construction Regional Criteria Pollutant Emissions for Year 2030**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
Area Sources <sup>1</sup>	9.22	0.01	0.69	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.28	2.58	2.16	0.02	0.20	0.20
Mobile Sources <sup>3</sup>	5.98	22.11	50.21	0.22	21.47	5.87
Construction <sup>4</sup>	5.17	11.66	18.64	0.04	3.20	6.07
<b>Total Emissions for Year 2030</b>	<b>20.65</b>	<b>36.35</b>	<b>71.69</b>	<b>0.28</b>	<b>24.87</b>	<b>7.88</b>
<b>SCQAMD Operational Thresholds</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Threshold?	No	No	No	No	No	No

Notes:

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment. Emissions are combined year 2020, year 2025 and year 2030 model run totals.

<sup>2</sup> Energy usage consist of emissions from natural gas usage (excluding hearths). Emissions are combined year 2020, year 2025 and year 2030 model run totals.

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2030 from Table F.

Source: Calculated from CalEEMod Version 2016.3.2.

**Table L – Operational and Construction Regional Criteria Pollutant Emissions for Year 2035**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
Area Sources <sup>1</sup>	12.94	0.01	1.23	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.41	3.76	3.15	0.03	0.29	0.29
Mobile Sources <sup>3</sup>	5.82	32.91	75.66	0.39	39.88	10.86
Construction <sup>4</sup>	8.54	8.02	21.30	0.05	3.00	1.61

<b>Total Emissions for Year 2035</b>	<b>27.71</b>	<b>44.71</b>	<b>101.34</b>	<b>0.47</b>	<b>43.17</b>	<b>12.76</b>
<b>SCQAMD Operational Thresholds</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes:

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consist of emissions from natural gas usage (excluding hearths).

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2035 from Table G.

Source: Calculated from CalEEMod Version 2016.3.2.

**Table M – Operational and Construction Regional Criteria Pollutant Emissions for Year 2041**

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO <sub>2</sub>	PM10	PM2.5
Area Sources <sup>1</sup>	17.09	0.01	0.76	0.00	0.00	0.00
Energy Usage <sup>2</sup>	0.56	5.11	4.29	0.03	0.39	0.39
Mobile Sources <sup>3</sup>	6.36	42.34	74.56	0.41	42.71	11.54
Construction <sup>4</sup>	5.07	5.80	19.79	0.06	2.92	1.53
<b>Total Emissions for Year 2041</b>	<b>29.08</b>	<b>53.26</b>	<b>99.40</b>	<b>0.50</b>	<b>46.02</b>	<b>13.46</b>
<b>SCQAMD Operational Thresholds</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes:

<sup>1</sup> Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment. Area source emissions are from CalEEMod model run of entire master plan.

<sup>2</sup> Energy usage consist of emissions from natural gas usage (excluding hearths). Energy usage emissions are from CalEEMod model run of entire master plan.

<sup>3</sup> Mobile sources consist of emissions from vehicles and road dust.

<sup>4</sup> Construction emissions for year 2041 from Table H.

Source: Calculated from CalEEMod Version 2016.3.2.

## 5.2 Generation of Greenhouse Gas Emissions

The project’s GHG emissions have been calculated with the CalEEMod model based on the construction and operational parameters detailed in Section 4.1 above. A summary of the results is shown below in [Table N](#) and the CalEEMod model run annual printouts are provided [for operational emissions are provided](#) in Appendix B. [The construction emissions for year 2020 are provided in Appendix G](#)

**Table N – Project Related Greenhouse Gas Annual Emissions**

Category	Greenhouse Gas Emissions (Metric Tons per Year)			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2e</sub>
Area Sources <sup>1</sup>	0.19	0.00	0.00	0.20
Energy Usage <sup>2</sup>	3,256.76	0.11	0.04	3,270.81
Mobile Sources <sup>3</sup>	6,627.71	0.25	0.00	6,634.06
Solid Waste <sup>4</sup>	278.02	16.43	0.00	688.79
Water and Wastewater <sup>5</sup>	160.32	0.53	0.01	177.63
<b>Construction Year 2020<sup>6</sup></b>	<b>12.20</b>	<b>0.00</b>	<b>0.00</b>	<b>12.24</b>
<b>Construction Year 2025<sup>6</sup></b>	<b>10.65</b>	<b>0.00</b>	<b>0.00</b>	<b>10.70</b>
<b>Construction Year 2030<sup>6</sup></b>	<b>8.53</b>	<b>0.00</b>	<b>0.00</b>	<b>8.56</b>
<b>Construction Year 2035<sup>6</sup></b>	<b>11.63</b>	<b>0.00</b>	<b>0.00</b>	<b>11.64</b>
<b>Construction Year 2040<sup>6</sup></b>	<b>57.69</b>	<b>10.40</b>	<b>0.00</b>	<b>57.80</b>
<b>Total 2040 Emissions</b>	<b>10,376.41</b>	<b>18.69</b>	<b>0.05</b>	<b>10,825.90</b>
<b>Service Population</b>				<b>7,458</b>
<b>Metric Tons CO<sub>2e</sub> per Service Population</b>				<b>1.45</b>
<b>SCAQMD Draft Threshold of Significance (Metric Tons CO<sub>2e</sub> per Service Population)<sup>2</sup></b>				<b>4.13.96</b>

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**Quantitative Metric Tons CO<sub>2</sub>e Threshold****30,577.80**

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Notes:

<sup>1</sup> Area sources consist of GHG emissions from consumer products, architectural coatings, and landscaping equipment.

<sup>2</sup> Energy usage consists of GHG emissions from electricity and natural gas usage.

<sup>3</sup> Mobile sources consist of GHG emissions from vehicles.

<sup>4</sup> Waste includes the CO<sub>2</sub> and CH<sub>4</sub> emissions created from the solid waste placed in landfills.

<sup>5</sup> Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

<sup>6</sup> Construction emissions amortized over 30 years as recommended in the SCAQMD GHG Working Group on November 19, 2009.

<sup>7</sup> [SCAQMD's Year 2020 threshold of 6.6 MTCO<sub>2</sub>e per year was reduced by 40 percent to account for AB 197 and SB 32.](#)

Source: CalEEMod Version 2016.3.2.

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**APPENDIX A**

OFFROAD2017 Model Printouts and Calculations~~CalEEMod Model Daily Printouts~~

**OFFROAD2017 (v1.0.1) Emissions Inventory**

Region Type: Air Basin

Region: South Coast

Calendar Year: 2020, 2025, 2030, 2035, 2040

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

1 pound = 453.592 grams per hour

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	NOx_tpd	Fuel_gpy	Total_Activity_J	Total_Popi	Horsepower_Hours_hhp	Tons per Year		Per HorsePower-Hour	
											NOx	Tons per hour	Pounds	Grams
South Coas	2020	ConstMin - Cranes	Aggregatec	Aggregatec	Diesel	0.658	2504002.17	726836.37	1584.512	168178435.5	240.053	1.427E-06	0.0029	1.295
South Coas	2020	ConstMin - Excavators	Aggregatec	Aggregatec	Diesel	1.370	11134489.22	3555652.38	5672.763	560444478.7	500.052	8.922E-07	0.0018	0.809
South Coas	2020	ConstMin - Graders	Aggregatec	Aggregatec	Diesel	1.175	4186629.50	1050394.31	1833.904	197883645.1	428.814	2.167E-06	0.0043	1.966
South Coas	2020	ConstMin - Other Construct	Aggregatec	Aggregatec	Diesel	0.618	3153823.91	847613.83	1954.395	146148404.3	225.408	1.542E-06	0.0031	1.399
South Coas	2020	ConstMin - Pavers	Aggregatec	Aggregatec	Diesel	0.140	742425.06	266323.03	693.6475	34480522.48	51.206	1.485E-06	0.0030	1.347
South Coas	2020	ConstMin - Paving Equipme	Aggregatec	Aggregatec	Diesel	0.078	431892.45	177769.30	393.0159	23358504.67	28.306	1.212E-06	0.0024	1.099
South Coas	2020	ConstMin - Rollers	Aggregatec	Aggregatec	Diesel	0.372	1925468.42	1208050.61	3615.949	97052913.19	135.745	1.399E-06	0.0028	1.269
South Coas	2020	ConstMin - Rubber Tired Dc	Aggregatec	Aggregatec	Diesel	0.422	1235703.49	240893.89	322.0689	60051972.66	154.056	2.565E-06	0.0051	2.327
South Coas	2020	ConstMin - Scrapers	Aggregatec	Aggregatec	Diesel	2.497	1105667.188	1207160.29	2652.648	442613585.5	911.442	2.059E-06	0.0041	1.868
South Coas	2020	ConstMin - Tractors/Loader	Aggregatec	Aggregatec	Diesel	2.794	15465938.23	8280740.02	14248.17	808449067.2	1019.853	1.261E-06	0.0025	1.144
South Coas	2020	Industrial - Forklifts	Aggregatec	Aggregatec	Diesel	1.167	5123410.86	5481373.96	7444.302	490519885.2	426.063	8.686E-07	0.0017	0.788
South Coas	2020	Portable Equipment - Rentz	Aggregatec	Aggregatec	Diesel	0.245	3356458.95	511656.09	991.6952	221571841.3	89.371	4.033E-07	0.0008	0.366
South Coas	2025	ConstMin - Cranes	Aggregatec	Aggregatec	Diesel	0.406	2659887.79	772475.07	1600.78	178522211.4	148.122	8.297E-07	0.0017	0.753
South Coas	2025	ConstMin - Excavators	Aggregatec	Aggregatec	Diesel	0.806	11836158.45	3778952.89	5731.006	595621827.4	294.322	4.941E-07	0.0010	0.448
South Coas	2025	ConstMin - Graders	Aggregatec	Aggregatec	Diesel	0.693	4440151.70	1116396.23	1852.733	209755963.6	253.081	1.207E-06	0.0024	1.095
South Coas	2025	ConstMin - Other Construct	Aggregatec	Aggregatec	Diesel	0.402	3357062.59	900849.99	1974.461	155304692.7	146.583	9.438E-07	0.0019	0.856
South Coas	2025	ConstMin - Pavers	Aggregatec	Aggregatec	Diesel	0.086	789130.30	283056.01	700.7692	36634204.36	31.492	8.596E-07	0.0017	0.780
South Coas	2025	ConstMin - Paving Equipme	Aggregatec	Aggregatec	Diesel	0.045	458986.72	188924.49	397.051	24862033.48	16.455	6.619E-07	0.0013	0.600
South Coas	2025	ConstMin - Rollers	Aggregatec	Aggregatec	Diesel	0.262	2046508.78	1283955.02	3653.074	103156105.1	95.573	9.265E-07	0.0019	0.840
South Coas	2025	ConstMin - Rubber Tired Dc	Aggregatec	Aggregatec	Diesel	0.284	1311968.67	256027.07	325.3756	63651401.51	103.478	1.626E-06	0.0033	1.475
South Coas	2025	ConstMin - Scrapers	Aggregatec	Aggregatec	Diesel	1.467	11759747.40	1282932.99	2679.883	470386149	535.323	1.138E-06	0.0023	1.032
South Coas	2025	ConstMin - Tractors/Loader	Aggregatec	Aggregatec	Diesel	1.843	16494975.97	8800776.89	14394.45	861095478.6	672.671	7.812E-07	0.0016	0.709
South Coas	2025	Industrial - Forklifts	Aggregatec	Aggregatec	Diesel	0.824	5897951.84	6310030.67	8146.035	564727050.4	300.848	5.327E-07	0.0011	0.483
South Coas	2025	Portable Equipment - Rentz	Aggregatec	Aggregatec	Diesel	0.122	3705801.90	564909.67	1037.132	231723669.9	44.371	1.915E-07	0.0004	0.174
South Coas	2030	ConstMin - Cranes	Aggregatec	Aggregatec	Diesel	0.281	2580926.59	749441.07	1521.196	173204300.5	102.642	5.926E-07	0.0012	0.538
South Coas	2030	ConstMin - Excavators	Aggregatec	Aggregatec	Diesel	0.595	11484239.14	3666242.65	5446.084	577833058.3	217.184	3.759E-07	0.0008	0.341
South Coas	2030	ConstMin - Graders	Aggregatec	Aggregatec	Diesel	0.416	4314305.39	1083066.77	1760.623	203738735.1	151.911	7.456E-07	0.0015	0.676
South Coas	2030	ConstMin - Other Construct	Aggregatec	Aggregatec	Diesel	0.289	3255793.05	873987.91	1876.299	150512825	105.434	7.005E-07	0.0014	0.635
South Coas	2030	ConstMin - Pavers	Aggregatec	Aggregatec	Diesel	0.060	765537.10	274614.30	665.9299	35549091.25	21.836	6.143E-07	0.0012	0.557
South Coas	2030	ConstMin - Paving Equipme	Aggregatec	Aggregatec	Diesel	0.035	445524.72	183293.95	377.3113	24114646.76	12.688	5.262E-07	0.0011	0.477
South Coas	2030	ConstMin - Rollers	Aggregatec	Aggregatec	Diesel	0.211	1985860.18	1245570.62	3471.459	100058313.5	77.059	7.701E-07	0.0015	0.699
South Coas	2030	ConstMin - Rubber Tired Dc	Aggregatec	Aggregatec	Diesel	0.208	1269982.79	248390.45	309.1992	61578761.59	75.777	1.231E-06	0.0025	1.116
South Coas	2030	ConstMin - Scrapers	Aggregatec	Aggregatec	Diesel	0.974	11417595.21	1244648.80	2546.651	457010394.5	355.430	7.777E-07	0.0016	0.706
South Coas	2030	ConstMin - Tractors/Loader	Aggregatec	Aggregatec	Diesel	1.467	16025832.44	8538279.61	13678.82	836610628.9	535.357	6.399E-07	0.0013	0.581
South Coas	2030	Industrial - Forklifts	Aggregatec	Aggregatec	Diesel	0.645	6240895.07	6676934.70	8443.033	597612880.2	235.321	3.938E-07	0.0008	0.357
South Coas	2030	Portable Equipment - Rentz	Aggregatec	Aggregatec	Diesel	0.065	4091504.74	623705.92	1084.651	242340628.1	23.893	9.859E-08	0.0002	0.089
South Coas	2035	ConstMin - Cranes	Aggregatec	Aggregatec	Diesel	0.229	2722751.01	790623.58	1573.355	182722044.6	83.723	4.582E-07	0.0009	0.416
South Coas	2035	ConstMin - Excavators	Aggregatec	Aggregatec	Diesel	0.530	12115309.20	3867706.24	5632.821	609585544.6	193.358	3.172E-07	0.0006	0.288
South Coas	2035	ConstMin - Graders	Aggregatec	Aggregatec	Diesel	0.295	4551380.65	1142582.34	1820.991	214934375.9	107.561	5.004E-07	0.0010	0.454
South Coas	2035	ConstMin - Other Construct	Aggregatec	Aggregatec	Diesel	0.241	3434702.03	922014.40	1940.634	158783650.5	87.934	5.538E-07	0.0011	0.502

Region	CalYr	VehClass	MdIYr	HP_Bin	Fuel	NOx_tpd	Fuel_gpy	Total_Activity_l	Total_Popt	Horsepower_Hours_hhp	NOx	Tons per hour	Pounds	Grams
South Coas	2035	ConstMin - Pavers	Aggregatec	Aggregatec	Diesel	0.049	807604.10	289704.62	688.7635	37502548.25	18.059	4.815E-07	0.0010	0.437
South Coas	2035	ConstMin - Paving Equipme	Aggregatec	Aggregatec	Diesel	0.030	470006.74	193366.13	390.2486	25439769.96	10.883	4.278E-07	0.0009	0.388
South Coas	2035	ConstMin - Rollers	Aggregatec	Aggregatec	Diesel	0.197	2094985.12	1314015.94	3590.489	105556614.7	71.796	6.802E-07	0.0014	0.617
South Coas	2035	ConstMin - Rubber Tired Dc	Aggregatec	Aggregatec	Diesel	0.171	1339769.58	262039.75	319.8012	64962574.19	62.235	9.580E-07	0.0019	0.869
South Coas	2035	ConstMin - Scrapers	Aggregatec	Aggregatec	Diesel	0.777	12045003.12	1313043.46	2633.971	482123558.4	283.735	5.885E-07	0.0012	0.534
South Coas	2035	ConstMin - Tractors/Loader	Aggregatec	Aggregatec	Diesel	1.409	16906467.46	9007466.34	14147.84	882583193.4	514.106	5.825E-07	0.0012	0.528
South Coas	2035	Industrial - Forklifts	Aggregatec	Aggregatec	Diesel	0.585	6583838.30	7043838.73	8732.531	630452286.8	213.608	3.388E-07	0.0007	0.307
South Coas	2035	Portable Equipment - Rentz	Aggregatec	Aggregatec	Diesel	0.062	4517351.83	688621.73	1134.346	253444026.9	22.674	8.946E-08	0.0002	0.081
South Coas	2040	ConstMin - Cranes	Aggregatec	Aggregatec	Diesel	0.191	2864575.43	831806.09	1624.261	192239788.7	69.726	3.627E-07	0.0007	0.329
South Coas	2040	ConstMin - Excavators	Aggregatec	Aggregatec	Diesel	0.483	12746379.27	4069169.82	5815.069	641338030.9	176.289	2.749E-07	0.0005	0.249
South Coas	2040	ConstMin - Graders	Aggregatec	Aggregatec	Diesel	0.215	4788455.91	1202097.91	1879.909	226130016.8	78.428	3.468E-07	0.0007	0.315
South Coas	2040	ConstMin - Other Construct	Aggregatec	Aggregatec	Diesel	0.208	3613611.01	970040.88	2003.423	167054476	75.888	4.543E-07	0.0009	0.412
South Coas	2040	ConstMin - Pavers	Aggregatec	Aggregatec	Diesel	0.042	849671.11	304794.94	711.0482	39456005.25	15.369	3.895E-07	0.0008	0.353
South Coas	2040	ConstMin - Paving Equipme	Aggregatec	Aggregatec	Diesel	0.028	494488.75	203438.31	402.875	26764893.16	10.080	3.766E-07	0.0008	0.342
South Coas	2040	ConstMin - Rollers	Aggregatec	Aggregatec	Diesel	0.187	2204110.06	1382461.25	3706.658	111054916	68.244	6.145E-07	0.0012	0.557
South Coas	2040	ConstMin - Rubber Tired Dc	Aggregatec	Aggregatec	Diesel	0.139	1409556.36	275689.04	330.1482	68346386.79	50.760	7.427E-07	0.0015	0.674
South Coas	2040	ConstMin - Scrapers	Aggregatec	Aggregatec	Diesel	0.622	1267241.04	1381438.12	2719.192	507236722.2	227.163	4.478E-07	0.0009	0.406
South Coas	2040	ConstMin - Tractors/Loader	Aggregatec	Aggregatec	Diesel	1.377	17787102.47	9476653.08	14605.59	928555757.8	502.781	5.415E-07	0.0011	0.491
South Coas	2040	Industrial - Forklifts	Aggregatec	Aggregatec	Diesel	0.557	6926781.53	7410742.76	9015.069	663291693.5	203.144	3.063E-07	0.0006	0.278
South Coas	2040	Portable Equipment - Rentz	Aggregatec	Aggregatec	Diesel	0.068	4987521.44	760294.04	1186.319	265056153.7	24.908	9.397E-08	0.0002	0.085

Equipment	2020			2025-2030			2025-2035			2025-2040		
	Year	2020	% Reductic	2025	2030	% Reductic	2025	% Reduction	2035	% Reduction	2040	% Reduction
ConstMin - Cranes	1.295	0.753	0.538	0.538	0.538	28.6%	0.416	44.8%	0.416	44.8%	0.329	56.3%
ConstMin - Excavators	0.809	0.448	0.341	0.341	0.341	23.9%	0.288	35.8%	0.288	35.8%	0.249	44.4%
ConstMin - Graders	1.966	1.095	0.676	0.676	0.676	38.2%	0.454	58.5%	0.454	58.5%	0.315	71.3%
ConstMin - Other Construct	1.399	0.856	0.635	0.635	0.635	25.8%	0.502	41.3%	0.502	41.3%	0.412	51.9%
ConstMin - Pavers	1.347	0.780	0.557	0.557	0.557	28.5%	0.437	44.0%	0.437	44.0%	0.353	54.7%
ConstMin - Paving Equipme	1.099	0.600	0.477	0.477	0.477	20.5%	0.388	35.4%	0.388	35.4%	0.342	43.1%
ConstMin - Rollers	1.269	0.840	0.699	0.699	0.699	16.9%	0.617	26.6%	0.617	26.6%	0.557	33.7%
ConstMin - Rubber Tired Dc	2.327	1.475	1.116	1.116	1.116	24.3%	0.869	41.1%	0.869	41.1%	0.674	54.3%
ConstMin - Scrapers	1.868	1.032	0.706	0.706	0.706	31.7%	0.534	48.3%	0.534	48.3%	0.406	60.6%
ConstMin - Tractors/Loader	1.144	0.709	0.581	0.581	0.581	18.1%	0.528	25.4%	0.528	25.4%	0.491	30.7%
Industrial - Forklifts	0.788	0.483	0.357	0.357	0.357	26.1%	0.307	36.4%	0.307	36.4%	0.278	42.5%
Portable Equipment - Rentz	0.366	0.174	0.089	0.089	0.089	48.5%	0.081	53.3%	0.081	53.3%	0.085	50.9%
<b>Average (All Equipment)</b>	<b>1.307</b>	<b>0.770</b>	<b>0.564</b>	<b>0.564</b>	<b>0.564</b>	<b>26.7%</b>	<b>0.452</b>	<b>41.4%</b>	<b>0.452</b>	<b>41.4%</b>	<b>0.374</b>	<b>51.4%</b>

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**APPENDIX B**

CalEEMod Model ~~Interim Year 2020~~Annual Printouts

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**LBCC LAC Interim Year 2020**  
**Los Angeles-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	806.00	Student	2.18	179,898.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0
Recreational Swimming Pool	1.50	1000sqft	2.00	1,500.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2020

**Utility Company** Southern California Edison

<b>CO2 Intensity (lb/MW/hr)</b>	702.44	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

Project Characteristics - Interim Year 2020

Land Use - 806 student Junior College on 2.18 acres and 179,898 sq ft of building, 50,881 SF Recreational Swimming Pool, and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving. Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 48,768 SF of building space

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips. Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Mobile Commute Mitigation -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	PhaseEndDate	8/7/2020	6/12/2020
tblConstructionPhase	PhaseStartDate	7/11/2020	7/27/2019
tblLandUse	LandUseSquareFeet	35,183.70	179,898.00
tblLandUse	LotAcreage	0.81	2.18
tblLandUse	LotAcreage	0.03	2.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

2.0 Emissions Summary



LBCCLAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	5.2022	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004	0.0288	0.1891
Energy	0.1439	1.3085	1.0992	7.8500e-003	0.0995	0.0995	0.0995	0.0995	0.0995	0.0995	1,570.2298	1,570.2298	1,570.2298	0.0301	0.0288	1,579.5609
Mobile	1.9380	8.9061	25.2505	0.0812	6.2160	0.0810	6.2970	1.6637	0.0760	1.7397	8,243.5879	8,243.5879	8,243.5879	0.4524	0.0288	8,254.8979
<b>Total</b>	<b>7.2841</b>	<b>10.2154</b>	<b>26.4329</b>	<b>0.0890</b>	<b>6.2160</b>	<b>0.1808</b>	<b>6.3968</b>	<b>1.6637</b>	<b>0.1757</b>	<b>1.8394</b>	<b>9,813.9949</b>	<b>9,813.9949</b>	<b>9,813.9949</b>	<b>0.4830</b>	<b>0.0288</b>	<b>9,834.6478</b>

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	5.2022	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004	0.0288	0.1891
Energy	0.1439	1.3085	1.0992	7.8500e-003	0.0995	0.0995	0.0995	0.0995	0.0995	0.0995	1,570.2298	1,570.2298	1,570.2298	0.0301	0.0288	1,579.5609
Mobile	1.7500	7.6942	20.4073	0.0637	4.7979	0.0640	4.8618	1.2841	0.0600	1.3441	6,471.8081	6,471.8081	6,471.8081	0.3652	0.0288	6,480.9393
<b>Total</b>	<b>7.0961</b>	<b>9.0035</b>	<b>21.5897</b>	<b>0.0715</b>	<b>4.7979</b>	<b>0.1637</b>	<b>4.9616</b>	<b>1.2841</b>	<b>0.1597</b>	<b>1.4438</b>	<b>8,042.2151</b>	<b>8,042.2151</b>	<b>8,042.2151</b>	<b>0.3958</b>	<b>0.0288</b>	<b>8,060.6892</b>

LBCCLAC Interim Year 2020 - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.58	11.86	18.32	19.63	22.81	9.44	22.44	22.81	9.12	21.51	0.00	18.05	18.05	18.05	0.00	18.04

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2019	6/28/2019	5	20	
2	Grading	Grading	6/29/2019	7/26/2019	5	20	
3	Building Construction	Building Construction	7/27/2019	6/12/2020	5	230	
4	Paving	Paving	6/13/2020	7/10/2020	5	20	
5	Architectural Coating	Architectural Coating	7/27/2019	6/12/2020	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 346,169; Non-Residential Outdoor: 115,390; Striped Parking Area: 5,410 (Architectural Coating – sqft)

OffRoad Equipment

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	222.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	114.00	45.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2019**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Fugitive Dust					2.4003	0.0000	2.4003	0.3634	0.0000	0.3634			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
<b>Total</b>	<b>3.5134</b>	<b>35.7830</b>	<b>22.0600</b>	<b>0.0388</b>	<b>2.4003</b>	<b>1.7949</b>	<b>4.1952</b>	<b>0.3634</b>	<b>1.6697</b>	<b>2.0331</b>		<b>3,816.8994</b>	<b>3,816.8994</b>	<b>1.0618</b>		<b>3,843.4451</b>

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2019**

**Unmitigated Construction Off-Site**

Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.1043	3.3997	0.7249	8.8700e-003	0.1941	0.0125	0.2066	0.0532	0.0119	0.0651		959.6081	959.6081	0.0661		961.2602
Vendor	0.0249	0.6944	0.1843	1.5700e-003	0.0384	4.4300e-003	0.0428	0.0111	4.2300e-003	0.0153		167.2888	167.2888	0.0107		167.5568
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		181.9429	181.9429	6.2500e-003		182.0992
<b>Total</b>	<b>0.2042</b>	<b>4.1492</b>	<b>1.6324</b>	<b>0.0123</b>	<b>0.4001</b>	<b>0.0184</b>	<b>0.4185</b>	<b>0.1087</b>	<b>0.0175</b>	<b>0.1262</b>		<b>1,308.8398</b>	<b>1,308.8398</b>	<b>0.0831</b>		<b>1,310.9162</b>

**Mitigated Construction On-Site**

Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.9361	0.0000	0.9361	0.1417	0.0000	0.1417			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949	1.6697	1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
<b>Total</b>	<b>3.5134</b>	<b>35.7830</b>	<b>22.0600</b>	<b>0.0388</b>	<b>0.9361</b>	<b>1.7949</b>	<b>2.7310</b>	<b>0.1417</b>	<b>1.6697</b>	<b>1.8114</b>	<b>0.0000</b>	<b>3,816.8994</b>	<b>3,816.8994</b>	<b>1.0618</b>		<b>3,843.4451</b>

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2019**

**Mitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.1043	3.3997	0.7249	8.8700e-003	0.1941	0.0125	0.2066	0.0532	0.0119	0.0651		959.6081	959.6081	0.0661		961.2602
Vendor	0.0249	0.6944	0.1843	1.5700e-003	0.0384	4.4300e-003	0.0428	0.0111	4.2300e-003	0.0153		167.2888	167.2888	0.0107		167.5568
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		181.9429	181.9429	6.2500e-003		182.0992
<b>Total</b>	<b>0.2042</b>	<b>4.1492</b>	<b>1.6324</b>	<b>0.0123</b>	<b>0.4001</b>	<b>0.0184</b>	<b>0.4185</b>	<b>0.1087</b>	<b>0.0175</b>	<b>0.1262</b>		<b>1,308.8398</b>	<b>1,308.8398</b>	<b>0.0831</b>		<b>1,310.9162</b>

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974	1.2856	1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
<b>Total</b>	<b>2.5805</b>	<b>28.3480</b>	<b>16.2934</b>	<b>0.0297</b>	<b>6.5523</b>	<b>1.3974</b>	<b>7.9497</b>	<b>3.3675</b>	<b>1.2856</b>	<b>4.6531</b>		<b>2,936.8068</b>	<b>2,936.8068</b>	<b>0.9292</b>		<b>2,960.0361</b>

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**3.3 Grading - 2019**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0249	0.6944	0.1843	1.5700e-003	0.0384	4.4300e-003	0.0428	0.0111	4.2300e-003	0.0153	167.2888	167.2888	167.2888	0.0107		167.5568	
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458	181.9429	181.9429	181.9429	6.2500e-003		182.0992	
<b>Total</b>	<b>0.0999</b>	<b>0.7495</b>	<b>0.9075</b>	<b>3.4000e-003</b>	<b>0.2061</b>	<b>5.8800e-003</b>	<b>0.2120</b>	<b>0.0555</b>	<b>5.5600e-003</b>	<b>0.0611</b>	<b>349.2317</b>	<b>349.2317</b>	<b>349.2317</b>	<b>0.0170</b>		<b>349.6560</b>	

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000	
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974	1.2856	1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361	
<b>Total</b>	<b>2.5805</b>	<b>28.3480</b>	<b>16.2934</b>	<b>0.0297</b>	<b>2.5554</b>	<b>1.3974</b>	<b>3.9528</b>	<b>1.3133</b>	<b>1.2856</b>	<b>2.5989</b>	<b>0.0000</b>	<b>2,936.8068</b>	<b>2,936.8068</b>	<b>0.9292</b>		<b>2,960.0361</b>	

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**3.3 Grading - 2019**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0249	0.6944	0.1843	1.5700e-003	0.0384	4.4300e-003	0.0428	0.0111	4.2300e-003	0.0153	167.2888	167.2888	167.2888	0.0107		167.5568	
Worker	0.0749	0.0551	0.7233	1.8300e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458	181.9429	181.9429	181.9429	6.2500e-003		182.0992	
<b>Total</b>	<b>0.0999</b>	<b>0.7495</b>	<b>0.9075</b>	<b>3.4000e-003</b>	<b>0.2061</b>	<b>5.8800e-003</b>	<b>0.2120</b>	<b>0.0555</b>	<b>5.5600e-003</b>	<b>0.0611</b>	<b>349.2317</b>	<b>349.2317</b>	<b>349.2317</b>	<b>0.0170</b>		<b>349.6560</b>	

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899	1.2127	1.2127	1.2127	2,591,580 <sup>2</sup>	2,591,580 <sup>2</sup>	2,591,580 <sup>2</sup>	0.6313		2,607,363 <sup>5</sup>	
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>	<b>1.2127</b>	<b>1.2127</b>	<b>1.2127</b>	<b>2,591,580<sup>2</sup></b>	<b>2,591,580<sup>2</sup></b>	<b>2,591,580<sup>2</sup></b>	<b>0.6313</b>		<b>2,607,363<sup>5</sup></b>	

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2019**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.1870	5.2078	1.3819	0.0118	0.2881	0.0332	0.3213	0.0829	0.0318	0.1147		1,254.665 8	1,254.665 8	0.0804			1,256.675 9
Worker	0.5695	0.4186	5.4967	0.0139	1.2743	0.0110	1.2852	0.3379	0.0101	0.3481		1,382.766 3	1,382.766 3	0.0475			1,383.953 7
<b>Total</b>	<b>0.7565</b>	<b>5.6264</b>	<b>6.8785</b>	<b>0.0257</b>	<b>1.5623</b>	<b>0.0442</b>	<b>1.6065</b>	<b>0.4209</b>	<b>0.0419</b>	<b>0.4628</b>		<b>2,637.432 1</b>	<b>2,637.432 1</b>	<b>0.1279</b>			<b>2,640.629 5</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899	1.2127	1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313			2,607.363 5
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>	<b>1.2127</b>	<b>1.2127</b>	<b>1.2127</b>	<b>0.0000</b>	<b>2,591.580 2</b>	<b>2,591.580 2</b>	<b>0.6313</b>			<b>2,607.363 5</b>

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**3.4 Building Construction - 2019**  
**Mitigated Construction Off-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.1870	5.2078	1.3819	0.0118	0.2881	0.0332	0.3213	0.0829	0.0318	0.1147	1,254.6658	1,254.6658	1,254.6658	0.0804			1,256.6759
Worker	0.5695	0.4186	5.4967	0.0139	1.2743	0.0110	1.2852	0.3379	0.0101	0.3481	1,382.7663	1,382.7663	1,382.7663	0.0475			1,383.9537
<b>Total</b>	<b>0.7565</b>	<b>5.6264</b>	<b>6.8785</b>	<b>0.0257</b>	<b>1.5623</b>	<b>0.0442</b>	<b>1.6065</b>	<b>0.4209</b>	<b>0.0419</b>	<b>0.4628</b>	<b>2,637.4321</b>	<b>2,637.4321</b>	<b>2,637.4321</b>	<b>0.1279</b>			<b>2,640.6295</b>

**3.4 Building Construction - 2020**  
**Unmitigated Construction On-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503			2,553.0631	0.6229			2,568.6345
<b>Total</b>	<b>2.1198</b>	<b>19.1860</b>	<b>16.8485</b>	<b>0.0269</b>		<b>1.1171</b>	<b>1.1171</b>		<b>1.0503</b>	<b>1.0503</b>			<b>2,553.0631</b>	<b>0.6229</b>			<b>2,568.6345</b>

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**3.4 Building Construction - 2020**  
**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.1601	4.7868	1.2542	0.0117	0.2881	0.0225	0.3106	0.0830	0.0216	0.1045	1,246.6111	1,246.6111	1,246.6111	0.0761			1,248.5129
Worker	0.5246	0.3732	4.9914	0.0135	1.2743	0.0107	1.2849	0.3379	9.8100e-003	0.3478	1,340.7687	1,340.7687	1,340.7687	0.0423			1,341.8255
<b>Total</b>	<b>0.6847</b>	<b>5.1600</b>	<b>6.2456</b>	<b>0.0251</b>	<b>1.5623</b>	<b>0.0332</b>	<b>1.5955</b>	<b>0.4209</b>	<b>0.0314</b>	<b>0.4523</b>	<b>2,587.3798</b>	<b>2,587.3798</b>	<b>2,587.3798</b>	<b>0.1183</b>			<b>2,590.3384</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229			2,568.6345
<b>Total</b>	<b>2.1198</b>	<b>19.1860</b>	<b>16.8485</b>	<b>0.0269</b>		<b>1.1171</b>	<b>1.1171</b>		<b>1.0503</b>	<b>1.0503</b>	<b>0.0000</b>	<b>2,553.0631</b>	<b>2,553.0631</b>	<b>0.6229</b>			<b>2,568.6345</b>

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**3.4 Building Construction - 2020**  
**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.1601	4.7868	1.2542	0.0117	0.2881	0.0225	0.3106	0.0830	0.0216	0.1045	1,246.6111	1,246.6111	1,246.6111	0.0761			1,248.5129
Worker	0.5246	0.3732	4.9914	0.0135	1.2743	0.0107	1.2849	0.3379	9.8100e-003	0.3478	1,340.7687	1,340.7687	1,340.7687	0.0423			1,341.8255
<b>Total</b>	<b>0.6847</b>	<b>5.1600</b>	<b>6.2456</b>	<b>0.0251</b>	<b>1.5623</b>	<b>0.0332</b>	<b>1.5955</b>	<b>0.4209</b>	<b>0.0314</b>	<b>0.4523</b>	<b>2,587.3798</b>	<b>2,587.3798</b>	<b>2,587.3798</b>	<b>0.1183</b>			<b>2,590.3384</b>

**3.5 Paving - 2020**  
**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528	0.6926	0.6926	0.6926			2,207.7334	0.7140			2,225.5841
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>1.3566</b>	<b>14.0656</b>	<b>14.6521</b>	<b>0.0228</b>		<b>0.7528</b>	<b>0.7528</b>	<b>0.6926</b>	<b>0.6926</b>	<b>0.6926</b>			<b>2,207.7334</b>	<b>0.7140</b>			<b>2,225.5841</b>

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**3.5 Paving - 2020**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458	176.4169	176.4169	176.4169	5.5600e-003	176.5560	176.5560	176.5560
<b>Total</b>	<b>0.0690</b>	<b>0.0491</b>	<b>0.6568</b>	<b>1.7700e-003</b>	<b>0.1677</b>	<b>1.4000e-003</b>	<b>0.1691</b>	<b>0.0445</b>	<b>1.2900e-003</b>	<b>0.0458</b>	<b>176.4169</b>	<b>176.4169</b>	<b>176.4169</b>	<b>5.5600e-003</b>	<b>176.5560</b>	<b>176.5560</b>	<b>176.5560</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.3566	14.0656	14.6521	0.0228	0.7528	0.7528	0.7528	0.6926	0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140	2,225.5841	2,225.5841	2,225.5841
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.3566</b>	<b>14.0656</b>	<b>14.6521</b>	<b>0.0228</b>	<b>0.7528</b>	<b>0.7528</b>	<b>0.7528</b>	<b>0.6926</b>	<b>0.6926</b>	<b>0.6926</b>	<b>0.0000</b>	<b>2,207.7334</b>	<b>2,207.7334</b>	<b>0.7140</b>	<b>2,225.5841</b>	<b>2,225.5841</b>	<b>2,225.5841</b>

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**3.5 Paving - 2020**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Worker	0.0690	0.0491	0.6568	1.7700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458	176.4169	176.4169	176.4169	5.5600e-003			176.5560
<b>Total</b>	<b>0.0690</b>	<b>0.0491</b>	<b>0.6568</b>	<b>1.7700e-003</b>	<b>0.1677</b>	<b>1.4000e-003</b>	<b>0.1691</b>	<b>0.0445</b>	<b>1.2900e-003</b>	<b>0.0458</b>	<b>176.4169</b>	<b>176.4169</b>	<b>176.4169</b>	<b>5.5600e-003</b>			<b>176.5560</b>

**3.6 Architectural Coating - 2019**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Archit. Coating	9.4104					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288	0.1288	0.1288	0.1288	281.4481	281.4481	281.4481	0.0238			282.0423
<b>Total</b>	<b>9.6769</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>281.4481</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>			<b>282.0423</b>

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**3.6 Architectural Coating - 2019**  
**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1149	0.0845	1.1090	2.8000e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702	278.9792	278.9792	278.9792	9.5800e-003		279.2187	
<b>Total</b>	<b>0.1149</b>	<b>0.0845</b>	<b>1.1090</b>	<b>2.8000e-003</b>	<b>0.2571</b>	<b>2.2200e-003</b>	<b>0.2593</b>	<b>0.0682</b>	<b>2.0400e-003</b>	<b>0.0702</b>	<b>278.9792</b>	<b>278.9792</b>	<b>278.9792</b>	<b>9.5800e-003</b>		<b>279.2187</b>	

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	9.4104					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288	0.1288	0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423	
<b>Total</b>	<b>9.6769</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>	

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**3.6 Architectural Coating - 2019**  
**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1149	0.0845	1.1090	2.8000e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702	278.9792	278.9792	278.9792	9.5800e-003	279.2187	279.2187
<b>Total</b>	<b>0.1149</b>	<b>0.0845</b>	<b>1.1090</b>	<b>2.8000e-003</b>	<b>0.2571</b>	<b>2.2200e-003</b>	<b>0.2593</b>	<b>0.0682</b>	<b>2.0400e-003</b>	<b>0.0702</b>	<b>278.9792</b>	<b>278.9792</b>	<b>278.9792</b>	<b>9.5800e-003</b>	<b>279.2187</b>	<b>279.2187</b>

**3.6 Architectural Coating - 2020**  
**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	9.4104					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109	0.1109	0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
<b>Total</b>	<b>9.6526</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>		<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9928</b>

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**3.6 Architectural Coating - 2020**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.1059	0.0753	1.0070	2.7200e-003	0.2571	2.1500e-003	0.2592	0.0682	1.9800e-003	0.0702		270.5060	270.5060	8.5300e-003		270.7192
<b>Total</b>	<b>0.1059</b>	<b>0.0753</b>	<b>1.0070</b>	<b>2.7200e-003</b>	<b>0.2571</b>	<b>2.1500e-003</b>	<b>0.2592</b>	<b>0.0682</b>	<b>1.9800e-003</b>	<b>0.0702</b>		<b>270.5060</b>	<b>270.5060</b>	<b>8.5300e-003</b>		<b>270.7192</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	9.4104					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003	0.1109	0.1109	0.1109	0.1109	0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
<b>Total</b>	<b>9.6526</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9928</b>

LACC Interim Year 2020 - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2020**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1059	0.0753	1.0070	2.7200e-003	0.2571	2.1500e-003	0.2592	0.0682	1.9800e-003	0.0702	270.5060	270.5060	270.5060	8.5300e-003		270.7192
<b>Total</b>	<b>0.1059</b>	<b>0.0753</b>	<b>1.0070</b>	<b>2.7200e-003</b>	<b>0.2571</b>	<b>2.1500e-003</b>	<b>0.2592</b>	<b>0.0682</b>	<b>1.9800e-003</b>	<b>0.0702</b>	<b>270.5060</b>	<b>270.5060</b>	<b>270.5060</b>	<b>8.5300e-003</b>		<b>270.7192</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

- Increase Transit Accessibility
- Improve Pedestrian Network

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	1.7500	7.6942	20.4073	0.0637	4.7979	0.0640	4.8618	1.2841	0.0600	1.3441	6,471.8081	6,471.8081	0.3652			6,480.9393
Unmitigated	1.9380	8.9061	25.2505	0.0812	6.2160	0.0810	6.2970	1.6637	0.0760	1.7397	8,243.5879	8,243.5879	0.4524			8,254.8979

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Junior College (2Yr)	926.90	338.52	32.24	2,159,668		1,666,957	
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
Recreational Swimming Pool	50.73	13.65	20.40	100,100		77,263	
Total	977.63	352.17	52.64	2,259,768		1,744,219	

4.3 Trip Type Information

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Other Non-Asphalt Surfaces	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Recreational Swimming Pool	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	lb/day										lb/day			CO2e		
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2		CH4	N2O
NaturalGas Mitigated	0.1439	1.3085	1.0992	7.8500e-003	0.0995	0.0995	0.0995	0.0995	0.0995	0.0995	1,570.2298	1,570.2298	0.0301	0.0288	0.0288	1,579.5609
NaturalGas Unmitigated	0.1439	1.3085	1.0992	7.8500e-003	0.0995	0.0995	0.0995	0.0995	0.0995	0.0995	1,570.2298	1,570.2298	0.0301	0.0288	0.0288	1,579.5609

LBC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Junior College (2Yr)	13347	0.1439	1.3085	1.0992	7.8500e-003		0.0995	0.0995		0.0995	0.0995		1,570.2298	1,570.2298	0.0301	0.0288	1,579.5609
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1439</b>	<b>1.3085</b>	<b>1.0992</b>	<b>7.8500e-003</b>		<b>0.0995</b>	<b>0.0995</b>		<b>0.0995</b>	<b>0.0995</b>		<b>1,570.2298</b>	<b>1,570.2298</b>	<b>0.0301</b>	<b>0.0288</b>	<b>1,579.5609</b>

Mitigated

Land Use	Natural Gas Use kBTU/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Junior College (2Yr)	13.347	0.1439	1.3085	1.0992	7.8500e-003		0.0995	0.0995		0.0995	0.0995		1,570.2298	1,570.2298	0.0301	0.0288	1,579.5609
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1439</b>	<b>1.3085</b>	<b>1.0992</b>	<b>7.8500e-003</b>		<b>0.0995</b>	<b>0.0995</b>		<b>0.0995</b>	<b>0.0995</b>		<b>1,570.2298</b>	<b>1,570.2298</b>	<b>0.0301</b>	<b>0.0288</b>	<b>1,579.5609</b>

**6.0 Area Detail**

LBCCLAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**6.1 Mitigation Measures Area**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	5.2022	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004		0.1891
Unmitigated	5.2022	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004		0.1891

**6.2 Area by SubCategory**

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.5930				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	4.6014				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	7.8300e-003	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004		0.1891
<b>Total</b>	<b>5.2022</b>	<b>7.7000e-004</b>	<b>0.0832</b>	<b>1.0000e-005</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>0.1772</b>	<b>0.1772</b>	<b>0.1772</b>	<b>4.8000e-004</b>		<b>0.1891</b>

LBCCLAC Interim Year 2020 - Los Angeles-South Coast County, Summer

**6.2 Area by SubCategory**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.5930				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	4.6014				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	7.8300e-003	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004		0.1772	0.1772	4.8000e-004		0.1891
<b>Total</b>	<b>5.2022</b>	<b>7.7000e-004</b>	<b>0.0832</b>	<b>1.0000e-005</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>0.1772</b>	<b>0.1772</b>	<b>0.1772</b>	<b>4.8000e-004</b>		<b>0.1891</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Winter

**LBCC LAC Interim Year 2020**  
**Los Angeles-South Coast County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	806.00	Student	2.18	179,898.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0
Recreational Swimming Pool	1.50	1000sqft	2.00	1,500.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2020

**Utility Company** Southern California Edison

<b>CO2 Intensity (lb/MW/hr)</b>	702.44	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Winter

Project Characteristics - Interim Year 2020

Land Use - 806 student Junior College on 2.18 acres and 179,898 sq ft of building, 50,881 SF Recreational Swimming Pool, and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 48,768 SF of building space

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Mobile Commute Mitigation -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	PhaseEndDate	8/7/2020	6/12/2020
tblConstructionPhase	PhaseStartDate	7/11/2020	7/27/2019
tblLandUse	LandUseSquareFeet	35,183.70	179,898.00
tblLandUse	LotAcreage	0.81	2.18
tblLandUse	LotAcreage	0.03	2.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

2.0 Emissions Summary



LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Winter

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	5.2022	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004		0.1891
Energy	0.1439	1.3085	1.0992	7.8500e-003	0.0995	0.0995	0.0995	0.0995	0.0995	0.0995	1,570.2298	1,570.2298	1,570.2298	0.0301	0.0288	1,579.5609
Mobile	1.8858	9.1353	24.1211	0.0771	6.2160	0.0815	6.2975	1.6637	0.0764	1.7401	7,840.0784	7,840.0784	7,840.0784	0.4511		7,851.3562
<b>Total</b>	<b>7.2319</b>	<b>10.4446</b>	<b>25.3034</b>	<b>0.0850</b>	<b>6.2160</b>	<b>0.1812</b>	<b>6.3972</b>	<b>1.6637</b>	<b>0.1762</b>	<b>1.8398</b>	<b>9,410.4853</b>	<b>9,410.4853</b>	<b>9,410.4853</b>	<b>0.4817</b>	<b>0.0288</b>	<b>9,431.1061</b>

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	5.2022	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004		0.1891
Energy	0.1439	1.3085	1.0992	7.8500e-003	0.0995	0.0995	0.0995	0.0995	0.0995	0.0995	1,570.2298	1,570.2298	1,570.2298	0.0301	0.0288	1,579.5609
Mobile	1.7024	7.8523	19.7223	0.0605	4.7979	0.0644	4.8623	1.2841	0.0604	1.3445	6,150.5300	6,150.5300	6,150.5300	0.3663		6,159.6886
<b>Total</b>	<b>7.0485</b>	<b>9.1616</b>	<b>20.9046</b>	<b>0.0684</b>	<b>4.7979</b>	<b>0.1642</b>	<b>4.9620</b>	<b>1.2841</b>	<b>0.1601</b>	<b>1.4443</b>	<b>7,720.9370</b>	<b>7,720.9370</b>	<b>7,720.9370</b>	<b>0.3969</b>	<b>0.0288</b>	<b>7,739.4385</b>

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.54	12.28	17.38	19.57	22.81	9.41	22.43	22.81	9.09	21.50	0.00	17.95	17.95	17.60	0.00	17.94

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2019	6/28/2019	5	20	
2	Grading	Grading	6/29/2019	7/26/2019	5	20	
3	Building Construction	Building Construction	7/27/2019	6/12/2020	5	230	
4	Paving	Paving	6/13/2020	7/10/2020	5	20	
5	Architectural Coating	Architectural Coating	7/27/2019	6/12/2020	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 346,169; Non-Residential Outdoor: 115,390; Striped Parking Area: 5,410 (Architectural Coating – sqft)

OffRoad Equipment

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	222.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	114.00	45.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Winter

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2019**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Fugitive Dust					2.4003	0.0000	2.4003	0.3634	0.0000	0.3634			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
<b>Total</b>	<b>3.5134</b>	<b>35.7830</b>	<b>22.0600</b>	<b>0.0388</b>	<b>2.4003</b>	<b>1.7949</b>	<b>4.1952</b>	<b>0.3634</b>	<b>1.6697</b>	<b>2.0331</b>		<b>3,816.8994</b>	<b>3,816.8994</b>	<b>1.0618</b>		<b>3,843.4451</b>

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Winter

**3.2 Demolition - 2019**  
**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.1069	3.4451	0.7738	8.7200e-003	0.1941	0.0127	0.2068	0.0532	0.0122	0.0654		943.3331	943.3331	0.0686			945.0483
Vendor	0.0260	0.6953	0.2031	1.5300e-003	0.0384	4.5000e-003	0.0429	0.0111	4.3000e-003	0.0154		162.7663	162.7663	0.0114			163.0521
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		171.3196	171.3196	5.8900e-003			171.4670
<b>Total</b>	<b>0.2160</b>	<b>4.2014</b>	<b>1.6406</b>	<b>0.0120</b>	<b>0.4001</b>	<b>0.0187</b>	<b>0.4188</b>	<b>0.1087</b>	<b>0.0178</b>	<b>0.1265</b>		<b>1,277.4190</b>	<b>1,277.4190</b>	<b>0.0859</b>			<b>1,279.5674</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					0.9361	0.0000	0.9361	0.1417	0.0000	0.1417			0.0000				0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949	1.6697	1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618			3,843.4451
<b>Total</b>	<b>3.5134</b>	<b>35.7830</b>	<b>22.0600</b>	<b>0.0388</b>	<b>0.9361</b>	<b>1.7949</b>	<b>2.7310</b>	<b>0.1417</b>	<b>1.6697</b>	<b>1.8114</b>	<b>0.0000</b>	<b>3,816.8994</b>	<b>3,816.8994</b>	<b>1.0618</b>			<b>3,843.4451</b>

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**3.2 Demolition - 2019**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.1069	3.4451	0.7738	8.7200e-003	0.1941	0.0127	0.2068	0.0532	0.0122	0.0654		943.3331	943.3331	0.0686			945.0483
Vendor	0.0260	0.6953	0.2031	1.5300e-003	0.0384	4.5000e-003	0.0429	0.0111	4.3000e-003	0.0154		162.7663	162.7663	0.0114			163.0521
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458		171.3196	171.3196	5.8900e-003			171.4670
<b>Total</b>	<b>0.2160</b>	<b>4.2014</b>	<b>1.6406</b>	<b>0.0120</b>	<b>0.4001</b>	<b>0.0187</b>	<b>0.4188</b>	<b>0.1087</b>	<b>0.0178</b>	<b>0.1265</b>		<b>1,277.4190</b>	<b>1,277.4190</b>	<b>0.0859</b>			<b>1,279.5674</b>

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000				0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974	1.2856	1.2856	1.2856		2,936.8068	2,936.8068	0.9292			2,960.0361
<b>Total</b>	<b>2.5805</b>	<b>28.3480</b>	<b>16.2934</b>	<b>0.0297</b>	<b>6.5523</b>	<b>1.3974</b>	<b>7.9497</b>	<b>3.3675</b>	<b>1.2856</b>	<b>4.6531</b>		<b>2,936.8068</b>	<b>2,936.8068</b>	<b>0.9292</b>			<b>2,960.0361</b>

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**3.3 Grading - 2019**

**Unmitigated Construction Off-Site**

Category	lb/day										lb/day						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0260	0.6953	0.2031	1.5300e-003	0.0384	4.5000e-003	0.0429	0.0111	4.3000e-003	0.0154	162.7663	162.7663	162.7663	0.0114			163.0521
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458	171.3196	171.3196	171.3196	5.8900e-003			171.4670
<b>Total</b>	<b>0.1091</b>	<b>0.7563</b>	<b>0.8668</b>	<b>3.2500e-003</b>	<b>0.2061</b>	<b>5.9500e-003</b>	<b>0.2120</b>	<b>0.0555</b>	<b>5.6300e-003</b>	<b>0.0612</b>	<b>334.0859</b>	<b>334.0859</b>	<b>334.0859</b>	<b>0.0173</b>			<b>334.5191</b>

**Mitigated Construction On-Site**

Category	lb/day										lb/day						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000				0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974	1.2856	1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292			2,960.0361
<b>Total</b>	<b>2.5805</b>	<b>28.3480</b>	<b>16.2934</b>	<b>0.0297</b>	<b>2.5554</b>	<b>1.3974</b>	<b>3.9528</b>	<b>1.3133</b>	<b>1.2856</b>	<b>2.5989</b>	<b>0.0000</b>	<b>2,936.8068</b>	<b>2,936.8068</b>	<b>0.9292</b>			<b>2,960.0361</b>

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**3.3 Grading - 2019**

**Mitigated Construction Off-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0260	0.6953	0.2031	1.5300e-003	0.0384	4.5000e-003	0.0429	0.0111	4.3000e-003	0.0154	162.7663	162.7663	162.7663	0.0114			163.0521
Worker	0.0831	0.0610	0.6637	1.7200e-003	0.1677	1.4500e-003	0.1691	0.0445	1.3300e-003	0.0458	171.3196	171.3196	171.3196	5.8900e-003			171.4670
<b>Total</b>	<b>0.1091</b>	<b>0.7563</b>	<b>0.8668</b>	<b>3.2500e-003</b>	<b>0.2061</b>	<b>5.9500e-003</b>	<b>0.2120</b>	<b>0.0555</b>	<b>5.6300e-003</b>	<b>0.0612</b>	<b>334.0859</b>	<b>334.0859</b>	<b>334.0859</b>	<b>0.0173</b>			<b>334.5191</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899	1.2127	1.2127	1.2127	2,591,580 <sup>2</sup>	2,591,580 <sup>2</sup>	2,591,580 <sup>2</sup>	0.6313			2,607,363 <sup>5</sup>
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>	<b>1.2127</b>	<b>1.2127</b>	<b>1.2127</b>	<b>2,591,580<sup>2</sup></b>	<b>2,591,580<sup>2</sup></b>	<b>2,591,580<sup>2</sup></b>	<b>0.6313</b>			<b>2,607,363<sup>5</sup></b>

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**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1950	5.2148	1.5232	0.0115	0.2881	0.0338	0.3218	0.0829	0.0323	0.1152	1,220.747 0	1,220.747 0	1,220.747 0	0.0858		1,222.890 9	
Worker	0.6313	0.4635	5.0442	0.0131	1.2743	0.0110	1.2852	0.3379	0.0101	0.3481	1,302.029 1	1,302.029 1	1,302.029 1	0.0448		1,303.148 9	
<b>Total</b>	<b>0.8263</b>	<b>5.6783</b>	<b>6.5674</b>	<b>0.0245</b>	<b>1.5623</b>	<b>0.0447</b>	<b>1.6071</b>	<b>0.4209</b>	<b>0.0424</b>	<b>0.4633</b>	<b>2,522.776</b> <b>1</b>	<b>2,522.776</b> <b>1</b>	<b>2,522.776</b> <b>1</b>	<b>0.1306</b>		<b>2,526.039</b> <b>8</b>	

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899	1.2127	1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5	
<b>Total</b>	<b>2.3612</b>	<b>21.0788</b>	<b>17.1638</b>	<b>0.0269</b>		<b>1.2899</b>	<b>1.2899</b>	<b>1.2127</b>	<b>1.2127</b>	<b>1.2127</b>	<b>0.0000</b>	<b>2,591.580</b> <b>2</b>	<b>2,591.580</b> <b>2</b>	<b>0.6313</b>		<b>2,607.363</b> <b>5</b>	

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**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1950	5.2148	1.5232	0.0115	0.2881	0.0338	0.3218	0.0829	0.0323	0.1152	1,220.747	0	1,220.747	0.0858		1,222.890	9
Worker	0.6313	0.4635	5.0442	0.0131	1.2743	0.0110	1.2852	0.3379	0.0101	0.3481	1,302.029	1	1,302.029	0.0448		1,303.148	9
<b>Total</b>	<b>0.8263</b>	<b>5.6783</b>	<b>6.5674</b>	<b>0.0245</b>	<b>1.5623</b>	<b>0.0447</b>	<b>1.6071</b>	<b>0.4209</b>	<b>0.0424</b>	<b>0.4633</b>	<b>2,522.776</b>	<b>1</b>	<b>2,522.776</b>	<b>0.1306</b>		<b>2,526.039</b>	<b>8</b>

**3.4 Building Construction - 2020**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503			2,553.063	0.6229		2,568.634	5
<b>Total</b>	<b>2.1198</b>	<b>19.1860</b>	<b>16.8485</b>	<b>0.0269</b>		<b>1.1171</b>	<b>1.1171</b>		<b>1.0503</b>	<b>1.0503</b>			<b>2,553.063</b>	<b>0.6229</b>		<b>2,568.634</b>	<b>5</b>

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**3.4 Building Construction - 2020**

**Unmitigated Construction Off-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1673	4.7858	1.3632	0.0114	0.2881	0.0229	0.3110	0.0830	0.0219	0.1048	1,212.5208	1,212.5208	1,212.5208	0.0811		1,214.5478	
Worker	0.5826	0.4132	4.5715	0.0127	1.2743	0.0107	1.2849	0.3379	9.8100e-003	0.3478	1,262.4592	1,262.4592	1,262.4592	0.0398		1,263.4540	
<b>Total</b>	<b>0.7499</b>	<b>5.1990</b>	<b>5.9548</b>	<b>0.0240</b>	<b>1.5623</b>	<b>0.0335</b>	<b>1.5959</b>	<b>0.4209</b>	<b>0.0317</b>	<b>0.4526</b>	<b>2,474.9800</b>	<b>2,474.9800</b>	<b>2,474.9800</b>	<b>0.1209</b>		<b>2,478.0018</b>	

**Mitigated Construction On-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345	
<b>Total</b>	<b>2.1198</b>	<b>19.1860</b>	<b>16.8485</b>	<b>0.0269</b>		<b>1.1171</b>	<b>1.1171</b>	<b>1.0503</b>	<b>1.0503</b>	<b>1.0503</b>	<b>0.0000</b>	<b>2,553.0631</b>	<b>2,553.0631</b>	<b>0.6229</b>		<b>2,568.6345</b>	

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**3.4 Building Construction - 2020**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1673	4.7858	1.3632	0.0114	0.2881	0.0229	0.3110	0.0830	0.0219	0.1048	1,212.5208	1,212.5208	1,212.5208	0.0811		1,214.5478	
Worker	0.5826	0.4132	4.5715	0.0127	1.2743	0.0107	1.2849	0.3379	9.8100e-003	0.3478	1,262.4592	1,262.4592	1,262.4592	0.0398		1,263.4540	
<b>Total</b>	<b>0.7499</b>	<b>5.1990</b>	<b>5.9548</b>	<b>0.0240</b>	<b>1.5623</b>	<b>0.0335</b>	<b>1.5959</b>	<b>0.4209</b>	<b>0.0317</b>	<b>0.4526</b>	<b>2,474.9800</b>	<b>2,474.9800</b>	<b>2,474.9800</b>	<b>0.1209</b>		<b>2,478.0018</b>	

**3.5 Paving - 2020**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528	0.6926	0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841	
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000	
<b>Total</b>	<b>1.3566</b>	<b>14.0656</b>	<b>14.6521</b>	<b>0.0228</b>		<b>0.7528</b>	<b>0.7528</b>	<b>0.6926</b>	<b>0.6926</b>	<b>0.6926</b>		<b>2,207.7334</b>	<b>2,207.7334</b>	<b>0.7140</b>		<b>2,225.5841</b>	

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**3.5 Paving - 2020**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458	166.1131	166.1131	166.1131	5.2400e-003	166.2440	166.2440	166.2440
<b>Total</b>	<b>0.0767</b>	<b>0.0544</b>	<b>0.6015</b>	<b>1.6700e-003</b>	<b>0.1677</b>	<b>1.4000e-003</b>	<b>0.1691</b>	<b>0.0445</b>	<b>1.2900e-003</b>	<b>0.0458</b>	<b>166.1131</b>	<b>166.1131</b>	<b>166.1131</b>	<b>5.2400e-003</b>	<b>166.2440</b>	<b>166.2440</b>	<b>166.2440</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.3566	14.0656	14.6521	0.0228	0.7528	0.7528	0.7528	0.6926	0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140	2,225.5841	2,225.5841	2,225.5841
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.3566</b>	<b>14.0656</b>	<b>14.6521</b>	<b>0.0228</b>	<b>0.7528</b>	<b>0.7528</b>	<b>0.7528</b>	<b>0.6926</b>	<b>0.6926</b>	<b>0.6926</b>	<b>0.0000</b>	<b>2,207.7334</b>	<b>2,207.7334</b>	<b>0.7140</b>	<b>2,225.5841</b>	<b>2,225.5841</b>	<b>2,225.5841</b>

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**3.5 Paving - 2020**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0767	0.0544	0.6015	1.6700e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458	166.1131	166.1131	166.1131	5.2400e-003		166.2440
<b>Total</b>	<b>0.0767</b>	<b>0.0544</b>	<b>0.6015</b>	<b>1.6700e-003</b>	<b>0.1677</b>	<b>1.4000e-003</b>	<b>0.1691</b>	<b>0.0445</b>	<b>1.2900e-003</b>	<b>0.0458</b>	<b>166.1131</b>	<b>166.1131</b>	<b>166.1131</b>	<b>5.2400e-003</b>		<b>166.2440</b>

**3.6 Architectural Coating - 2019**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	9.4104					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288	0.1288	0.1288	0.1288	281.4481	281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>9.6769</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>281.4481</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

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**3.6 Architectural Coating - 2019**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Worker	0.1274	0.0935	1.0177	2.6400e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702	262.6901	262.6901	262.6901	9.0400e-003			262.9160
<b>Total</b>	<b>0.1274</b>	<b>0.0935</b>	<b>1.0177</b>	<b>2.6400e-003</b>	<b>0.2571</b>	<b>2.2200e-003</b>	<b>0.2593</b>	<b>0.0682</b>	<b>2.0400e-003</b>	<b>0.0702</b>	<b>262.6901</b>	<b>262.6901</b>	<b>262.6901</b>	<b>9.0400e-003</b>			<b>262.9160</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Archit. Coating	9.4104					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288	0.1288	0.1288	0.1288	0.0000	281.4481	281.4481	0.0238			282.0423
<b>Total</b>	<b>9.6769</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>			<b>282.0423</b>

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**3.6 Architectural Coating - 2019**  
**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Worker	0.1274	0.0935	1.0177	2.6400e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702	262.6901	262.6901	262.6901	9.0400e-003			262.9160
<b>Total</b>	<b>0.1274</b>	<b>0.0935</b>	<b>1.0177</b>	<b>2.6400e-003</b>	<b>0.2571</b>	<b>2.2200e-003</b>	<b>0.2593</b>	<b>0.0682</b>	<b>2.0400e-003</b>	<b>0.0702</b>	<b>262.6901</b>	<b>262.6901</b>	<b>262.6901</b>	<b>9.0400e-003</b>			<b>262.9160</b>

**3.6 Architectural Coating - 2020**  
**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Archit. Coating	9.4104					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000				0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109	0.1109	0.1109	0.1109	281.4481	281.4481	281.4481	0.0218			281.9928
<b>Total</b>	<b>9.6526</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>		<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>281.4481</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>			<b>281.9928</b>

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**3.6 Architectural Coating - 2020  
Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1175	0.0834	0.9223	2.5600e-003	0.2571	2.1500e-003	0.2592	0.0682	1.9800e-003	0.0702	254.7067	254.7067	8.0300e-003	254.9074		254.9074
<b>Total</b>	<b>0.1175</b>	<b>0.0834</b>	<b>0.9223</b>	<b>2.5600e-003</b>	<b>0.2571</b>	<b>2.1500e-003</b>	<b>0.2592</b>	<b>0.0682</b>	<b>1.9800e-003</b>	<b>0.0702</b>	<b>254.7067</b>	<b>254.7067</b>	<b>8.0300e-003</b>	<b>254.9074</b>		<b>254.9074</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	9.4104					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003	0.1109	0.1109	0.1109	0.1109	0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
<b>Total</b>	<b>9.6526</b>	<b>1.6838</b>	<b>1.8314</b>	<b>2.9700e-003</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.1109</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0218</b>		<b>281.9928</b>

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**3.6 Architectural Coating - 2020**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1175	0.0834	0.9223	2.5600e-003	0.2571	2.1500e-003	0.2592	0.0682	1.9800e-003	0.0702	254.7067	254.7067	254.7067	8.0300e-003		254.9074
<b>Total</b>	<b>0.1175</b>	<b>0.0834</b>	<b>0.9223</b>	<b>2.5600e-003</b>	<b>0.2571</b>	<b>2.1500e-003</b>	<b>0.2592</b>	<b>0.0682</b>	<b>1.9800e-003</b>	<b>0.0702</b>	<b>254.7067</b>	<b>254.7067</b>	<b>254.7067</b>	<b>8.0300e-003</b>		<b>254.9074</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

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Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	1.7024	7.8523	19.7223	0.0605	4.7979	0.0644	4.8623	1.2841	0.0604	1.3445	6,150,530	0	6,150,530	0.3663		6,159,888
Unmitigated	1.8858	9.1353	24.1211	0.0771	6.2160	0.0815	6.2975	1.6637	0.0764	1.7401	7,840,078	4	7,840,078	0.4511		7,851,356

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Junior College (2Yr)	926.90	338.52	32.24	2,159,668		1,666,957	
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
Recreational Swimming Pool	50.73	13.65	20.40	100,100		77,263	
Total	977.63	352.17	52.64	2,259,768		1,744,219	

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-O or C-C	H-S or C-C	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Other Non-Asphalt Surfaces	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Recreational Swimming Pool	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

### 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Category	lb/day										lb/day			CO2e		
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2		CH4	N2O
NaturalGas Mitigated	0.1439	1.3085	1.0992	7.8500e-003	0.0995	0.0995	0.0995	0.0995	0.0995	0.0995	1,570.2298	1,570.2298	0.0301	0.0288	0.0288	1,579.5609
NaturalGas Unmitigated	0.1439	1.3085	1.0992	7.8500e-003	0.0995	0.0995	0.0995	0.0995	0.0995	0.0995	1,570.2298	1,570.2298	0.0301	0.0288	0.0288	1,579.5609

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**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Junior College (2Yr)	13347	0.1439	1.3085	1.0992	7.8500e-003		0.0995	0.0995		0.0995	0.0995		1,570.2298	1,570.2298	0.0301	0.0288	1,579.5609
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1439</b>	<b>1.3085</b>	<b>1.0992</b>	<b>7.8500e-003</b>		<b>0.0995</b>	<b>0.0995</b>		<b>0.0995</b>	<b>0.0995</b>		<b>1,570.2298</b>	<b>1,570.2298</b>	<b>0.0301</b>	<b>0.0288</b>	<b>1,579.5609</b>

Mitigated

Land Use	Natural Gas Use kBTU/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Junior College (2Yr)	13.347	0.1439	1.3085	1.0992	7.8500e-003		0.0995	0.0995		0.0995	0.0995		1,570.2298	1,570.2298	0.0301	0.0288	1,579.5609
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1439</b>	<b>1.3085</b>	<b>1.0992</b>	<b>7.8500e-003</b>		<b>0.0995</b>	<b>0.0995</b>		<b>0.0995</b>	<b>0.0995</b>		<b>1,570.2298</b>	<b>1,570.2298</b>	<b>0.0301</b>	<b>0.0288</b>	<b>1,579.5609</b>

**6.0 Area Detail**

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**6.1 Mitigation Measures Area**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	5.2022	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004		0.1891
Unmitigated	5.2022	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004		0.1891

**6.2 Area by SubCategory**

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.5930					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.6014					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.8300e-003	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004		0.1891
<b>Total</b>	<b>5.2022</b>	<b>7.7000e-004</b>	<b>0.0832</b>	<b>1.0000e-005</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>0.1772</b>	<b>0.1772</b>	<b>0.1772</b>	<b>4.8000e-004</b>		<b>0.1891</b>

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**6.2 Area by SubCategory**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.5930				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	4.6014				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	7.8300e-003	7.7000e-004	0.0832	1.0000e-005	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	3.0000e-004	0.1772	0.1772	0.1772	4.8000e-004		0.1891
<b>Total</b>	<b>5.2022</b>	<b>7.7000e-004</b>	<b>0.0832</b>	<b>1.0000e-005</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>0.1772</b>	<b>0.1772</b>	<b>0.1772</b>	<b>4.8000e-004</b>		<b>0.1891</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**LBCC LAC Interim Year 2020**  
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**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	806.00	Student	2.18	179,898.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0
Recreational Swimming Pool	1.50	1000sqft	2.00	1,500.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2020

**Utility Company** Southern California Edison

<b>CO2 Intensity (lb/MW/hr)</b>	702.44	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2020 - Los Angeles-South Coast County, Annual

Project Characteristics - Interim Year 2020

Land Use - 806 student Junior College on 2.18 acres and 179,898 sq ft of building, 50,881 SF Recreational Swimming Pool, and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 48,768 SF of building space

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Mobile Commute Mitigation -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	230.00
tblConstructionPhase	PhaseEndDate	8/7/2020	6/12/2020
tblConstructionPhase	PhaseStartDate	7/11/2020	7/27/2019
tblLandUse	LandUseSquareFeet	35,183.70	179,898.00
tblLandUse	LotAcreage	0.81	2.18
tblLandUse	LotAcreage	0.03	2.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

2.0 Emissions Summary



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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2019	8-31-2019	1.2883	1.2883
2	9-1-2019	11-30-2019	1.3530	1.3530
3	12-1-2019	2-29-2020	1.2927	1.2927
4	3-1-2020	5-31-2020	1.2719	1.2719
5	6-1-2020	8-31-2020	0.3211	0.3211
		Highest	1.3530	1.3530

**2.2 Overall Operational**  
Unmitigated Operational

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.9490	1.0000e-004	0.0104	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0000	0.0201	0.0201	5.0000e-005	0.0000	0.0214
Energy	0.0263	0.2388	0.2006	1.4300e-003	0.0182	0.0182	0.0182	0.0182	0.0182	0.0182	0.0000	834.3091	834.3091	0.0287	9.6700e-003	837.9087
Mobile	0.2589	1.3098	3.4382	0.0110	0.8577	0.0114	0.8691	0.2299	0.0107	0.2406	0.0000	1,015.0462	1,015.0462	0.0574	0.0000	1,016.4801
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	31.5935	0.0000	31.5935	1.8671	0.0000	78.2716
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5756	17.2751	17.8507	0.0598	1.5400e-003	19.8066
<b>Total</b>	<b>1.2341</b>	<b>1.5487</b>	<b>3.6492</b>	<b>0.0124</b>	<b>0.8577</b>	<b>0.0296</b>	<b>0.8873</b>	<b>0.2299</b>	<b>0.0289</b>	<b>0.2588</b>	<b>32.1692</b>	<b>1,866.6504</b>	<b>1,898.8196</b>	<b>2.0131</b>	<b>0.0112</b>	<b>1,952.4884</b>

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**2.2 Overall Operational  
Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.9490	1.0000e-004	0.0104	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0000	0.0201	0.0201	5.0000e-005	0.0000	0.0214	
Energy	0.0263	0.2388	0.2006	1.4300e-003	0.0182	0.0182	0.0182	0.0182	0.0182	0.0182	0.0000	834.3091	834.3091	0.0287	9.6700e-003	837.9087	
Mobile	0.2328	1.1255	2.8028	8.6400e-003	0.6620	9.0200e-003	0.6710	0.1775	8.4500e-003	0.1859	0.0000	796.8389	796.8389	0.0465	0.0000	798.0006	
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	31.5935	0.0000	31.5935	1.8671	0.0000	78.2716	
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5756	17.2751	17.8507	0.0598	1.5400e-003	19.8066	
<b>Total</b>	<b>1.2081</b>	<b>1.3644</b>	<b>3.0138</b>	<b>0.0101</b>	<b>0.6620</b>	<b>0.0272</b>	<b>0.6892</b>	<b>0.1775</b>	<b>0.0266</b>	<b>0.2041</b>	<b>32.1692</b>	<b>1,648.443</b>	<b>1,680.612</b>	<b>2.0022</b>	<b>0.0112</b>	<b>1,734.009</b>	

Percent Reduction	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
2.11	11.90	17.41	19.05	22.81	8.11	22.32	22.82	7.79	21.13	0.00	11.69	11.49	0.54	0.00	11.19		

**3.0 Construction Detail**

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2019	6/28/2019	5	20	
2	Grading	Grading	6/29/2019	7/26/2019	5	20	
3	Building Construction	Building Construction	7/27/2019	6/12/2020	5	230	
4	Paving	Paving	6/13/2020	7/10/2020	5	20	
5	Architectural Coating	Architectural Coating	7/27/2019	6/12/2020	5	230	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 2.07**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 346,169; Non-Residential Outdoor: 115,390; Striped Parking Area: 5,410 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	222.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	114.00	45.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2019**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0240	0.0000	0.0240	3.6300e-003	0.0000	3.6300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8672
<b>Total</b>	<b>0.0351</b>	<b>0.3578</b>	<b>0.2206</b>	<b>3.9000e-004</b>	<b>0.0240</b>	<b>0.0180</b>	<b>0.0420</b>	<b>3.6300e-003</b>	<b>0.0167</b>	<b>0.0203</b>	<b>0.0000</b>	<b>34.6263</b>	<b>34.6263</b>	<b>9.6300e-003</b>	<b>0.0000</b>	<b>34.8672</b>

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**3.2 Demolition - 2019**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.0500e-003	0.0351	7.4600e-003	9.0000e-005	1.9100e-003	1.3000e-004	2.0300e-003	5.2000e-004	1.2000e-004	6.4000e-004	0.0000	8.6434	8.6434	6.1000e-004	0.0000	8.6587
Vendor	2.5000e-004	7.0900e-003	1.9400e-003	2.0000e-005	3.8000e-004	4.0000e-005	4.2000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	1.5004	1.5004	1.0000e-004	0.0000	1.5029
Worker	7.5000e-004	6.3000e-004	6.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5800	1.5800	5.0000e-005	0.0000	1.5814
<b>Total</b>	<b>2.0500e-003</b>	<b>0.0429</b>	<b>0.0162</b>	<b>1.3000e-004</b>	<b>3.9300e-003</b>	<b>1.8000e-004</b>	<b>4.1100e-003</b>	<b>1.0700e-003</b>	<b>1.7000e-004</b>	<b>1.2400e-003</b>	<b>0.0000</b>	<b>11.7238</b>	<b>11.7238</b>	<b>7.6000e-004</b>	<b>0.0000</b>	<b>11.7429</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					9.3600e-003	0.0000	9.3600e-003	1.4200e-003	0.0000	1.4200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3578	0.2206	3.9000e-004	0.0180	0.0180	0.0180	0.0167	0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8671
<b>Total</b>	<b>0.0351</b>	<b>0.3578</b>	<b>0.2206</b>	<b>3.9000e-004</b>	<b>9.3600e-003</b>	<b>0.0180</b>	<b>0.0273</b>	<b>0.0167</b>	<b>0.0167</b>	<b>0.0181</b>	<b>0.0000</b>	<b>34.6263</b>	<b>34.6263</b>	<b>9.6300e-003</b>	<b>0.0000</b>	<b>34.8671</b>

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**3.2 Demolition - 2019**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.0500e-003	0.0351	7.4600e-003	9.0000e-005	1.9100e-003	1.3000e-004	2.0300e-003	5.2000e-004	1.2000e-004	6.4000e-004	0.0000	8.6434	8.6434	6.1000e-004	0.0000	8.6587
Vendor	2.5000e-004	7.0900e-003	1.9400e-003	2.0000e-005	3.8000e-004	4.0000e-005	4.2000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	1.5004	1.5004	1.0000e-004	0.0000	1.5029
Worker	7.5000e-004	6.3000e-004	6.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5800	1.5800	5.0000e-005	0.0000	1.5814
<b>Total</b>	<b>2.0500e-003</b>	<b>0.0429</b>	<b>0.0162</b>	<b>1.3000e-004</b>	<b>3.9300e-003</b>	<b>1.8000e-004</b>	<b>4.1100e-003</b>	<b>1.0700e-003</b>	<b>1.7000e-004</b>	<b>1.2400e-003</b>	<b>0.0000</b>	<b>11.7238</b>	<b>11.7238</b>	<b>7.6000e-004</b>	<b>0.0000</b>	<b>11.7429</b>

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0258	0.2835	0.1629	3.0000e-004		0.0140	0.0140	0.0129	0.0129	0.0129	0.0000	26.6423	26.6423	8.4300e-003	0.0000	26.8530
<b>Total</b>	<b>0.0258</b>	<b>0.2835</b>	<b>0.1629</b>	<b>3.0000e-004</b>	<b>0.0655</b>	<b>0.0140</b>	<b>0.0795</b>	<b>0.0337</b>	<b>0.0129</b>	<b>0.0465</b>	<b>0.0000</b>	<b>26.6423</b>	<b>26.6423</b>	<b>8.4300e-003</b>	<b>0.0000</b>	<b>26.8530</b>

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**3.3 Grading - 2019**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	7.0900e-003	1.9400e-003	2.0000e-005	3.8000e-004	4.0000e-005	4.2000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	1.5004	1.5004	1.0000e-004	0.0000	1.5029
Worker	7.5000e-004	6.3000e-004	6.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5800	1.5800	5.0000e-005	0.0000	1.5814
<b>Total</b>	<b>1.0000e-003</b>	<b>7.7200e-003</b>	<b>8.7500e-003</b>	<b>4.0000e-005</b>	<b>2.0200e-003</b>	<b>5.0000e-005</b>	<b>2.0800e-003</b>	<b>5.5000e-004</b>	<b>5.0000e-005</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>3.0804</b>	<b>3.0804</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>3.0843</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0256	0.0000	0.0256	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0258	0.2835	0.1629	3.0000e-004		0.0140	0.0140	0.0129	0.0129	0.0129	0.0000	26.6422	26.6422	8.4300e-003	0.0000	26.8530
<b>Total</b>	<b>0.0258</b>	<b>0.2835</b>	<b>0.1629</b>	<b>3.0000e-004</b>	<b>0.0256</b>	<b>0.0140</b>	<b>0.0395</b>	<b>0.0131</b>	<b>0.0129</b>	<b>0.0260</b>	<b>0.0000</b>	<b>26.6422</b>	<b>26.6422</b>	<b>8.4300e-003</b>	<b>0.0000</b>	<b>26.8530</b>

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**3.3 Grading - 2019**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5000e-004	7.0900e-003	1.9400e-003	2.0000e-005	3.8000e-004	4.0000e-005	4.2000e-004	1.1000e-004	4.0000e-005	1.5000e-004	0.0000	1.5004	1.5004	1.0000e-004	0.0000	1.5029
Worker	7.5000e-004	6.3000e-004	6.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5800	1.5800	5.0000e-005	0.0000	1.5814
<b>Total</b>	<b>1.0000e-003</b>	<b>7.7200e-003</b>	<b>8.7500e-003</b>	<b>4.0000e-005</b>	<b>2.0200e-003</b>	<b>5.0000e-005</b>	<b>2.0800e-003</b>	<b>5.5000e-004</b>	<b>5.0000e-005</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>3.0804</b>	<b>3.0804</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>3.0843</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1322	1.1804	0.9612	1.5100e-003		0.0722	0.0722		0.0679	0.0679	0.0000	131.6584	131.6584	0.0321	0.0000	132.4602
<b>Total</b>	<b>0.1322</b>	<b>1.1804</b>	<b>0.9612</b>	<b>1.5100e-003</b>		<b>0.0722</b>	<b>0.0722</b>		<b>0.0679</b>	<b>0.0679</b>	<b>0.0000</b>	<b>131.6584</b>	<b>131.6584</b>	<b>0.0321</b>	<b>0.0000</b>	<b>132.4602</b>

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**3.4 Building Construction - 2019**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0107	0.2977	0.0814	6.5000e-004	0.0159	1.8700e-003	0.0178	4.5800e-003	1.7900e-003	6.3700e-003	0.0000	63.0163	63.0163	4.2100e-003	0.0000	63.1214
Worker	0.0320	0.0267	0.2898	7.4000e-004	0.0700	6.2000e-004	0.0706	0.0186	5.7000e-004	0.0192	0.0000	67.2463	67.2463	2.3100e-003	0.0000	67.3041
<b>Total</b>	<b>0.0427</b>	<b>0.3243</b>	<b>0.3712</b>	<b>1.3900e-003</b>	<b>0.0858</b>	<b>2.4900e-003</b>	<b>0.0883</b>	<b>0.0232</b>	<b>2.3600e-003</b>	<b>0.0255</b>	<b>0.0000</b>	<b>130.2626</b>	<b>130.2626</b>	<b>6.5200e-003</b>	<b>0.0000</b>	<b>130.4256</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1322	1.1804	0.9612	1.5100e-003		0.0722	0.0722		0.0679	0.0679	0.0000	131.6582	131.6582	0.0321	0.0000	132.4600
<b>Total</b>	<b>0.1322</b>	<b>1.1804</b>	<b>0.9612</b>	<b>1.5100e-003</b>		<b>0.0722</b>	<b>0.0722</b>		<b>0.0679</b>	<b>0.0679</b>	<b>0.0000</b>	<b>131.6582</b>	<b>131.6582</b>	<b>0.0321</b>	<b>0.0000</b>	<b>132.4600</b>

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**3.4 Building Construction - 2019**  
**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0107	0.2977	0.0814	6.5000e-004	0.0159	1.8700e-003	0.0178	4.5800e-003	1.7900e-003	6.3700e-003	0.0000	63.0163	63.0163	4.2100e-003	0.0000	63.1214
Worker	0.0320	0.0267	0.2898	7.4000e-004	0.0700	6.2000e-004	0.0706	0.0186	5.7000e-004	0.0192	0.0000	67.2463	67.2463	2.3100e-003	0.0000	67.3041
<b>Total</b>	<b>0.0427</b>	<b>0.3243</b>	<b>0.3712</b>	<b>1.3900e-003</b>	<b>0.0858</b>	<b>2.4900e-003</b>	<b>0.0883</b>	<b>0.0232</b>	<b>2.3600e-003</b>	<b>0.0255</b>	<b>0.0000</b>	<b>130.2626</b>	<b>130.2626</b>	<b>6.5200e-003</b>	<b>0.0000</b>	<b>130.4256</b>

**3.4 Building Construction - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1251	1.1320	0.9941	1.5900e-003		0.0659	0.0659		0.0620	0.0620	0.0000	136.6499	136.6499	0.0333	0.0000	137.4833
<b>Total</b>	<b>0.1251</b>	<b>1.1320</b>	<b>0.9941</b>	<b>1.5900e-003</b>		<b>0.0659</b>	<b>0.0659</b>		<b>0.0620</b>	<b>0.0620</b>	<b>0.0000</b>	<b>136.6499</b>	<b>136.6499</b>	<b>0.0333</b>	<b>0.0000</b>	<b>137.4833</b>

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**3.4 Building Construction - 2020**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6300e-003	0.2877	0.0779	6.8000e-004	0.0167	1.3400e-003	0.0181	4.8300e-003	1.2800e-003	6.1100e-003	0.0000	65.9572	65.9572	4.1900e-003	0.0000	66.0619
Worker	0.0311	0.0250	0.2769	7.6000e-004	0.0737	6.3000e-004	0.0743	0.0196	5.8000e-004	0.0202	0.0000	68.6960	68.6960	2.1600e-003	0.0000	68.7502
<b>Total</b>	<b>0.0407</b>	<b>0.3128</b>	<b>0.3547</b>	<b>1.4400e-003</b>	<b>0.0904</b>	<b>1.9700e-003</b>	<b>0.0924</b>	<b>0.0244</b>	<b>1.8600e-003</b>	<b>0.0263</b>	<b>0.0000</b>	<b>134.6532</b>	<b>134.6532</b>	<b>6.3500e-003</b>	<b>0.0000</b>	<b>134.8121</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1251	1.1320	0.9941	1.5900e-003		0.0659	0.0659		0.0620	0.0620	0.0000	136.6497	136.6497	0.0333	0.0000	137.4832
<b>Total</b>	<b>0.1251</b>	<b>1.1320</b>	<b>0.9941</b>	<b>1.5900e-003</b>		<b>0.0659</b>	<b>0.0659</b>		<b>0.0620</b>	<b>0.0620</b>	<b>0.0000</b>	<b>136.6497</b>	<b>136.6497</b>	<b>0.0333</b>	<b>0.0000</b>	<b>137.4832</b>

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**3.4 Building Construction - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6300e-003	0.2877	0.0779	6.8000e-004	0.0167	1.3400e-003	0.0181	4.8300e-003	1.2800e-003	6.1100e-003	0.0000	65.9572	65.9572	4.1900e-003	0.0000	66.0619
Worker	0.0311	0.0250	0.2769	7.6000e-004	0.0737	6.3000e-004	0.0743	0.0196	5.8000e-004	0.0202	0.0000	68.6960	68.6960	2.1600e-003	0.0000	68.7502
<b>Total</b>	<b>0.0407</b>	<b>0.3128</b>	<b>0.3547</b>	<b>1.4400e-003</b>	<b>0.0904</b>	<b>1.9700e-003</b>	<b>0.0924</b>	<b>0.0244</b>	<b>1.8600e-003</b>	<b>0.0263</b>	<b>0.0000</b>	<b>134.6532</b>	<b>134.6532</b>	<b>6.3500e-003</b>	<b>0.0000</b>	<b>134.8121</b>

**3.5 Paving - 2020**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1902
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0136</b>	<b>0.1407</b>	<b>0.1465</b>	<b>2.3000e-004</b>		<b>7.5300e-003</b>	<b>7.5300e-003</b>		<b>6.9300e-003</b>	<b>6.9300e-003</b>	<b>0.0000</b>	<b>20.0282</b>	<b>20.0282</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.1902</b>

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**3.5 Paving - 2020**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.6000e-004	6.1700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5320	1.5320	5.0000e-005	0.0000	1.5332
<b>Total</b>	<b>6.9000e-004</b>	<b>5.6000e-004</b>	<b>6.1700e-003</b>	<b>2.0000e-005</b>	<b>1.6400e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.5320</b>	<b>1.5320</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.5332</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0136	0.1407	0.1465	2.3000e-004	7.5300e-003	7.5300e-003	7.5300e-003	6.9300e-003	6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1901
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0136</b>	<b>0.1407</b>	<b>0.1465</b>	<b>2.3000e-004</b>	<b>7.5300e-003</b>	<b>7.5300e-003</b>	<b>7.5300e-003</b>	<b>6.9300e-003</b>	<b>6.9300e-003</b>	<b>6.9300e-003</b>	<b>0.0000</b>	<b>20.0282</b>	<b>20.0282</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.1901</b>

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**3.5 Paving - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.6000e-004	6.1700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5320	1.5320	5.0000e-005	0.0000	1.5332
<b>Total</b>	<b>6.9000e-004</b>	<b>5.6000e-004</b>	<b>6.1700e-003</b>	<b>2.0000e-005</b>	<b>1.6400e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.5320</b>	<b>1.5320</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.5332</b>

**3.6 Architectural Coating - 2019**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.5270					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1028	0.1031	1.7000e-004	7.2100e-003	7.2100e-003	7.2100e-003	7.2100e-003	7.2100e-003	7.2100e-003	0.0000	14.2982	14.2982	1.2100e-003	0.0000	14.3284
<b>Total</b>	<b>0.5419</b>	<b>0.1028</b>	<b>0.1031</b>	<b>1.7000e-004</b>	<b>7.2100e-003</b>	<b>7.2100e-003</b>	<b>7.2100e-003</b>	<b>7.2100e-003</b>	<b>7.2100e-003</b>	<b>7.2100e-003</b>	<b>0.0000</b>	<b>14.2982</b>	<b>14.2982</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>14.3284</b>

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**3.6 Architectural Coating - 2019**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4500e-003	5.3800e-003	0.0585	1.5000e-004	0.0141	1.2000e-004	0.0142	3.7500e-003	1.1000e-004	3.8600e-003	0.0000	13.5672	13.5672	4.7000e-004	0.0000	13.5789
<b>Total</b>	<b>6.4500e-003</b>	<b>5.3800e-003</b>	<b>0.0585</b>	<b>1.5000e-004</b>	<b>0.0141</b>	<b>1.2000e-004</b>	<b>0.0142</b>	<b>3.7500e-003</b>	<b>1.1000e-004</b>	<b>3.8600e-003</b>	<b>0.0000</b>	<b>13.5672</b>	<b>13.5672</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>13.5789</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.5270					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1028	0.1031	1.7000e-004		7.2100e-003	7.2100e-003	7.2100e-003	7.2100e-003	7.2100e-003	0.0000	14.2982	14.2982	1.2100e-003	0.0000	14.3284
<b>Total</b>	<b>0.5419</b>	<b>0.1028</b>	<b>0.1031</b>	<b>1.7000e-004</b>		<b>7.2100e-003</b>	<b>7.2100e-003</b>	<b>7.2100e-003</b>	<b>7.2100e-003</b>	<b>7.2100e-003</b>	<b>0.0000</b>	<b>14.2982</b>	<b>14.2982</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>14.3284</b>

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**3.6 Architectural Coating - 2019**  
**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4500e-003	5.3800e-003	0.0585	1.5000e-004	0.0141	1.2000e-004	0.0142	3.7500e-003	1.1000e-004	3.8600e-003	0.0000	13.5672	13.5672	4.7000e-004	0.0000	13.5789
<b>Total</b>	<b>6.4500e-003</b>	<b>5.3800e-003</b>	<b>0.0585</b>	<b>1.5000e-004</b>	<b>0.0141</b>	<b>1.2000e-004</b>	<b>0.0142</b>	<b>3.7500e-003</b>	<b>1.1000e-004</b>	<b>3.8600e-003</b>	<b>0.0000</b>	<b>13.5672</b>	<b>13.5672</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>13.5789</b>

**3.6 Architectural Coating - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.5552					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0143	0.0994	0.1081	1.8000e-004		6.5500e-003	6.5500e-003	6.5500e-003	6.5500e-003	6.5500e-003	0.0000	15.0642	15.0642	1.1700e-003	0.0000	15.0934
<b>Total</b>	<b>0.5695</b>	<b>0.0994</b>	<b>0.1081</b>	<b>1.8000e-004</b>		<b>6.5500e-003</b>	<b>6.5500e-003</b>	<b>6.5500e-003</b>	<b>6.5500e-003</b>	<b>6.5500e-003</b>	<b>0.0000</b>	<b>15.0642</b>	<b>15.0642</b>	<b>1.1700e-003</b>	<b>0.0000</b>	<b>15.0934</b>

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**3.6 Architectural Coating - 2020**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2600e-003	5.0500e-003	0.0559	1.5000e-004	0.0149	1.3000e-004	0.0150	3.9500e-003	1.2000e-004	4.0700e-003	0.0000	13.8597	13.8597	4.4000e-004	0.0000	13.8707
<b>Total</b>	<b>6.2600e-003</b>	<b>5.0500e-003</b>	<b>0.0559</b>	<b>1.5000e-004</b>	<b>0.0149</b>	<b>1.3000e-004</b>	<b>0.0150</b>	<b>3.9500e-003</b>	<b>1.2000e-004</b>	<b>4.0700e-003</b>	<b>0.0000</b>	<b>13.8597</b>	<b>13.8597</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>13.8707</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.5552					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0143	0.0994	0.1081	1.8000e-004		6.5500e-003	6.5500e-003	6.5500e-003	6.5500e-003	6.5500e-003	0.0000	15.0642	15.0642	1.1700e-003	0.0000	15.0933
<b>Total</b>	<b>0.5695</b>	<b>0.0994</b>	<b>0.1081</b>	<b>1.8000e-004</b>		<b>6.5500e-003</b>	<b>6.5500e-003</b>	<b>6.5500e-003</b>	<b>6.5500e-003</b>	<b>6.5500e-003</b>	<b>0.0000</b>	<b>15.0642</b>	<b>15.0642</b>	<b>1.1700e-003</b>	<b>0.0000</b>	<b>15.0933</b>

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**3.6 Architectural Coating - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2600e-003	5.0500e-003	0.0559	1.5000e-004	0.0149	1.3000e-004	0.0150	3.9500e-003	1.2000e-004	4.0700e-003	0.0000	13.8597	13.8597	4.4000e-004	0.0000	0.0000	13.8707
<b>Total</b>	<b>6.2600e-003</b>	<b>5.0500e-003</b>	<b>0.0559</b>	<b>1.5000e-004</b>	<b>0.0149</b>	<b>1.3000e-004</b>	<b>0.0150</b>	<b>3.9500e-003</b>	<b>1.2000e-004</b>	<b>4.0700e-003</b>	<b>0.0000</b>	<b>13.8597</b>	<b>13.8597</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>13.8707</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

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Category	tons/yr													CO2e		
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2		CH4	N2O
Mitigated	0.2328	1.1255	2.8028	8.6400e-003	0.6620	9.0200e-003	0.6710	0.1775	8.4500e-003	0.1859	0.0000	796.8389	796.8389	0.0465	0.0000	798.0006
Unmitigated	0.2589	1.3098	3.4382	0.0110	0.8577	0.0114	0.8691	0.2299	0.0107	0.2406	0.0000	1,015.046	1,015.046	0.0574	0.0000	1,016.480
												2	2			1

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT		
Junior College (2Yr)	926.90	338.52	32.24	2,159,668	1,666,957		
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
Recreational Swimming Pool	50.73	13.65	20.40	100,100	77,263		
Total	977.63	352.17	52.64	2,259,768	1,744,219		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-O or C-C	H-S or C-C	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Other Non-Asphalt Surfaces	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Recreational Swimming Pool	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	574.3400	574.3400	0.0237	4.9100e-003	576.3947
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	574.3400	574.3400	0.0237	4.9100e-003	576.3947
Natural Gas Mitigated	0.0263	0.2388	0.2006	1.4300e-003		0.0182	0.0182		0.0182	0.0182	0.0000	259.9692	259.9692	4.9800e-003	4.7700e-003	261.5140
Natural Gas Unmitigated	0.0263	0.2388	0.2006	1.4300e-003		0.0182	0.0182		0.0182	0.0182	0.0000	259.9692	259.9692	4.9800e-003	4.7700e-003	261.5140

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**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	tons/yr										MT/yr					CO <sub>2</sub> e				
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O					
Junior College (2Yr)	4.87164e+006	0.0263	0.2388	0.2006	1.4300e-003		0.0182	0.0182		0.0182		0.0182		0.0182		0.0000	259.9692	4.9800e-003	4.7700e-003	261.5140	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0263</b>	<b>0.2388</b>	<b>0.2006</b>	<b>1.4300e-003</b>		<b>0.0182</b>	<b>0.0182</b>		<b>0.0182</b>		<b>0.0182</b>		<b>0.0182</b>		<b>0.0000</b>	<b>259.9692</b>	<b>4.9800e-003</b>	<b>4.7700e-003</b>	<b>261.5140</b>	

Mitigated

Land Use	Natural Gas Use kBTU/yr	tons/yr										MT/yr					CO <sub>2</sub> e				
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O					
Junior College (2Yr)	4.87164e+006	0.0263	0.2388	0.2006	1.4300e-003		0.0182	0.0182		0.0182		0.0182		0.0182		0.0000	259.9692	4.9800e-003	4.7700e-003	261.5140	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0263</b>	<b>0.2388</b>	<b>0.2006</b>	<b>1.4300e-003</b>		<b>0.0182</b>	<b>0.0182</b>		<b>0.0182</b>		<b>0.0182</b>		<b>0.0182</b>		<b>0.0000</b>	<b>259.9692</b>	<b>4.9800e-003</b>	<b>4.7700e-003</b>	<b>261.5140</b>	



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**6.1 Mitigation Measures Area**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	0.9490	1.0000e-004	0.0104	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0000	0.0201	0.0201	5.0000e-005	0.0000	0.0214
Unmitigated	0.9490	1.0000e-004	0.0104	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0000	0.0201	0.0201	5.0000e-005	0.0000	0.0214

**6.2 Area by SubCategory**

Unmitigated

SubCategory	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.1082				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8398				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.8000e-004	1.0000e-004	0.0104	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0000	0.0201	0.0201	5.0000e-005	0.0000	0.0214
<b>Total</b>	<b>0.9490</b>	<b>1.0000e-004</b>	<b>0.0104</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.0201</b>	<b>0.0201</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.0214</b>

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**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.1082					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8398					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.8000e-004	1.0000e-004	0.0104	0.0000	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	4.0000e-005	0.0000	0.0201	0.0201	5.0000e-005	0.0000	0.0214
<b>Total</b>	<b>0.9490</b>	<b>1.0000e-004</b>	<b>0.0104</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.0201</b>	<b>0.0201</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.0214</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	17.8507	0.0598	1.5400e-003	19.8066
Unmitigated	17.8507	0.0598	1.5400e-003	19.8066

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	1.72573 / 2.69921	17.2620	0.0569	1.4700e-003	19.1233
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0887147 / 0.0543735	0.5887	2.9100e-003	7.0000e-005	0.6833
<b>Total</b>		<b>17.8507</b>	<b>0.0598</b>	<b>1.5400e-003</b>	<b>19.8066</b>

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**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Junior College (2Yr)	1.72573 / 2.69921	17.2620	0.0569	1.4700e-003	19.1233
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0887147 / 0.0543735	0.5887	2.9100e-003	7.0000e-005	0.6833
<b>Total</b>		<b>17.8507</b>	<b>0.0598</b>	<b>1.5400e-003</b>	<b>19.8066</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

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**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	31.5935	1.8671	0.0000	78.2716
Unmitigated	31.5935	1.8671	0.0000	78.2716

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	147.09	29.8579	1.7646	0.0000	73.9718
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	8.55	1.7356	0.1026	0.0000	4.2998
<b>Total</b>		<b>31.5935</b>	<b>1.8671</b>	<b>0.0000</b>	<b>78.2716</b>

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**8.2 Waste by Land Use**

Mitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	147.09	29.8579	1.7646	0.0000	73.9718
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	8.55	1.7356	0.1026	0.0000	4.2998
<b>Total</b>		<b>31.5935</b>	<b>1.8671</b>	<b>0.0000</b>	<b>78.2716</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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## **11.0 Vegetation**

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APPENDIX C

CalEEMod Model Interim Year 2025 Printouts

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**LBCC LAC Interim Year 2025 (2021-2025 Construction)**  
Los Angeles-South Coast County, Summer

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	2,211.00	Student	1.23	101,578.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

Urbanization Urban Wind Speed (m/s) 2.2 Precipitation Freq (Days) 33  
 Climate Zone 9 Operational Year 2025

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr) 702.44 CH4 Intensity (lb/MW/hr) 0.029 N2O Intensity (lb/MW/hr) 0.006

**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

Project Characteristics - Interim Year 2025

Land Use - 2,211 student Junior College on 1.23 acres and 101,578 sq ft of building and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 50276 SF of building space

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Mobile Commute Mitigation -

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	8.00	20.00
tblConstructionPhase	NumDays	18.00	230.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	PhaseEndDate	7/8/2021	7/26/2021
tblConstructionPhase	PhaseEndDate	5/26/2022	6/13/2022
tblConstructionPhase	PhaseEndDate	7/15/2022	6/13/2022
tblConstructionPhase	PhaseEndDate	6/21/2022	7/11/2022
tblConstructionPhase	PhaseStartDate	7/9/2021	7/27/2021
tblConstructionPhase	PhaseStartDate	6/22/2022	7/27/2021
tblConstructionPhase	PhaseStartDate	5/27/2022	6/14/2022
tblLandUse	LandUseSquareFeet	96,515.10	101,578.00
tblLandUse	LotAcreage	2.22	1.23
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

**2.0 Emissions Summary**



LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	2.3288	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003	0.0163	0.5158
Energy	0.0813	0.7389	0.6206	4.4300e-003	0.0562	0.0562	0.0562	0.0562	0.0562	0.0562	886.6180	886.6180	886.6180	0.0170	0.0163	891.8867
Mobile	3.5780	15.4004	45.9714	0.1850	16.3268	0.1367	16.4634	4.3684	0.1269	4.4953	18.879.64	78	18,879.64	0.8600	18,901.14	69
<b>Total</b>	<b>5.9881</b>	<b>16.1412</b>	<b>46.8174</b>	<b>0.1895</b>	<b>16.3268</b>	<b>0.1936</b>	<b>16.5204</b>	<b>4.3684</b>	<b>0.1839</b>	<b>4.5522</b>	<b>19,766.75</b>	<b>01</b>	<b>19,766.75</b>	<b>0.8762</b>	<b>0.0163</b>	<b>19,793.54</b>
lb/day																

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	2.3288	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003	0.0163	0.5158
Energy	0.0813	0.7389	0.6206	4.4300e-003	0.0562	0.0562	0.0562	0.0562	0.0562	0.0562	886.6180	886.6180	886.6180	0.0170	0.0163	891.8867
Mobile	3.2284	13.7082	37.0383	0.1454	12.6020	0.1086	12.7105	3.3718	0.1008	3.4726	14,843.18	44	14,843.18	0.6926	14,860.49	85
<b>Total</b>	<b>5.6385</b>	<b>14.4491</b>	<b>37.8843</b>	<b>0.1498</b>	<b>12.6020</b>	<b>0.1655</b>	<b>12.7675</b>	<b>3.3718</b>	<b>0.1578</b>	<b>3.5295</b>	<b>15,730.28</b>	<b>67</b>	<b>15,730.28</b>	<b>0.7108</b>	<b>0.0163</b>	<b>15,752.90</b>
lb/day																

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	5.84	10.48	19.08	20.92	22.81	14.50	22.72	22.81	14.19	22.47	0.00	20.42	20.42	19.06	0.00	20.41

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2021	6/28/2021	5	20	
2	Grading	Grading	6/29/2021	7/26/2021	5	20	
3	Building Construction	Building Construction	7/27/2021	6/13/2022	5	230	
4	Paving	Paving	6/14/2022	7/11/2022	5	20	
5	Architectural Coating	Architectural Coating	7/27/2021	6/13/2022	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 152,367; Non-Residential Outdoor: 50,789; Striped Parking Area: 5,410 (Architectural Coating – sqft)

#### OffRoad Equipment

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	229.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2021**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.4745	0.0000	2.4745	0.3747	0.0000	0.3747			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513	1.4411	1.4411	1.4411		3,747.944 <sub>9</sub>	3,747.944 <sub>9</sub>	1.0549		3,774.317 <sub>4</sub>
<b>Total</b>	<b>3.1651</b>	<b>31.4407</b>	<b>21.5650</b>	<b>0.0388</b>	<b>2.4745</b>	<b>1.5513</b>	<b>4.0258</b>	<b>0.3747</b>	<b>1.4411</b>	<b>1.8158</b>		<b>3,747.944<sub>9</sub></b>	<b>3,747.944<sub>9</sub></b>	<b>1.0549</b>		<b>3,774.317<sub>4</sub></b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2021**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0955	3.0714	0.7202	8.9300e-003	0.2002	9.4300e-003	0.2096	0.0549	9.0200e-003	0.0639		969.1810	969.1810	0.0658			970.8253
Vendor	0.0182	0.5825	0.1523	1.5400e-003	0.0384	1.1900e-003	0.0396	0.0111	1.1400e-003	0.0122		164.9284	164.9284	9.7200e-003			166.1713
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003			170.9413
<b>Total</b>	<b>0.1780</b>	<b>3.6981</b>	<b>1.4766</b>	<b>0.0122</b>	<b>0.4063</b>	<b>0.0120</b>	<b>0.4183</b>	<b>0.1104</b>	<b>0.0114</b>	<b>0.1218</b>		<b>1,304.9248</b>	<b>1,304.9248</b>	<b>0.0805</b>			<b>1,306.9379</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					0.9650	0.0000	0.9650	0.1461	0.0000	0.1461			0.0000				0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513	1.4411	1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549			3,774.3174
<b>Total</b>	<b>3.1651</b>	<b>31.4407</b>	<b>21.5650</b>	<b>0.0388</b>	<b>0.9650</b>	<b>1.5513</b>	<b>2.5164</b>	<b>0.1461</b>	<b>1.4411</b>	<b>1.5872</b>	<b>0.0000</b>	<b>3,747.9449</b>	<b>3,747.9449</b>	<b>1.0549</b>			<b>3,774.3174</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2021**

**Mitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0955	3.0714	0.7202	8.9300e-003	0.2002	9.4300e-003	0.2096	0.0549	9.0200e-003	0.0639		969.1810	969.1810	0.0658		970.8253
Vendor	0.0182	0.5825	0.1523	1.5400e-003	0.0384	1.1900e-003	0.0396	0.0111	1.1400e-003	0.0122		164.9284	164.9284	9.7200e-003		166.1713
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
<b>Total</b>	<b>0.1780</b>	<b>3.6981</b>	<b>1.4766</b>	<b>0.0122</b>	<b>0.4063</b>	<b>0.0120</b>	<b>0.4183</b>	<b>0.1104</b>	<b>0.0114</b>	<b>0.1218</b>		<b>1,304.9248</b>	<b>1,304.9248</b>	<b>0.0805</b>		<b>1,306.9379</b>

**3.3 Grading - 2021**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599	1.0671		1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
<b>Total</b>	<b>2.2903</b>	<b>24.7367</b>	<b>15.8575</b>	<b>0.0296</b>	<b>6.5523</b>	<b>1.1599</b>	<b>7.7123</b>	<b>3.3675</b>	<b>1.0671</b>	<b>4.4346</b>		<b>2,871.9285</b>	<b>2,871.9285</b>	<b>0.9288</b>		<b>2,895.1495</b>

LBC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.3 Grading - 2021**

**Unmitigated Construction Off-Site**

Category	lb/day										lb/day						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0182	0.5825	0.1523	1.5400e-003	0.0384	1.1900e-003	0.0396	0.0111	1.1400e-003	0.0122	164.9284	164.9284	164.9284	9.7200e-003			166.1713
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457	170.8155	170.8155	170.8155	5.0300e-003			170.9413
<b>Total</b>	<b>0.0825</b>	<b>0.6267</b>	<b>0.7565</b>	<b>3.2500e-003</b>	<b>0.2061</b>	<b>2.5400e-003</b>	<b>0.2086</b>	<b>0.0555</b>	<b>2.3900e-003</b>	<b>0.0579</b>	<b>335.7439</b>	<b>335.7439</b>	<b>335.7439</b>	<b>0.0148</b>			<b>336.1126</b>

**Mitigated Construction On-Site**

Category	lb/day										lb/day						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000				0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599	1.0671	1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288			2,895.1495
<b>Total</b>	<b>2.2903</b>	<b>24.7367</b>	<b>15.8575</b>	<b>0.0296</b>	<b>2.5554</b>	<b>1.1599</b>	<b>3.7153</b>	<b>1.3133</b>	<b>1.0671</b>	<b>2.3804</b>	<b>0.0000</b>	<b>2,871.9285</b>	<b>2,871.9285</b>	<b>0.9288</b>			<b>2,895.1495</b>

LBCCLAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.3 Grading - 2021**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0182	0.5825	0.1523	1.5400e-003	0.0384	1.1900e-003	0.0396	0.0111	1.1400e-003	0.0122	164.9284	164.9284	164.9284	9.7200e-003		166.1713	
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457	170.8155	170.8155	170.8155	5.0300e-003		170.9413	
<b>Total</b>	<b>0.0825</b>	<b>0.6267</b>	<b>0.7565</b>	<b>3.2500e-003</b>	<b>0.2061</b>	<b>2.5400e-003</b>	<b>0.2086</b>	<b>0.0555</b>	<b>2.3900e-003</b>	<b>0.0579</b>	<b>335.7439</b>	<b>335.7439</b>	<b>335.7439</b>	<b>0.0148</b>		<b>336.1126</b>	

**3.4 Building Construction - 2021**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	2,553.3639	2,553.3639	2,553.3639	0.6160		2,568.7643	
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>	

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2021  
Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0942	3.0098	0.7868	7.9700e-003	0.1985	6.1500e-003	0.2046	0.0571	5.8900e-003	0.0630	852.1300	852.1300	852.1300	0.0502		853.3850	
Worker	0.3472	0.2387	3.2625	9.2600e-003	0.9054	7.3200e-003	0.9127	0.2401	6.7400e-003	0.2469	922.4036	922.4036	922.4036	0.0272		923.0830	
<b>Total</b>	<b>0.4414</b>	<b>3.2484</b>	<b>4.0493</b>	<b>0.0172</b>	<b>1.1039</b>	<b>0.0135</b>	<b>1.1173</b>	<b>0.2973</b>	<b>0.0126</b>	<b>0.3099</b>	<b>1,774.533</b>	<b>1,774.533</b>	<b>1,774.533</b>	<b>0.0774</b>		<b>1,776.468</b>	<b>0</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643	
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>	<b>0.0000</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>	<b>0</b>

LBCCLAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2021**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0942	3.0098	0.7868	7.9700e-003	0.1985	6.1500e-003	0.2046	0.0571	5.8900e-003	0.0630	852.1300	852.1300	852.1300	0.0502		853.3850	
Worker	0.3472	0.2387	3.2625	9.2600e-003	0.9054	7.3200e-003	0.9127	0.2401	6.7400e-003	0.2469	922.4036	922.4036	922.4036	0.0272		923.0830	
<b>Total</b>	<b>0.4414</b>	<b>3.2484</b>	<b>4.0493</b>	<b>0.0172</b>	<b>1.1039</b>	<b>0.0135</b>	<b>1.1173</b>	<b>0.2973</b>	<b>0.0126</b>	<b>0.3099</b>	<b>1,774.5335</b>	<b>1,774.5335</b>	<b>1,774.5335</b>	<b>0.0774</b>		<b>1,776.4680</b>	

**3.4 Building Construction - 2022**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090	0.7612	0.7612	0.7612	2,554.3336	2,554.3336	2,554.3336	0.6120		2,569.6322	
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>	<b>0.7612</b>	<b>0.7612</b>	<b>0.7612</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>		<b>2,569.6322</b>	

LBCCLAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2022**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0884	2.8622	0.7445	7.9000e-003	0.1985	5.3800e-003	0.2039	0.0571	5.1500e-003	0.0623	844.7063	844.7063	844.7063	0.0485		845.9181
Worker	0.3252	0.2156	3.0100	8.9300e-003	0.9054	7.0900e-003	0.9125	0.2401	6.5300e-003	0.2466	889.9570	889.9570	889.9570	0.0246		890.5711
<b>Total</b>	<b>0.4137</b>	<b>3.0778</b>	<b>3.7544</b>	<b>0.0168</b>	<b>1.1039</b>	<b>0.0125</b>	<b>1.1163</b>	<b>0.2973</b>	<b>0.0117</b>	<b>0.3089</b>	<b>1,734.663</b>	<b>1,734.663</b>	<b>1,734.663</b>	<b>0.0730</b>		<b>1,736.489</b>
lb/day																

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090	0.7612	0.7612	0.7612	0.0000	2,554.333	2,554.333	0.6120		2,569.632
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>	<b>0.7612</b>	<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.333</b>	<b>2,554.333</b>	<b>0.6120</b>		<b>2,569.632</b>
lb/day																

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2022**

**Mitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0884	2.8622	0.7445	7.9000e-003	0.1985	5.3800e-003	0.2039	0.0571	5.1500e-003	0.0623	844.7063	844.7063	844.7063	0.0485		845.9181	
Worker	0.3252	0.2156	3.0100	8.9300e-003	0.9054	7.0900e-003	0.9125	0.2401	6.5300e-003	0.2466	889.9570	889.9570	889.9570	0.0246		890.5711	
<b>Total</b>	<b>0.4137</b>	<b>3.0778</b>	<b>3.7544</b>	<b>0.0168</b>	<b>1.1039</b>	<b>0.0125</b>	<b>1.1163</b>	<b>0.2973</b>	<b>0.0117</b>	<b>0.3089</b>	<b>1,734.663</b>	<b>1,734.663</b>	<b>1,734.663</b>	<b>0.0730</b>		<b>1,736.489</b>	<b>2</b>

**3.5 Paving - 2022**

**Unmitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.129	1,805.129	0.5672		1,819.309	1
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
<b>Total</b>	<b>0.9765</b>	<b>9.5221</b>	<b>12.1940</b>	<b>0.0189</b>		<b>0.4877</b>	<b>0.4877</b>		<b>0.4504</b>	<b>0.4504</b>		<b>1,805.129</b>	<b>1,805.129</b>	<b>0.5672</b>		<b>1,819.309</b>	<b>1</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.5 Paving - 2022**

**Unmitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	219.7425	219.7425	219.7425	6.0600e-003		219.8941	
<b>Total</b>	<b>0.0803</b>	<b>0.0532</b>	<b>0.7432</b>	<b>2.2100e-003</b>	<b>0.2236</b>	<b>1.7500e-003</b>	<b>0.2253</b>	<b>0.0593</b>	<b>1.6100e-003</b>	<b>0.0609</b>	<b>219.7425</b>	<b>219.7425</b>	<b>219.7425</b>	<b>6.0600e-003</b>		<b>219.8941</b>	

**Mitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877	0.4504	0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091	
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000	
<b>Total</b>	<b>0.9765</b>	<b>9.5221</b>	<b>12.1940</b>	<b>0.0189</b>		<b>0.4877</b>	<b>0.4877</b>	<b>0.4504</b>	<b>0.4504</b>	<b>0.4504</b>	<b>0.0000</b>	<b>1,805.1297</b>	<b>1,805.1297</b>	<b>0.5672</b>		<b>1,819.3091</b>	

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.5 Paving - 2022**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	219.7425	219.7425	219.7425	6.0600e-003		219.8941	219.8941
<b>Total</b>	<b>0.0803</b>	<b>0.0532</b>	<b>0.7432</b>	<b>2.2100e-003</b>	<b>0.2236</b>	<b>1.7500e-003</b>	<b>0.2253</b>	<b>0.0593</b>	<b>1.6100e-003</b>	<b>0.0609</b>	<b>219.7425</b>	<b>219.7425</b>	<b>219.7425</b>	<b>6.0600e-003</b>		<b>219.8941</b>	<b>219.8941</b>

**3.6 Architectural Coating - 2021**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	4.2031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003	0.0941	0.0941	0.0941	0.0941	0.0941	0.0941	281.4481	281.4481	281.4481	0.0193		281.9309	281.9309
<b>Total</b>	<b>4.4220</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>281.4481</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>	<b>281.9309</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2021  
Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488	182.2032	182.2032	5.3700e-003	5.3700e-003	182.3374	182.3374	182.3374
<b>Total</b>	<b>0.0686</b>	<b>0.0471</b>	<b>0.6444</b>	<b>1.8300e-003</b>	<b>0.1788</b>	<b>1.4500e-003</b>	<b>0.1803</b>	<b>0.0474</b>	<b>1.3300e-003</b>	<b>0.0488</b>	<b>182.2032</b>	<b>182.2032</b>	<b>5.3700e-003</b>	<b>5.3700e-003</b>	<b>182.3374</b>	<b>182.3374</b>	<b>182.3374</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	4.2031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941	0.0941	0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309	281.9309
<b>Total</b>	<b>4.4220</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>		<b>281.9309</b>	<b>281.9309</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2021**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0686	0.0471	0.6444	1.8300e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488	182.2032	182.2032	5.3700e-003	5.3700e-003	182.3374	182.3374	182.3374
<b>Total</b>	<b>0.0686</b>	<b>0.0471</b>	<b>0.6444</b>	<b>1.8300e-003</b>	<b>0.1788</b>	<b>1.4500e-003</b>	<b>0.1803</b>	<b>0.0474</b>	<b>1.3300e-003</b>	<b>0.0488</b>	<b>182.2032</b>	<b>182.2032</b>	<b>5.3700e-003</b>	<b>5.3700e-003</b>	<b>182.3374</b>	<b>182.3374</b>	<b>182.3374</b>

**3.6 Architectural Coating - 2022**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	4.2031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817			281.4481	0.0183		281.9062	281.9062
<b>Total</b>	<b>4.4076</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>			<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>	<b>281.9062</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2022  
Unmitigated Construction Off-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Worker	0.0642	0.0426	0.5946	1.7600e-003	0.1788	1.4000e-003	0.1802	0.0474	1.2900e-003	0.0487	175.7940	175.7940	175.7940	4.8500e-003			175.9153
<b>Total</b>	<b>0.0642</b>	<b>0.0426</b>	<b>0.5946</b>	<b>1.7600e-003</b>	<b>0.1788</b>	<b>1.4000e-003</b>	<b>0.1802</b>	<b>0.0474</b>	<b>1.2900e-003</b>	<b>0.0487</b>	<b>175.7940</b>	<b>175.7940</b>	<b>175.7940</b>	<b>4.8500e-003</b>			<b>175.9153</b>

**Mitigated Construction On-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	4.2031					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183			281.9062
<b>Total</b>	<b>4.4076</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>			<b>281.9062</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2022**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0642	0.0426	0.5946	1.7600e-003	0.1788	1.4000e-003	0.1802	0.0474	1.2900e-003	0.0487	175.7940	175.7940	175.7940	4.8500e-003		175.9153
<b>Total</b>	<b>0.0642</b>	<b>0.0426</b>	<b>0.5946</b>	<b>1.7600e-003</b>	<b>0.1788</b>	<b>1.4000e-003</b>	<b>0.1802</b>	<b>0.0474</b>	<b>1.2900e-003</b>	<b>0.0487</b>	<b>175.7940</b>	<b>175.7940</b>	<b>175.7940</b>	<b>4.8500e-003</b>		<b>175.9153</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

LBCG LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	3.2284	13.7082	37.0383	0.1454	12.6020	0.1086	12.7105	3.3718	0.1008	3.4726	14,843.18	44	14,843.18	0.6926		14,860.49
Unmitigated	3.5780	15.4004	45.9714	0.1850	16.3268	0.1367	16.4634	4.3684	0.1269	4.4953	18,879.64	78	18,879.64	0.8600		18,901.14

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT		
Junior College (2Yr)	2,542.65	928.62	88.44	5,924,351	4,572,756		
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
<b>Total</b>	<b>2,542.65</b>	<b>928.62</b>	<b>88.44</b>	<b>5,924,351</b>	<b>4,572,756</b>		

4.3 Trip Type Information

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by			
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1			
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0			

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
NaturalGas Mitigated	0.0813	0.7389	0.6206	4.4300e-003	0.0562	0.0562	0.0562	0.0562	0.0562	0.0562		886.6180	886.6180	0.0170	0.0163	891.8867
NaturalGas Unmitigated	0.0813	0.7389	0.6206	4.4300e-003	0.0562	0.0562	0.0562	0.0562	0.0562	0.0562		886.6180	886.6180	0.0170	0.0163	891.8867

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e						
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
Junior College (2Yr)	7536.25	0.0813	0.7389	0.6206	4.4300e-003		0.0562	0.0562		0.0562		0.0562		886.6180	886.6180	0.0170	0.0163	891.8867
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0813</b>	<b>0.7389</b>	<b>0.6206</b>	<b>4.4300e-003</b>		<b>0.0562</b>	<b>0.0562</b>		<b>0.0562</b>		<b>0.0562</b>		<b>886.6180</b>	<b>886.6180</b>	<b>0.0170</b>	<b>0.0163</b>	<b>891.8867</b>

Mitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e						
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
Junior College (2Yr)	7.53625	0.0813	0.7389	0.6206	4.4300e-003		0.0562	0.0562		0.0562		0.0562		886.6180	886.6180	0.0170	0.0163	891.8867
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0813</b>	<b>0.7389</b>	<b>0.6206</b>	<b>4.4300e-003</b>		<b>0.0562</b>	<b>0.0562</b>		<b>0.0562</b>		<b>0.0562</b>		<b>886.6180</b>	<b>886.6180</b>	<b>0.0170</b>	<b>0.0163</b>	<b>891.8867</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	2.3288	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003		0.5158
Unmitigated	2.3288	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003		0.5158

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.2649				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0432				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0208	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003		0.5158
<b>Total</b>	<b>2.3288</b>	<b>2.0400e-003</b>	<b>0.2254</b>	<b>2.0000e-005</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>0.4843</b>	<b>0.4843</b>	<b>0.4843</b>	<b>1.2600e-003</b>		<b>0.5158</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

**6.2 Area by SubCategory**

**Mitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.2649				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0432				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0208	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004		0.4843	0.4843	1.2600e-003		0.5158
<b>Total</b>	<b>2.3288</b>	<b>2.0400e-003</b>	<b>0.2254</b>	<b>2.0000e-005</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>		<b>0.4843</b>	<b>0.4843</b>	<b>1.2600e-003</b>		<b>0.5158</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**LBCC LAC Interim Year 2025 (2021-2025 Construction)**  
Los Angeles-South Coast County, Winter

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	2,211.00	Student	1.23	101,578.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

Urbanization Urban Wind Speed (m/s) 2.2 Precipitation Freq (Days) 33  
 Climate Zone 9 Operational Year 2025

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr) 702.44 CH4 Intensity (lb/MW/hr) 0.029 N2O Intensity (lb/MW/hr) 0.006

**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

Project Characteristics - Interim Year 2025

Land Use - 2,211 student Junior College on 1.23 acres and 101,578 sq ft of building and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 50276 SF of building space

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Mobile Commute Mitigation -

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	8.00	20.00
tblConstructionPhase	NumDays	18.00	230.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	PhaseEndDate	7/8/2021	7/26/2021
tblConstructionPhase	PhaseEndDate	5/26/2022	6/13/2022
tblConstructionPhase	PhaseEndDate	7/15/2022	6/13/2022
tblConstructionPhase	PhaseEndDate	6/21/2022	7/11/2022
tblConstructionPhase	PhaseStartDate	7/9/2021	7/27/2021
tblConstructionPhase	PhaseStartDate	6/22/2022	7/27/2021
tblConstructionPhase	PhaseStartDate	5/27/2022	6/14/2022
tblLandUse	LandUseSquareFeet	96,515.10	101,578.00
tblLandUse	LotAcreage	2.22	1.23
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

**2.0 Emissions Summary**



LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	2.3288	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003	0.0163	0.5158
Energy	0.0813	0.7389	0.6206	4.4300e-003	0.0562	0.0562	0.0562	0.0562	0.0562	0.0562	886.6180	886.6180	886.6180	0.0170	0.0163	891.8867
Mobile	3.4635	15.7104	43.6704	0.1761	16.3268	0.1372	16.4640	4.3684	0.1275	4.4958	17,981.0735	17,981.0735	17,981.0735	0.8595		18,002.5613
<b>Total</b>	<b>5.8736</b>	<b>16.4513</b>	<b>44.5164</b>	<b>0.1806</b>	<b>16.3268</b>	<b>0.1942</b>	<b>16.5209</b>	<b>4.3684</b>	<b>0.1844</b>	<b>4.5528</b>	<b>18,868.1759</b>	<b>18,868.1759</b>	<b>18,868.1759</b>	<b>0.8778</b>	<b>0.0163</b>	<b>18,894.9638</b>

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	2.3288	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003	0.0163	0.5158
Energy	0.0813	0.7389	0.6206	4.4300e-003	0.0562	0.0562	0.0562	0.0562	0.0562	0.0562	886.6180	886.6180	886.6180	0.0170	0.0163	891.8867
Mobile	3.1215	13.9135	35.5662	0.1383	12.6020	0.1091	12.7111	3.3718	0.1014	3.4731	14,123.5942	14,123.5942	14,123.5942	0.6959		14,140.9923
<b>Total</b>	<b>5.5315</b>	<b>14.6544</b>	<b>36.4122</b>	<b>0.1427</b>	<b>12.6020</b>	<b>0.1661</b>	<b>12.7680</b>	<b>3.3718</b>	<b>0.1583</b>	<b>3.5301</b>	<b>15,010.6965</b>	<b>15,010.6965</b>	<b>15,010.6965</b>	<b>0.7142</b>	<b>0.0163</b>	<b>15,033.3948</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	5.82	10.92	18.21	20.95	22.81	14.46	22.72	22.81	14.15	22.46	0.00	20.44	20.44	18.64	0.00	20.44

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2021	6/28/2021	5	20	
2	Grading	Grading	6/29/2021	7/26/2021	5	20	
3	Building Construction	Building Construction	7/27/2021	6/13/2022	5	230	
4	Paving	Paving	6/14/2022	7/11/2022	5	20	
5	Architectural Coating	Architectural Coating	7/27/2021	6/13/2022	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 152,367; Non-Residential Outdoor: 50,789; Striped Parking Area: 5,410 (Architectural Coating – sqft)

OffRoad Equipment

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

**Trips and VMT**

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	229.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2021**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.4745	0.0000	2.4745	0.3747	0.0000	0.3747			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388	1.5513	1.5513	1.5513	1.4411	1.4411	1.4411		3,747.944 <sub>9</sub>	3,747.944 <sub>9</sub>	1.0549		3,774.317 <sub>4</sub>
<b>Total</b>	<b>3.1651</b>	<b>31.4407</b>	<b>21.5650</b>	<b>0.0388</b>	<b>2.4745</b>	<b>1.5513</b>	<b>4.0258</b>	<b>0.3747</b>	<b>1.4411</b>	<b>1.8158</b>		<b>3,747.944<sub>9</sub></b>	<b>3,747.944<sub>9</sub></b>	<b>1.0549</b>		<b>3,774.317<sub>4</sub></b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.2 Demolition - 2021**

**Unmitigated Construction Off-Site**

Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0978	3.1090	0.7636	8.7800e-003	0.2002	9.5700e-003	0.2098	0.0549	9.1600e-003	0.0640		952.3917	952.3917	0.0681		954.0939
Vendor	0.0192	0.5813	0.1685	1.5000e-003	0.0384	1.2300e-003	0.0396	0.0111	1.1800e-003	0.0122		160.4073	160.4073	0.0104		160.6662
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
<b>Total</b>	<b>0.1884</b>	<b>3.7393</b>	<b>1.4845</b>	<b>0.0119</b>	<b>0.4063</b>	<b>0.0122</b>	<b>0.4184</b>	<b>0.1104</b>	<b>0.0116</b>	<b>0.1220</b>		<b>1,273.636</b>	<b>1,273.636</b>	<b>0.0832</b>		<b>1,275.716</b>

**Mitigated Construction On-Site**

Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.9650	0.0000	0.9650	0.1461	0.0000	0.1461			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513	1.4411	1.4411	1.4411	0.0000	3,747.944	3,747.944	1.0549		3,774.317
<b>Total</b>	<b>3.1651</b>	<b>31.4407</b>	<b>21.5650</b>	<b>0.0388</b>	<b>0.9650</b>	<b>1.5513</b>	<b>2.5164</b>	<b>0.1461</b>	<b>1.4411</b>	<b>1.5872</b>	<b>0.0000</b>	<b>3,747.944</b>	<b>3,747.944</b>	<b>1.0549</b>		<b>3,774.317</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.2 Demolition - 2021**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0978	3.1090	0.7636	8.7800e-003	0.2002	9.5700e-003	0.2098	0.0549	9.1600e-003	0.0640		952.3917	952.3917	0.0681		954.0939
Vendor	0.0192	0.5813	0.1685	1.5000e-003	0.0384	1.2300e-003	0.0396	0.0111	1.1800e-003	0.0122		160.4073	160.4073	0.0104		160.6662
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
<b>Total</b>	<b>0.1884</b>	<b>3.7393</b>	<b>1.4845</b>	<b>0.0119</b>	<b>0.4063</b>	<b>0.0122</b>	<b>0.4184</b>	<b>0.1104</b>	<b>0.0116</b>	<b>0.1220</b>		<b>1,273.636</b>	<b>1,273.636</b>	<b>0.0832</b>		<b>1,275.716</b>

**3.3 Grading - 2021**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599	1.0671	1.0671	1.0671		2,871.928	2,871.928	0.9288		2,895.149
<b>Total</b>	<b>2.2903</b>	<b>24.7367</b>	<b>15.8575</b>	<b>0.0296</b>	<b>6.5523</b>	<b>1.1599</b>	<b>7.7123</b>	<b>3.3675</b>	<b>1.0671</b>	<b>4.4346</b>		<b>2,871.928</b>	<b>2,871.928</b>	<b>0.9288</b>		<b>2,895.149</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.3 Grading - 2021**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0192	0.5813	0.1685	1.5000e-003	0.0384	1.2300e-003	0.0396	0.0111	1.1800e-003	0.0122	160.4073	160.4073	160.4073	0.0104		160.6662	
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457	160.8377	160.8377	160.8377	4.7300e-003		160.9560	
<b>Total</b>	<b>0.0907</b>	<b>0.6303</b>	<b>0.7208</b>	<b>3.1100e-003</b>	<b>0.2061</b>	<b>2.5800e-003</b>	<b>0.2087</b>	<b>0.0555</b>	<b>2.4300e-003</b>	<b>0.0580</b>		<b>321.2450</b>	<b>321.2450</b>	<b>0.0151</b>		<b>321.6222</b>	

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000	
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599	1.0671	1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495	
<b>Total</b>	<b>2.2903</b>	<b>24.7367</b>	<b>15.8575</b>	<b>0.0296</b>	<b>2.5554</b>	<b>1.1599</b>	<b>3.7153</b>	<b>1.3133</b>	<b>1.0671</b>	<b>2.3804</b>	<b>0.0000</b>	<b>2,871.9285</b>	<b>2,871.9285</b>	<b>0.9288</b>		<b>2,895.1495</b>	

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.3 Grading - 2021**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0192	0.5813	0.1685	1.5000e-003	0.0384	1.2300e-003	0.0396	0.0111	1.1800e-003	0.0122	160.4073	160.4073	160.4073	0.0104		160.6662
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457	160.8377	160.8377	160.8377	4.7300e-003		160.9560
<b>Total</b>	<b>0.0907</b>	<b>0.6303</b>	<b>0.7208</b>	<b>3.1100e-003</b>	<b>0.2061</b>	<b>2.5800e-003</b>	<b>0.2087</b>	<b>0.0555</b>	<b>2.4300e-003</b>	<b>0.0580</b>	<b>321.2450</b>	<b>321.2450</b>	<b>321.2450</b>	<b>0.0151</b>		<b>321.6222</b>

**3.4 Building Construction - 2021**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586	0.9013	0.9013	0.9013	2,553.3639	2,553.3639	2,553.3639	0.6160		2,568.7643
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>	<b>0.9013</b>	<b>0.9013</b>	<b>0.9013</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2021  
Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0989	3.0036	0.8704	7.7600e-003	0.1985	6.3500e-003	0.2048	0.0571	6.0700e-003	0.0632	828.7711	828.7711	828.7711	0.0535		830.1087	
Worker	0.3862	0.2642	2.9829	8.7200e-003	0.9054	7.3200e-003	0.9127	0.2401	6.7400e-003	0.2469	868.5234	868.5234	868.5234	0.0256		869.1623	
<b>Total</b>	<b>0.4851</b>	<b>3.2677</b>	<b>3.8533</b>	<b>0.0165</b>	<b>1.1039</b>	<b>0.0137</b>	<b>1.1175</b>	<b>0.2973</b>	<b>0.0128</b>	<b>0.3101</b>	<b>1,697.2945</b>	<b>1,697.2945</b>	<b>1,697.2945</b>	<b>0.0791</b>		<b>1,699.2710</b>	

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643	
<b>Total</b>	<b>1.9009</b>	<b>17.4321</b>	<b>16.5752</b>	<b>0.0269</b>		<b>0.9586</b>	<b>0.9586</b>		<b>0.9013</b>	<b>0.9013</b>	<b>0.0000</b>	<b>2,553.3639</b>	<b>2,553.3639</b>	<b>0.6160</b>		<b>2,568.7643</b>	

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2021**

**Mitigated Construction Off-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0989	3.0036	0.8704	7.7600e-003	0.1985	6.3500e-003	0.2048	0.0571	6.0700e-003	0.0632	828.7711	828.7711	828.7711	0.0535			830.1087
Worker	0.3862	0.2642	2.9829	8.7200e-003	0.9054	7.3200e-003	0.9127	0.2401	6.7400e-003	0.2469	868.5234	868.5234	868.5234	0.0256			869.1623
<b>Total</b>	<b>0.4851</b>	<b>3.2677</b>	<b>3.8533</b>	<b>0.0165</b>	<b>1.1039</b>	<b>0.0137</b>	<b>1.1175</b>	<b>0.2973</b>	<b>0.0128</b>	<b>0.3101</b>	<b>1,697.2945</b>	<b>1,697.2945</b>	<b>1,697.2945</b>	<b>0.0791</b>			<b>1,699.2710</b>

**3.4 Building Construction - 2022**

**Unmitigated Construction On-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090	0.7612	0.7612	0.7612	2,554.3336	2,554.3336	2,554.3336	0.6120			2,569.6322
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>	<b>0.7612</b>	<b>0.7612</b>	<b>0.7612</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>2,554.3336</b>	<b>0.6120</b>			<b>2,569.6322</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2022**  
**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0929	2.8545	0.8239	7.6800e-003	0.1985	5.5600e-003	0.2040	0.0571	5.3100e-003	0.0625	821.4079	821.4079	821.4079	0.0516		822.6984	
Worker	0.3628	0.2386	2.7473	8.4100e-003	0.9054	7.0900e-003	0.9125	0.2401	6.5300e-003	0.2466	838.0013	838.0013	838.0013	0.0231		838.5781	
<b>Total</b>	<b>0.4556</b>	<b>3.0930</b>	<b>3.5712</b>	<b>0.0161</b>	<b>1.1039</b>	<b>0.0127</b>	<b>1.1165</b>	<b>0.2973</b>	<b>0.0118</b>	<b>0.3091</b>	<b>1,659.409</b>	<b>1,659.409</b>	<b>1,659.409</b>	<b>0.0747</b>		<b>1,661.276</b>	<b>6</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333	2,554.333	0.6120		2,569.632	2
<b>Total</b>	<b>1.7062</b>	<b>15.6156</b>	<b>16.3634</b>	<b>0.0269</b>		<b>0.8090</b>	<b>0.8090</b>		<b>0.7612</b>	<b>0.7612</b>	<b>0.0000</b>	<b>2,554.333</b>	<b>2,554.333</b>	<b>0.6120</b>		<b>2,569.632</b>	<b>2</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2022**

**Mitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0929	2.8545	0.8239	7.6800e-003	0.1985	5.5600e-003	0.2040	0.0571	5.3100e-003	0.0625	821.4079	821.4079	821.4079	0.0516			822.6984
Worker	0.3628	0.2386	2.7473	8.4100e-003	0.9054	7.0900e-003	0.9125	0.2401	6.5300e-003	0.2466	838.0013	838.0013	838.0013	0.0231			838.5781
<b>Total</b>	<b>0.4556</b>	<b>3.0930</b>	<b>3.5712</b>	<b>0.0161</b>	<b>1.1039</b>	<b>0.0127</b>	<b>1.1165</b>	<b>0.2973</b>	<b>0.0118</b>	<b>0.3091</b>	<b>1,659.409</b>	<b>1,659.409</b>	<b>1,659.409</b>	<b>0.0747</b>			<b>1,661.276</b>

**3.5 Paving - 2022**

**Unmitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.9765	9.5221	12.1940	0.0189	0.4877	0.4877	0.4877	0.4504	0.4504	0.4504	1,805.129	1,805.129	1,805.129	0.5672			1,819.309
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>0.9765</b>	<b>9.5221</b>	<b>12.1940</b>	<b>0.0189</b>	<b>0.4877</b>	<b>0.4877</b>	<b>0.4877</b>	<b>0.4504</b>	<b>0.4504</b>	<b>0.4504</b>	<b>1,805.129</b>	<b>1,805.129</b>	<b>1,805.129</b>	<b>0.5672</b>			<b>1,819.309</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.5 Paving - 2022**

**Unmitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003			207.0563
<b>Total</b>	<b>0.0896</b>	<b>0.0589</b>	<b>0.6784</b>	<b>2.0800e-003</b>	<b>0.2236</b>	<b>1.7500e-003</b>	<b>0.2253</b>	<b>0.0593</b>	<b>1.6100e-003</b>	<b>0.0609</b>		<b>206.9139</b>	<b>206.9139</b>	<b>5.7000e-003</b>			<b>207.0563</b>

**Mitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672			1,819.3091
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>0.9765</b>	<b>9.5221</b>	<b>12.1940</b>	<b>0.0189</b>		<b>0.4877</b>	<b>0.4877</b>		<b>0.4504</b>	<b>0.4504</b>	<b>0.0000</b>	<b>1,805.1297</b>	<b>1,805.1297</b>	<b>0.5672</b>			<b>1,819.3091</b>

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**3.5 Paving - 2022**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	206.9139	206.9139	5.7000e-003	5.7000e-003	207.0563	207.0563
<b>Total</b>	<b>0.0896</b>	<b>0.0589</b>	<b>0.6784</b>	<b>2.0800e-003</b>	<b>0.2236</b>	<b>1.7500e-003</b>	<b>0.2253</b>	<b>0.0593</b>	<b>1.6100e-003</b>	<b>0.0609</b>	<b>206.9139</b>	<b>206.9139</b>	<b>5.7000e-003</b>	<b>5.7000e-003</b>	<b>207.0563</b>	<b>207.0563</b>

**3.6 Architectural Coating - 2021**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	4.2031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941	0.0941	0.0941	0.0941	281.4481	281.4481	0.0193	0.0193	281.9309	281.9309
<b>Total</b>	<b>4.4220</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>	<b>0.0193</b>	<b>281.9309</b>	<b>281.9309</b>

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**3.6 Architectural Coating - 2021  
Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488	171.5602	171.5602	171.5602	5.0500e-003			171.6864
<b>Total</b>	<b>0.0763</b>	<b>0.0522</b>	<b>0.5892</b>	<b>1.7200e-003</b>	<b>0.1788</b>	<b>1.4500e-003</b>	<b>0.1803</b>	<b>0.0474</b>	<b>1.3300e-003</b>	<b>0.0488</b>	<b>171.5602</b>	<b>171.5602</b>	<b>171.5602</b>	<b>5.0500e-003</b>			<b>171.6864</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	4.2031					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941	0.0941	0.0941	0.0941	0.0000	281.4481	281.4481	0.0193			281.9309
<b>Total</b>	<b>4.4220</b>	<b>1.5268</b>	<b>1.8176</b>	<b>2.9700e-003</b>		<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0941</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0193</b>			<b>281.9309</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.6 Architectural Coating - 2021  
Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0763	0.0522	0.5892	1.7200e-003	0.1788	1.4500e-003	0.1803	0.0474	1.3300e-003	0.0488	171.5602	171.5602	171.5602	5.0500e-003		171.6864	
<b>Total</b>	<b>0.0763</b>	<b>0.0522</b>	<b>0.5892</b>	<b>1.7200e-003</b>	<b>0.1788</b>	<b>1.4500e-003</b>	<b>0.1803</b>	<b>0.0474</b>	<b>1.3300e-003</b>	<b>0.0488</b>	<b>171.5602</b>	<b>171.5602</b>	<b>171.5602</b>	<b>5.0500e-003</b>		<b>171.6864</b>	

**3.6 Architectural Coating - 2022  
Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	4.2031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817			281.4481	0.0183		281.9062	
<b>Total</b>	<b>4.4076</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>			<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>	

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.6 Architectural Coating - 2022**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0717	0.0471	0.5427	1.6600e-003	0.1788	1.4000e-003	0.1802	0.0474	1.2900e-003	0.0487	165.5311	165.5311	4.5600e-003	165.6451		165.6451
<b>Total</b>	<b>0.0717</b>	<b>0.0471</b>	<b>0.5427</b>	<b>1.6600e-003</b>	<b>0.1788</b>	<b>1.4000e-003</b>	<b>0.1802</b>	<b>0.0474</b>	<b>1.2900e-003</b>	<b>0.0487</b>	<b>165.5311</b>	<b>165.5311</b>	<b>4.5600e-003</b>	<b>165.6451</b>		<b>165.6451</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	4.2031					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
<b>Total</b>	<b>4.4076</b>	<b>1.4085</b>	<b>1.8136</b>	<b>2.9700e-003</b>		<b>0.0817</b>	<b>0.0817</b>		<b>0.0817</b>	<b>0.0817</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0183</b>		<b>281.9062</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**3.6 Architectural Coating - 2022**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0717	0.0471	0.5427	1.6600e-003	0.1788	1.4000e-003	0.1802	0.0474	1.2900e-003	0.0487		165.5311	165.5311	4.5600e-003		165.6451
<b>Total</b>	<b>0.0717</b>	<b>0.0471</b>	<b>0.5427</b>	<b>1.6600e-003</b>	<b>0.1788</b>	<b>1.4000e-003</b>	<b>0.1802</b>	<b>0.0474</b>	<b>1.2900e-003</b>	<b>0.0487</b>		<b>165.5311</b>	<b>165.5311</b>	<b>4.5600e-003</b>		<b>165.6451</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	3.1215	13.9135	35.5662	0.1383	12.6020	0.1091	12.7111	3.3718	0.1014	3.4731	14,123.59	42	14,123.59	0.6959		14,140.99
Unmitigated	3.4635	15.7104	43.6704	0.1761	16.3268	0.1372	16.4640	4.3684	0.1275	4.4958	17,981.07	35	17,981.07	0.8595		18,002.56
																13

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Junior College (2Yr)	2,542.65	928.62	88.44	5,924,351	4,572,756		
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
<b>Total</b>	<b>2,542.65</b>	<b>928.62</b>	<b>88.44</b>	<b>5,924,351</b>	<b>4,572,756</b>		

4.3 Trip Type Information

Land Use	Miles						Trip %						Trip Purpose %					
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	Primary	Diverted	Pass-by	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	6.40	88.60	92	7	1	92	7	1				
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0				

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
NaturalGas Mitigated	0.0813	0.7389	0.6206	4.4300e-003	0.0562	0.0562	0.0562	0.0562	0.0562	0.0562		886.6180	886.6180	0.0170	0.0163	891.8867
NaturalGas Unmitigated	0.0813	0.7389	0.6206	4.4300e-003	0.0562	0.0562	0.0562	0.0562	0.0562	0.0562		886.6180	886.6180	0.0170	0.0163	891.8867

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBtu/yr	lb/day										CO <sub>2</sub> e						
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
Junior College (2Yr)	7536.25	0.0813	0.7389	0.6206	4.4300e-003		0.0562	0.0562		0.0562		0.0562		886.6180	886.6180	0.0170	0.0163	891.8867
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0813</b>	<b>0.7389</b>	<b>0.6206</b>	<b>4.4300e-003</b>		<b>0.0562</b>	<b>0.0562</b>		<b>0.0562</b>		<b>0.0562</b>		<b>886.6180</b>	<b>886.6180</b>	<b>0.0170</b>	<b>0.0163</b>	<b>891.8867</b>

Mitigated

Land Use	Natural Gas Use kBtu/yr	lb/day										CO <sub>2</sub> e						
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
Junior College (2Yr)	7.53625	0.0813	0.7389	0.6206	4.4300e-003		0.0562	0.0562		0.0562		0.0562		886.6180	886.6180	0.0170	0.0163	891.8867
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0813</b>	<b>0.7389</b>	<b>0.6206</b>	<b>4.4300e-003</b>		<b>0.0562</b>	<b>0.0562</b>		<b>0.0562</b>		<b>0.0562</b>		<b>886.6180</b>	<b>886.6180</b>	<b>0.0170</b>	<b>0.0163</b>	<b>891.8867</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	2.3288	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003		0.5158
Unmitigated	2.3288	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003		0.5158

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.2649				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0432				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0208	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.4843	0.4843	0.4843	1.2600e-003		0.5158
<b>Total</b>	<b>2.3288</b>	<b>2.0400e-003</b>	<b>0.2254</b>	<b>2.0000e-005</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>0.4843</b>	<b>0.4843</b>	<b>0.4843</b>	<b>1.2600e-003</b>		<b>0.5158</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

**6.2 Area by SubCategory**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.2649				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0432				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0208	2.0400e-003	0.2254	2.0000e-005	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004		0.4843	0.4843	1.2600e-003		0.5158
<b>Total</b>	<b>2.3288</b>	<b>2.0400e-003</b>	<b>0.2254</b>	<b>2.0000e-005</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>	<b>8.0000e-004</b>		<b>0.4843</b>	<b>0.4843</b>	<b>1.2600e-003</b>		<b>0.5158</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Annual

**LBCC LAC Interim Year 2025 (2021-2025 Construction)**  
Los Angeles-South Coast County, Annual

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	2,211.00	Student	1.23	101,578.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2025

**Utility Company** Southern California Edison

<b>CO2 Intensity (lb/MW/hr)</b>	702.44	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Annual

Project Characteristics - Interim Year 2025

Land Use - 2,211 student Junior College on 1.23 acres and 101,578 sq ft of building and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 50276 SF of building space

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Mobile Commute Mitigation -

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	8.00	20.00
tblConstructionPhase	NumDays	18.00	230.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	PhaseEndDate	7/8/2021	7/26/2021
tblConstructionPhase	PhaseEndDate	5/26/2022	6/13/2022
tblConstructionPhase	PhaseEndDate	7/15/2022	6/13/2022
tblConstructionPhase	PhaseEndDate	6/21/2022	7/11/2022
tblConstructionPhase	PhaseStartDate	7/9/2021	7/27/2021
tblConstructionPhase	PhaseStartDate	6/22/2022	7/27/2021
tblConstructionPhase	PhaseStartDate	5/27/2022	6/14/2022
tblLandUse	LandUseSquareFeet	96,515.10	101,578.00
tblLandUse	LotAcreage	2.22	1.23
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

**2.0 Emissions Summary**



LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2021	8-31-2021	1.0362	1.0362
2	9-1-2021	11-30-2021	0.9470	0.9470
3	12-1-2021	2-28-2022	0.8877	0.8877
4	3-1-2022	5-31-2022	0.8792	0.8792
5	6-1-2022	8-31-2022	0.2305	0.2305
		Highest	1.0362	1.0362

**2.2 Overall Operational**  
Unmitigated Operational

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.4238	2.6000e-004	0.0282	0.0000	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	0.0000	0.0549	0.0549	1.4000e-004	0.0000	0.0585
Energy	0.0148	0.1348	0.1133	8.1000e-004	0.0103	0.0103	0.0103	0.0103	0.0103	0.0103	0.0000	471.0861	471.0861	0.0162	5.4600e-003	473.1186
Mobile	0.4745	2.2427	6.2178	0.0251	2.2480	0.0192	2.2672	0.6025	0.0178	0.6203	0.0000	2,322.6925	2,322.6925	0.1090	0.0000	2,325.4163
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	81.9089	0.0000	81.9089	4.8407	0.0000	202.9258
Water						0.0000	0.0000	0.0000	0.0000	0.0000	1.5019	45.8509	47.3528	0.1562	4.0300e-003	52.4587
<b>Total</b>	<b>0.9131</b>	<b>2.3778</b>	<b>6.3593</b>	<b>0.0259</b>	<b>2.2480</b>	<b>0.0295</b>	<b>2.2776</b>	<b>0.6025</b>	<b>0.0282</b>	<b>0.6306</b>	<b>83.4108</b>	<b>2,839.6845</b>	<b>2,923.0952</b>	<b>5.1221</b>	<b>9.4900e-003</b>	<b>3,053.9778</b>

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Annual

**2.2 Overall Operational**

Mitigated Operational

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.4238	2.6000e-004	0.0282	0.0000	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	0.0000	0.0549	0.0549	1.4000e-004	0.0000	0.0585
Energy	0.0148	0.1348	0.1133	8.1000e-004	0.0103	0.0103	0.0103	0.0103	0.0103	0.0103	0.0000	471.0861	471.0861	0.0162	5.4600e-003	473.1186
Mobile	0.4261	1.9850	5.0497	0.0197	1.7352	0.0153	1.7504	0.4650	0.0142	0.4792	0.0000	1,825.846 <sub>1</sub>	1,825.846 <sub>1</sub>	0.0880	0.0000	1,828.046 <sub>5</sub>
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	81.9089	0.0000	81.9089	4.8407	0.0000	202.9258
Water						0.0000	0.0000	0.0000	0.0000	0.0000	1.5019	45.8509	47.3528	0.1562	4.0300e-003	52.4587
<b>Total</b>	<b>0.8648</b>	<b>2.1201</b>	<b>5.1911</b>	<b>0.0205</b>	<b>1.7352</b>	<b>0.0256</b>	<b>1.7608</b>	<b>0.4650</b>	<b>0.0245</b>	<b>0.4895</b>	<b>83.4108</b>	<b>2,342.838<sub>1</sub></b>	<b>2,426.248<sub>9</sub></b>	<b>5.1012</b>	<b>9.4900e-003</b>	<b>2,556.608<sub>0</sub></b>

Percent Reduction	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
5.30		10.84	18.37	20.74	22.81	13.30	22.69	22.81	12.99	22.38	0.00	17.50	17.00	0.41	0.00	16.29

**3.0 Construction Detail**

Construction Phase

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2021	6/28/2021	5	20	
2	Grading	Grading	6/29/2021	7/26/2021	5	20	
3	Building Construction	Building Construction	7/27/2021	6/13/2022	5	230	
4	Paving	Paving	6/14/2022	7/11/2022	5	20	
5	Architectural Coating	Architectural Coating	7/27/2021	6/13/2022	5	230	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 2.07**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 152,367; Non-Residential Outdoor: 50,789; Striped Parking Area: 5,410 (Architectural Coating – sqft)**

**OffRoad Equipment**

LBCC LAC Interim Year 2025 (2021-2025 Construction) - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	229.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	31.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2021**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Fugitive Dust					0.0247	0.0000	0.0247	3.7500e-003	0.0000	3.7500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004	0.0155	0.0155	0.0155	0.0144	0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
<b>Total</b>	<b>0.0317</b>	<b>0.3144</b>	<b>0.2157</b>	<b>3.9000e-004</b>	<b>0.0247</b>	<b>0.0155</b>	<b>0.0403</b>	<b>0.0144</b>	<b>0.0144</b>	<b>0.0182</b>	<b>0.0000</b>	<b>34.0008</b>	<b>34.0008</b>	<b>9.5700e-003</b>	<b>0.0000</b>	<b>34.2400</b>

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**3.2 Demolition - 2021**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	9.6000e-004	0.0317	7.3900e-003	9.0000e-005	1.9700e-003	9.0000e-005	2.0600e-003	5.4000e-004	9.0000e-005	6.3000e-004	0.0000	8.7283	8.7283	6.1000e-004	0.0000	8.7434
Vendor	1.9000e-004	5.9200e-003	1.6100e-003	2.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.4790	1.4790	9.0000e-005	0.0000	1.4813
Worker	6.5000e-004	5.0000e-004	5.6700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4834	1.4834	4.0000e-005	0.0000	1.4845
<b>Total</b>	<b>1.8000e-003</b>	<b>0.0381</b>	<b>0.0147</b>	<b>1.3000e-004</b>	<b>3.9900e-003</b>	<b>1.1000e-004</b>	<b>4.1100e-003</b>	<b>1.0900e-003</b>	<b>1.1000e-004</b>	<b>1.2000e-003</b>	<b>0.0000</b>	<b>11.6907</b>	<b>11.6907</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>11.7092</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					9.6500e-003	0.0000	9.6500e-003	1.4600e-003	0.0000	1.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155	0.0144	0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
<b>Total</b>	<b>0.0317</b>	<b>0.3144</b>	<b>0.2157</b>	<b>3.9000e-004</b>	<b>9.6500e-003</b>	<b>0.0155</b>	<b>0.0252</b>	<b>1.4600e-003</b>	<b>0.0144</b>	<b>0.0159</b>	<b>0.0000</b>	<b>34.0007</b>	<b>34.0007</b>	<b>9.5700e-003</b>	<b>0.0000</b>	<b>34.2400</b>

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**3.2 Demolition - 2021**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	9.6000e-004	0.0317	7.3900e-003	9.0000e-005	1.9700e-003	9.0000e-005	2.0600e-003	5.4000e-004	9.0000e-005	6.3000e-004	0.0000	8.7283	8.7283	6.1000e-004	0.0000	8.7434
Vendor	1.9000e-004	5.9200e-003	1.6100e-003	2.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.4790	1.4790	9.0000e-005	0.0000	1.4813
Worker	6.5000e-004	5.0000e-004	5.6700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4834	1.4834	4.0000e-005	0.0000	1.4845
<b>Total</b>	<b>1.8000e-003</b>	<b>0.0381</b>	<b>0.0147</b>	<b>1.3000e-004</b>	<b>3.9900e-003</b>	<b>1.1000e-004</b>	<b>4.1100e-003</b>	<b>1.0900e-003</b>	<b>1.1000e-004</b>	<b>1.2000e-003</b>	<b>0.0000</b>	<b>11.6907</b>	<b>11.6907</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>11.7092</b>

**3.3 Grading - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116	0.0107	0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2644
<b>Total</b>	<b>0.0229</b>	<b>0.2474</b>	<b>0.1586</b>	<b>3.0000e-004</b>	<b>0.0655</b>	<b>0.0116</b>	<b>0.0771</b>	<b>0.0337</b>	<b>0.0107</b>	<b>0.0443</b>	<b>0.0000</b>	<b>26.0537</b>	<b>26.0537</b>	<b>8.4300e-003</b>	<b>0.0000</b>	<b>26.2644</b>

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**3.3 Grading - 2021**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.9200e-003	1.6100e-003	2.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.4790	1.4790	9.0000e-005	0.0000	1.4813
Worker	6.5000e-004	5.0000e-004	5.6700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4834	1.4834	4.0000e-005	0.0000	1.4845
<b>Total</b>	<b>8.4000e-004</b>	<b>6.4200e-003</b>	<b>7.2800e-003</b>	<b>4.0000e-005</b>	<b>2.0200e-003</b>	<b>2.0000e-005</b>	<b>2.0500e-003</b>	<b>5.5000e-004</b>	<b>2.0000e-005</b>	<b>5.7000e-004</b>	<b>0.0000</b>	<b>2.9624</b>	<b>2.9624</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.9657</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0256	0.0000	0.0256	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004	0.0116	0.0116	0.0116	0.0107	0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
<b>Total</b>	<b>0.0229</b>	<b>0.2474</b>	<b>0.1586</b>	<b>3.0000e-004</b>	<b>0.0256</b>	<b>0.0116</b>	<b>0.0372</b>	<b>0.0131</b>	<b>0.0107</b>	<b>0.0238</b>	<b>0.0000</b>	<b>26.0537</b>	<b>26.0537</b>	<b>8.4300e-003</b>	<b>0.0000</b>	<b>26.2643</b>

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**3.3 Grading - 2021**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.9200e-003	1.6100e-003	2.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.4790	1.4790	9.0000e-005	0.0000	1.4813
Worker	6.5000e-004	5.0000e-004	5.6700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4834	1.4834	4.0000e-005	0.0000	1.4845
<b>Total</b>	<b>8.4000e-004</b>	<b>6.4200e-003</b>	<b>7.2800e-003</b>	<b>4.0000e-005</b>	<b>2.0200e-003</b>	<b>2.0000e-005</b>	<b>2.0500e-003</b>	<b>5.5000e-004</b>	<b>2.0000e-005</b>	<b>5.7000e-004</b>	<b>0.0000</b>	<b>2.9624</b>	<b>2.9624</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.9657</b>

**3.4 Building Construction - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1084	0.9936	0.9448	1.5300e-003		0.0546	0.0546	0.0514	0.0514	0.0514	0.0000	132.0333	132.0333	0.0319	0.0000	132.8296
<b>Total</b>	<b>0.1084</b>	<b>0.9936</b>	<b>0.9448</b>	<b>1.5300e-003</b>		<b>0.0546</b>	<b>0.0546</b>	<b>0.0514</b>	<b>0.0514</b>	<b>0.0514</b>	<b>0.0000</b>	<b>132.0333</b>	<b>132.0333</b>	<b>0.0319</b>	<b>0.0000</b>	<b>132.8296</b>

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**3.4 Building Construction - 2021**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4900e-003	0.1744	0.0473	4.5000e-004	0.0111	3.6000e-004	0.0115	3.2100e-003	3.4000e-004	3.5500e-003	0.0000	43.5559	43.5559	2.6700e-003	0.0000	43.6227
Worker	0.0199	0.0155	0.1746	5.1000e-004	0.0506	4.2000e-004	0.0510	0.0134	3.8000e-004	0.0138	0.0000	45.6583	45.6583	1.3400e-003	0.0000	45.6919
<b>Total</b>	<b>0.0254</b>	<b>0.1899</b>	<b>0.2219</b>	<b>9.6000e-004</b>	<b>0.0617</b>	<b>7.8000e-004</b>	<b>0.0625</b>	<b>0.0167</b>	<b>7.2000e-004</b>	<b>0.0174</b>	<b>0.0000</b>	<b>89.2142</b>	<b>89.2142</b>	<b>4.0100e-003</b>	<b>0.0000</b>	<b>89.3146</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1084	0.9936	0.9448	1.5300e-003		0.0546	0.0546		0.0514	0.0514	0.0000	132.0331	132.0331	0.0319	0.0000	132.8294
<b>Total</b>	<b>0.1084</b>	<b>0.9936</b>	<b>0.9448</b>	<b>1.5300e-003</b>		<b>0.0546</b>	<b>0.0546</b>		<b>0.0514</b>	<b>0.0514</b>	<b>0.0000</b>	<b>132.0331</b>	<b>132.0331</b>	<b>0.0319</b>	<b>0.0000</b>	<b>132.8294</b>

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**3.4 Building Construction - 2021**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4900e-003	0.1744	0.0473	4.5000e-004	0.0111	3.6000e-004	0.0115	3.2100e-003	3.4000e-004	3.5500e-003	0.0000	43.5559	43.5559	2.6700e-003	0.0000	43.6227
Worker	0.0199	0.0155	0.1746	5.1000e-004	0.0506	4.2000e-004	0.0510	0.0134	3.8000e-004	0.0138	0.0000	45.6583	45.6583	1.3400e-003	0.0000	45.6919
<b>Total</b>	<b>0.0254</b>	<b>0.1899</b>	<b>0.2219</b>	<b>9.6000e-004</b>	<b>0.0617</b>	<b>7.8000e-004</b>	<b>0.0625</b>	<b>0.0167</b>	<b>7.2000e-004</b>	<b>0.0174</b>	<b>0.0000</b>	<b>89.2142</b>	<b>89.2142</b>	<b>4.0100e-003</b>	<b>0.0000</b>	<b>89.3146</b>

**3.4 Building Construction - 2022**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0990	0.9057	0.9491	1.5600e-003		0.0469	0.0469		0.0442	0.0442	0.0000	134.4006	134.4006	0.0322	0.0000	135.2056
<b>Total</b>	<b>0.0990</b>	<b>0.9057</b>	<b>0.9491</b>	<b>1.5600e-003</b>		<b>0.0469</b>	<b>0.0469</b>		<b>0.0442</b>	<b>0.0442</b>	<b>0.0000</b>	<b>134.4006</b>	<b>134.4006</b>	<b>0.0322</b>	<b>0.0000</b>	<b>135.2056</b>

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**3.4 Building Construction - 2022**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2400e-003	0.1686	0.0455	4.5000e-004	0.0113	3.2000e-004	0.0116	3.2700e-003	3.0000e-004	3.5700e-003	0.0000	43.9308	43.9308	2.6200e-003	0.0000	43.9964
Worker	0.0190	0.0142	0.1637	5.0000e-004	0.0515	4.1000e-004	0.0519	0.0137	3.8000e-004	0.0141	0.0000	44.8262	44.8262	1.2300e-003	0.0000	44.8571
<b>Total</b>	<b>0.0242</b>	<b>0.1828</b>	<b>0.2092</b>	<b>9.5000e-004</b>	<b>0.0628</b>	<b>7.3000e-004</b>	<b>0.0635</b>	<b>0.0169</b>	<b>6.8000e-004</b>	<b>0.0176</b>	<b>0.0000</b>	<b>88.7570</b>	<b>88.7570</b>	<b>3.8500e-003</b>	<b>0.0000</b>	<b>88.8535</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0990	0.9057	0.9491	1.5600e-003		0.0469	0.0469		0.0442	0.0442	0.0000	134.4005	134.4005	0.0322	0.0000	135.2054
<b>Total</b>	<b>0.0990</b>	<b>0.9057</b>	<b>0.9491</b>	<b>1.5600e-003</b>		<b>0.0469</b>	<b>0.0469</b>		<b>0.0442</b>	<b>0.0442</b>	<b>0.0000</b>	<b>134.4005</b>	<b>134.4005</b>	<b>0.0322</b>	<b>0.0000</b>	<b>135.2054</b>

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**3.4 Building Construction - 2022**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2400e-003	0.1686	0.0455	4.5000e-004	0.0113	3.2000e-004	0.0116	3.2700e-003	3.0000e-004	3.5700e-003	0.0000	43.9308	43.9308	2.6200e-003	0.0000	43.9964
Worker	0.0190	0.0142	0.1637	5.0000e-004	0.0515	4.1000e-004	0.0519	0.0137	3.8000e-004	0.0141	0.0000	44.8262	44.8262	1.2300e-003	0.0000	44.8571
<b>Total</b>	<b>0.0242</b>	<b>0.1828</b>	<b>0.2092</b>	<b>9.5000e-004</b>	<b>0.0628</b>	<b>7.3000e-004</b>	<b>0.0635</b>	<b>0.0169</b>	<b>6.8000e-004</b>	<b>0.0176</b>	<b>0.0000</b>	<b>88.7570</b>	<b>88.7570</b>	<b>3.8500e-003</b>	<b>0.0000</b>	<b>88.8535</b>

**3.5 Paving - 2022**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	9.7700e-003	0.0952	0.1219	1.9000e-004		4.8800e-003	4.8800e-003	4.5000e-003	4.5000e-003	4.5000e-003	0.0000	16.3759	16.3759	5.1500e-003	0.0000	16.5045
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>9.7700e-003</b>	<b>0.0952</b>	<b>0.1219</b>	<b>1.9000e-004</b>		<b>4.8800e-003</b>	<b>4.8800e-003</b>	<b>4.5000e-003</b>	<b>4.5000e-003</b>	<b>4.5000e-003</b>	<b>0.0000</b>	<b>16.3759</b>	<b>16.3759</b>	<b>5.1500e-003</b>	<b>0.0000</b>	<b>16.5045</b>

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**3.5 Paving - 2022**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.7000e-004	6.1000e-004	6.9700e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9083	1.9083	5.0000e-005	0.0000	1.9096
<b>Total</b>	<b>8.7000e-004</b>	<b>6.1000e-004</b>	<b>6.9700e-003</b>	<b>2.0000e-005</b>	<b>2.1900e-003</b>	<b>2.0000e-005</b>	<b>2.2100e-003</b>	<b>5.8000e-004</b>	<b>2.0000e-005</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>1.9083</b>	<b>1.9083</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.9096</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	9.7700e-003	0.0952	0.1219	1.9000e-004	4.8800e-003	4.8800e-003	4.8800e-003	4.5000e-003	4.5000e-003	4.5000e-003	0.0000	16.3758	16.3758	5.1500e-003	0.0000	16.5045
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>9.7700e-003</b>	<b>0.0952</b>	<b>0.1219</b>	<b>1.9000e-004</b>	<b>4.8800e-003</b>	<b>4.8800e-003</b>	<b>4.8800e-003</b>	<b>4.5000e-003</b>	<b>4.5000e-003</b>	<b>4.5000e-003</b>	<b>0.0000</b>	<b>16.3758</b>	<b>16.3758</b>	<b>5.1500e-003</b>	<b>0.0000</b>	<b>16.5045</b>

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**3.5 Paving - 2022**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	6.1000e-004	6.9700e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9083	1.9083	5.0000e-005	0.0000	1.9096
<b>Total</b>	<b>8.1000e-004</b>	<b>6.1000e-004</b>	<b>6.9700e-003</b>	<b>2.0000e-005</b>	<b>2.1900e-003</b>	<b>2.0000e-005</b>	<b>2.2100e-003</b>	<b>5.8000e-004</b>	<b>2.0000e-005</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>1.9083</b>	<b>1.9083</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.9096</b>

**3.6 Architectural Coating - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.2396					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.0870	0.1036	1.7000e-004		5.3600e-003	5.3600e-003	5.3600e-003	5.3600e-003	5.3600e-003	0.0000	14.5536	14.5536	1.0000e-003	0.0000	14.5785
<b>Total</b>	<b>0.2521</b>	<b>0.0870</b>	<b>0.1036</b>	<b>1.7000e-004</b>		<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>0.0000</b>	<b>14.5536</b>	<b>14.5536</b>	<b>1.0000e-003</b>	<b>0.0000</b>	<b>14.5785</b>

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**3.6 Architectural Coating - 2021  
Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9200e-003	3.0600e-003	0.0345	1.0000e-004	9.9900e-003	8.0000e-005	0.0101	2.6500e-003	8.0000e-005	2.7300e-003	0.0000	9.0189	9.0189	2.7000e-004	0.0000	9.0256
<b>Total</b>	<b>3.9200e-003</b>	<b>3.0600e-003</b>	<b>0.0345</b>	<b>1.0000e-004</b>	<b>9.9900e-003</b>	<b>8.0000e-005</b>	<b>0.0101</b>	<b>2.6500e-003</b>	<b>8.0000e-005</b>	<b>2.7300e-003</b>	<b>0.0000</b>	<b>9.0189</b>	<b>9.0189</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>9.0256</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.2396					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.0870	0.1036	1.7000e-004		5.3600e-003	5.3600e-003	5.3600e-003	5.3600e-003	5.3600e-003	0.0000	14.5535	14.5535	1.0000e-003	0.0000	14.5785
<b>Total</b>	<b>0.2521</b>	<b>0.0870</b>	<b>0.1036</b>	<b>1.7000e-004</b>		<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>5.3600e-003</b>	<b>0.0000</b>	<b>14.5535</b>	<b>14.5535</b>	<b>1.0000e-003</b>	<b>0.0000</b>	<b>14.5785</b>

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**3.6 Architectural Coating - 2021  
Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9200e-003	3.0600e-003	0.0345	1.0000e-004	9.9900e-003	8.0000e-005	0.0101	2.6500e-003	8.0000e-005	2.7300e-003	0.0000	9.0189	9.0189	2.7000e-004	0.0000	9.0256
<b>Total</b>	<b>3.9200e-003</b>	<b>3.0600e-003</b>	<b>0.0345</b>	<b>1.0000e-004</b>	<b>9.9900e-003</b>	<b>8.0000e-005</b>	<b>0.0101</b>	<b>2.6500e-003</b>	<b>8.0000e-005</b>	<b>2.7300e-003</b>	<b>0.0000</b>	<b>9.0189</b>	<b>9.0189</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>9.0256</b>

**3.6 Architectural Coating - 2022  
Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.2438					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.0817	0.1052	1.7000e-004		4.7400e-003	4.7400e-003	4.7400e-003	4.7400e-003	4.7400e-003	0.0000	14.8089	14.8089	9.6000e-004	0.0000	14.8330
<b>Total</b>	<b>0.2556</b>	<b>0.0817</b>	<b>0.1052</b>	<b>1.7000e-004</b>		<b>4.7400e-003</b>	<b>4.7400e-003</b>	<b>4.7400e-003</b>	<b>4.7400e-003</b>	<b>4.7400e-003</b>	<b>0.0000</b>	<b>14.8089</b>	<b>14.8089</b>	<b>9.6000e-004</b>	<b>0.0000</b>	<b>14.8330</b>

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**3.6 Architectural Coating - 2022  
Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7400e-003	2.8100e-003	0.0323	1.0000e-004	0.0102	8.0000e-005	0.0103	2.7000e-003	7.0000e-005	2.7800e-003	0.0000	8.8546	8.8546	2.4000e-004	0.0000	8.8607
<b>Total</b>	<b>3.7400e-003</b>	<b>2.8100e-003</b>	<b>0.0323</b>	<b>1.0000e-004</b>	<b>0.0102</b>	<b>8.0000e-005</b>	<b>0.0103</b>	<b>2.7000e-003</b>	<b>7.0000e-005</b>	<b>2.7800e-003</b>	<b>0.0000</b>	<b>8.8546</b>	<b>8.8546</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>8.8607</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.2438					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.0817	0.1052	1.7000e-004		4.7400e-003	4.7400e-003	4.7400e-003	4.7400e-003	4.7400e-003	0.0000	14.8089	14.8089	9.6000e-004	0.0000	14.8330
<b>Total</b>	<b>0.2556</b>	<b>0.0817</b>	<b>0.1052</b>	<b>1.7000e-004</b>		<b>4.7400e-003</b>	<b>4.7400e-003</b>	<b>4.7400e-003</b>	<b>4.7400e-003</b>	<b>4.7400e-003</b>	<b>0.0000</b>	<b>14.8089</b>	<b>14.8089</b>	<b>9.6000e-004</b>	<b>0.0000</b>	<b>14.8330</b>

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**3.6 Architectural Coating - 2022**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7400e-003	2.8100e-003	0.0323	1.0000e-004	0.0102	8.0000e-005	0.0103	2.7000e-003	7.0000e-005	2.7800e-003	0.0000	8.8546	8.8546	2.4000e-004	0.0000	0.0000	8.8607
<b>Total</b>	<b>3.7400e-003</b>	<b>2.8100e-003</b>	<b>0.0323</b>	<b>1.0000e-004</b>	<b>0.0102</b>	<b>8.0000e-005</b>	<b>0.0103</b>	<b>2.7000e-003</b>	<b>7.0000e-005</b>	<b>2.7800e-003</b>	<b>0.0000</b>	<b>8.8546</b>	<b>8.8546</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>8.8607</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

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Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	0.4261	1.9850	5.0497	0.0197	1.7352	0.0153	1.7504	0.4650	0.0142	0.4792	0.0000	1,825.846	1,825.846	0.0880	0.0000	1,828.046
Unmitigated	0.4745	2.2427	6.2178	0.0251	2.2480	0.0192	2.2672	0.6025	0.0178	0.6203	0.0000	2,322.692	2,322.692	0.1090	0.0000	2,325.416
												5	5			3

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Junior College (2Yr)	2,542.65	928.62	88.44	5,924,351	4,572,756		
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
Total	2,542.65	928.62	88.44	5,924,351	4,572,756		

4.3 Trip Type Information

Land Use	Miles				Trip %				Trip Purpose %				
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	Primary	Diverted	Pass-by	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1				
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0				

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Other Non-Asphalt Surfaces	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	324.2966	324.2966	0.0134	2.7700e-003		325.4568
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	324.2966	324.2966	0.0134	2.7700e-003		325.4568
NaturalGas Mitigated	0.0148	0.1348	0.1133	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	146.7896	146.7896	2.8100e-003	2.6900e-003		147.6618
NaturalGas Unmitigated	0.0148	0.1348	0.1133	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	146.7896	146.7896	2.8100e-003	2.6900e-003		147.6618

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**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBtu/yr	tons/yr										MT/yr							
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e		
Junior College (2Yr)	2.75073e+006	0.0148	0.1348	0.1133	8.1000e-004		0.0103	0.0103		0.0103	0.0103		0.0103	0.0103	0.0000	146.7896	2.8100e-003	2.6900e-003	147.6618
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0148</b>	<b>0.1348</b>	<b>0.1133</b>	<b>8.1000e-004</b>		<b>0.0103</b>	<b>0.0103</b>		<b>0.0103</b>	<b>0.0103</b>		<b>0.0103</b>	<b>0.0103</b>	<b>0.0000</b>	<b>146.7896</b>	<b>2.8100e-003</b>	<b>2.6900e-003</b>	<b>147.6618</b>

Mitigated

Land Use	Natural Gas Use kBtu/yr	tons/yr										MT/yr							
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e		
Junior College (2Yr)	2.75073e+006	0.0148	0.1348	0.1133	8.1000e-004		0.0103	0.0103		0.0103	0.0103		0.0103	0.0103	0.0000	146.7896	2.8100e-003	2.6900e-003	147.6618
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0148</b>	<b>0.1348</b>	<b>0.1133</b>	<b>8.1000e-004</b>		<b>0.0103</b>	<b>0.0103</b>		<b>0.0103</b>	<b>0.0103</b>		<b>0.0103</b>	<b>0.0103</b>	<b>0.0000</b>	<b>146.7896</b>	<b>2.8100e-003</b>	<b>2.6900e-003</b>	<b>147.6618</b>

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**5.3 Energy by Land Use - Electricity**

Unmitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	1.01781e +006	324.2966	0.0134	2.7700e- 003	325.4568
Other Non- Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>324.2966</b>	<b>0.0134</b>	<b>2.7700e- 003</b>	<b>325.4568</b>

Mitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	1.01781e +006	324.2966	0.0134	2.7700e- 003	325.4568
Other Non- Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>324.2966</b>	<b>0.0134</b>	<b>2.7700e- 003</b>	<b>325.4568</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Mitigated	0.4238	2.6000e-004	0.0282	0.0000	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	0.0000	0.0549	0.0549	1.4000e-004	0.0000	0.0585
Unmitigated	0.4238	2.6000e-004	0.0282	0.0000	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	0.0000	0.0549	0.0549	1.4000e-004	0.0000	0.0585

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Architectural Coating	0.0483				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3729				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5900e-003	2.6000e-004	0.0282	0.0000	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	0.0000	0.0549	0.0549	1.4000e-004	0.0000	0.0585
<b>Total</b>	<b>0.4238</b>	<b>2.6000e-004</b>	<b>0.0282</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0549</b>	<b>0.0549</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.0585</b>

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**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3729					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.5900e-003	2.6000e-004	0.0282	0.0000	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	1.0000e-004	0.0000	0.0549	0.0549	1.4000e-004	0.0000	0.0585
<b>Total</b>	<b>0.4238</b>	<b>2.6000e-004</b>	<b>0.0282</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0549</b>	<b>0.0549</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.0585</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	47.3528	0.1562	4.0300e-003	52.4587
Unmitigated	47.3528	0.1562	4.0300e-003	52.4587

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	4.73397 / 7.40442	47.3528	0.1562	4.0300e-003	52.4587
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>47.3528</b>	<b>0.1562</b>	<b>4.0300e-003</b>	<b>52.4587</b>

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**7.2 Water by Land Use**

Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Junior College (2Yr)	4,73397 / 7,40442	47.3528	0.1562	4.0300e-003	52.4587
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>47.3528</b>	<b>0.1562</b>	<b>4.0300e-003</b>	<b>52.4587</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	81.9089	4.8407	0.0000	202.9258
Unmitigated	81.9089	4.8407	0.0000	202.9258

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**8.2 Waste by Land Use**

Unmitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	403.51	81.9089	4.8407	0.0000	202.9258
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>81.9089</b>	<b>4.8407</b>	<b>0.0000</b>	<b>202.9258</b>

Mitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	403.51	81.9089	4.8407	0.0000	202.9258
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>81.9089</b>	<b>4.8407</b>	<b>0.0000</b>	<b>202.9258</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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### 10.0 Stationary Equipment

#### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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#### Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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#### User Defined Equipment

Equipment Type	Number
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### 11.0 Vegetation

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**APPENDIX D**

**CalEEMod Model Interim Year 2030 Printouts**

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**LBCC LAC Interim Year 2030 (2026-2030 Construction)**  
 Los Angeles-South Coast County, Summer

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	3,736.00	Student	0.88	72,336.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

Urbanization Urban Wind Speed (m/s) 2.2 Precipitation Freq (Days) 33  
 Climate Zone 9 Operational Year 2030

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr) 702.44 CH4 Intensity (lb/MW/hr) 0.029 N2O Intensity (lb/MW/hr) 0.006

**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

Project Characteristics - Interim Year 2030

Land Use - 3,736 student Junior College on 0.88 acres and 72,336 sq ft of building and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 27,792 SF of building space

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Mobile Commute Mitigation -

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	220.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	7/6/2026	7/26/2026
tblConstructionPhase	PhaseEndDate	5/10/2027	5/28/2027
tblConstructionPhase	PhaseEndDate	6/7/2027	5/28/2027
tblConstructionPhase	PhaseEndDate	5/24/2027	6/26/2027
tblConstructionPhase	PhaseStartDate	7/7/2026	7/27/2026
tblConstructionPhase	PhaseStartDate	5/25/2027	7/27/2026
tblConstructionPhase	PhaseStartDate	5/11/2027	5/29/2027
tblLandUse	LandUseSquareFeet	163,084.76	72,336.00
tblLandUse	LotAcreage	3.74	0.88
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

**2.0 Emissions Summary**



LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	1.6895	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003	0.0116	0.8708
Energy	0.0579	0.5262	0.4420	3.1600e-003	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400	631.3808	631.3808	631.3808	0.0121	0.0116	635.1328
Mobile	4.8694	23.6856	61.3669	0.2811	27.5850	0.1737	27.7588	7.3792	0.1613	7.5404	28,777.55	55	28,777.55	1.1815	55	28,807.09
<b>Total</b>	<b>6.6168</b>	<b>24.2152</b>	<b>62.1886</b>	<b>0.2842</b>	<b>27.5850</b>	<b>0.2151</b>	<b>27.8001</b>	<b>7.3792</b>	<b>0.2026</b>	<b>7.5818</b>	<b>29,409.75</b>	<b>43</b>	<b>29,409.75</b>	<b>1.1957</b>	<b>0.0116</b>	<b>29,443.09</b>
lb/day																

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	1.6895	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003	0.0116	0.8708
Energy	0.0579	0.5262	0.4420	3.1600e-003	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400	631.3808	631.3808	631.3808	0.0121	0.0116	635.1328
Mobile	4.3737	21.3891	49.3925	0.2212	21.2917	0.1383	21.4300	5.6957	0.1283	5.8240	22,660.93	52	22,660.93	0.9537	52	22,684.77
<b>Total</b>	<b>6.1211</b>	<b>21.9187</b>	<b>50.2142</b>	<b>0.2244</b>	<b>21.2917</b>	<b>0.1796</b>	<b>21.4713</b>	<b>5.6957</b>	<b>0.1697</b>	<b>5.8654</b>	<b>23,293.13</b>	<b>41</b>	<b>23,293.13</b>	<b>0.9679</b>	<b>0.0116</b>	<b>23,320.78</b>
lb/day																

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	7.49	9.48	19.25	21.07	22.81	16.48	22.77	22.81	16.25	22.64	0.00	20.80	20.80	19.05	0.00	20.79

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2026	6/26/2026	5	20	
2	Grading	Grading	6/27/2026	7/26/2026	5	20	
3	Building Construction	Building Construction	7/27/2026	5/28/2027	5	220	
4	Paving	Paving	5/29/2027	6/26/2027	5	20	
5	Architectural Coating	Architectural Coating	7/27/2026	5/28/2027	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 108,504; Non-Residential Outdoor: 36,168; Striped Parking Area: 5,410 (Architectural Coating – sqft)

#### OffRoad Equipment

LBCCLAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	6.00	126.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	68.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2026**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Fugitive Dust					1.3679	0.0000	1.3679	0.2071	0.0000	0.2071			0.0000			0.0000
Off-Road	1.3396	12.9057	13.3316	0.0242		0.5452	0.5452		0.5091	0.5091		2,325.7934	2,325.7934	0.5866		2,340.4584
<b>Total</b>	<b>1.3396</b>	<b>12.9057</b>	<b>13.3316</b>	<b>0.0242</b>	<b>1.3679</b>	<b>0.5452</b>	<b>1.9131</b>	<b>0.2071</b>	<b>0.5091</b>	<b>0.7162</b>		<b>2,325.7934</b>	<b>2,325.7934</b>	<b>0.5866</b>		<b>2,340.4584</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2026**

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0325	0.9982	0.3668	4.5500e-003	0.1102	1.8000e-003	0.1120	0.0302	1.7200e-003	0.0319		497.1907	497.1907	0.0331		498.0169
Vendor	0.0118	0.4113	0.1205	1.4500e-003	0.0384	4.6000e-004	0.0389	0.0111	4.4000e-004	0.0115		155.9985	155.9985	7.9700e-003		156.1977
Worker	0.0420	0.0241	0.3602	1.2400e-003	0.1453	1.0300e-003	0.1463	0.0385	9.5000e-004	0.0395		123.7184	123.7184	2.7300e-003		123.7866
<b>Total</b>	<b>0.0863</b>	<b>1.4336</b>	<b>0.8475</b>	<b>7.2400e-003</b>	<b>0.2939</b>	<b>3.2900e-003</b>	<b>0.2972</b>	<b>0.0798</b>	<b>3.1100e-003</b>	<b>0.0829</b>		<b>776.9076</b>	<b>776.9076</b>	<b>0.0438</b>		<b>778.0011</b>

**Mitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.5335	0.0000	0.5335	0.0808	0.0000	0.0808			0.0000			0.0000
Off-Road	1.3396	12.9057	13.3316	0.0242		0.5452	0.5452	0.5091	0.5091	0.5091	0.0000	2,325.7934	2,325.7934	0.5866		2,340.4584
<b>Total</b>	<b>1.3396</b>	<b>12.9057</b>	<b>13.3316</b>	<b>0.0242</b>	<b>0.5335</b>	<b>0.5452</b>	<b>1.0787</b>	<b>0.0808</b>	<b>0.5091</b>	<b>0.5898</b>	<b>0.0000</b>	<b>2,325.7934</b>	<b>2,325.7934</b>	<b>0.5866</b>		<b>2,340.4584</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2026**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0325	0.9982	0.3668	4.5500e-003	0.1102	1.8000e-003	0.1120	0.0302	1.7200e-003	0.0319		497.1907	497.1907	0.0331		498.0169
Vendor	0.0118	0.4113	0.1205	1.4500e-003	0.0384	4.6000e-004	0.0389	0.0111	4.4000e-004	0.0115		155.9985	155.9985	7.9700e-003		156.1977
Worker	0.0420	0.0241	0.3602	1.2400e-003	0.1453	1.0300e-003	0.1463	0.0385	9.5000e-004	0.0395		123.7184	123.7184	2.7300e-003		123.7866
<b>Total</b>	<b>0.0863</b>	<b>1.4336</b>	<b>0.8475</b>	<b>7.2400e-003</b>	<b>0.2939</b>	<b>3.2900e-003</b>	<b>0.2972</b>	<b>0.0798</b>	<b>3.1100e-003</b>	<b>0.0829</b>		<b>776.9076</b>	<b>776.9076</b>	<b>0.0438</b>		<b>778.0011</b>

**3.3 Grading - 2026**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.1904	12.4243	8.4937	0.0206	0.4961	0.4961	0.4961	0.4564	0.4564	0.4564		1,995.7975	1,995.7975	0.6455		2,011.9345
<b>Total</b>	<b>1.1904</b>	<b>12.4243</b>	<b>8.4937</b>	<b>0.0206</b>	<b>6.5523</b>	<b>0.4961</b>	<b>7.0484</b>	<b>3.3675</b>	<b>0.4564</b>	<b>3.8239</b>		<b>1,995.7975</b>	<b>1,995.7975</b>	<b>0.6455</b>		<b>2,011.9345</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.3 Grading - 2026**

**Unmitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0118	0.4113	0.1205	1.4500e-003	0.0384	4.6000e-004	0.0389	0.0111	4.4000e-004	0.0115	155.9985	155.9985	7.9700e-003	7.9700e-003			156.1977
Worker	0.0323	0.0185	0.2771	9.5000e-004	0.1118	7.9000e-004	0.1126	0.0296	7.3000e-004	0.0304	95.1680	95.1680	2.1000e-003	2.1000e-003			95.2204
<b>Total</b>	<b>0.0441</b>	<b>0.4298</b>	<b>0.3975</b>	<b>2.4000e-003</b>	<b>0.1502</b>	<b>1.2500e-003</b>	<b>0.1515</b>	<b>0.0407</b>	<b>1.1700e-003</b>	<b>0.0419</b>	<b>251.1665</b>	<b>251.1665</b>	<b>0.0101</b>	<b>0.0101</b>			<b>251.4181</b>

**Mitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000				0.0000
Off-Road	1.1904	12.4243	8.4937	0.0206	0.4961	0.4961	0.4961	0.4564	0.4564	0.4564	0.0000	1,995.7975	1,995.7975	0.6455			2,011.9345
<b>Total</b>	<b>1.1904</b>	<b>12.4243</b>	<b>8.4937</b>	<b>0.0206</b>	<b>2.5554</b>	<b>0.4961</b>	<b>3.0515</b>	<b>1.3133</b>	<b>0.4564</b>	<b>1.7697</b>	<b>0.0000</b>	<b>1,995.7975</b>	<b>1,995.7975</b>	<b>0.6455</b>			<b>2,011.9345</b>

LBCCLAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.3 Grading - 2026**

**Mitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0118	0.4113	0.1205	1.4500e-003	0.0384	4.6000e-004	0.0389	0.0111	4.4000e-004	0.0115	155.9985	155.9985	7.9700e-003	7.9700e-003			156.1977
Worker	0.0323	0.0185	0.2771	9.5000e-004	0.1118	7.9000e-004	0.1126	0.0296	7.3000e-004	0.0304	95.1680	95.1680	2.1000e-003	2.1000e-003			95.2204
<b>Total</b>	<b>0.0441</b>	<b>0.4298</b>	<b>0.3975</b>	<b>2.4000e-003</b>	<b>0.1502</b>	<b>1.2500e-003</b>	<b>0.1515</b>	<b>0.0407</b>	<b>1.1700e-003</b>	<b>0.0419</b>	<b>251.1665</b>	<b>251.1665</b>	<b>0.0101</b>	<b>0.0101</b>			<b>251.4181</b>

**3.4 Building Construction - 2026**

**Unmitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.4897	12.0233	14.0072	0.0250		0.4700	0.4700	0.4498	0.4498	0.4498	2,289.8898	2,289.8898	0.4200	0.4200			2,300.3887
<b>Total</b>	<b>1.4897</b>	<b>12.0233</b>	<b>14.0072</b>	<b>0.0250</b>		<b>0.4700</b>	<b>0.4700</b>	<b>0.4498</b>	<b>0.4498</b>	<b>0.4498</b>	<b>2,289.8898</b>	<b>2,289.8898</b>	<b>0.4200</b>	<b>0.4200</b>			<b>2,300.3887</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2026**

**Unmitigated Construction Off-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0531	1.8510	0.5420	6.5400e-003	0.1729	2.0800e-003	0.1750	0.0498	1.9900e-003	0.0518	701.9932	701.9932	701.9932	0.0359		702.8894
Worker	0.2198	0.1259	1.8841	6.4900e-003	0.7601	5.3900e-003	0.7655	0.2016	4.9600e-003	0.2065	647.1422	647.1422	647.1422	0.0143		647.4989
<b>Total</b>	<b>0.2729</b>	<b>1.9769</b>	<b>2.4261</b>	<b>0.0130</b>	<b>0.9330</b>	<b>7.4700e-003</b>	<b>0.9404</b>	<b>0.2514</b>	<b>6.9500e-003</b>	<b>0.2583</b>	<b>1,349.1354</b>	<b>1,349.1354</b>	<b>1,349.1354</b>	<b>0.0501</b>		<b>1,350.3883</b>

**Mitigated Construction On-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.4897	12.0233	14.0072	0.0250	0.4700	0.4700	0.4700	0.4498	0.4498	0.4498	0.0000	2,289.8898	2,289.8898	0.4200		2,300.3887
<b>Total</b>	<b>1.4897</b>	<b>12.0233</b>	<b>14.0072</b>	<b>0.0250</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4498</b>	<b>0.4498</b>	<b>0.4498</b>	<b>0.0000</b>	<b>2,289.8898</b>	<b>2,289.8898</b>	<b>0.4200</b>		<b>2,300.3887</b>

LBCCLAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2026**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0531	1.8510	0.5420	6.5400e-003	0.1729	2.0800e-003	0.1750	0.0498	1.9900e-003	0.0518	701.9932	701.9932	701.9932	0.0359		702.8894	
Worker	0.2198	0.1259	1.8841	6.4900e-003	0.7601	5.3900e-003	0.7655	0.2016	4.9600e-003	0.2065	647.1422	647.1422	647.1422	0.0143		647.4989	
<b>Total</b>	<b>0.2729</b>	<b>1.9769</b>	<b>2.4261</b>	<b>0.0130</b>	<b>0.9330</b>	<b>7.4700e-003</b>	<b>0.9404</b>	<b>0.2514</b>	<b>6.9500e-003</b>	<b>0.2583</b>	<b>1,349.1354</b>	<b>1,349.1354</b>	<b>1,349.1354</b>	<b>0.0501</b>		<b>1,350.3883</b>	

**3.4 Building Construction - 2027**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.4897	12.0233	14.0072	0.0250	0.4700	0.4700	0.4700	0.4498	0.4498	0.4498	2,289.8898	2,289.8898	2,289.8898	0.4200		2,300.3887	
<b>Total</b>	<b>1.4897</b>	<b>12.0233</b>	<b>14.0072</b>	<b>0.0250</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4498</b>	<b>0.4498</b>	<b>0.4498</b>	<b>2,289.8898</b>	<b>2,289.8898</b>	<b>2,289.8898</b>	<b>0.4200</b>		<b>2,300.3887</b>	

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2027**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0521	1.8343	0.5330	6.5000e-003	0.1729	2.0500e-003	0.1749	0.0498	1.9600e-003	0.0517	698.6335	698.6335	698.6335	0.0353		699.5168	
Worker	0.2095	0.1161	1.7670	6.2800e-003	0.7601	5.0900e-003	0.7652	0.2016	4.6900e-003	0.2063	626.5221	626.5221	626.5221	0.0131		626.8496	
<b>Total</b>	<b>0.2616</b>	<b>1.9505</b>	<b>2.3000</b>	<b>0.0128</b>	<b>0.9330</b>	<b>7.1400e-003</b>	<b>0.9401</b>	<b>0.2514</b>	<b>6.6500e-003</b>	<b>0.2580</b>	<b>1,325.155</b>	<b>1,325.155</b>	<b>1,325.155</b>	<b>0.0484</b>		<b>1,326.366</b>	<b>4</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.4897	12.0233	14.0072	0.0250		0.4700	0.4700		0.4498	0.4498	0.0000	2,289.889	2,289.889	0.4200		2,300.388	7
<b>Total</b>	<b>1.4897</b>	<b>12.0233</b>	<b>14.0072</b>	<b>0.0250</b>		<b>0.4700</b>	<b>0.4700</b>		<b>0.4498</b>	<b>0.4498</b>	<b>0.0000</b>	<b>2,289.889</b>	<b>2,289.889</b>	<b>0.4200</b>		<b>2,300.388</b>	<b>7</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2027**

**Mitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0521	1.8343	0.5330	6.5000e-003	0.1729	2.0500e-003	0.1749	0.0498	1.9600e-003	0.0517	698.6335	698.6335	698.6335	0.0353			699.5168
Worker	0.2095	0.1161	1.7670	6.2800e-003	0.7601	5.0900e-003	0.7652	0.2016	4.6900e-003	0.2063	626.5221	626.5221	626.5221	0.0131			626.8496
<b>Total</b>	<b>0.2616</b>	<b>1.9505</b>	<b>2.3000</b>	<b>0.0128</b>	<b>0.9330</b>	<b>7.1400e-003</b>	<b>0.9401</b>	<b>0.2514</b>	<b>6.6500e-003</b>	<b>0.2580</b>	<b>1,325.1555</b>	<b>1,325.1555</b>	<b>1,325.1555</b>	<b>0.0484</b>			<b>1,326.3664</b>

**3.5 Paving - 2027**

**Unmitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.7854	7.4371	11.6737	0.0179		0.3503	0.3503		0.3234	0.3234		1,710.0067	1,710.0067	0.5420			1,723.5556
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>0.7854</b>	<b>7.4371</b>	<b>11.6737</b>	<b>0.0179</b>		<b>0.3503</b>	<b>0.3503</b>		<b>0.3234</b>	<b>0.3234</b>		<b>1,710.0067</b>	<b>1,710.0067</b>	<b>0.5420</b>			<b>1,723.5556</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.5 Paving - 2027**

**Unmitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0462	0.0256	0.3898	1.3900e-003	0.1677	1.1200e-003	0.1688	0.0445	1.0300e-003	0.0455	138.2034	138.2034	2.8900e-003	2.8900e-003	138.2756	138.2756	138.2756
<b>Total</b>	<b>0.0462</b>	<b>0.0256</b>	<b>0.3898</b>	<b>1.3900e-003</b>	<b>0.1677</b>	<b>1.1200e-003</b>	<b>0.1688</b>	<b>0.0445</b>	<b>1.0300e-003</b>	<b>0.0455</b>	<b>138.2034</b>	<b>138.2034</b>	<b>2.8900e-003</b>	<b>2.8900e-003</b>	<b>138.2756</b>	<b>138.2756</b>	<b>138.2756</b>

**Mitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.7854	7.4371	11.6737	0.0179	0.3503	0.3503	0.3503	0.3234	0.3234	0.3234	0.0000	1,710.0067	1,710.0067	0.5420	0.5420	1,723.5556	1,723.5556
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.7854</b>	<b>7.4371</b>	<b>11.6737</b>	<b>0.0179</b>	<b>0.3503</b>	<b>0.3503</b>	<b>0.3503</b>	<b>0.3234</b>	<b>0.3234</b>	<b>0.3234</b>	<b>0.0000</b>	<b>1,710.0067</b>	<b>1,710.0067</b>	<b>0.5420</b>	<b>0.5420</b>	<b>1,723.5556</b>	<b>1,723.5556</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.5 Paving - 2027**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0462	0.0256	0.3898	1.3900e-003	0.1677	1.1200e-003	0.1688	0.0445	1.0300e-003	0.0455	138.2034	138.2034	2.8900e-003	2.8900e-003	138.2756	138.2756
<b>Total</b>	<b>0.0462</b>	<b>0.0256</b>	<b>0.3898</b>	<b>1.3900e-003</b>	<b>0.1677</b>	<b>1.1200e-003</b>	<b>0.1688</b>	<b>0.0445</b>	<b>1.0300e-003</b>	<b>0.0455</b>	<b>138.2034</b>	<b>138.2034</b>	<b>2.8900e-003</b>	<b>2.8900e-003</b>	<b>138.2756</b>	<b>138.2756</b>

**3.6 Architectural Coating - 2026**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.1620					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515	0.0515	0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>3.3328</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2026**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0453	0.0259	0.3879	1.3400e-003	0.1565	1.1100e-003	0.1576	0.0415	1.0200e-003	0.0425	133.2352	133.2352	2.9400e-003	2.9400e-003	133.3086	133.3086
<b>Total</b>	<b>0.0453</b>	<b>0.0259</b>	<b>0.3879</b>	<b>1.3400e-003</b>	<b>0.1565</b>	<b>1.1100e-003</b>	<b>0.1576</b>	<b>0.0415</b>	<b>1.0200e-003</b>	<b>0.0425</b>	<b>133.2352</b>	<b>133.2352</b>	<b>2.9400e-003</b>	<b>2.9400e-003</b>	<b>133.3086</b>	<b>133.3086</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.1620					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>3.3328</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2026**

**Mitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0453	0.0259	0.3879	1.3400e-003	0.1565	1.1100e-003	0.1576	0.0415	1.0200e-003	0.0425	133.2352	133.2352	2.9400e-003	2.9400e-003		133.3086	133.3086
<b>Total</b>	<b>0.0453</b>	<b>0.0259</b>	<b>0.3879</b>	<b>1.3400e-003</b>	<b>0.1565</b>	<b>1.1100e-003</b>	<b>0.1576</b>	<b>0.0415</b>	<b>1.0200e-003</b>	<b>0.0425</b>	<b>133.2352</b>	<b>133.2352</b>	<b>2.9400e-003</b>	<b>2.9400e-003</b>		<b>133.3086</b>	<b>133.3086</b>

**3.6 Architectural Coating - 2027**

**Unmitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	3.1620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319	281.8319
<b>Total</b>	<b>3.3328</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>		<b>0.0515</b>	<b>0.0515</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>	<b>281.8319</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2027**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0431	0.0239	0.3638	1.2900e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425	128.9898	128.9898	2.7000e-003	2.7000e-003	129.0573	129.0573
<b>Total</b>	<b>0.0431</b>	<b>0.0239</b>	<b>0.3638</b>	<b>1.2900e-003</b>	<b>0.1565</b>	<b>1.0500e-003</b>	<b>0.1575</b>	<b>0.0415</b>	<b>9.6000e-004</b>	<b>0.0425</b>	<b>128.9898</b>	<b>128.9898</b>	<b>2.7000e-003</b>	<b>2.7000e-003</b>	<b>129.0573</b>	<b>129.0573</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.1620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>3.3328</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>		<b>0.0515</b>	<b>0.0515</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2027**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0431	0.0239	0.3638	1.2900e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425	128.9898	2.7000e-003	128.9898	2.7000e-003		129.0573
<b>Total</b>	<b>0.0431</b>	<b>0.0239</b>	<b>0.3638</b>	<b>1.2900e-003</b>	<b>0.1565</b>	<b>1.0500e-003</b>	<b>0.1575</b>	<b>0.0415</b>	<b>9.6000e-004</b>	<b>0.0425</b>	<b>128.9898</b>	<b>2.7000e-003</b>	<b>128.9898</b>	<b>2.7000e-003</b>		<b>129.0573</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	4.3737	21.3891	49.3925	0.2212	21.2917	0.1383	21.4300	5.6957	0.1283	5.8240	22,660.93	52	22,660.93	0.9537		22,684.77
Unmitigated	4.8694	23.6856	61.3669	0.2811	27.5850	0.1737	27.7588	7.3792	0.1613	7.5404	28,777.55	55	28,777.55	1.1815		28,807.09
Total																

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Junior College (2Yr)	4,296.40	1,569.12	149.44	10,010,572	7,726,738		
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
Total	4,296.40	1,569.12	149.44	10,010,572	7,726,738		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.542058	0.044057	0.210689	0.115963	0.013736	0.006367	0.021423	0.034509	0.002637	0.001734	0.005297	0.000719	0.000812
Other Non-Asphalt Surfaces	0.542058	0.044057	0.210689	0.115963	0.013736	0.006367	0.021423	0.034509	0.002637	0.001734	0.005297	0.000719	0.000812

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
NaturalGas Mitigated	0.0579	0.5262	0.4420	3.1600e-003	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400		631.3808	631.3808	0.0121	0.0116	635.1328
NaturalGas Unmitigated	0.0579	0.5262	0.4420	3.1600e-003	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400		631.3808	631.3808	0.0121	0.0116	635.1328

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e					
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM <sub>10</sub>	Exhaust PM <sub>10</sub>	PM <sub>10</sub> Total	Fugitive PM <sub>2.5</sub>	Exhaust PM <sub>2.5</sub>	PM <sub>2.5</sub> Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Junior College (2Yr)	5366.74	0.0579	0.5262	0.4420	3.1600e-003		0.0400	0.0400		0.0400	0.0400			631.3808	0.0121	0.0116	635.1328
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0579</b>	<b>0.5262</b>	<b>0.4420</b>	<b>3.1600e-003</b>		<b>0.0400</b>	<b>0.0400</b>		<b>0.0400</b>	<b>0.0400</b>			<b>631.3808</b>	<b>0.0121</b>	<b>0.0116</b>	<b>635.1328</b>

Mitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e					
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM <sub>10</sub>	Exhaust PM <sub>10</sub>	PM <sub>10</sub> Total	Fugitive PM <sub>2.5</sub>	Exhaust PM <sub>2.5</sub>	PM <sub>2.5</sub> Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Junior College (2Yr)	5366.74	0.0579	0.5262	0.4420	3.1600e-003		0.0400	0.0400		0.0400	0.0400			631.3808	0.0121	0.0116	635.1328
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0579</b>	<b>0.5262</b>	<b>0.4420</b>	<b>3.1600e-003</b>		<b>0.0400</b>	<b>0.0400</b>		<b>0.0400</b>	<b>0.0400</b>			<b>631.3808</b>	<b>0.0121</b>	<b>0.0116</b>	<b>635.1328</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	1.6895	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003		0.8708
Unmitigated	1.6895	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003		0.8708

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	0.1906				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4642				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0347	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003		0.8708
<b>Total</b>	<b>1.6895</b>	<b>3.4200e-003</b>	<b>0.3797</b>	<b>3.0000e-005</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>0.8181</b>	<b>0.8181</b>	<b>0.8181</b>	<b>2.1100e-003</b>		<b>0.8708</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

**6.2 Area by SubCategory**

**Mitigated**

SubCategory	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.1906				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4642				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0347	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003			0.8708
<b>Total</b>	<b>1.6895</b>	<b>3.4200e-003</b>	<b>0.3797</b>	<b>3.0000e-005</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>0.8181</b>	<b>0.8181</b>	<b>0.8181</b>	<b>2.1100e-003</b>			<b>0.8708</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**LBCC LAC Interim Year 2030 (2026-2030 Construction)**  
 Los Angeles-South Coast County, Winter

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	3,736.00	Student	0.88	72,336.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

Urbanization Urban Wind Speed (m/s) 2.2 Precipitation Freq (Days) 33  
 Climate Zone 9 Operational Year 2030

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr) 702.44 CH4 Intensity (lb/MW/hr) 0.029 N2O Intensity (lb/MW/hr) 0.006

**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

Project Characteristics - Interim Year 2030

Land Use - 3,736 student Junior College on 0.88 acres and 72,336 sq ft of building and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 27,792 SF of building space

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Mobile Commute Mitigation -

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	220.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	7/6/2026	7/26/2026
tblConstructionPhase	PhaseEndDate	5/10/2027	5/28/2027
tblConstructionPhase	PhaseEndDate	6/7/2027	5/28/2027
tblConstructionPhase	PhaseEndDate	5/24/2027	6/26/2027
tblConstructionPhase	PhaseStartDate	7/7/2026	7/27/2026
tblConstructionPhase	PhaseStartDate	5/25/2027	7/27/2026
tblConstructionPhase	PhaseStartDate	5/11/2027	5/29/2027
tblLandUse	LandUseSquareFeet	163,084.76	72,336.00
tblLandUse	LotAcreage	3.74	0.88
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

**2.0 Emissions Summary**



LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	1.6895	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003		0.8708
Energy	0.0579	0.5262	0.4420	3.1600e-003	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400	631.3808	631.3808	631.3808	0.0121	0.0116	635.1328
Mobile	4.7162	24.0086	58.4063	0.2679	27.5850	0.1743	27.7593	7.3792	0.1618	7.5409	27,443.0889	27,443.0889	27,443.0889	1.1872		27,472.7700
<b>Total</b>	<b>6.4636</b>	<b>24.5382</b>	<b>59.2280</b>	<b>0.2710</b>	<b>27.5850</b>	<b>0.2156</b>	<b>27.8006</b>	<b>7.3792</b>	<b>0.2031</b>	<b>7.5823</b>	<b>28,075.2878</b>	<b>28,075.2878</b>	<b>28,075.2878</b>	<b>1.2015</b>	<b>0.0116</b>	<b>28,108.7736</b>

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	1.6895	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003		0.8708
Energy	0.0579	0.5262	0.4420	3.1600e-003	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400	631.3808	631.3808	631.3808	0.0121	0.0116	635.1328
Mobile	4.2277	21.5760	47.4933	0.2106	21.2917	0.1388	21.4305	5.6957	0.1289	5.8245	21,585.6717	21,585.6717	21,585.6717	0.9634		21,609.7576
<b>Total</b>	<b>5.9751</b>	<b>22.1056</b>	<b>48.3150</b>	<b>0.2138</b>	<b>21.2917</b>	<b>0.1802</b>	<b>21.4719</b>	<b>5.6957</b>	<b>0.1702</b>	<b>5.8659</b>	<b>22,217.8705</b>	<b>22,217.8705</b>	<b>22,217.8705</b>	<b>0.9777</b>	<b>0.0116</b>	<b>22,245.7612</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	7.56	9.91	18.43	21.14	22.81	16.44	22.76	22.81	16.22	22.64	0.00	20.86	20.86	18.63	0.00	20.86

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2026	6/26/2026	5	20	
2	Grading	Grading	6/27/2026	7/26/2026	5	20	
3	Building Construction	Building Construction	7/27/2026	5/28/2027	5	220	
4	Paving	Paving	5/29/2027	6/26/2027	5	20	
5	Architectural Coating	Architectural Coating	7/27/2026	5/28/2027	5	220	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 2.07**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 108,504; Non-Residential Outdoor: 36,168; Striped Parking Area: 5,410 (Architectural Coating – sqft)**

OffRoad Equipment

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	6.00	126.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	68.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2026**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Fugitive Dust					1.3679	0.0000	1.3679	0.2071	0.0000	0.2071			0.0000			0.0000
Off-Road	1.3396	12.9057	13.3316	0.0242		0.5452	0.5452		0.5091	0.5091		2,325.7934	2,325.7934	0.5866		2,340.4584
<b>Total</b>	<b>1.3396</b>	<b>12.9057</b>	<b>13.3316</b>	<b>0.0242</b>	<b>1.3679</b>	<b>0.5452</b>	<b>1.9131</b>	<b>0.2071</b>	<b>0.5091</b>	<b>0.7162</b>		<b>2,325.7934</b>	<b>2,325.7934</b>	<b>0.5866</b>		<b>2,340.4584</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.2 Demolition - 2026**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0333	1.0055	0.3814	4.4700e-003	0.1102	1.8400e-003	0.1120	0.0302	1.7600e-003	0.0320		488.7128	488.7128	0.0339			489.5605
Vendor	0.0124	0.4096	0.1312	1.4200e-003	0.0384	4.8000e-004	0.0389	0.0111	4.6000e-004	0.0115		151.8352	151.8352	8.4000e-003			152.0453
Worker	0.0475	0.0266	0.3271	1.1700e-003	0.1453	1.0300e-003	0.1463	0.0385	9.5000e-004	0.0395		116.5025	116.5025	2.5500e-003			116.5663
<b>Total</b>	<b>0.0931</b>	<b>1.4417</b>	<b>0.8396</b>	<b>7.0600e-003</b>	<b>0.2939</b>	<b>3.3500e-003</b>	<b>0.2973</b>	<b>0.0798</b>	<b>3.1700e-003</b>	<b>0.0830</b>		<b>757.0505</b>	<b>757.0505</b>	<b>0.0449</b>			<b>758.1720</b>

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					0.5335	0.0000	0.5335	0.0808	0.0000	0.0808			0.0000				0.0000
Off-Road	1.3396	12.9057	13.3316	0.0242		0.5452	0.5452	0.5091	0.5091	0.5091	0.0000	2,325.7934	2,325.7934	0.5866			2,340.4584
<b>Total</b>	<b>1.3396</b>	<b>12.9057</b>	<b>13.3316</b>	<b>0.0242</b>	<b>0.5335</b>	<b>0.5452</b>	<b>1.0787</b>	<b>0.0808</b>	<b>0.5091</b>	<b>0.5898</b>	<b>0.0000</b>	<b>2,325.7934</b>	<b>2,325.7934</b>	<b>0.5866</b>			<b>2,340.4584</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.2 Demolition - 2026**

**Mitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0333	1.0055	0.3814	4.4700e-003	0.1102	1.8400e-003	0.1120	0.0302	1.7600e-003	0.0320	488.7128	488.7128	0.0339			489.5605
Vendor	0.0124	0.4096	0.1312	1.4200e-003	0.0384	4.8000e-004	0.0389	0.0111	4.6000e-004	0.0115	151.8352	151.8352	8.4000e-003			152.0453
Worker	0.0475	0.0266	0.3271	1.1700e-003	0.1453	1.0300e-003	0.1463	0.0385	9.5000e-004	0.0395	116.5025	116.5025	2.5500e-003			116.5663
<b>Total</b>	<b>0.0931</b>	<b>1.4417</b>	<b>0.8396</b>	<b>7.0600e-003</b>	<b>0.2939</b>	<b>3.3500e-003</b>	<b>0.2973</b>	<b>0.0798</b>	<b>3.1700e-003</b>	<b>0.0830</b>	<b>757.0505</b>	<b>757.0505</b>	<b>0.0449</b>			<b>758.1720</b>

**3.3 Grading - 2026**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.1904	12.4243	8.4937	0.0206	0.4961	0.4961	0.4961	0.4564	0.4564	0.4564	1,995.7975	1,995.7975	0.6455			2,011.9345
<b>Total</b>	<b>1.1904</b>	<b>12.4243</b>	<b>8.4937</b>	<b>0.0206</b>	<b>6.5523</b>	<b>0.4961</b>	<b>7.0484</b>	<b>3.3675</b>	<b>0.4564</b>	<b>3.8239</b>	<b>1,995.7975</b>	<b>1,995.7975</b>	<b>0.6455</b>			<b>2,011.9345</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.3 Grading - 2026**

**Unmitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0124	0.4096	0.1312	1.4200e-003	0.0384	4.8000e-004	0.0389	0.0111	4.6000e-004	0.0115	151.8352	151.8352	151.8352	8.4000e-003			152.0453
Worker	0.0365	0.0205	0.2516	9.0000e-004	0.1118	7.9000e-004	0.1126	0.0296	7.3000e-004	0.0304	89.6173	89.6173	89.6173	1.9600e-003			89.6664
<b>Total</b>	<b>0.0489</b>	<b>0.4300</b>	<b>0.3828</b>	<b>2.3200e-003</b>	<b>0.1502</b>	<b>1.2700e-003</b>	<b>0.1515</b>	<b>0.0407</b>	<b>1.1900e-003</b>	<b>0.0419</b>	<b>241.4525</b>	<b>241.4525</b>	<b>241.4525</b>	<b>0.0104</b>			<b>241.7117</b>

**Mitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000				0.0000
Off-Road	1.1904	12.4243	8.4937	0.0206	0.4961	0.4961	0.4961	0.4564	0.4564	0.4564	0.0000	1,995.7975	1,995.7975	0.6455			2,011.9345
<b>Total</b>	<b>1.1904</b>	<b>12.4243</b>	<b>8.4937</b>	<b>0.0206</b>	<b>2.5554</b>	<b>0.4961</b>	<b>3.0515</b>	<b>1.3133</b>	<b>0.4564</b>	<b>1.7697</b>	<b>0.0000</b>	<b>1,995.7975</b>	<b>1,995.7975</b>	<b>0.6455</b>			<b>2,011.9345</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.3 Grading - 2026**

**Mitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0124	0.4096	0.1312	1.4200e-003	0.0384	4.8000e-004	0.0389	0.0111	4.6000e-004	0.0115	151.8352	151.8352	151.8352	8.4000e-003			152.0453
Worker	0.0365	0.0205	0.2516	9.0000e-004	0.1118	7.9000e-004	0.1126	0.0296	7.3000e-004	0.0304	89.6173	89.6173	89.6173	1.9600e-003			89.6664
<b>Total</b>	<b>0.0489</b>	<b>0.4300</b>	<b>0.3828</b>	<b>2.3200e-003</b>	<b>0.1502</b>	<b>1.2700e-003</b>	<b>0.1515</b>	<b>0.0407</b>	<b>1.1900e-003</b>	<b>0.0419</b>		<b>241.4525</b>	<b>241.4525</b>	<b>0.0104</b>			<b>241.7117</b>

**3.4 Building Construction - 2026**

**Unmitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.4897	12.0233	14.0072	0.0250		0.4700	0.4700		0.4498	0.4498		2,289.8898	2,289.8898	0.4200			2,300.3887
<b>Total</b>	<b>1.4897</b>	<b>12.0233</b>	<b>14.0072</b>	<b>0.0250</b>		<b>0.4700</b>	<b>0.4700</b>		<b>0.4498</b>	<b>0.4498</b>		<b>2,289.8898</b>	<b>2,289.8898</b>	<b>0.4200</b>			<b>2,300.3887</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2026**  
**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0558	1.8430	0.5903	6.3700e-003	0.1729	2.1600e-003	0.1750	0.0498	2.0700e-003	0.0518	683.2583	683.2583	683.2583	0.0378		684.2037	
Worker	0.2483	0.1392	1.7108	6.1100e-003	0.7601	5.3900e-003	0.7655	0.2016	4.9600e-003	0.2065	609.3977	609.3977	609.3977	0.0134		609.7314	
<b>Total</b>	<b>0.3041</b>	<b>1.9822</b>	<b>2.3012</b>	<b>0.0125</b>	<b>0.9330</b>	<b>7.5500e-003</b>	<b>0.9405</b>	<b>0.2514</b>	<b>7.0300e-003</b>	<b>0.2584</b>	<b>1,292.6560</b>	<b>1,292.6560</b>	<b>1,292.6560</b>	<b>0.0512</b>		<b>1,293.9351</b>	

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.4897	12.0233	14.0072	0.0250	0.4700	0.4700	0.4700	0.4498	0.4498	0.4498	0.0000	2,289.8898	2,289.8898	0.4200		2,300.3887	
<b>Total</b>	<b>1.4897</b>	<b>12.0233</b>	<b>14.0072</b>	<b>0.0250</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4498</b>	<b>0.4498</b>	<b>0.4498</b>	<b>0.0000</b>	<b>2,289.8898</b>	<b>2,289.8898</b>	<b>0.4200</b>		<b>2,300.3887</b>	

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2026**

**Mitigated Construction Off-Site**

Category	lb/day										lb/day						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0558	1.8430	0.5903	6.3700e-003	0.1729	2.1600e-003	0.1750	0.0498	2.0700e-003	0.0518	683.2583	683.2583	683.2583	0.0378			684.2037
Worker	0.2483	0.1392	1.7108	6.1100e-003	0.7601	5.3900e-003	0.7655	0.2016	4.9600e-003	0.2065	609.3977	609.3977	609.3977	0.0134			609.7314
<b>Total</b>	<b>0.3041</b>	<b>1.9822</b>	<b>2.3012</b>	<b>0.0125</b>	<b>0.9330</b>	<b>7.5500e-003</b>	<b>0.9405</b>	<b>0.2514</b>	<b>7.0300e-003</b>	<b>0.2584</b>	<b>1,292.6560</b>	<b>1,292.6560</b>	<b>1,292.6560</b>	<b>0.0512</b>			<b>1,293.9351</b>

**3.4 Building Construction - 2027**

**Unmitigated Construction On-Site**

Category	lb/day										lb/day						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.4897	12.0233	14.0072	0.0250	0.4700	0.4700	0.4700	0.4498	0.4498	0.4498	2,289.8898	2,289.8898	2,289.8898	0.4200			2,300.3887
<b>Total</b>	<b>1.4897</b>	<b>12.0233</b>	<b>14.0072</b>	<b>0.0250</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4498</b>	<b>0.4498</b>	<b>0.4498</b>	<b>2,289.8898</b>	<b>2,289.8898</b>	<b>2,289.8898</b>	<b>0.4200</b>			<b>2,300.3887</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2027**

**Unmitigated Construction Off-Site**

Category	lb/day											CO2e				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2		NBio- CO2	Total CO2	CH4	N2O
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0547	1.8263	0.5805	6.3300e-003	0.1729	2.1200e-003	0.1750	0.0498	2.0200e-003	0.0518	680.0634	680.0634	0.0372	0.0372	680.9944	680.9944
Worker	0.2374	0.1284	1.6029	5.9100e-003	0.7601	5.0900e-003	0.7652	0.2016	4.6900e-003	0.2063	589.9712	589.9712	0.0123	0.0123	590.2774	590.2774
<b>Total</b>	<b>0.2921</b>	<b>1.9547</b>	<b>2.1835</b>	<b>0.0122</b>	<b>0.9330</b>	<b>7.2100e-003</b>	<b>0.9402</b>	<b>0.2514</b>	<b>6.7100e-003</b>	<b>0.2581</b>	<b>1,270.0347</b>	<b>1,270.0347</b>	<b>0.0495</b>	<b>0.0495</b>	<b>1,271.2718</b>	<b>1,271.2718</b>

**Mitigated Construction On-Site**

Category	lb/day											CO2e				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2		NBio- CO2	Total CO2	CH4	N2O
Off-Road	1.4897	12.0233	14.0072	0.0250	0.4700	0.4700	0.4700	0.4498	0.4498	0.4498	0.0000	2,289.8898	2,289.8898	0.4200	0.4200	2,300.3887
<b>Total</b>	<b>1.4897</b>	<b>12.0233</b>	<b>14.0072</b>	<b>0.0250</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4700</b>	<b>0.4498</b>	<b>0.4498</b>	<b>0.4498</b>	<b>0.0000</b>	<b>2,289.8898</b>	<b>2,289.8898</b>	<b>0.4200</b>	<b>0.4200</b>	<b>2,300.3887</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2027**

**Mitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0547	1.8263	0.5805	6.3300e-003	0.1729	2.1200e-003	0.1750	0.0498	2.0200e-003	0.0518	680.0634	680.0634	680.0634	0.0372			680.9944
Worker	0.2374	0.1284	1.6029	5.9100e-003	0.7601	5.0900e-003	0.7652	0.2016	4.6900e-003	0.2063	589.9712	589.9712	589.9712	0.0123			590.2774
<b>Total</b>	<b>0.2921</b>	<b>1.9547</b>	<b>2.1835</b>	<b>0.0122</b>	<b>0.9330</b>	<b>7.2100e-003</b>	<b>0.9402</b>	<b>0.2514</b>	<b>6.7100e-003</b>	<b>0.2581</b>	<b>1,270.0347</b>	<b>1,270.0347</b>	<b>1,270.0347</b>	<b>0.0495</b>			<b>1,271.2718</b>

**3.5 Paving - 2027**

**Unmitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.7854	7.4371	11.6737	0.0179		0.3503	0.3503		0.3234	0.3234	1,710.0067	1,710.0067	1,710.0067	0.5420			1,723.5556
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
<b>Total</b>	<b>0.7854</b>	<b>7.4371</b>	<b>11.6737</b>	<b>0.0179</b>		<b>0.3503</b>	<b>0.3503</b>		<b>0.3234</b>	<b>0.3234</b>	<b>1,710.0067</b>	<b>1,710.0067</b>	<b>1,710.0067</b>	<b>0.5420</b>			<b>1,723.5556</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.5 Paving - 2027**

**Unmitigated Construction Off-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0524	0.0283	0.3536	1.3000e-003	0.1677	1.1200e-003	0.1688	0.0445	1.0300e-003	0.0455	130.1407	130.1407	2.7000e-003	2.7000e-003	130.2083	130.2083	130.2083
<b>Total</b>	<b>0.0524</b>	<b>0.0283</b>	<b>0.3536</b>	<b>1.3000e-003</b>	<b>0.1677</b>	<b>1.1200e-003</b>	<b>0.1688</b>	<b>0.0445</b>	<b>1.0300e-003</b>	<b>0.0455</b>	<b>130.1407</b>	<b>130.1407</b>	<b>2.7000e-003</b>	<b>2.7000e-003</b>	<b>130.2083</b>	<b>130.2083</b>	<b>130.2083</b>

**Mitigated Construction On-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.7854	7.4371	11.6737	0.0179	0.3503	0.3503	0.3503	0.3234	0.3234	0.3234	0.0000	1,710.0067	1,710.0067	0.5420	0.5420	1,723.5556
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.7854</b>	<b>7.4371</b>	<b>11.6737</b>	<b>0.0179</b>	<b>0.3503</b>	<b>0.3503</b>	<b>0.3503</b>	<b>0.3234</b>	<b>0.3234</b>	<b>0.3234</b>	<b>0.0000</b>	<b>1,710.0067</b>	<b>1,710.0067</b>	<b>0.5420</b>	<b>0.5420</b>	<b>1,723.5556</b>

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**3.5 Paving - 2027**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0524	0.0283	0.3536	1.3000e-003	0.1677	1.1200e-003	0.1688	0.0445	1.0300e-003	0.0455	130.1407	130.1407	2.7000e-003	2.7000e-003	130.2083	130.2083
<b>Total</b>	<b>0.0524</b>	<b>0.0283</b>	<b>0.3536</b>	<b>1.3000e-003</b>	<b>0.1677</b>	<b>1.1200e-003</b>	<b>0.1688</b>	<b>0.0445</b>	<b>1.0300e-003</b>	<b>0.0455</b>	<b>130.1407</b>	<b>130.1407</b>	<b>2.7000e-003</b>	<b>2.7000e-003</b>	<b>130.2083</b>	<b>130.2083</b>

**3.6 Architectural Coating - 2026**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.1620					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515	0.0515	0.0515	0.0515			281.4481	0.0154		281.8319
<b>Total</b>	<b>3.3328</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>			<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

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**3.6 Architectural Coating - 2026**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0511	0.0287	0.3522	1.2600e-003	0.1565	1.1100e-003	0.1576	0.0415	1.0200e-003	0.0425	125.4642	125.4642	125.4642	2.7500e-003	125.5329	125.5329
<b>Total</b>	<b>0.0511</b>	<b>0.0287</b>	<b>0.3522</b>	<b>1.2600e-003</b>	<b>0.1565</b>	<b>1.1100e-003</b>	<b>0.1576</b>	<b>0.0415</b>	<b>1.0200e-003</b>	<b>0.0425</b>	<b>125.4642</b>	<b>125.4642</b>	<b>125.4642</b>	<b>2.7500e-003</b>	<b>125.5329</b>	<b>125.5329</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.1620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>3.3328</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

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**3.6 Architectural Coating - 2026**  
**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0511	0.0287	0.3522	1.2600e-003	0.1565	1.1100e-003	0.1576	0.0415	1.0200e-003	0.0425	125.4642	125.4642	125.4642	2.7500e-003		125.5329	
<b>Total</b>	<b>0.0511</b>	<b>0.0287</b>	<b>0.3522</b>	<b>1.2600e-003</b>	<b>0.1565</b>	<b>1.1100e-003</b>	<b>0.1576</b>	<b>0.0415</b>	<b>1.0200e-003</b>	<b>0.0425</b>	<b>125.4642</b>	<b>125.4642</b>	<b>125.4642</b>	<b>2.7500e-003</b>		<b>125.5329</b>	

**3.6 Architectural Coating - 2027**  
**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	3.1620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515			281.4481	0.0154		281.8319	
<b>Total</b>	<b>3.3328</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>		<b>0.0515</b>	<b>0.0515</b>			<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>	

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.6 Architectural Coating - 2027**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Worker	0.0489	0.0264	0.3300	1.2200e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425		121.4647	121.4647	2.5200e-003			121.5277
<b>Total</b>	<b>0.0489</b>	<b>0.0264</b>	<b>0.3300</b>	<b>1.2200e-003</b>	<b>0.1565</b>	<b>1.0500e-003</b>	<b>0.1575</b>	<b>0.0415</b>	<b>9.6000e-004</b>	<b>0.0425</b>		<b>121.4647</b>	<b>121.4647</b>	<b>2.5200e-003</b>			<b>121.5277</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
lb/day																	
Archit. Coating	3.1620					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154			281.8319
<b>Total</b>	<b>3.3328</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0515</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>			<b>281.8319</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**3.6 Architectural Coating - 2027**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0489	0.0264	0.3300	1.2200e-003	0.1565	1.0500e-003	0.1575	0.0415	9.6000e-004	0.0425	121.4647	121.4647	121.4647	2.5200e-003		121.5277
<b>Total</b>	<b>0.0489</b>	<b>0.0264</b>	<b>0.3300</b>	<b>1.2200e-003</b>	<b>0.1565</b>	<b>1.0500e-003</b>	<b>0.1575</b>	<b>0.0415</b>	<b>9.6000e-004</b>	<b>0.0425</b>	<b>121.4647</b>	<b>121.4647</b>	<b>121.4647</b>	<b>2.5200e-003</b>		<b>121.5277</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	4.2277	21.5760	47.4933	0.2106	21.2917	0.1388	21.4305	5.6957	0.1289	5.8245	21,585.67	17	21,585.67	0.9634		21,609.75
Unmitigated	4.7162	24.0086	58.4063	0.2679	27.5850	0.1743	27.7593	7.3792	0.1618	7.5409	27,443.08	89	27,443.08	1.1872		27,472.77
Total																

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Junior College (2Yr)	4,296.40	1,569.12	149.44	10,010,572	7,726,738		
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
Total	4,296.40	1,569.12	149.44	10,010,572	7,726,738		

4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-C	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	6.40	88.60	92	7	1	
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0.00	0.00	0	0	0	

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.542058	0.044057	0.210689	0.115963	0.013736	0.006367	0.021423	0.034509	0.002637	0.001734	0.005297	0.000719	0.000812
Other Non-Asphalt Surfaces	0.542058	0.044057	0.210689	0.115963	0.013736	0.006367	0.021423	0.034509	0.002637	0.001734	0.005297	0.000719	0.000812

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
NaturalGas Mitigated	0.0579	0.5262	0.4420	3.1600e-003	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400		631.3808	631.3808	0.0121	0.0116	635.1328
NaturalGas Unmitigated	0.0579	0.5262	0.4420	3.1600e-003	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400		631.3808	631.3808	0.0121	0.0116	635.1328

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e					
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Junior College (2Yr)	5366.74	0.0579	0.5262	0.4420	3.1600e-003		0.0400	0.0400		0.0400		0.0400		631.3808	0.0121	0.0116	635.1328
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0579</b>	<b>0.5262</b>	<b>0.4420</b>	<b>3.1600e-003</b>		<b>0.0400</b>	<b>0.0400</b>		<b>0.0400</b>		<b>0.0400</b>		<b>631.3808</b>	<b>0.0121</b>	<b>0.0116</b>	<b>635.1328</b>

Mitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e					
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Junior College (2Yr)	5.36674	0.0579	0.5262	0.4420	3.1600e-003		0.0400	0.0400		0.0400		0.0400		631.3808	0.0121	0.0116	635.1328
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0579</b>	<b>0.5262</b>	<b>0.4420</b>	<b>3.1600e-003</b>		<b>0.0400</b>	<b>0.0400</b>		<b>0.0400</b>		<b>0.0400</b>		<b>631.3808</b>	<b>0.0121</b>	<b>0.0116</b>	<b>635.1328</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	1.6895	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003		0.8708
Unmitigated	1.6895	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003		0.8708

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.1906				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4642				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0347	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003		0.8708
<b>Total</b>	<b>1.6895</b>	<b>3.4200e-003</b>	<b>0.3797</b>	<b>3.0000e-005</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>0.8181</b>	<b>0.8181</b>	<b>0.8181</b>	<b>2.1100e-003</b>		<b>0.8708</b>

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

**6.2 Area by SubCategory**

Mitigated

SubCategory	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.1906				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4642				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0347	3.4200e-003	0.3797	3.0000e-005	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.8181	0.8181	0.8181	2.1100e-003			0.8708
<b>Total</b>	<b>1.6895</b>	<b>3.4200e-003</b>	<b>0.3797</b>	<b>3.0000e-005</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>0.8181</b>	<b>0.8181</b>	<b>0.8181</b>	<b>2.1100e-003</b>			<b>0.8708</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Annual

**LBCC LAC Interim Year 2030 (2026-2030 Construction)**  
 Los Angeles-South Coast County, Annual

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	3,736.00	Student	0.88	72,336.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

Urbanization Urban Wind Speed (m/s) 2.2 Precipitation Freq (Days) 33  
 Climate Zone 9 Operational Year 2030

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr) 702.44 CH4 Intensity (lb/MW/hr) 0.029 N2O Intensity (lb/MW/hr) 0.006

**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Annual

Project Characteristics - Interim Year 2030

Land Use - 3,736 student Junior College on 0.88 acres and 72,336 sq ft of building and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 27,792 SF of building space

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Mobile Commute Mitigation -

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6.00	20.00
tblConstructionPhase	NumDays	10.00	220.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	7/6/2026	7/26/2026
tblConstructionPhase	PhaseEndDate	5/10/2027	5/28/2027
tblConstructionPhase	PhaseEndDate	6/7/2027	5/28/2027
tblConstructionPhase	PhaseEndDate	5/24/2027	6/26/2027
tblConstructionPhase	PhaseStartDate	7/7/2026	7/27/2026
tblConstructionPhase	PhaseStartDate	5/25/2027	7/27/2026
tblConstructionPhase	PhaseStartDate	5/11/2027	5/29/2027
tblLandUse	LandUseSquareFeet	163,084.76	72,336.00
tblLandUse	LotAcreage	3.74	0.88
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	WD_TR	1.23	1.15

**2.0 Emissions Summary**



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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2026	8-31-2026	0.5585	0.5585
2	9-1-2026	11-30-2026	0.6611	0.6611
3	12-1-2026	2-28-2027	0.6534	0.6534
4	3-1-2027	5-31-2027	0.6537	0.6537
5	6-1-2027	8-31-2027	0.0770	0.0770
		Highest	0.6611	0.6611

**2.2 Overall Operational**  
Unmitigated Operational

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.3063	4.3000e-004	0.0475	0.0000	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.4000e-004	0.0000	0.0988
Energy	0.0106	0.0960	0.0807	5.8000e-004	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	0.0000	335.4711	335.4711	0.0115	3.8900e-003	336.9185
Mobile	0.6462	3.4248	8.3067	0.0381	3.7982	0.0244	3.8225	1.0177	0.0227	1.0403	0.0000	3,544.6464	3,544.6464	0.1502	0.0000	3,548.4016
Waste						0.0000	0.0000		0.0000	0.0000	138.4033	0.0000	138.4033	8.1794	0.0000	342.8883
Water						0.0000	0.0000		0.0000	0.0000	2.5378	77.4759	80.0136	0.2639	6.8200e-003	88.6412
<b>Total</b>	<b>0.9631</b>	<b>3.5213</b>	<b>8.4349</b>	<b>0.0387</b>	<b>3.7982</b>	<b>0.0319</b>	<b>3.8300</b>	<b>1.0177</b>	<b>0.0301</b>	<b>1.0478</b>	<b>140.9411</b>	<b>3,957.6862</b>	<b>4,098.6272</b>	<b>8.6052</b>	<b>0.0107</b>	<b>4,316.9483</b>

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**2.2 Overall Operational  
Mitigated Operational**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.3063	4.3000e-004	0.0475	0.0000	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.4000e-004	0.0000	0.0988
Energy	0.0106	0.0960	0.0807	5.8000e-004	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	0.0000	335.4711	335.4711	0.0115	3.8900e-003	336.9185
Mobile	0.5773	3.0762	6.7357	0.0300	2.9316	0.0194	2.9511	0.7855	0.0180	0.8035	0.0000	2,790.6348	2,790.6348	0.1216	0.0000	2,793.6748
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	138.4033	0.0000	138.4033	8.1794	0.0000	342.8883
Water						0.0000	0.0000	0.0000	0.0000	0.0000	2.5378	77.4759	80.0136	0.2639	6.8200e-003	88.6412
<b>Total</b>	<b>0.8942</b>	<b>3.1726</b>	<b>6.8638</b>	<b>0.0306</b>	<b>2.9316</b>	<b>0.0269</b>	<b>2.9585</b>	<b>0.7855</b>	<b>0.0255</b>	<b>0.8110</b>	<b>140.9411</b>	<b>3,203.6746</b>	<b>3,344.6156</b>	<b>8.5766</b>	<b>0.0107</b>	<b>3,562.2215</b>

Percent Reduction	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
7.16		9.90	18.63	21.00	22.81	15.60	22.75	22.81	15.34	22.60	0.00	19.05	18.40	0.33	0.00	17.48

**3.0 Construction Detail**

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2026	6/26/2026	5	20	
2	Grading	Grading	6/27/2026	7/26/2026	5	20	
3	Building Construction	Building Construction	7/27/2026	5/28/2027	5	220	
4	Paving	Paving	5/29/2027	6/26/2027	5	20	
5	Architectural Coating	Architectural Coating	7/27/2026	5/28/2027	5	220	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 2.07**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 108,504; Non-Residential Outdoor: 36,168; Striped Parking Area: 5,410 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	6.00	126.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	68.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2026**

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
MT/yr																
Fugitive Dust					0.0137	0.0000	0.0137	2.0700e-003	0.0000	2.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0134	0.1291	0.1333	2.4000e-004		5.4500e-003	5.4500e-003	5.0900e-003	5.0900e-003	5.0900e-003	0.0000	21.0992	21.0992	5.3200e-003	0.0000	21.2323
<b>Total</b>	<b>0.0134</b>	<b>0.1291</b>	<b>0.1333</b>	<b>2.4000e-004</b>	<b>0.0137</b>	<b>5.4500e-003</b>	<b>0.0191</b>	<b>2.0700e-003</b>	<b>5.0900e-003</b>	<b>7.1600e-003</b>	<b>0.0000</b>	<b>21.0992</b>	<b>21.0992</b>	<b>5.3200e-003</b>	<b>0.0000</b>	<b>21.2323</b>

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**3.2 Demolition - 2026**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	3.3000e-004	0.0102	3.7300e-003	5.0000e-005	1.0800e-003	2.0000e-005	1.1000e-003	3.0000e-004	2.0000e-005	3.1000e-004	0.0000	4.4781	4.4781	3.0000e-004	0.0000	4.4857
Vendor	1.2000e-004	4.1600e-003	1.2600e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3993	1.3993	7.0000e-005	0.0000	1.4012
Worker	4.2000e-004	2.7000e-004	3.3600e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0745	1.0745	2.0000e-005	0.0000	1.0751
<b>Total</b>	<b>8.7000e-004</b>	<b>0.0147</b>	<b>8.3500e-003</b>	<b>7.0000e-005</b>	<b>2.8800e-003</b>	<b>3.0000e-005</b>	<b>2.9100e-003</b>	<b>7.9000e-004</b>	<b>3.0000e-005</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>6.9519</b>	<b>6.9519</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>6.9620</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					5.3300e-003	0.0000	5.3300e-003	8.1000e-004	0.0000	8.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0134	0.1291	0.1333	2.4000e-004	5.4500e-003	5.4500e-003	5.4500e-003	5.0900e-003	0.0000	5.0900e-003	0.0000	21.0992	21.0992	5.3200e-003	0.0000	21.2323
<b>Total</b>	<b>0.0134</b>	<b>0.1291</b>	<b>0.1333</b>	<b>2.4000e-004</b>	<b>5.3300e-003</b>	<b>5.4500e-003</b>	<b>0.0108</b>	<b>8.1000e-004</b>	<b>5.0900e-003</b>	<b>5.9000e-003</b>	<b>0.0000</b>	<b>21.0992</b>	<b>21.0992</b>	<b>5.3200e-003</b>	<b>0.0000</b>	<b>21.2323</b>

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**3.2 Demolition - 2026**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	3.3000e-004	0.0102	3.7300e-003	5.0000e-005	1.0800e-003	2.0000e-005	1.1000e-003	3.0000e-004	2.0000e-005	3.1000e-004	0.0000	4.4781	4.4781	3.0000e-004	0.0000	4.4857
Vendor	1.2000e-004	4.1600e-003	1.2600e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3993	1.3993	7.0000e-005	0.0000	1.4012
Worker	4.2000e-004	2.7000e-004	3.3600e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.0745	1.0745	2.0000e-005	0.0000	1.0751
<b>Total</b>	<b>8.7000e-004</b>	<b>0.0147</b>	<b>8.3500e-003</b>	<b>7.0000e-005</b>	<b>2.8800e-003</b>	<b>3.0000e-005</b>	<b>2.9100e-003</b>	<b>7.9000e-004</b>	<b>3.0000e-005</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>6.9519</b>	<b>6.9519</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>6.9620</b>

**3.3 Grading - 2026**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.1242	0.0849	2.1000e-004	4.9600e-003	4.9600e-003	4.9600e-003	4.5600e-003	4.5600e-003	4.5600e-003	0.0000	18.1056	18.1056	5.8600e-003	0.0000	18.2520
<b>Total</b>	<b>0.0119</b>	<b>0.1242</b>	<b>0.0849</b>	<b>2.1000e-004</b>	<b>0.0655</b>	<b>4.9600e-003</b>	<b>0.0705</b>	<b>0.0337</b>	<b>4.5600e-003</b>	<b>0.0382</b>	<b>0.0000</b>	<b>18.1056</b>	<b>18.1056</b>	<b>5.8600e-003</b>	<b>0.0000</b>	<b>18.2520</b>

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**3.3 Grading - 2026**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	4.1600e-003	1.2600e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3993	1.3993	7.0000e-005	0.0000	1.4012
Worker	3.3000e-004	2.1000e-004	2.5900e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8265	0.8265	2.0000e-005	0.0000	0.8270
<b>Total</b>	<b>4.5000e-004</b>	<b>4.3700e-003</b>	<b>3.8500e-003</b>	<b>2.0000e-005</b>	<b>1.4800e-003</b>	<b>1.0000e-005</b>	<b>1.4800e-003</b>	<b>4.0000e-004</b>	<b>1.0000e-005</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>2.2258</b>	<b>2.2258</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>2.2281</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0256	0.0000	0.0256	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.1242	0.0849	2.1000e-004	4.9600e-003	4.9600e-003	4.9600e-003	4.5600e-003	0.0000	4.5600e-003	0.0000	18.1056	18.1056	5.8600e-003	0.0000	18.2519
<b>Total</b>	<b>0.0119</b>	<b>0.1242</b>	<b>0.0849</b>	<b>2.1000e-004</b>	<b>0.0256</b>	<b>4.9600e-003</b>	<b>0.0305</b>	<b>0.0131</b>	<b>4.5600e-003</b>	<b>0.0177</b>	<b>0.0000</b>	<b>18.1056</b>	<b>18.1056</b>	<b>5.8600e-003</b>	<b>0.0000</b>	<b>18.2519</b>

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**3.3 Grading - 2026**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	4.1600e-003	1.2600e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3993	1.3993	7.0000e-005	0.0000	0.0000	1.4012
Worker	3.3000e-004	2.1000e-004	2.5900e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8265	0.8265	2.0000e-005	0.0000	0.0000	0.8270
<b>Total</b>	<b>4.5000e-004</b>	<b>4.3700e-003</b>	<b>3.8500e-003</b>	<b>2.0000e-005</b>	<b>1.4800e-003</b>	<b>1.0000e-005</b>	<b>1.4800e-003</b>	<b>4.0000e-004</b>	<b>1.0000e-005</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>2.2258</b>	<b>2.2258</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.2281</b>

**3.4 Building Construction - 2026**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0849	0.6853	0.7984	1.4300e-003		0.0268	0.0268		0.0256	0.0256	0.0000	118.4091	118.4091	0.0217	0.0000	118.9520
<b>Total</b>	<b>0.0849</b>	<b>0.6853</b>	<b>0.7984</b>	<b>1.4300e-003</b>		<b>0.0268</b>	<b>0.0268</b>		<b>0.0256</b>	<b>0.0256</b>	<b>0.0000</b>	<b>118.4091</b>	<b>118.4091</b>	<b>0.0217</b>	<b>0.0000</b>	<b>118.9520</b>

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**3.4 Building Construction - 2026**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0900e-003	0.1067	0.0323	3.7000e-004	9.7000e-003	1.2000e-004	9.8200e-003	2.8000e-003	1.2000e-004	2.9100e-003	0.0000	35.8929	35.8929	1.9000e-003	0.0000	35.9403
Worker	0.0127	8.1500e-003	0.1003	3.5000e-004	0.0425	3.1000e-004	0.0428	0.0113	2.8000e-004	0.0116	0.0000	32.0354	32.0354	7.0000e-004	0.0000	32.0530
<b>Total</b>	<b>0.0158</b>	<b>0.1148</b>	<b>0.1326</b>	<b>7.2000e-004</b>	<b>0.0522</b>	<b>4.3000e-004</b>	<b>0.0526</b>	<b>0.0141</b>	<b>4.0000e-004</b>	<b>0.0145</b>	<b>0.0000</b>	<b>67.9283</b>	<b>67.9283</b>	<b>2.6000e-003</b>	<b>0.0000</b>	<b>67.9933</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0849	0.6853	0.7984	1.4300e-003		0.0268	0.0268		0.0256	0.0256	0.0000	118.4090	118.4090	0.0217	0.0000	118.9519
<b>Total</b>	<b>0.0849</b>	<b>0.6853</b>	<b>0.7984</b>	<b>1.4300e-003</b>		<b>0.0268</b>	<b>0.0268</b>		<b>0.0256</b>	<b>0.0256</b>	<b>0.0000</b>	<b>118.4090</b>	<b>118.4090</b>	<b>0.0217</b>	<b>0.0000</b>	<b>118.9519</b>

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**3.4 Building Construction - 2026**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0900e-003	0.1067	0.0323	3.7000e-004	9.7000e-003	1.2000e-004	9.8200e-003	2.8000e-003	1.2000e-004	2.9100e-003	0.0000	35.8929	35.8929	1.9000e-003	0.0000	35.9403
Worker	0.0127	8.1500e-003	0.1003	3.5000e-004	0.0425	3.1000e-004	0.0428	0.0113	2.8000e-004	0.0116	0.0000	32.0354	32.0354	7.0000e-004	0.0000	32.0530
<b>Total</b>	<b>0.0158</b>	<b>0.1148</b>	<b>0.1326</b>	<b>7.2000e-004</b>	<b>0.0522</b>	<b>4.3000e-004</b>	<b>0.0526</b>	<b>0.0141</b>	<b>4.0000e-004</b>	<b>0.0145</b>	<b>0.0000</b>	<b>67.9283</b>	<b>67.9283</b>	<b>2.6000e-003</b>	<b>0.0000</b>	<b>67.9933</b>

**3.4 Building Construction - 2027**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0790	0.6372	0.7424	1.3300e-003		0.0249	0.0249		0.0238	0.0238	0.0000	110.0997	110.0997	0.0202	0.0000	110.6045
<b>Total</b>	<b>0.0790</b>	<b>0.6372</b>	<b>0.7424</b>	<b>1.3300e-003</b>		<b>0.0249</b>	<b>0.0249</b>		<b>0.0238</b>	<b>0.0238</b>	<b>0.0000</b>	<b>110.0997</b>	<b>110.0997</b>	<b>0.0202</b>	<b>0.0000</b>	<b>110.6045</b>

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**3.4 Building Construction - 2027**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8200e-003	0.0983	0.0296	3.4000e-004	9.0200e-003	1.1000e-004	9.1300e-003	2.6000e-003	1.1000e-004	2.7100e-003	0.0000	33.2159	33.2159	1.7400e-003	0.0000	33.2594
Worker	0.0112	6.9900e-003	0.0874	3.2000e-004	0.0395	2.7000e-004	0.0398	0.0105	2.5000e-004	0.0107	0.0000	28.8379	28.8379	6.0000e-004	0.0000	28.8529
<b>Total</b>	<b>0.0141</b>	<b>0.1053</b>	<b>0.1170</b>	<b>6.6000e-004</b>	<b>0.0485</b>	<b>3.8000e-004</b>	<b>0.0489</b>	<b>0.0131</b>	<b>3.6000e-004</b>	<b>0.0135</b>	<b>0.0000</b>	<b>62.0537</b>	<b>62.0537</b>	<b>2.3400e-003</b>	<b>0.0000</b>	<b>62.1122</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0790	0.6372	0.7424	1.3300e-003		0.0249	0.0249		0.0238	0.0238	0.0000	110.0996	110.0996	0.0202	0.0000	110.6044
<b>Total</b>	<b>0.0790</b>	<b>0.6372</b>	<b>0.7424</b>	<b>1.3300e-003</b>		<b>0.0249</b>	<b>0.0249</b>		<b>0.0238</b>	<b>0.0238</b>	<b>0.0000</b>	<b>110.0996</b>	<b>110.0996</b>	<b>0.0202</b>	<b>0.0000</b>	<b>110.6044</b>

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**3.4 Building Construction - 2027**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8200e-003	0.0983	0.0296	3.4000e-004	9.0200e-003	1.1000e-004	9.1300e-003	2.6000e-003	1.1000e-004	2.7100e-003	0.0000	33.2159	33.2159	1.7400e-003	0.0000	33.2594
Worker	0.0112	6.9900e-003	0.0874	3.2000e-004	0.0395	2.7000e-004	0.0398	0.0105	2.5000e-004	0.0107	0.0000	28.8379	28.8379	6.0000e-004	0.0000	28.8529
<b>Total</b>	<b>0.0141</b>	<b>0.1053</b>	<b>0.1170</b>	<b>6.6000e-004</b>	<b>0.0485</b>	<b>3.8000e-004</b>	<b>0.0489</b>	<b>0.0131</b>	<b>3.6000e-004</b>	<b>0.0135</b>	<b>0.0000</b>	<b>62.0537</b>	<b>62.0537</b>	<b>2.3400e-003</b>	<b>0.0000</b>	<b>62.1122</b>

**3.5 Paving - 2027**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	7.8500e-003	0.0744	0.1167	1.8000e-004		3.5000e-003	3.5000e-003	3.2300e-003	3.2300e-003	3.2300e-003	0.0000	15.5129	15.5129	4.9200e-003	0.0000	15.6358
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.8500e-003</b>	<b>0.0744</b>	<b>0.1167</b>	<b>1.8000e-004</b>		<b>3.5000e-003</b>	<b>3.5000e-003</b>	<b>3.2300e-003</b>	<b>3.2300e-003</b>	<b>3.2300e-003</b>	<b>0.0000</b>	<b>15.5129</b>	<b>15.5129</b>	<b>4.9200e-003</b>	<b>0.0000</b>	<b>15.6358</b>

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**3.5 Paving - 2027**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	2.9000e-004	3.6400e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2002	1.2002	2.0000e-005	0.0000	1.2009
<b>Total</b>	<b>4.7000e-004</b>	<b>2.9000e-004</b>	<b>3.6400e-003</b>	<b>1.0000e-005</b>	<b>1.6400e-003</b>	<b>1.0000e-005</b>	<b>1.6500e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.2002</b>	<b>1.2002</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.2009</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	7.8500e-003	0.0744	0.1167	1.8000e-004		3.5000e-003	3.5000e-003	3.2300e-003	3.2300e-003	3.2300e-003	0.0000	15.5129	15.5129	4.9200e-003	0.0000	15.6358
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>7.8500e-003</b>	<b>0.0744</b>	<b>0.1167</b>	<b>1.8000e-004</b>		<b>3.5000e-003</b>	<b>3.5000e-003</b>	<b>3.2300e-003</b>	<b>3.2300e-003</b>	<b>3.2300e-003</b>	<b>0.0000</b>	<b>15.5129</b>	<b>15.5129</b>	<b>4.9200e-003</b>	<b>0.0000</b>	<b>15.6358</b>

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**3.5 Paving - 2027**

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	2.9000e-004	3.6400e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2002	1.2002	2.0000e-005	0.0000	1.2009
<b>Total</b>	<b>4.7000e-004</b>	<b>2.9000e-004</b>	<b>3.6400e-003</b>	<b>1.0000e-005</b>	<b>1.6400e-003</b>	<b>1.0000e-005</b>	<b>1.6500e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.2002</b>	<b>1.2002</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.2009</b>

**3.6 Architectural Coating - 2026**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.1802					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.0653	0.1031	1.7000e-004	2.9400e-003	2.9400e-003	2.9400e-003	2.9400e-003	2.9400e-003	2.9400e-003	0.0000	14.5536	14.5536	7.9000e-004	0.0000	14.5734
<b>Total</b>	<b>0.1900</b>	<b>0.0653</b>	<b>0.1031</b>	<b>1.7000e-004</b>	<b>2.9400e-003</b>	<b>2.9400e-003</b>	<b>2.9400e-003</b>	<b>2.9400e-003</b>	<b>2.9400e-003</b>	<b>2.9400e-003</b>	<b>0.0000</b>	<b>14.5536</b>	<b>14.5536</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>14.5734</b>

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**3.6 Architectural Coating - 2026**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6100e-003	1.6800e-003	0.0207	7.0000e-005	8.7400e-003	6.0000e-005	8.8100e-003	2.3200e-003	6.0000e-005	2.3800e-003	0.0000	6.5955	6.5955	1.4000e-004	0.0000	6.5991
<b>Total</b>	<b>2.6100e-003</b>	<b>1.6800e-003</b>	<b>0.0207</b>	<b>7.0000e-005</b>	<b>8.7400e-003</b>	<b>6.0000e-005</b>	<b>8.8100e-003</b>	<b>2.3200e-003</b>	<b>6.0000e-005</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>6.5955</b>	<b>6.5955</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>6.5991</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.1802					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.0653	0.1031	1.7000e-004		2.9400e-003	2.9400e-003		2.9400e-003	2.9400e-003	0.0000	14.5535	14.5535	7.9000e-004	0.0000	14.5734
<b>Total</b>	<b>0.1900</b>	<b>0.0653</b>	<b>0.1031</b>	<b>1.7000e-004</b>		<b>2.9400e-003</b>	<b>2.9400e-003</b>		<b>2.9400e-003</b>	<b>2.9400e-003</b>	<b>0.0000</b>	<b>14.5535</b>	<b>14.5535</b>	<b>7.9000e-004</b>	<b>0.0000</b>	<b>14.5734</b>

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**3.6 Architectural Coating - 2026**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6100e-003	1.6800e-003	0.0207	7.0000e-005	8.7400e-003	6.0000e-005	8.8100e-003	2.3200e-003	6.0000e-005	2.3800e-003	0.0000	6.5955	6.5955	1.4000e-004	0.0000	6.5991
<b>Total</b>	<b>2.6100e-003</b>	<b>1.6800e-003</b>	<b>0.0207</b>	<b>7.0000e-005</b>	<b>8.7400e-003</b>	<b>6.0000e-005</b>	<b>8.8100e-003</b>	<b>2.3200e-003</b>	<b>6.0000e-005</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>6.5955</b>	<b>6.5955</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>6.5991</b>

**3.6 Architectural Coating - 2027**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.1676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0600e-003	0.0607	0.0959	1.6000e-004	2.7300e-003	2.7300e-003	2.7300e-003	2.7300e-003	2.7300e-003	2.7300e-003	0.0000	13.5322	13.5322	7.4000e-004	0.0000	13.5507
<b>Total</b>	<b>0.1766</b>	<b>0.0607</b>	<b>0.0959</b>	<b>1.6000e-004</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>0.0000</b>	<b>13.5322</b>	<b>13.5322</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>13.5507</b>

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**3.6 Architectural Coating - 2027  
Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3100e-003	1.4400e-003	0.0180	7.0000e-005	8.1300e-003	6.0000e-005	8.1900e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	5.9372	5.9372	1.2000e-004	0.0000	5.9403
<b>Total</b>	<b>2.3100e-003</b>	<b>1.4400e-003</b>	<b>0.0180</b>	<b>7.0000e-005</b>	<b>8.1300e-003</b>	<b>6.0000e-005</b>	<b>8.1900e-003</b>	<b>2.1600e-003</b>	<b>5.0000e-005</b>	<b>2.2100e-003</b>	<b>0.0000</b>	<b>5.9372</b>	<b>5.9372</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>5.9403</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.1676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0600e-003	0.0607	0.0959	1.6000e-004	2.7300e-003	2.7300e-003	2.7300e-003	2.7300e-003	2.7300e-003	2.7300e-003	0.0000	13.5322	13.5322	7.4000e-004	0.0000	13.5507
<b>Total</b>	<b>0.1766</b>	<b>0.0607</b>	<b>0.0959</b>	<b>1.6000e-004</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>2.7300e-003</b>	<b>0.0000</b>	<b>13.5322</b>	<b>13.5322</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>13.5507</b>

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**3.6 Architectural Coating - 2027**

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3100e-003	1.4400e-003	0.0180	7.0000e-005	8.1300e-003	6.0000e-005	8.1900e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	5.9372	5.9372	1.2000e-004	0.0000	5.9403
<b>Total</b>	<b>2.3100e-003</b>	<b>1.4400e-003</b>	<b>0.0180</b>	<b>7.0000e-005</b>	<b>8.1300e-003</b>	<b>6.0000e-005</b>	<b>8.1900e-003</b>	<b>2.1600e-003</b>	<b>5.0000e-005</b>	<b>2.2100e-003</b>	<b>0.0000</b>	<b>5.9372</b>	<b>5.9372</b>	<b>1.2000e-004</b>	<b>0.0000</b>	<b>5.9403</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

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Category	tons/yr													CO2e			
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2		CH4	N2O	
Mitigated	0.5773	3.0762	6.7357	0.0300	2.9316	0.0194	2.9511	0.7855	0.0180	0.8035	0.0000	2,790.6348	2,790.6348	0.1216	0.0000	0.0000	2,793.6748
Unmitigated	0.6462	3.4248	8.3067	0.0381	3.7982	0.0244	3.8225	1.0177	0.0227	1.0403	0.0000	3,544.6464	3,544.6464	0.1502	0.0000	0.0000	3,548.4016

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Junior College (2Yr)	4,296.40	1,569.12	149.44	10,010,572	7,726,738
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>4,296.40</b>	<b>1,569.12</b>	<b>149.44</b>	<b>10,010,572</b>	<b>7,726,738</b>

4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-C	Primary	Diverted	Pass-by	UBUS	MCY	SBUS	MH
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1				
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0				

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.542058	0.044057	0.210689	0.115963	0.013736	0.006367	0.021423	0.034509	0.002637	0.001734	0.005297	0.000719	0.000812
Other Non-Asphalt Surfaces	0.542058	0.044057	0.210689	0.115963	0.013736	0.006367	0.021423	0.034509	0.002637	0.001734	0.005297	0.000719	0.000812

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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	230.9390	230.9390	9.5300e-003	1.9700e-003	231.7651
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	230.9390	230.9390	9.5300e-003	1.9700e-003	231.7651
NaturalGas Mitigated	0.0106	0.0960	0.0807	5.8000e-004		7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	0.0000	104.5322	104.5322	2.0000e-003	1.9200e-003	105.1534
NaturalGas Unmitigated	0.0106	0.0960	0.0807	5.8000e-004		7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	0.0000	104.5322	104.5322	2.0000e-003	1.9200e-003	105.1534

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**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBtu/yr	tons/yr										MT/yr					CO <sub>2</sub> e
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO <sub>2</sub>	NBio-CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
Junior College (2Yr)	1.95886e+006	0.0106	0.0960	0.0807	5.8000e-004	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	0.0000	104.5322	104.5322	2.0000e-003	1.9200e-003	105.1534
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0106</b>	<b>0.0960</b>	<b>0.0807</b>	<b>5.8000e-004</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>0.0000</b>	<b>104.5322</b>	<b>104.5322</b>	<b>2.0000e-003</b>	<b>1.9200e-003</b>	<b>105.1534</b>

Mitigated

Land Use	Natural Gas Use kBtu/yr	tons/yr										MT/yr					CO <sub>2</sub> e
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO <sub>2</sub>	NBio-CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
Junior College (2Yr)	1.95886e+006	0.0106	0.0960	0.0807	5.8000e-004	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	7.3000e-003	0.0000	104.5322	104.5322	2.0000e-003	1.9200e-003	105.1534
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0106</b>	<b>0.0960</b>	<b>0.0807</b>	<b>5.8000e-004</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>7.3000e-003</b>	<b>0.0000</b>	<b>104.5322</b>	<b>104.5322</b>	<b>2.0000e-003</b>	<b>1.9200e-003</b>	<b>105.1534</b>

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**5.3 Energy by Land Use - Electricity**

Unmitigated

Land Use	Electricity Use kWh/yr	Total CO2			N2O	CO2e
		CH4	CH4	CH4		
Junior College (2Yr)	724807	230.9390	9.5300e-003	1.9700e-003	231.7651	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	
<b>Total</b>		<b>230.9390</b>	<b>9.5300e-003</b>	<b>1.9700e-003</b>	<b>231.7651</b>	

Mitigated

Land Use	Electricity Use kWh/yr	Total CO2			N2O	CO2e
		CH4	CH4	CH4		
Junior College (2Yr)	724807	230.9390	9.5300e-003	1.9700e-003	231.7651	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	
<b>Total</b>		<b>230.9390</b>	<b>9.5300e-003</b>	<b>1.9700e-003</b>	<b>231.7651</b>	

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Mitigated	0.3063	4.3000e-004	0.0475	0.0000	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.4000e-004	0.0000	0.0988
Unmitigated	0.3063	4.3000e-004	0.0475	0.0000	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.4000e-004	0.0000	0.0988

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Architectural Coating	0.0348				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2672				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.3400e-003	4.3000e-004	0.0475	0.0000	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.4000e-004	0.0000	0.0988
<b>Total</b>	<b>0.3063</b>	<b>4.3000e-004</b>	<b>0.0475</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>0.0928</b>	<b>0.0928</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.0988</b>

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**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0348					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2672					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.3400e-003	4.3000e-004	0.0475	0.0000	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	1.7000e-004	0.0000	0.0928	0.0928	2.4000e-004	0.0000	0.0988
<b>Total</b>	<b>0.3063</b>	<b>4.3000e-004</b>	<b>0.0475</b>	<b>0.0000</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>1.7000e-004</b>	<b>0.0000</b>	<b>0.0928</b>	<b>0.0928</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.0988</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	80.0136	0.2639	6.8200e-003	88.6412
Unmitigated	80.0136	0.2639	6.8200e-003	88.6412

**7.2 Water by Land Use**

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	7.99915 / 12.5115	80.0136	0.2639	6.8200e-003	88.6412
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>80.0136</b>	<b>0.2639</b>	<b>6.8200e-003</b>	<b>88.6412</b>

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**7.2 Water by Land Use**

Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Junior College (2Yr)	7.99915 / 12.5115	80.0136	0.2639	6.8200e-003	88.6412
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>80.0136</b>	<b>0.2639</b>	<b>6.8200e-003</b>	<b>88.6412</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Category/Year

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	138.4033	8.1794	0.0000	342.8883
Unmitigated	138.4033	8.1794	0.0000	342.8883

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**8.2 Waste by Land Use**

Unmitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	681.82	138.4033	8.1794	0.0000	342.8883
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>138.4033</b>	<b>8.1794</b>	<b>0.0000</b>	<b>342.8883</b>

Mitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	681.82	138.4033	8.1794	0.0000	342.8883
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>138.4033</b>	<b>8.1794</b>	<b>0.0000</b>	<b>342.8883</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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LBCC LAC Interim Year 2030 (2026-2030 Construction) - Los Angeles-South Coast County, Annual

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**APPENDIX E**

**CalEEMod Model Interim Year 2035 Printouts**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**LBCC LAC Interim Year 2035 (2031-2035 Construction)**  
 Los Angeles-South Coast County, Summer

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	5,362.00	Student	1.97	162,651.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

Urbanization Urban Wind Speed (m/s) 2.2 Precipitation Freq (Days) 33  
 Climate Zone 9 Operational Year 2035

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr) 702.44 CH4 Intensity (lb/MW/hr) 0.029 N2O Intensity (lb/MW/hr) 0.006

**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

Project Characteristics - Interim Year 2035

Land Use - 5,362 student Junior College on 1.97 acre and 162,651 sq ft and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Grading.

Demolition -

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Table Name	Column Name	Default Value	New Value
tbiConstructionPhase	NumDays	18.00	230.00
tbiConstructionPhase	NumDays	8.00	20.00
tbiConstructionPhase	NumDays	18.00	20.00
tbiConstructionPhase	PhaseEndDate	7/15/2032	5/14/2032
tbiConstructionPhase	PhaseEndDate	5/26/2032	5/14/2032
tbiConstructionPhase	PhaseEndDate	7/9/2031	6/27/2031
tbiConstructionPhase	PhaseEndDate	6/21/2032	6/11/2032
tbiConstructionPhase	PhaseStartDate	6/22/2032	6/28/2031
tbiConstructionPhase	PhaseStartDate	7/10/2031	6/28/2031
tbiConstructionPhase	PhaseStartDate	6/28/2031	6/1/2031
tbiConstructionPhase	PhaseStartDate	5/27/2032	5/15/2032
tbiLandUse	LandUseSquareFeet	234,063.30	162,651.00
tbiLandUse	LotAcreage	5.37	1.97
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiVehicleTrips	WD_TR	1.23	1.15

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2031	8,4802	11,6518	21,2973	0,0543	6,7584	0,2353	6,9937	3,4230	0,2352	3,6582	0,0000	5,282,650	5,282,650	0,1962	0,0000	5,287,556
2032	8,4571	11,6205	21,1366	0,0540	1,6821	0,2539	1,8601	0,4521	0,2538	0,6294	0,0000	5,259,054	5,259,054	0,1943	0,0000	5,263,913
<b>Maximum</b>	<b>8,4802</b>	<b>11,6518</b>	<b>21,2973</b>	<b>0,0543</b>	<b>6,7584</b>	<b>0,2539</b>	<b>6,9937</b>	<b>3,4230</b>	<b>0,2538</b>	<b>3,6582</b>	<b>0,0000</b>	<b>5,282,650</b>	<b>5,282,650</b>	<b>0,1962</b>	<b>0,0000</b>	<b>5,287,556</b>

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2031	8,4802	11,6518	21,2973	0,0543	2,7615	0,2353	2,9968	1,3689	0,2352	1,6040	0,0000	5,282,650	5,282,650	0,1962	0,0000	5,287,556
2032	8,4571	11,6205	21,1366	0,0540	1,6821	0,2539	1,8601	0,4521	0,2538	0,6294	0,0000	5,259,054	5,259,054	0,1943	0,0000	5,263,913
<b>Maximum</b>	<b>8,4802</b>	<b>11,6518</b>	<b>21,2973</b>	<b>0,0543</b>	<b>2,7615</b>	<b>0,2539</b>	<b>2,9968</b>	<b>1,3689</b>	<b>0,2538</b>	<b>1,6040</b>	<b>0,0000</b>	<b>5,282,650</b>	<b>5,282,650</b>	<b>0,1962</b>	<b>0,0000</b>	<b>5,287,556</b>



LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	3.7222	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
Energy	0.1301	1.1831	0.9938	7.1000e-003	0.0899	0.0899	0.0899	0.0899	0.0899	0.0899	1,419.6903	1,419.6903	1,419.6903	0.0272	0.0260	1,428.1268
Mobile	5.8207	32.6124	74.1264	0.3818	39.5990	0.1895	39.7886	10.5931	0.1761	10.7692	39,203.6759	39,203.6759	39,203.6759	1.5054		39,241.3098
<b>Total</b>	<b>9.6731</b>	<b>33.8003</b>	<b>75.6647</b>	<b>0.3890</b>	<b>39.5990</b>	<b>0.2814</b>	<b>39.8804</b>	<b>10.5931</b>	<b>0.2679</b>	<b>10.8610</b>	<b>40,624.5401</b>	<b>40,624.5401</b>	<b>40,624.5401</b>	<b>1.5356</b>	<b>0.0260</b>	<b>40,670.6861</b>

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	3.7222	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
Energy	0.1301	1.1831	0.9938	7.1000e-003	0.0899	0.0899	0.0899	0.0899	0.0899	0.0899	1,419.6903	1,419.6903	1,419.6903	0.0272	0.0260	1,428.1268
Mobile	5.1796	29.7272	59.6272	0.3009	30.5648	0.1508	30.7156	8.1764	0.1401	8.3164	30,915.4896	30,915.4896	30,915.4896	1.2175		30,945.9267
<b>Total</b>	<b>9.0319</b>	<b>30.9152</b>	<b>61.1655</b>	<b>0.3080</b>	<b>30.5648</b>	<b>0.2426</b>	<b>30.8074</b>	<b>8.1764</b>	<b>0.2319</b>	<b>8.4083</b>	<b>32,336.3538</b>	<b>32,336.3538</b>	<b>32,336.3538</b>	<b>1.2477</b>	<b>0.0260</b>	<b>32,375.3030</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	6.63	8.54	19.16	20.82	22.81	13.77	22.75	22.81	13.45	22.58	0.00	20.40	20.40	18.75	0.00	20.40

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/1/2031	6/27/2031	5	20	
2	Building Construction	Building Construction	6/28/2031	5/14/2032	5	230	
3	Paving	Paving	5/15/2032	6/11/2032	5	20	
4	Architectural Coating	Architectural Coating	6/28/2031	5/14/2032	5	230	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 2.07**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 243,977; Non-Residential Outdoor: 81,326; Striped Parking Area: 5,410 (Architectural Coating – sqft)**

#### OffRoad Equipment

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	106.00	41.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	21.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.2 Grading - 2031**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.6179	7.7501	14.4518	0.0363		0.2340	0.2340		0.2340	0.2340		3,439.7201	3,439.7201	0.1437		3,443.3117
<b>Total</b>	<b>1.6179</b>	<b>7.7501</b>	<b>14.4518</b>	<b>0.0363</b>	<b>6.5523</b>	<b>0.2340</b>	<b>6.7864</b>	<b>3.3675</b>	<b>0.2340</b>	<b>3.6015</b>		<b>3,439.7201</b>	<b>3,439.7201</b>	<b>0.1437</b>		<b>3,443.3117</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0110	0.3962	0.1137	1.4200e-003	0.0384	4.2000e-004	0.0389	0.0111	4.1000e-004	0.0115		153.2408	153.2408	7.5000e-003		153.4284
Worker	0.0355	0.0181	0.3030	1.2500e-003	0.1677	8.5000e-004	0.1685	0.0445	7.8000e-004	0.0452		124.7846	124.7846	2.0500e-003		124.8359
<b>Total</b>	<b>0.0465</b>	<b>0.4143</b>	<b>0.4167</b>	<b>2.6700e-003</b>	<b>0.2061</b>	<b>1.2700e-003</b>	<b>0.2074</b>	<b>0.0555</b>	<b>1.1900e-003</b>	<b>0.0567</b>		<b>278.0254</b>	<b>278.0254</b>	<b>9.5500e-003</b>		<b>278.2642</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.2 Grading - 2031**

**Mitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.6179	7.7501	14.4518	0.0363		0.2340	0.2340		0.2340	0.2340	0.0000	3,439.720 1	3,439.720 1	0.1437		3,443.3117
<b>Total</b>	<b>1.6179</b>	<b>7.7501</b>	<b>14.4518</b>	<b>0.0363</b>	<b>2.5554</b>	<b>0.2340</b>	<b>2.7894</b>	<b>1.3133</b>	<b>0.2340</b>	<b>1.5473</b>	<b>0.0000</b>	<b>3,439.720 1</b>	<b>3,439.720 1</b>	<b>0.1437</b>		<b>3,443.311 7</b>

**Mitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0110	0.3962	0.1137	1.4200e-003	0.0384	4.2000e-004	0.0389	0.0111	4.1000e-004	0.0115		153.2408	153.2408	7.5000e-003		153.4284
Worker	0.0355	0.0181	0.3030	1.2500e-003	0.1677	8.5000e-004	0.1685	0.0445	7.8000e-004	0.0452		124.7846	124.7846	2.0500e-003		124.8359
<b>Total</b>	<b>0.0465</b>	<b>0.4143</b>	<b>0.4167</b>	<b>2.6700e-003</b>	<b>0.2061</b>	<b>1.2700e-003</b>	<b>0.2074</b>	<b>0.0555</b>	<b>1.1900e-003</b>	<b>0.0567</b>		<b>278.0254</b>	<b>278.0254</b>	<b>9.5500e-003</b>		<b>278.2642</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.3 Building Construction - 2031**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.546 <sub>8</sub>	2,897.546 <sub>8</sub>	0.1162		2,900.452 <sub>9</sub>
<b>Total</b>	<b>1.3091</b>	<b>7.9346</b>	<b>16.1570</b>	<b>0.0310</b>		<b>0.1481</b>	<b>0.1481</b>		<b>0.1481</b>	<b>0.1481</b>		<b>2,897.546<sub>8</sub></b>	<b>2,897.546<sub>8</sub></b>	<b>0.1162</b>		<b>2,900.452<sub>9</sub></b>

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0748	2.7074	0.7769	9.7300e-003	0.2625	2.9000e-003	0.2655	0.0756	2.7700e-003	0.0784		1,047.145 <sub>7</sub>	1,047.145 <sub>7</sub>	0.0513		1,048.427 <sub>1</sub>
Worker	0.2511	0.1281	2.1414	8.8400e-003	1.1848	5.9900e-003	1.1908	0.3142	5.5100e-003	0.3197		881.8111	881.8111	0.0145		882.1735
<b>Total</b>	<b>0.3259</b>	<b>2.8355</b>	<b>2.9183</b>	<b>0.0186</b>	<b>1.4474</b>	<b>8.8900e-003</b>	<b>1.4563</b>	<b>0.3898</b>	<b>8.2800e-003</b>	<b>0.3981</b>		<b>1,928.956<sub>9</sub></b>	<b>1,928.956<sub>9</sub></b>	<b>0.0657</b>		<b>1,930.600<sub>6</sub></b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.3 Building Construction - 2031**

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
<b>Total</b>	<b>1.3091</b>	<b>7.9346</b>	<b>16.1570</b>	<b>0.0310</b>		<b>0.1481</b>	<b>0.1481</b>		<b>0.1481</b>	<b>0.1481</b>	<b>0.0000</b>	<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1162</b>		<b>2,900.4529</b>

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0748	2.7074	0.7769	9.7300e-003	0.2625	2.9000e-003	0.2655	0.0756	2.7700e-003	0.0784		1,047.1457	1,047.1457	0.0513		1,048.4271
Worker	0.2511	0.1281	2.1414	8.8400e-003	1.1848	5.9900e-003	1.1908	0.3142	5.5100e-003	0.3197		881.8111	881.8111	0.0145		882.1735
<b>Total</b>	<b>0.3259</b>	<b>2.8355</b>	<b>2.9183</b>	<b>0.0186</b>	<b>1.4474</b>	<b>8.8900e-003</b>	<b>1.4563</b>	<b>0.3898</b>	<b>8.2800e-003</b>	<b>0.3981</b>		<b>1,928.9569</b>	<b>1,928.9569</b>	<b>0.0657</b>		<b>1,930.6006</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.3 Building Construction - 2032**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.3091	7.9346	16.1570	0.0310	0.1481	0.1481	0.1481	0.1481	0.1481	0.1481	2,897.5468	2,897.5468	2,897.5468	0.1162		2,900.4529
<b>Total</b>	<b>1.3091</b>	<b>7.9346</b>	<b>16.1570</b>	<b>0.0310</b>	<b>0.1481</b>	<b>0.1481</b>	<b>0.1481</b>	<b>0.1481</b>	<b>0.1481</b>	<b>0.1481</b>	<b>2,897.5468</b>	<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1162</b>		<b>2,900.4529</b>

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0742	2.6897	0.7733	9.7100e-003	0.2626	2.8600e-003	0.2654	0.0756	2.7300e-003	0.0783			1,045.0529	0.0509		1,046.3242
Worker	0.2324	0.1168	2.0103	8.6500e-003	1.1848	5.5900e-003	1.1904	0.3142	5.1400e-003	0.3194			863.8639	0.0132		864.1950
<b>Total</b>	<b>0.3066</b>	<b>2.8065</b>	<b>2.7836</b>	<b>0.0184</b>	<b>1.4474</b>	<b>8.4500e-003</b>	<b>1.4558</b>	<b>0.3898</b>	<b>7.8700e-003</b>	<b>0.3977</b>			<b>1,908.9167</b>	<b>0.0641</b>		<b>1,910.5192</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.3 Building Construction - 2032**

**Mitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.3091	7.9346	16.1570	0.0310	0.1481	0.1481	0.1481	0.1481	0.1481	0.1481	0.0000	2,897.546 <sub>8</sub>	2,897.546 <sub>8</sub>	0.1162		2,900.452 <sub>9</sub>
<b>Total</b>	<b>1.3091</b>	<b>7.9346</b>	<b>16.1570</b>	<b>0.0310</b>	<b>0.1481</b>	<b>0.1481</b>	<b>0.1481</b>	<b>0.1481</b>	<b>0.1481</b>	<b>0.1481</b>	<b>0.0000</b>	<b>2,897.546<sub>8</sub></b>	<b>2,897.546<sub>8</sub></b>	<b>0.1162</b>		<b>2,900.452<sub>9</sub></b>

**Mitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0742	2.6897	0.7733	9.7100e-003	0.2626	2.8600e-003	0.2654	0.0756	2.7300e-003	0.0783		1,045.052 <sub>9</sub>	1,045.052 <sub>9</sub>	0.0509		1,046.324 <sub>2</sub>
Worker	0.2324	0.1168	2.0103	8.6500e-003	1.1848	5.5900e-003	1.1904	0.3142	5.1400e-003	0.3194		863.8639	863.8639	0.0132		864.1950
<b>Total</b>	<b>0.3066</b>	<b>2.8065</b>	<b>2.7836</b>	<b>0.0184</b>	<b>1.4474</b>	<b>8.4500e-003</b>	<b>1.4558</b>	<b>0.3898</b>	<b>7.8700e-003</b>	<b>0.3977</b>		<b>1,908.916<sub>7</sub></b>	<b>1,908.916<sub>7</sub></b>	<b>0.0641</b>		<b>1,910.519<sub>2</sub></b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.4 Paving - 2032**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.1543	6.2343	13.0935	0.0230		0.2528	0.2528	0.2528	0.2528	0.2528		2,154.260 3	2,154.260 3	0.1035		2,156.846 8
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000			0.0000
<b>Total</b>	<b>1.1543</b>	<b>6.2343</b>	<b>13.0935</b>	<b>0.0230</b>		<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>		<b>2,154.260 3</b>	<b>2,154.260 3</b>	<b>0.1035</b>		<b>2,156.846 8</b>

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0439	0.0220	0.3793	1.6300e-003	0.2236	1.0500e-003	0.2246	0.0593	9.7000e-004	0.0603		162.9932	162.9932	2.5000e-003		163.0557
<b>Total</b>	<b>0.0439</b>	<b>0.0220</b>	<b>0.3793</b>	<b>1.6300e-003</b>	<b>0.2236</b>	<b>1.0500e-003</b>	<b>0.2246</b>	<b>0.0593</b>	<b>9.7000e-004</b>	<b>0.0603</b>		<b>162.9932</b>	<b>162.9932</b>	<b>2.5000e-003</b>		<b>163.0557</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.4 Paving - 2032**

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.1543	6.2343	13.0935	0.0230		0.2528	0.2528	0.2528	0.2528	0.2528	0.0000	2,154.260 <sub>3</sub>	2,154.260 <sub>3</sub>	0.1035		2,156.846 <sub>8</sub>
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.1543</b>	<b>6.2343</b>	<b>13.0935</b>	<b>0.0230</b>		<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.0000</b>	<b>2,154.260<sub>3</sub></b>	<b>2,154.260<sub>3</sub></b>	<b>0.1035</b>		<b>2,156.846<sub>8</sub></b>

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0439	0.0220	0.3793	1.6300e-003	0.2236	1.0500e-003	0.2246	0.0593	9.7000e-004	0.0603			162.9932	2.5000e-003		163.0557
<b>Total</b>	<b>0.0439</b>	<b>0.0220</b>	<b>0.3793</b>	<b>1.6300e-003</b>	<b>0.2236</b>	<b>1.0500e-003</b>	<b>0.2246</b>	<b>0.0593</b>	<b>9.7000e-004</b>	<b>0.0603</b>		<b>162.9932</b>	<b>162.9932</b>	<b>2.5000e-003</b>		<b>163.0557</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.5 Architectural Coating - 2031**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Archit. Coating	6.6646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003	0.0203	0.0203	0.0203	0.0203	0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
<b>Total</b>	<b>6.7953</b>	<b>0.8563</b>	<b>1.7977</b>	<b>2.9700e-003</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0114</b>		<b>281.7328</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0498	0.0254	0.4243	1.7500e-003	0.2347	1.1900e-003	0.2359	0.0623	1.0900e-003	0.0633		174.6984	174.6984	2.8700e-003		174.7702
<b>Total</b>	<b>0.0498</b>	<b>0.0254</b>	<b>0.4243</b>	<b>1.7500e-003</b>	<b>0.2347</b>	<b>1.1900e-003</b>	<b>0.2359</b>	<b>0.0623</b>	<b>1.0900e-003</b>	<b>0.0633</b>		<b>174.6984</b>	<b>174.6984</b>	<b>2.8700e-003</b>		<b>174.7702</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.5 Architectural Coating - 2031**

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	6.6646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
<b>Total</b>	<b>6.7953</b>	<b>0.8563</b>	<b>1.7977</b>	<b>2.9700e-003</b>		<b>0.0203</b>	<b>0.0203</b>		<b>0.0203</b>	<b>0.0203</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0114</b>		<b>281.7328</b>

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0498	0.0254	0.4243	1.7500e-003	0.2347	1.1900e-003	0.2359	0.0623	1.0900e-003	0.0633	174.6984	174.6984	174.6984	2.8700e-003		174.7702
<b>Total</b>	<b>0.0498</b>	<b>0.0254</b>	<b>0.4243</b>	<b>1.7500e-003</b>	<b>0.2347</b>	<b>1.1900e-003</b>	<b>0.2359</b>	<b>0.0623</b>	<b>1.0900e-003</b>	<b>0.0633</b>	<b>174.6984</b>	<b>174.6984</b>	<b>174.6984</b>	<b>2.8700e-003</b>		<b>174.7702</b>

LBC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.5 Architectural Coating - 2032**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	6.6646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003	0.0203	0.0203	0.0203	0.0203	0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
<b>Total</b>	<b>6.7953</b>	<b>0.8563</b>	<b>1.7977</b>	<b>2.9700e-003</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0114</b>		<b>281.7328</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0460	0.0231	0.3983	1.7100e-003	0.2347	1.1100e-003	0.2358	0.0623	1.0200e-003	0.0633		171.1428	171.1428	2.6200e-003		171.2084
<b>Total</b>	<b>0.0460</b>	<b>0.0231</b>	<b>0.3983</b>	<b>1.7100e-003</b>	<b>0.2347</b>	<b>1.1100e-003</b>	<b>0.2358</b>	<b>0.0623</b>	<b>1.0200e-003</b>	<b>0.0633</b>		<b>171.1428</b>	<b>171.1428</b>	<b>2.6200e-003</b>		<b>171.2084</b>

LBCCLAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**3.5 Architectural Coating - 2032**

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	6.6646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003	0.0203	0.0203	0.0203	0.0203	0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
<b>Total</b>	<b>6.7953</b>	<b>0.8563</b>	<b>1.7977</b>	<b>2.9700e-003</b>		<b>0.0203</b>	<b>0.0203</b>		<b>0.0203</b>	<b>0.0203</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0114</b>		<b>281.7328</b>

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0460	0.0231	0.3983	1.7100e-003	0.2347	1.1100e-003	0.2358	0.0623	1.0200e-003	0.0633			171.1428	2.6200e-003		171.2084
<b>Total</b>	<b>0.0460</b>	<b>0.0231</b>	<b>0.3983</b>	<b>1.7100e-003</b>	<b>0.2347</b>	<b>1.1100e-003</b>	<b>0.2358</b>	<b>0.0623</b>	<b>1.0200e-003</b>	<b>0.0633</b>		<b>171.1428</b>	<b>171.1428</b>	<b>2.6200e-003</b>		<b>171.2084</b>

**4.0 Operational Detail - Mobile**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	5.1796	29.7272	59.6272	0.3009	30.5648	0.1508	30.7156	8.1764	0.1401	8.3164	30,915.48	96	30,915.48	1.2175		30,945.92
Unmitigated	5.8207	32.6124	74.1264	0.3818	39.5990	0.1895	39.7886	10.5931	0.1761	10.7692	39,203.67	59	39,203.67	1.5054		39,241.30

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Junior College (2Yr)	6,166.30	2,252.04	214.48	14,367,421	11,089,606
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>6,166.30</b>	<b>2,252.04</b>	<b>214.48</b>	<b>14,367,421</b>	<b>11,089,606</b>

**4.3 Trip Type Information**

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-W or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	Primary	Diverted	Pass-by	
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	6.40	88.60	92	7	1	
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0.00	0.00	0	0	0	

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHH	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807
Other Non-Asphalt Surfaces	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
NaturalGas Mitigated	0.1301	1.1831	0.9938	7.1000e-003		0.0899	0.0899		0.0899	0.0899		1,419.6903	1,419.6903	0.0272	0.0260	1,428.1268
NaturalGas Unmitigated	0.1301	1.1831	0.9938	7.1000e-003		0.0899	0.0899		0.0899	0.0899		1,419.6903	1,419.6903	0.0272	0.0260	1,428.1268

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e					
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Junior College (2Yr)	12067.4	0.1301	1.1831	0.9938	7.1000e-003		0.0899	0.0899		0.0899	0.0899			1,419.6903	0.0272	0.0260	1,428.1268
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1301</b>	<b>1.1831</b>	<b>0.9938</b>	<b>7.1000e-003</b>		<b>0.0899</b>	<b>0.0899</b>		<b>0.0899</b>	<b>0.0899</b>			<b>1,419.6903</b>	<b>0.0272</b>	<b>0.0260</b>	<b>1,428.1268</b>

Mitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e					
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Junior College (2Yr)	12.0674	0.1301	1.1831	0.9938	7.1000e-003		0.0899	0.0899		0.0899	0.0899			1,419.6903	0.0272	0.0260	1,428.1268
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1301</b>	<b>1.1831</b>	<b>0.9938</b>	<b>7.1000e-003</b>		<b>0.0899</b>	<b>0.0899</b>		<b>0.0899</b>	<b>0.0899</b>			<b>1,419.6903</b>	<b>0.0272</b>	<b>0.0260</b>	<b>1,428.1268</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	3.7222	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
Unmitigated	3.7222	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.4200				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2524				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0498	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
<b>Total</b>	<b>3.7222</b>	<b>4.8900e-003</b>	<b>0.5446</b>	<b>4.0000e-005</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.1739</b>	<b>1.1739</b>	<b>1.1739</b>	<b>3.0200e-003</b>		<b>1.2496</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

**6.2 Area by SubCategory**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.4200				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2524				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0498	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
<b>Total</b>	<b>3.7222</b>	<b>4.8900e-003</b>	<b>0.5446</b>	<b>4.0000e-005</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.1739</b>	<b>1.1739</b>	<b>1.1739</b>	<b>3.0200e-003</b>		<b>1.2496</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**LBCC LAC Interim Year 2035 (2031-2035 Construction)**  
 Los Angeles-South Coast County, Winter

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	5,362.00	Student	1.97	162,651.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

Urbanization      Urban      Wind Speed (m/s)      2.2      Precipitation Freq (Days)      33  
 Climate Zone      9      Operational Year      2035

Utility Company      Southern California Edison

CO2 Intensity (lb/MW/hr)      702.44      CH4 Intensity (lb/MW/hr)      0.029      N2O Intensity (lb/MW/hr)      0.006

**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

Project Characteristics - Interim Year 2035

Land Use - 5,362 student Junior College on 1.97 acre and 162,651 sq ft and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Grading.

Demolition -

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Table Name	Column Name	Default Value	New Value
tbiConstructionPhase	NumDays	18.00	230.00
tbiConstructionPhase	NumDays	8.00	20.00
tbiConstructionPhase	NumDays	18.00	20.00
tbiConstructionPhase	PhaseEndDate	7/15/2032	5/14/2032
tbiConstructionPhase	PhaseEndDate	5/26/2032	5/14/2032
tbiConstructionPhase	PhaseEndDate	7/9/2031	6/27/2031
tbiConstructionPhase	PhaseEndDate	6/21/2032	6/11/2032
tbiConstructionPhase	PhaseStartDate	6/22/2032	6/28/2031
tbiConstructionPhase	PhaseStartDate	7/10/2031	6/28/2031
tbiConstructionPhase	PhaseStartDate	6/28/2031	6/1/2031
tbiConstructionPhase	PhaseStartDate	5/27/2032	5/15/2032
tbiLandUse	LandUseSquareFeet	234,063.30	162,651.00
tbiLandUse	LotAcreage	5.37	1.97
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiVehicleTrips	WD_TR	1.23	1.15

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2031	8.5266	11.6557	21.1162	0.0534	6.7584	0.2353	6.9937	3.4230	0.2352	3.6582	0.0000	5,193.200 9	5,193.200 9	0.1977	0.0000	5,198.142 4
2032	8.5009	11.6228	20.9673	0.0531	1.6821	0.2539	1.8602	0.4521	0.2538	0.6295	0.0000	5,170.823 9	5,170.823 9	0.1958	0.0000	5,175.719 0
<b>Maximum</b>	<b>8.5266</b>	<b>11.6557</b>	<b>21.1162</b>	<b>0.0534</b>	<b>6.7584</b>	<b>0.2539</b>	<b>6.9937</b>	<b>3.4230</b>	<b>0.2538</b>	<b>3.6582</b>	<b>0.0000</b>	<b>5,193.200 9</b>	<b>5,193.200 9</b>	<b>0.1977</b>	<b>0.0000</b>	<b>5,198.142 4</b>

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2031	8.5266	11.6557	21.1162	0.0534	2.7615	0.2353	2.9968	1.3689	0.2352	1.6041	0.0000	5,193.200 9	5,193.200 9	0.1977	0.0000	5,198.142 4
2032	8.5009	11.6228	20.9673	0.0531	1.6821	0.2539	1.8602	0.4521	0.2538	0.6295	0.0000	5,170.823 9	5,170.823 9	0.1958	0.0000	5,175.719 0
<b>Maximum</b>	<b>8.5266</b>	<b>11.6557</b>	<b>21.1162</b>	<b>0.0534</b>	<b>2.7615</b>	<b>0.2539</b>	<b>2.9968</b>	<b>1.3689</b>	<b>0.2538</b>	<b>1.6041</b>	<b>0.0000</b>	<b>5,193.200 9</b>	<b>5,193.200 9</b>	<b>0.1977</b>	<b>0.0000</b>	<b>5,198.142 4</b>



LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Area	3.7222	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
Energy	0.1301	1.1831	0.9938	7.1000e-003	0.0899	0.0899	0.0899	0.0899	0.0899	0.0899	1,419.6903	1,419.6903	1,419.6903	0.0272	0.0260	1,428.1268
Mobile	5.6529	32.9089	70.6919	0.3641	39.5990	0.1900	39.7890	10.5931	0.1765	10.7697	37,409.1641	37,409.1641	37,409.1641	1.5194		37,447.1500
<b>Total</b>	<b>9.5053</b>	<b>34.0968</b>	<b>72.2302</b>	<b>0.3713</b>	<b>39.5990</b>	<b>0.2819</b>	<b>39.8809</b>	<b>10.5931</b>	<b>0.2684</b>	<b>10.8615</b>	<b>38,830.0283</b>	<b>38,830.0283</b>	<b>38,830.0283</b>	<b>1.5497</b>	<b>0.0260</b>	<b>38,876.5263</b>

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Area	3.7222	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
Energy	0.1301	1.1831	0.9938	7.1000e-003	0.0899	0.0899	0.0899	0.0899	0.0899	0.0899	1,419.6903	1,419.6903	1,419.6903	0.0272	0.0260	1,428.1268
Mobile	5.0174	29.8596	57.4175	0.2866	30.5648	0.1513	30.7161	8.1764	0.1405	8.3169	29,461.8225	29,461.8225	29,461.8225	1.2353		29,492.7051
<b>Total</b>	<b>8.8697</b>	<b>31.0475</b>	<b>58.9559</b>	<b>0.2937</b>	<b>30.5648</b>	<b>0.2431</b>	<b>30.8079</b>	<b>8.1764</b>	<b>0.2324</b>	<b>8.4087</b>	<b>30,882.6868</b>	<b>30,882.6868</b>	<b>30,882.6868</b>	<b>1.2655</b>	<b>0.0260</b>	<b>30,922.0814</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	6.69	8.94	18.38	20.89	22.81	13.74	22.75	22.81	13.42	22.58	0.00	20.47	20.47	18.34	0.00	20.46

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/1/2031	6/27/2031	5	20	
2	Building Construction	Building Construction	6/28/2031	5/14/2032	5	230	
3	Paving	Paving	5/15/2032	6/11/2032	5	20	
4	Architectural Coating	Architectural Coating	6/28/2031	5/14/2032	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 243,977; Non-Residential Outdoor: 81,326; Striped Parking Area: 5,410 (Architectural Coating – sqft)

#### OffRoad Equipment

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	106.00	41.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	21.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.2 Grading - 2031**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.6179	7.7501	14.4518	0.0363		0.2340	0.2340		0.2340	0.2340		3,439.7201	3,439.7201	0.1437		3,443.3117
<b>Total</b>	<b>1.6179</b>	<b>7.7501</b>	<b>14.4518</b>	<b>0.0363</b>	<b>6.5523</b>	<b>0.2340</b>	<b>6.7864</b>	<b>3.3675</b>	<b>0.2340</b>	<b>3.6015</b>		<b>3,439.7201</b>	<b>3,439.7201</b>	<b>0.1437</b>		<b>3,443.3117</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0115	0.3945	0.1238	1.3900e-003	0.0384	4.3000e-004	0.0389	0.0111	4.1000e-004	0.0115		149.2133	149.2133	7.8800e-003		149.4103
Worker	0.0406	0.0200	0.2735	1.1800e-003	0.1677	8.5000e-004	0.1685	0.0445	7.8000e-004	0.0452		117.4703	117.4703	1.9100e-003		117.5181
<b>Total</b>	<b>0.0521</b>	<b>0.4145</b>	<b>0.3973</b>	<b>2.5700e-003</b>	<b>0.2061</b>	<b>1.2800e-003</b>	<b>0.2074</b>	<b>0.0555</b>	<b>1.1900e-003</b>	<b>0.0567</b>		<b>266.6836</b>	<b>266.6836</b>	<b>9.7900e-003</b>		<b>266.9284</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.2 Grading - 2031**

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.6179	7.7501	14.4518	0.0363	0.2340	0.2340	0.2340	0.2340	0.2340	0.2340	0.0000	3,439.720 1	3,439.720 1	0.1437		3,443.3117
<b>Total</b>	<b>1.6179</b>	<b>7.7501</b>	<b>14.4518</b>	<b>0.0363</b>	<b>2.5554</b>	<b>0.2340</b>	<b>2.7894</b>	<b>1.3133</b>	<b>0.2340</b>	<b>1.5473</b>	<b>0.0000</b>	<b>3,439.720 1</b>	<b>3,439.720 1</b>	<b>0.1437</b>		<b>3,443.311 7</b>

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0115	0.3945	0.1238	1.3900e-003	0.0384	4.3000e-004	0.0389	0.0111	4.1000e-004	0.0115			149.2133	7.8800e-003		149.4103
Worker	0.0406	0.0200	0.2735	1.1800e-003	0.1677	8.5000e-004	0.1685	0.0445	7.8000e-004	0.0452			117.4703	1.9100e-003		117.5181
<b>Total</b>	<b>0.0521</b>	<b>0.4145</b>	<b>0.3973</b>	<b>2.5700e-003</b>	<b>0.2061</b>	<b>1.2800e-003</b>	<b>0.2074</b>	<b>0.0555</b>	<b>1.1900e-003</b>	<b>0.0567</b>			<b>266.6836</b>	<b>9.7900e-003</b>		<b>266.9284</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.3 Building Construction - 2031**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
<b>Total</b>	<b>1.3091</b>	<b>7.9346</b>	<b>16.1570</b>	<b>0.0310</b>		<b>0.1481</b>	<b>0.1481</b>		<b>0.1481</b>	<b>0.1481</b>		<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1162</b>		<b>2,900.4529</b>

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0785	2.6955	0.8459	9.4800e-003	0.2625	2.9700e-003	0.2655	0.0756	2.8400e-003	0.0784		1,019.6240	1,019.6240	0.0539		1,020.9702
Worker	0.2869	0.1413	1.9327	8.3200e-003	1.1848	5.9900e-003	1.1908	0.3142	5.5100e-003	0.3197		830.1236	830.1236	0.0135		830.4612
<b>Total</b>	<b>0.3653</b>	<b>2.8368</b>	<b>2.7786</b>	<b>0.0178</b>	<b>1.4474</b>	<b>8.9600e-003</b>	<b>1.4563</b>	<b>0.3898</b>	<b>8.3500e-003</b>	<b>0.3982</b>		<b>1,849.7476</b>	<b>1,849.7476</b>	<b>0.0674</b>		<b>1,851.4314</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.3 Building Construction - 2031**

**Mitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
<b>Total</b>	<b>1.3091</b>	<b>7.9346</b>	<b>16.1570</b>	<b>0.0310</b>		<b>0.1481</b>	<b>0.1481</b>		<b>0.1481</b>	<b>0.1481</b>	<b>0.0000</b>	<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1162</b>		<b>2,900.4529</b>

**Mitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0785	2.6955	0.8459	9.4800e-003	0.2625	2.9700e-003	0.2655	0.0756	2.8400e-003	0.0784		1,019.6240	1,019.6240	0.0539		1,020.9702
Worker	0.2869	0.1413	1.9327	8.3200e-003	1.1848	5.9900e-003	1.1908	0.3142	5.5100e-003	0.3197		830.1236	830.1236	0.0135		830.4612
<b>Total</b>	<b>0.3653</b>	<b>2.8368</b>	<b>2.7786</b>	<b>0.0178</b>	<b>1.4474</b>	<b>8.9600e-003</b>	<b>1.4563</b>	<b>0.3898</b>	<b>8.3500e-003</b>	<b>0.3982</b>		<b>1,849.7476</b>	<b>1,849.7476</b>	<b>0.0674</b>		<b>1,851.4314</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.3 Building Construction - 2032**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
<b>Total</b>	<b>1.3091</b>	<b>7.9346</b>	<b>16.1570</b>	<b>0.0310</b>		<b>0.1481</b>	<b>0.1481</b>		<b>0.1481</b>	<b>0.1481</b>		<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1162</b>		<b>2,900.4529</b>

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0778	2.6777	0.8420	9.4600e-003	0.2626	2.9200e-003	0.2655	0.0756	2.7900e-003	0.0784		1,017.5658	1,017.5658	0.0534		1,018.9007
Worker	0.2659	0.1288	1.8117	8.1400e-003	1.1848	5.5900e-003	1.1904	0.3142	5.1400e-003	0.3194		813.1647	813.1647	0.0123		813.4729
<b>Total</b>	<b>0.3437</b>	<b>2.8064</b>	<b>2.6537</b>	<b>0.0176</b>	<b>1.4474</b>	<b>8.5100e-003</b>	<b>1.4559</b>	<b>0.3898</b>	<b>7.9300e-003</b>	<b>0.3978</b>		<b>1,830.7304</b>	<b>1,830.7304</b>	<b>0.0657</b>		<b>1,832.3736</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.3 Building Construction - 2032**

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
<b>Total</b>	<b>1.3091</b>	<b>7.9346</b>	<b>16.1570</b>	<b>0.0310</b>		<b>0.1481</b>	<b>0.1481</b>		<b>0.1481</b>	<b>0.1481</b>	<b>0.0000</b>	<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1162</b>		<b>2,900.4529</b>

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0778	2.6777	0.8420	9.4600e-003	0.2626	2.9200e-003	0.2655	0.0756	2.7900e-003	0.0784		1,017.5658	1,017.5658	0.0534		1,018.9007
Worker	0.2659	0.1288	1.8117	8.1400e-003	1.1848	5.5900e-003	1.1904	0.3142	5.1400e-003	0.3194		813.1647	813.1647	0.0123		813.4729
<b>Total</b>	<b>0.3437</b>	<b>2.8064</b>	<b>2.6537</b>	<b>0.0176</b>	<b>1.4474</b>	<b>8.5100e-003</b>	<b>1.4559</b>	<b>0.3898</b>	<b>7.9300e-003</b>	<b>0.3978</b>		<b>1,830.7304</b>	<b>1,830.7304</b>	<b>0.0657</b>		<b>1,832.3736</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.4 Paving - 2032**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.1543	6.2343	13.0935	0.0230		0.2528	0.2528	0.2528	0.2528	0.2528		2,154.260 3	2,154.260 3	0.1035		2,156.846 8
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000			0.0000
<b>Total</b>	<b>1.1543</b>	<b>6.2343</b>	<b>13.0935</b>	<b>0.0230</b>		<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>		<b>2,154.260 3</b>	<b>2,154.260 3</b>	<b>0.1035</b>		<b>2,156.846 8</b>

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0502	0.0243	0.3418	1.5400e-003	0.2236	1.0500e-003	0.2246	0.0593	9.7000e-004	0.0603		153.4273	153.4273	2.3300e-003		153.4855
<b>Total</b>	<b>0.0502</b>	<b>0.0243</b>	<b>0.3418</b>	<b>1.5400e-003</b>	<b>0.2236</b>	<b>1.0500e-003</b>	<b>0.2246</b>	<b>0.0593</b>	<b>9.7000e-004</b>	<b>0.0603</b>		<b>153.4273</b>	<b>153.4273</b>	<b>2.3300e-003</b>		<b>153.4855</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.4 Paving - 2032**

**Mitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.1543	6.2343	13.0935	0.0230		0.2528	0.2528	0.2528	0.2528	0.2528	0.0000	2,154.260 3	2,154.260 3	0.1035		2,156.846 8
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000			0.0000
<b>Total</b>	<b>1.1543</b>	<b>6.2343</b>	<b>13.0935</b>	<b>0.0230</b>		<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.2528</b>	<b>0.0000</b>	<b>2,154.260 3</b>	<b>2,154.260 3</b>	<b>0.1035</b>		<b>2,156.846 8</b>

**Mitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0502	0.0243	0.3418	1.5400e-003	0.2236	1.0500e-003	0.2246	0.0593	9.7000e-004	0.0603		153.4273	153.4273	2.3300e-003		153.4855
<b>Total</b>	<b>0.0502</b>	<b>0.0243</b>	<b>0.3418</b>	<b>1.5400e-003</b>	<b>0.2236</b>	<b>1.0500e-003</b>	<b>0.2246</b>	<b>0.0593</b>	<b>9.7000e-004</b>	<b>0.0603</b>		<b>153.4273</b>	<b>153.4273</b>	<b>2.3300e-003</b>		<b>153.4855</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.5 Architectural Coating - 2031**  
**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	6.6646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003	0.0203	0.0203	0.0203	0.0203	0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
<b>Total</b>	<b>6.7953</b>	<b>0.8563</b>	<b>1.7977</b>	<b>2.9700e-003</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0114</b>		<b>281.7328</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0568	0.0280	0.3829	1.6500e-003	0.2347	1.1900e-003	0.2359	0.0623	1.0900e-003	0.0633		164.4585	164.4585	2.6800e-003		164.5253
<b>Total</b>	<b>0.0568</b>	<b>0.0280</b>	<b>0.3829</b>	<b>1.6500e-003</b>	<b>0.2347</b>	<b>1.1900e-003</b>	<b>0.2359</b>	<b>0.0623</b>	<b>1.0900e-003</b>	<b>0.0633</b>		<b>164.4585</b>	<b>164.4585</b>	<b>2.6800e-003</b>		<b>164.5253</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.5 Architectural Coating - 2031**

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	6.6646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003		0.0203	0.0203		0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
<b>Total</b>	<b>6.7953</b>	<b>0.8563</b>	<b>1.7977</b>	<b>2.9700e-003</b>		<b>0.0203</b>	<b>0.0203</b>		<b>0.0203</b>	<b>0.0203</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0114</b>		<b>281.7328</b>

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0568	0.0280	0.3829	1.6500e-003	0.2347	1.1900e-003	0.2359	0.0623	1.0900e-003	0.0633			164.4585	2.6800e-003		164.5253
<b>Total</b>	<b>0.0568</b>	<b>0.0280</b>	<b>0.3829</b>	<b>1.6500e-003</b>	<b>0.2347</b>	<b>1.1900e-003</b>	<b>0.2359</b>	<b>0.0623</b>	<b>1.0900e-003</b>	<b>0.0633</b>			<b>164.4585</b>	<b>2.6800e-003</b>		<b>164.5253</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**3.5 Architectural Coating - 2032**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	6.6646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003	0.0203	0.0203	0.0203	0.0203	0.0203	0.0203		281.4481	281.4481	0.0114		281.7328
<b>Total</b>	<b>6.7953</b>	<b>0.8563</b>	<b>1.7977</b>	<b>2.9700e-003</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0114</b>		<b>281.7328</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0527	0.0255	0.3589	1.6100e-003	0.2347	1.1100e-003	0.2358	0.0623	1.0200e-003	0.0633		161.0987	161.0987	2.4400e-003		161.1597
<b>Total</b>	<b>0.0527</b>	<b>0.0255</b>	<b>0.3589</b>	<b>1.6100e-003</b>	<b>0.2347</b>	<b>1.1100e-003</b>	<b>0.2358</b>	<b>0.0623</b>	<b>1.0200e-003</b>	<b>0.0633</b>		<b>161.0987</b>	<b>161.0987</b>	<b>2.4400e-003</b>		<b>161.1597</b>

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**3.5 Architectural Coating - 2032**

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	6.6646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1308	0.8563	1.7977	2.9700e-003	0.0203	0.0203	0.0203	0.0203	0.0203	0.0203	0.0000	281.4481	281.4481	0.0114		281.7328
<b>Total</b>	<b>6.7953</b>	<b>0.8563</b>	<b>1.7977</b>	<b>2.9700e-003</b>		<b>0.0203</b>	<b>0.0203</b>		<b>0.0203</b>	<b>0.0203</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0114</b>		<b>281.7328</b>

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0527	0.0255	0.3589	1.6100e-003	0.2347	1.1100e-003	0.2358	0.0623	1.0200e-003	0.0633			161.0987	2.4400e-003		161.1597
<b>Total</b>	<b>0.0527</b>	<b>0.0255</b>	<b>0.3589</b>	<b>1.6100e-003</b>	<b>0.2347</b>	<b>1.1100e-003</b>	<b>0.2358</b>	<b>0.0623</b>	<b>1.0200e-003</b>	<b>0.0633</b>		<b>161.0987</b>	<b>161.0987</b>	<b>2.4400e-003</b>		<b>161.1597</b>

**4.0 Operational Detail - Mobile**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**4.1 Mitigation Measures Mobile**

- Increase Transit Accessibility
- Improve Pedestrian Network

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	5.0174	29.8596	57.4175	0.2866	30.5648	0.1513	30.7161	8.1764	0.1405	8.3169	29,461.82	25	29,461.82	1.2353		29,492.70
Unmitigated	5.6529	32.9089	70.6919	0.3641	39.5990	0.1900	39.7890	10.5931	0.1765	10.7697	37,409.16	41	37,409.16	1.5194		37,447.15

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Junior College (2Yr)	6,166.30	2,252.04	214.48	14,367,421	11,089,606
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>6,166.30</b>	<b>2,252.04</b>	<b>214.48</b>	<b>14,367,421</b>	<b>11,089,606</b>

**4.3 Trip Type Information**

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	92	7	1			
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0			

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**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807
Other Non-Asphalt Surfaces	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
NaturalGas Mitigated	0.1301	1.1831	0.9938	7.1000e-003		0.0899	0.0899		0.0899	0.0899		1,419.6903	1,419.6903	0.0272	0.0260	1,428.1268
NaturalGas Unmitigated	0.1301	1.1831	0.9938	7.1000e-003		0.0899	0.0899		0.0899	0.0899		1,419.6903	1,419.6903	0.0272	0.0260	1,428.1268

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e					
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM <sub>10</sub>	Exhaust PM <sub>10</sub>	PM <sub>10</sub> Total	Fugitive PM <sub>2.5</sub>	Exhaust PM <sub>2.5</sub>	PM <sub>2.5</sub> Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Junior College (2Yr)	12067.4	0.1301	1.1831	0.9938	7.1000e-003		0.0899	0.0899		0.0899	0.0899			1,419.6903	0.0272	0.0260	1,428.1268
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1301</b>	<b>1.1831</b>	<b>0.9938</b>	<b>7.1000e-003</b>		<b>0.0899</b>	<b>0.0899</b>		<b>0.0899</b>	<b>0.0899</b>			<b>1,419.6903</b>	<b>0.0272</b>	<b>0.0260</b>	<b>1,428.1268</b>

Mitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e					
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM <sub>10</sub>	Exhaust PM <sub>10</sub>	PM <sub>10</sub> Total	Fugitive PM <sub>2.5</sub>	Exhaust PM <sub>2.5</sub>	PM <sub>2.5</sub> Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Junior College (2Yr)	12.0674	0.1301	1.1831	0.9938	7.1000e-003		0.0899	0.0899		0.0899	0.0899			1,419.6903	0.0272	0.0260	1,428.1268
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1301</b>	<b>1.1831</b>	<b>0.9938</b>	<b>7.1000e-003</b>		<b>0.0899</b>	<b>0.0899</b>		<b>0.0899</b>	<b>0.0899</b>			<b>1,419.6903</b>	<b>0.0272</b>	<b>0.0260</b>	<b>1,428.1268</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	3.7222	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
Unmitigated	3.7222	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	0.4200				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2524				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0498	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
<b>Total</b>	<b>3.7222</b>	<b>4.8900e-003</b>	<b>0.5446</b>	<b>4.0000e-005</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.1739</b>	<b>1.1739</b>	<b>1.1739</b>	<b>3.0200e-003</b>		<b>1.2496</b>

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**6.2 Area by SubCategory**

**Mitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.4200				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	3.2524				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0498	4.8900e-003	0.5446	4.0000e-005	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.9300e-003	1.1739	1.1739	1.1739	3.0200e-003		1.2496
<b>Total</b>	<b>3.7222</b>	<b>4.8900e-003</b>	<b>0.5446</b>	<b>4.0000e-005</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.9300e-003</b>	<b>1.1739</b>	<b>1.1739</b>	<b>1.1739</b>	<b>3.0200e-003</b>		<b>1.2496</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**LBCC LAC Interim Year 2035 (2031-2035 Construction)**  
 Los Angeles-South Coast County, Annual

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	5,362.00	Student	1.97	162,651.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2035

**Utility Company** Southern California Edison

<b>CO2 Intensity (lb/MW/hr)</b>	702.44	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Annual

Project Characteristics - Interim Year 2035

Land Use - 5,362 student Junior College on 1.97 acre and 162,651 sq ft and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Grading.

Demolition -

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Table Name	Column Name	Default Value	New Value
tbiConstructionPhase	NumDays	18.00	230.00
tbiConstructionPhase	NumDays	8.00	20.00
tbiConstructionPhase	NumDays	18.00	20.00
tbiConstructionPhase	PhaseEndDate	7/15/2032	5/14/2032
tbiConstructionPhase	PhaseEndDate	5/26/2032	5/14/2032
tbiConstructionPhase	PhaseEndDate	7/9/2031	6/27/2031
tbiConstructionPhase	PhaseEndDate	6/21/2032	6/11/2032
tbiConstructionPhase	PhaseStartDate	6/22/2032	6/28/2031
tbiConstructionPhase	PhaseStartDate	7/10/2031	6/28/2031
tbiConstructionPhase	PhaseStartDate	6/28/2031	6/1/2031
tbiConstructionPhase	PhaseStartDate	5/27/2032	5/15/2032
tbiLandUse	LandUseSquareFeet	234,063.30	162,651.00
tbiLandUse	LotAcreage	5.37	1.97
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiVehicleTrips	WD_TR	1.23	1.15

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**2.0 Emissions Summary**

**2.1 Overall Construction**

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
2031	0.5810	0.8598	1.5552	3.9600e-003	0.1773	0.0142	0.1915	0.0638	0.0142	0.0779	0.0000	348.9228	348.9228	0.0133	0.0000	349.2539
2032	0.4225	0.6284	1.1530	2.8400e-003	0.0822	0.0112	0.0934	0.0221	0.0111	0.0333	0.0000	249.8852	249.8852	9.5300e-003	0.0000	250.1234
<b>Maximum</b>	<b>0.5810</b>	<b>0.8598</b>	<b>1.5552</b>	<b>3.9600e-003</b>	<b>0.1773</b>	<b>0.0142</b>	<b>0.1915</b>	<b>0.0638</b>	<b>0.0142</b>	<b>0.0779</b>	<b>0.0000</b>	<b>348.9228</b>	<b>348.9228</b>	<b>0.0133</b>	<b>0.0000</b>	<b>349.2539</b>
MT/yr																

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
2031	0.5810	0.8598	1.5552	3.9600e-003	0.1373	0.0142	0.1515	0.0432	0.0142	0.0574	0.0000	348.9225	348.9225	0.0133	0.0000	349.2537
2032	0.4225	0.6284	1.1530	2.8400e-003	0.0822	0.0112	0.0934	0.0221	0.0111	0.0333	0.0000	249.8851	249.8851	9.5300e-003	0.0000	250.1232
<b>Maximum</b>	<b>0.5810</b>	<b>0.8598</b>	<b>1.5552</b>	<b>3.9600e-003</b>	<b>0.1373</b>	<b>0.0142</b>	<b>0.1515</b>	<b>0.0432</b>	<b>0.0142</b>	<b>0.0574</b>	<b>0.0000</b>	<b>348.9225</b>	<b>348.9225</b>	<b>0.0133</b>	<b>0.0000</b>	<b>349.2537</b>
MT/yr																

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ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	15.40	0.00	14.03	23.91	0.00	18.47	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)					Maximum Mitigated ROG + NOX (tons/quarter)							
1	6-1-2031	8-31-2031	0.5621								0.5621				
2	9-1-2031	11-30-2031	0.6554								0.6554				
3	12-1-2031	2-29-2032	0.6547								0.6547				
4	3-1-2032	5-31-2032	0.5836								0.5836				
5	6-1-2032	8-31-2032	0.0293								0.0293				
		Highest	0.6554								0.6554				

**2.2 Overall Operational Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
Area	0.6764	6.1000e-004	0.0681	1.0000e-005	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	0.0000	0.1331	0.1331	3.4000e-004	0.0000	0.1417
Energy	0.0238	0.2159	0.1814	1.3000e-003	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0000	754.3231	754.3231	0.0259	8.7400e-003	757.5776
Mobile	0.7756	4.6925	10.0425	0.0518	5.4524	0.0266	5.4790	1.4609	0.0247	1.4857	0.0000	4,832.2588	4,832.2588	0.1919	0.0000	4,837.0572
Waste						0.0000	0.0000		0.0000	0.0000	198.6388	0.0000	198.6388	11.7392	0.0000	492.1193
Water						0.0000	0.0000		0.0000	0.0000	3.6423	111.1953	114.8375	0.3787	9.7800e-003	127.2200
<b>Total</b>	<b>1.4758</b>	<b>4.9090</b>	<b>10.2919</b>	<b>0.0532</b>	<b>5.4524</b>	<b>0.0433</b>	<b>5.4956</b>	<b>1.4609</b>	<b>0.0414</b>	<b>1.5023</b>	<b>202.2811</b>	<b>5,697.9102</b>	<b>5,900.1913</b>	<b>12.3361</b>	<b>0.0185</b>	<b>6,214.1157</b>

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**2.2 Overall Operational**

Mitigated Operational

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.6764	6.1000e-004	0.0681	1.0000e-005	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	0.0000	0.1331	0.1331	3.4000e-004	0.0000	0.1417
Energy	0.0238	0.2159	0.1814	1.3000e-003	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164	0.0000	754.3231	754.3231	0.0259	8.7400e-003	757.5776
Mobile	0.6860	4.2557	8.1338	0.0408	4.2085	0.0212	4.2296	1.1276	0.0197	1.1473	0.0000	3,809.5859	3,809.5859	0.1557	0.0000	3,813.4773
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	198.6388	0.0000	198.6388	11.7392	0.0000	492.1193
Water						0.0000	0.0000	0.0000	0.0000	0.0000	3.6423	111.1953	114.8375	0.3787	9.7800e-003	127.2200
<b>Total</b>	<b>1.3862</b>	<b>4.4722</b>	<b>8.3832</b>	<b>0.0422</b>	<b>4.2085</b>	<b>0.0378</b>	<b>4.2463</b>	<b>1.1276</b>	<b>0.0363</b>	<b>1.1640</b>	<b>202.2811</b>	<b>4,675.2374</b>	<b>4,877.5185</b>	<b>12.2999</b>	<b>0.0185</b>	<b>5,190.5358</b>

Percent Reduction	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
6.07		8.90	18.55	20.70	22.81	12.58	22.73	22.81	12.21	22.52	0.00	17.95	17.33	0.29	0.00	16.47

**3.0 Construction Detail**

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/1/2031	6/27/2031	5	20	
2	Building Construction	Building Construction	6/28/2031	5/14/2032	5	230	
3	Paving	Paving	5/15/2032	6/11/2032	5	20	
4	Architectural Coating	Architectural Coating	6/28/2031	5/14/2032	5	230	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 2.07**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 243,977; Non-Residential Outdoor: 81,326; Striped Parking Area: 5,410 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	106.00	41.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	21.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

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**3.2 Grading - 2031**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0162	0.0775	0.1445	3.6000e-004	2.3400e-003	2.3400e-003	2.3400e-003	2.3400e-003	2.3400e-003	2.3400e-003	0.0000	31.2046	31.2046	1.3000e-003	0.0000	31.2372
<b>Total</b>	<b>0.0162</b>	<b>0.0775</b>	<b>0.1445</b>	<b>3.6000e-004</b>	<b>0.0655</b>	<b>2.3400e-003</b>	<b>0.0679</b>	<b>0.0337</b>	<b>2.3400e-003</b>	<b>0.0360</b>	<b>0.0000</b>	<b>31.2046</b>	<b>31.2046</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>31.2372</b>

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	4.0000e-003	1.1900e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3748	1.3748	7.0000e-005	0.0000	1.3766
Worker	3.6000e-004	2.1000e-004	2.8200e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.0835	1.0835	2.0000e-005	0.0000	1.0839
<b>Total</b>	<b>4.7000e-004</b>	<b>4.2100e-003</b>	<b>4.0100e-003</b>	<b>2.0000e-005</b>	<b>2.0200e-003</b>	<b>1.0000e-005</b>	<b>2.0300e-003</b>	<b>5.5000e-004</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.4583</b>	<b>2.4583</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>2.4605</b>

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**3.2 Grading - 2031**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0256	0.0000	0.0256	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0162	0.0775	0.1445	3.6000e-004	2.3400e-003	2.3400e-003	2.3400e-003	2.3400e-003	2.3400e-003	2.3400e-003	0.0000	31.2046	31.2046	1.3000e-003	0.0000	31.2372
<b>Total</b>	<b>0.0162</b>	<b>0.0775</b>	<b>0.1445</b>	<b>3.6000e-004</b>	<b>0.0256</b>	<b>2.3400e-003</b>	<b>0.0279</b>	<b>0.0131</b>	<b>2.3400e-003</b>	<b>0.0155</b>	<b>0.0000</b>	<b>31.2046</b>	<b>31.2046</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>31.2372</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	4.0000e-003	1.1900e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3748	1.3748	7.0000e-005	0.0000	1.3766
Worker	3.6000e-004	2.1000e-004	2.8200e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.0835	1.0835	2.0000e-005	0.0000	1.0839
<b>Total</b>	<b>4.7000e-004</b>	<b>4.2100e-003</b>	<b>4.0100e-003</b>	<b>2.0000e-005</b>	<b>2.0200e-003</b>	<b>1.0000e-005</b>	<b>2.0300e-003</b>	<b>5.5000e-004</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.4583</b>	<b>2.4583</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>2.4605</b>

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**3.3 Building Construction - 2031**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0871	0.5277	1.0744	2.0600e-003		9.8500e-003	9.8500e-003		9.8500e-003	9.8500e-003	0.0000	174.8026	174.8026	7.0100e-003	0.0000	174.9779
<b>Total</b>	<b>0.0871</b>	<b>0.5277</b>	<b>1.0744</b>	<b>2.0600e-003</b>		<b>9.8500e-003</b>	<b>9.8500e-003</b>		<b>9.8500e-003</b>	<b>9.8500e-003</b>	<b>0.0000</b>	<b>174.8026</b>	<b>174.8026</b>	<b>7.0100e-003</b>	<b>0.0000</b>	<b>174.9779</b>

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0800e-003	0.1819	0.0541	6.4000e-004	0.0172	1.9000e-004	0.0174	4.9600e-003	1.9000e-004	5.1400e-003	0.0000	62.4747	62.4747	3.1600e-003	0.0000	62.5537
Worker	0.0170	9.6700e-003	0.1324	5.6000e-004	0.0772	4.0000e-004	0.0776	0.0205	3.7000e-004	0.0209	0.0000	50.9163	50.9163	8.3000e-004	0.0000	50.9370
<b>Total</b>	<b>0.0220</b>	<b>0.1916</b>	<b>0.1864</b>	<b>1.2000e-003</b>	<b>0.0944</b>	<b>5.9000e-004</b>	<b>0.0950</b>	<b>0.0255</b>	<b>5.6000e-004</b>	<b>0.0260</b>	<b>0.0000</b>	<b>113.3910</b>	<b>113.3910</b>	<b>3.9900e-003</b>	<b>0.0000</b>	<b>113.4907</b>

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**3.3 Building Construction - 2031**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0871	0.5277	1.0744	2.0600e-003		9.8500e-003	9.8500e-003		9.8500e-003	9.8500e-003	0.0000	174.8024	174.8024	7.0100e-003	0.0000	174.9777
<b>Total</b>	<b>0.0871</b>	<b>0.5277</b>	<b>1.0744</b>	<b>2.0600e-003</b>		<b>9.8500e-003</b>	<b>9.8500e-003</b>		<b>9.8500e-003</b>	<b>9.8500e-003</b>	<b>0.0000</b>	<b>174.8024</b>	<b>174.8024</b>	<b>7.0100e-003</b>	<b>0.0000</b>	<b>174.9777</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0800e-003	0.1819	0.0541	6.4000e-004	0.0172	1.9000e-004	0.0174	4.9600e-003	1.9000e-004	5.1400e-003	0.0000	62.4747	62.4747	3.1600e-003	0.0000	62.5537
Worker	0.0170	9.6700e-003	0.1324	5.6000e-004	0.0772	4.0000e-004	0.0776	0.0205	3.7000e-004	0.0209	0.0000	50.9163	50.9163	8.3000e-004	0.0000	50.9370
<b>Total</b>	<b>0.0220</b>	<b>0.1916</b>	<b>0.1864</b>	<b>1.2000e-003</b>	<b>0.0944</b>	<b>5.9000e-004</b>	<b>0.0950</b>	<b>0.0255</b>	<b>5.6000e-004</b>	<b>0.0260</b>	<b>0.0000</b>	<b>113.3910</b>	<b>113.3910</b>	<b>3.9900e-003</b>	<b>0.0000</b>	<b>113.4907</b>

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**3.3 Building Construction - 2032**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0635	0.3848	0.7836	1.5000e-003	7.1800e-003	7.1800e-003	7.1800e-003	7.1800e-003	7.1800e-003	7.1800e-003	0.0000	127.4876	127.4876	5.1100e-003	0.0000	127.6155
<b>Total</b>	<b>0.0635</b>	<b>0.3848</b>	<b>0.7836</b>	<b>1.5000e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>0.0000</b>	<b>127.4876</b>	<b>127.4876</b>	<b>5.1100e-003</b>	<b>0.0000</b>	<b>127.6155</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6700e-003	0.1318	0.0392	4.7000e-004	0.0125	1.4000e-004	0.0127	3.6200e-003	1.3000e-004	3.7500e-003	0.0000	45.4728	45.4728	2.2900e-003	0.0000	45.5300
Worker	0.0115	6.4300e-003	0.0905	4.0000e-004	0.0563	2.7000e-004	0.0566	0.0150	2.5000e-004	0.0152	0.0000	36.3766	36.3766	5.5000e-004	0.0000	36.3904
<b>Total</b>	<b>0.0151</b>	<b>0.1382</b>	<b>0.1298</b>	<b>8.7000e-004</b>	<b>0.0689</b>	<b>4.1000e-004</b>	<b>0.0693</b>	<b>0.0186</b>	<b>3.8000e-004</b>	<b>0.0190</b>	<b>0.0000</b>	<b>81.8494</b>	<b>81.8494</b>	<b>2.8400e-003</b>	<b>0.0000</b>	<b>81.9204</b>

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**3.3 Building Construction - 2032**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0635	0.3848	0.7836	1.5000e-003	7.1800e-003	7.1800e-003	7.1800e-003	7.1800e-003	7.1800e-003	7.1800e-003	0.0000	127.4874	127.4874	5.1100e-003	0.0000	127.6153
<b>Total</b>	<b>0.0635</b>	<b>0.3848</b>	<b>0.7836</b>	<b>1.5000e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>7.1800e-003</b>	<b>0.0000</b>	<b>127.4874</b>	<b>127.4874</b>	<b>5.1100e-003</b>	<b>0.0000</b>	<b>127.6153</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6700e-003	0.1318	0.0392	4.7000e-004	0.0125	1.4000e-004	0.0127	3.6200e-003	1.3000e-004	3.7500e-003	0.0000	45.4728	45.4728	2.2900e-003	0.0000	45.5300
Worker	0.0115	6.4300e-003	0.0905	4.0000e-004	0.0563	2.7000e-004	0.0566	0.0150	2.5000e-004	0.0152	0.0000	36.3766	36.3766	5.5000e-004	0.0000	36.3904
<b>Total</b>	<b>0.0151</b>	<b>0.1382</b>	<b>0.1298</b>	<b>8.7000e-004</b>	<b>0.0689</b>	<b>4.1000e-004</b>	<b>0.0693</b>	<b>0.0186</b>	<b>3.8000e-004</b>	<b>0.0190</b>	<b>0.0000</b>	<b>81.8494</b>	<b>81.8494</b>	<b>2.8400e-003</b>	<b>0.0000</b>	<b>81.9204</b>

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**3.4 Paving - 2032**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0115	0.0623	0.1309	2.3000e-004	2.5300e-003	2.5300e-003	2.5300e-003	2.5300e-003	2.5300e-003	2.5300e-003	0.0000	19.5431	19.5431	9.4000e-004	0.0000	19.5666
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0115</b>	<b>0.0623</b>	<b>0.1309</b>	<b>2.3000e-004</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>0.0000</b>	<b>19.5431</b>	<b>19.5431</b>	<b>9.4000e-004</b>	<b>0.0000</b>	<b>19.5666</b>

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	2.5000e-004	3.5200e-003	2.0000e-005	2.1900e-003	1.0000e-005	2.2000e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4152	1.4152	2.0000e-005	0.0000	1.4157
<b>Total</b>	<b>4.5000e-004</b>	<b>2.5000e-004</b>	<b>3.5200e-003</b>	<b>2.0000e-005</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>2.2000e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.4152</b>	<b>1.4152</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.4157</b>

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**3.4 Paving - 2032**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0115	0.0623	0.1309	2.3000e-004	2.5300e-003	2.5300e-003	2.5300e-003	2.5300e-003	2.5300e-003	2.5300e-003	0.0000	19.5431	19.5431	9.4000e-004	0.0000	19.5666
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0115</b>	<b>0.0623</b>	<b>0.1309</b>	<b>2.3000e-004</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>2.5300e-003</b>	<b>0.0000</b>	<b>19.5431</b>	<b>19.5431</b>	<b>9.4000e-004</b>	<b>0.0000</b>	<b>19.5666</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	2.5000e-004	3.5200e-003	2.0000e-005	2.1900e-003	1.0000e-005	2.2000e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.4152	1.4152	2.0000e-005	0.0000	1.4157
<b>Total</b>	<b>4.5000e-004</b>	<b>2.5000e-004</b>	<b>3.5200e-003</b>	<b>2.0000e-005</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>2.2000e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.4152</b>	<b>1.4152</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.4157</b>

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**3.5 Architectural Coating - 2031**  
**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.4432					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6900e-003	0.0569	0.1196	2.0000e-004	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.0000	16.9791	16.9791	6.9000e-004	0.0000	16.9963
<b>Total</b>	<b>0.4519</b>	<b>0.0569</b>	<b>0.1196</b>	<b>2.0000e-004</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>0.0000</b>	<b>16.9791</b>	<b>16.9791</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>16.9963</b>

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3600e-003	1.9200e-003	0.0262	1.1000e-004	0.0153	8.0000e-005	0.0154	4.0600e-003	7.0000e-005	4.1400e-003	0.0000	10.0872	10.0872	1.6000e-004	0.0000	10.0913
<b>Total</b>	<b>3.3600e-003</b>	<b>1.9200e-003</b>	<b>0.0262</b>	<b>1.1000e-004</b>	<b>0.0153</b>	<b>8.0000e-005</b>	<b>0.0154</b>	<b>4.0600e-003</b>	<b>7.0000e-005</b>	<b>4.1400e-003</b>	<b>0.0000</b>	<b>10.0872</b>	<b>10.0872</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>10.0913</b>

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**3.5 Architectural Coating - 2031**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.4432					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6900e-003	0.0569	0.1196	2.0000e-004	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	1.3500e-003	0.0000	16.9791	16.9791	16.9791	6.9000e-004	0.0000	16.9963
<b>Total</b>	<b>0.4519</b>	<b>0.0569</b>	<b>0.1196</b>	<b>2.0000e-004</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>1.3500e-003</b>	<b>0.0000</b>	<b>16.9791</b>	<b>16.9791</b>	<b>16.9791</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>16.9963</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3600e-003	1.9200e-003	0.0262	1.1000e-004	0.0153	8.0000e-005	0.0154	4.0600e-003	7.0000e-005	4.1400e-003	0.0000	10.0872	10.0872	1.6000e-004	0.0000	10.0913
<b>Total</b>	<b>3.3600e-003</b>	<b>1.9200e-003</b>	<b>0.0262</b>	<b>1.1000e-004</b>	<b>0.0153</b>	<b>8.0000e-005</b>	<b>0.0154</b>	<b>4.0600e-003</b>	<b>7.0000e-005</b>	<b>4.1400e-003</b>	<b>0.0000</b>	<b>10.0872</b>	<b>10.0872</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>10.0913</b>

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**3.5 Architectural Coating - 2032**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.3232					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3400e-003	0.0415	0.0872	1.4000e-004		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	12.3833	12.3833	5.0000e-004	0.0000	12.3958
<b>Total</b>	<b>0.3296</b>	<b>0.0415</b>	<b>0.0872</b>	<b>1.4000e-004</b>		<b>9.8000e-004</b>	<b>9.8000e-004</b>		<b>9.8000e-004</b>	<b>9.8000e-004</b>	<b>0.0000</b>	<b>12.3833</b>	<b>12.3833</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>12.3958</b>

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2700e-003	1.2700e-003	0.0179	8.0000e-005	0.0112	5.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0100e-003	0.0000	7.2067	7.2067	1.1000e-004	0.0000	7.2094
<b>Total</b>	<b>2.2700e-003</b>	<b>1.2700e-003</b>	<b>0.0179</b>	<b>8.0000e-005</b>	<b>0.0112</b>	<b>5.0000e-005</b>	<b>0.0112</b>	<b>2.9600e-003</b>	<b>5.0000e-005</b>	<b>3.0100e-003</b>	<b>0.0000</b>	<b>7.2067</b>	<b>7.2067</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>7.2094</b>

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**3.5 Architectural Coating - 2032**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.3232					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3400e-003	0.0415	0.0872	1.4000e-004	9.8000e-004	9.8000e-004	9.8000e-004	9.8000e-004	9.8000e-004	9.8000e-004	0.0000	12.3833	12.3833	5.0000e-004	0.0000	12.3958
<b>Total</b>	<b>0.3296</b>	<b>0.0415</b>	<b>0.0872</b>	<b>1.4000e-004</b>	<b>9.8000e-004</b>	<b>9.8000e-004</b>	<b>9.8000e-004</b>	<b>9.8000e-004</b>	<b>9.8000e-004</b>	<b>9.8000e-004</b>	<b>0.0000</b>	<b>12.3833</b>	<b>12.3833</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>12.3958</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2700e-003	1.2700e-003	0.0179	8.0000e-005	0.0112	5.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0100e-003	0.0000	7.2067	7.2067	1.1000e-004	0.0000	7.2094
<b>Total</b>	<b>2.2700e-003</b>	<b>1.2700e-003</b>	<b>0.0179</b>	<b>8.0000e-005</b>	<b>0.0112</b>	<b>5.0000e-005</b>	<b>0.0112</b>	<b>2.9600e-003</b>	<b>5.0000e-005</b>	<b>3.0100e-003</b>	<b>0.0000</b>	<b>7.2067</b>	<b>7.2067</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>7.2094</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

- Increase Transit Accessibility
- Improve Pedestrian Network

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	0.6860	4.2557	8.1338	0.0408	4.2085	0.0212	4.2296	1.1276	0.0197	1.1473	0.0000	3,809,585 <sub>9</sub>	3,809,585 <sub>9</sub>	0.1557	0.0000	3,813,477 <sub>3</sub>
Unmitigated	0.7756	4.6925	10.0425	0.0518	5.4524	0.0266	5.4790	1.4609	0.0247	1.4857	0.0000	4,832,258 <sub>8</sub>	4,832,258 <sub>8</sub>	0.1919	0.0000	4,837,057 <sub>2</sub>

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Junior College (2Yr)	6,166.30	2,252.04	214.48	14,367,421	11,089,606
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>6,166.30</b>	<b>2,252.04</b>	<b>214.48</b>	<b>14,367,421</b>	<b>11,089,606</b>

**4.3 Trip Type Information**

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-C	H-O or C-C	H-W or C-W	H-O or C-NW	H-S or C-C	H-W or C-C	H-O or C-C	H-W or C-W	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.90	88.60	5.00	92	7	1			
Other Non-Asphalt Surfaces	16.60	8.40	6.90	6.90	0.00	0.00	0	0	0			

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**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807
Other Non-Asphalt Surfaces	0.539854	0.043743	0.210883	0.115969	0.013375	0.006440	0.022010	0.036531	0.002703	0.001629	0.005324	0.000732	0.000807

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	519.2774	519.2774	0.0214	4.4400e-003	521.1352
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	519.2774	519.2774	0.0214	4.4400e-003	521.1352
NaturalGas Mitigated	0.0238	0.2159	0.1814	1.3000e-003		0.0164	0.0164		0.0164	0.0164	0.0000	235.0457	235.0457	4.5100e-003	4.3100e-003	236.4424
NaturalGas Unmitigated	0.0238	0.2159	0.1814	1.3000e-003		0.0164	0.0164		0.0164	0.0164	0.0000	235.0457	235.0457	4.5100e-003	4.3100e-003	236.4424

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**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBtu/yr	tons/yr										MT/yr									
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e				
Junior College (2Yr)	4.40459e+006	0.0238	0.2159	0.1814	1.3000e-003		0.0164	0.0164		0.0164			0.0164	0.0164	0.0000	235.0457	235.0457	4.5100e-003	4.3100e-003	236.4424	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0238</b>	<b>0.2159</b>	<b>0.1814</b>	<b>1.3000e-003</b>		<b>0.0164</b>	<b>0.0164</b>		<b>0.0164</b>			<b>0.0164</b>	<b>0.0164</b>	<b>0.0000</b>	<b>235.0457</b>	<b>235.0457</b>	<b>4.5100e-003</b>	<b>4.3100e-003</b>	<b>236.4424</b>	

Mitigated

Land Use	Natural Gas Use kBtu/yr	tons/yr										MT/yr									
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e				
Junior College (2Yr)	4.40459e+006	0.0238	0.2159	0.1814	1.3000e-003		0.0164	0.0164		0.0164			0.0164	0.0164	0.0000	235.0457	235.0457	4.5100e-003	4.3100e-003	236.4424	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0238</b>	<b>0.2159</b>	<b>0.1814</b>	<b>1.3000e-003</b>		<b>0.0164</b>	<b>0.0164</b>		<b>0.0164</b>			<b>0.0164</b>	<b>0.0164</b>	<b>0.0000</b>	<b>235.0457</b>	<b>235.0457</b>	<b>4.5100e-003</b>	<b>4.3100e-003</b>	<b>236.4424</b>	

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**5.3 Energy by Land Use - Electricity**

Unmitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	1.62976e+006	519.2774	0.0214	4.4400e-003	521.1352
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>519.2774</b>	<b>0.0214</b>	<b>4.4400e-003</b>	<b>521.1352</b>

Mitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	1.62976e+006	519.2774	0.0214	4.4400e-003	521.1352
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>519.2774</b>	<b>0.0214</b>	<b>4.4400e-003</b>	<b>521.1352</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Mitigated	0.6764	6.1000e-004	0.0681	1.0000e-005	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	0.0000	0.1331	0.1331	3.4000e-004	0.0000	0.1417
Unmitigated	0.6764	6.1000e-004	0.0681	1.0000e-005	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	0.0000	0.1331	0.1331	3.4000e-004	0.0000	0.1417

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Architectural Coating	0.0766				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5936				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.2300e-003	6.1000e-004	0.0681	1.0000e-005	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	0.0000	0.1331	0.1331	3.4000e-004	0.0000	0.1417
<b>Total</b>	<b>0.6764</b>	<b>6.1000e-004</b>	<b>0.0681</b>	<b>1.0000e-005</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.1331</b>	<b>0.1331</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>0.1417</b>

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**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Architectural Coating	0.0766					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5936					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.2300e-003	6.1000e-004	0.0681	1.0000e-005	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	2.4000e-004	0.0000	0.1331	0.1331	3.4000e-004	0.0000	0.0000	0.1417
<b>Total</b>	<b>0.6764</b>	<b>6.1000e-004</b>	<b>0.0681</b>	<b>1.0000e-005</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.1331</b>	<b>0.1331</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1417</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	114.8375	0.3787	9.7800e-003	127.2200
Unmitigated	114.8375	0.3787	9.7800e-003	127.2200

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	11.4806 / 17.9568	114.8375	0.3787	9.7800e-003	127.2200
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>114.8375</b>	<b>0.3787</b>	<b>9.7800e-003</b>	<b>127.2200</b>

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Annual

**7.2 Water by Land Use**

Mitigated

Land Use	MT/yr				
	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	11.4806	114.8375	0.3787	9.7800e-003	127.2200
Other Non-Asphalt Surfaces	17.9568	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>114.8375</b>	<b>0.3787</b>	<b>9.7800e-003</b>	<b>127.2200</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Category/Year

Category/Year	MT/yr			
	Total CO2	CH4	N2O	CO2e
Mitigated	198.6588	11.7392	0.0000	492.1193
Unmitigated	198.6588	11.7392	0.0000	492.1193

LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Annual

**8.2 Waste by Land Use**

Unmitigated

Land Use	Waste Disposed tons	MT/yr			CO2e
		Total CO2	CH4	N2O	
Junior College (2Yr)	978.56	198.6388	11.7392	0.0000	492.1193
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>198.6388</b>	<b>11.7392</b>	<b>0.0000</b>	<b>492.1193</b>

Mitigated

Land Use	Waste Disposed tons	MT/yr			CO2e
		Total CO2	CH4	N2O	
Junior College (2Yr)	978.56	198.6388	11.7392	0.0000	492.1193
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>198.6388</b>	<b>11.7392</b>	<b>0.0000</b>	<b>492.1193</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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LBCC LAC Interim Year 2035 (2031-2035 Construction) - Los Angeles-South Coast County, Annual

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### 10.0 Stationary Equipment

#### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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#### Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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#### User Defined Equipment

Equipment Type	Number
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### 11.0 Vegetation

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**APPENDIX F**

**CalEEMod Model Interim Year 2040 Printouts**

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**LBCC LAC Year 2041 (2036-2041 Construction)**  
 Los Angeles-South Coast County, Summer

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7,458.00	Student	1.02	84,015.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

Urbanization Urban Wind Speed (m/s) 2.2 Precipitation Freq (Days) 33  
 Climate Zone 9 Operational Year 2040

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr) 702.44 CH4 Intensity (lb/MW/hr) 0.029 N2O Intensity (lb/MW/hr) 0.006

**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

Project Characteristics - Opening Year 2041

Land Use - 7,458 student Junior College on 1.02 acre and 84,015 sq ft and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 15,968 SF of building space.

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Table Name	Column Name	Default Value	New Value
tbiConstructionPhase	NumDays	18.00	230.00
tbiConstructionPhase	NumDays	8.00	20.00
tbiConstructionPhase	NumDays	18.00	20.00
tbiConstructionPhase	PhaseEndDate	7/16/2037	6/12/2037
tbiConstructionPhase	PhaseEndDate	5/27/2037	6/12/2037
tbiConstructionPhase	PhaseEndDate	7/9/2036	7/27/2036
tbiConstructionPhase	PhaseEndDate	6/22/2037	7/10/2037
tbiConstructionPhase	PhaseStartDate	6/23/2037	7/28/2036
tbiConstructionPhase	PhaseStartDate	7/10/2036	7/28/2036
tbiConstructionPhase	PhaseStartDate	5/28/2037	6/13/2037
tbiLandUse	LandUseSquareFeet	325,558.38	84,015.00
tbiLandUse	LotAcreage	7.47	1.02
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiVehicleTrips	WD_TR	1.23	1.15

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2036	5.0407	9.8706	19.8636	0.0514	6.7584	0.2287	6.9151	3.4230	0.2286	3.5797	0.0000	4,927.732	4,927.732	0.1872	0.0000	4,932.4113
2037	5.0407	9.8706	19.8636	0.0476	1.1693	0.1548	1.2754	0.3143	0.1548	0.4200	0.0000	4,598.167	4,598.167	0.1622	0.0000	4,602.223
<b>Maximum</b>	<b>5.0407</b>	<b>9.8706</b>	<b>19.8636</b>	<b>0.0514</b>	<b>6.7584</b>	<b>0.2287</b>	<b>6.9151</b>	<b>3.4230</b>	<b>0.2286</b>	<b>3.5797</b>	<b>0.0000</b>	<b>4,927.732</b>	<b>4,927.732</b>	<b>0.1872</b>	<b>0.0000</b>	<b>4,932.411</b>

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2036	5.0407	9.8706	19.8636	0.0514	2.7615	0.2287	2.9182	1.3689	0.2286	1.5255	0.0000	4,927.732	4,927.732	0.1872	0.0000	4,932.4113
2037	5.0407	9.8706	19.8636	0.0476	1.1693	0.1548	1.2754	0.3143	0.1548	0.4200	0.0000	4,598.167	4,598.167	0.1622	0.0000	4,602.223
<b>Maximum</b>	<b>5.0407</b>	<b>9.8706</b>	<b>19.8636</b>	<b>0.0514</b>	<b>2.7615</b>	<b>0.2287</b>	<b>2.9182</b>	<b>1.3689</b>	<b>0.2286</b>	<b>1.5255</b>	<b>0.0000</b>	<b>4,927.732</b>	<b>4,927.732</b>	<b>0.1872</b>	<b>0.0000</b>	<b>4,932.411</b>



LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	1.9849	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003	0.0134	1.7378
Energy	0.0672	0.6111	0.5133	3.6700e-003	0.0464	0.0464	0.0464	0.0464	0.0464	0.0464	733.3203	733.3203	733.3203	0.0141	0.0134	737.6781
Mobile	7.2083	46.1386	92.7434	0.5223	55.1063	0.2160	55.3223	14.7439	0.2010	14.9450	53,737.81	53,737.81	53,737.81	1.9869		53,787.48
<b>Total</b>	<b>9.2604</b>	<b>46.7565</b>	<b>94.0135</b>	<b>0.5261</b>	<b>55.1063</b>	<b>0.2651</b>	<b>55.3714</b>	<b>14.7439</b>	<b>0.2502</b>	<b>14.9941</b>	<b>54,472.76</b>	<b>54,472.76</b>	<b>54,472.76</b>	<b>2.0052</b>	<b>0.0134</b>	<b>54,526.90</b>
lb/day																

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	1.9849	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003	0.0134	1.7378
Energy	0.0672	0.6111	0.5133	3.6700e-003	0.0464	0.0464	0.0464	0.0464	0.0464	0.0464	733.3203	733.3203	733.3203	0.0141	0.0134	737.6781
Mobile	6.3605	42.2575	74.5601	0.4121	42.5342	0.1716	42.7058	11.3802	0.1597	11.5399	42,433.62	42,433.62	42,433.62	1.6113		42,473.90
<b>Total</b>	<b>8.4127</b>	<b>42.8754</b>	<b>75.8302</b>	<b>0.4158</b>	<b>42.5342</b>	<b>0.2207</b>	<b>42.7549</b>	<b>11.3802</b>	<b>0.2088</b>	<b>11.5890</b>	<b>43,168.57</b>	<b>43,168.57</b>	<b>43,168.57</b>	<b>1.6296</b>	<b>0.0134</b>	<b>43,213.32</b>
lb/day																

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	9.15	8.30	19.34	20.96	22.81	16.76	22.79	22.81	16.54	22.71	0.00	20.75	20.75	18.73	0.00	20.75

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2036	6/27/2036	5	20	
2	Grading	Grading	6/28/2036	7/27/2036	5	20	
3	Building Construction	Building Construction	7/28/2036	6/12/2037	5	230	
4	Paving	Paving	6/13/2037	7/10/2037	5	20	
5	Architectural Coating	Architectural Coating	7/28/2036	6/12/2037	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 126,023; Non-Residential Outdoor: 42,008; Striped Parking Area: 5,410 (Architectural Coating – sqft)

#### OffRoad Equipment

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	73.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	73.00	29.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2036**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.7859	0.0000	0.7859	0.1190	0.0000	0.1190			0.0000			0.0000
Off-Road	1.8311	6.9070	18.7067	0.0462	0.2267	0.2267	0.2267	0.2267	0.2267	0.2267		4,378.5819	4,378.5819	0.1599		4,382.5795
<b>Total</b>	<b>1.8311</b>	<b>6.9070</b>	<b>18.7067</b>	<b>0.0462</b>	<b>0.7859</b>	<b>0.2267</b>	<b>1.0127</b>	<b>0.1190</b>	<b>0.2267</b>	<b>0.3457</b>		<b>4,378.5819</b>	<b>4,378.5819</b>	<b>0.1599</b>		<b>4,382.5795</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2036**

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0181	0.5268	0.2173	2.5600e-003	0.0639	9.1000e-004	0.0648	0.0175	8.7000e-004	0.0184		280.4057	280.4057	0.0185		280.8681
Vendor	0.0107	0.3877	0.1119	1.4200e-003	0.0384	4.0000e-004	0.0388	0.0111	3.9000e-004	0.0115		152.3814	152.3814	7.3100e-003		152.5641
Worker	0.0272	0.0132	0.2404	1.1700e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451		116.3631	116.3631	1.4600e-003		116.3995
<b>Total</b>	<b>0.0559</b>	<b>0.9278</b>	<b>0.5697</b>	<b>5.1500e-003</b>	<b>0.2699</b>	<b>1.9600e-003</b>	<b>0.2719</b>	<b>0.0730</b>	<b>1.8500e-003</b>	<b>0.0749</b>		<b>549.1501</b>	<b>549.1501</b>	<b>0.0273</b>		<b>549.8318</b>

**Mitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.3065	0.0000	0.3065	0.0464	0.0000	0.0464			0.0000			0.0000
Off-Road	1.8311	6.9070	18.7067	0.0462		0.2267	0.2267	0.2267	0.2267	0.2267	0.0000	4,378.5819	4,378.5819	0.1599		4,382.5795
<b>Total</b>	<b>1.8311</b>	<b>6.9070</b>	<b>18.7067</b>	<b>0.0462</b>	<b>0.3065</b>	<b>0.2267</b>	<b>0.5332</b>	<b>0.0464</b>	<b>0.2267</b>	<b>0.2732</b>	<b>0.0000</b>	<b>4,378.5819</b>	<b>4,378.5819</b>	<b>0.1599</b>		<b>4,382.5795</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2036**

**Mitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0181	0.5268	0.2173	2.5600e-003	0.0639	9.1000e-004	0.0648	0.0175	8.7000e-004	0.0184		280.4057	280.4057	0.0185		280.8681
Vendor	0.0107	0.3877	0.1119	1.4200e-003	0.0384	4.0000e-004	0.0388	0.0111	3.9000e-004	0.0115		152.3814	152.3814	7.3100e-003		152.5641
Worker	0.0272	0.0132	0.2404	1.1700e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451		116.3631	116.3631	1.4600e-003		116.3995
<b>Total</b>	<b>0.0559</b>	<b>0.9278</b>	<b>0.5697</b>	<b>5.1500e-003</b>	<b>0.2699</b>	<b>1.9600e-003</b>	<b>0.2719</b>	<b>0.0730</b>	<b>1.8500e-003</b>	<b>0.0749</b>		<b>549.1501</b>	<b>549.1501</b>	<b>0.0273</b>		<b>549.8318</b>

**3.3 Grading - 2036**

**Unmitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.4619	5.9823	14.3296	0.0363		0.1557	0.1557	0.1557		0.1557		3.439.720	3.439.720	0.1282		3,442.925
<b>Total</b>	<b>1.4619</b>	<b>5.9823</b>	<b>14.3296</b>	<b>0.0363</b>	<b>6.5523</b>	<b>0.1557</b>	<b>6.7080</b>	<b>3.3675</b>	<b>0.1557</b>	<b>3.5231</b>		<b>3,439.720</b>	<b>3,439.720</b>	<b>0.1282</b>		<b>3,442.925</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.3 Grading - 2036**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0107	0.3877	0.1119	1.4200e-003	0.0384	4.0000e-004	0.0388	0.0111	3.9000e-004	0.0115	152.3814	152.3814	7.3100e-003	152.5641			
Worker	0.0272	0.0132	0.2404	1.1700e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	116.3631	116.3631	1.4600e-003	116.3995			
<b>Total</b>	<b>0.0378</b>	<b>0.4009</b>	<b>0.3524</b>	<b>2.5900e-003</b>	<b>0.2061</b>	<b>1.0500e-003</b>	<b>0.2071</b>	<b>0.0555</b>	<b>9.8000e-004</b>	<b>0.0565</b>	<b>268.7444</b>	<b>268.7444</b>	<b>8.7700e-003</b>	<b>268.9637</b>			

**Mitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.4619	5.9823	14.3296	0.0363	0.1557	0.1557	0.1557	0.1557	0.1557	0.1557	0.0000	3.439.720	3.439.720	0.1282		3,442.925
<b>Total</b>	<b>1.4619</b>	<b>5.9823</b>	<b>14.3296</b>	<b>0.0363</b>	<b>2.5554</b>	<b>0.1557</b>	<b>2.7111</b>	<b>1.3133</b>	<b>0.1557</b>	<b>1.4690</b>	<b>0.0000</b>	<b>3,439.720</b>	<b>3,439.720</b>	<b>0.1282</b>		<b>3,442.925</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.3 Grading - 2036**

**Mitigated Construction Off-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0107	0.3877	0.1119	1.4200e-003	0.0384	4.0000e-004	0.0388	0.0111	3.9000e-004	0.0115	152.3814	152.3814	152.3814	7.3100e-003		152.5641
Worker	0.0272	0.0132	0.2404	1.1700e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	116.3631	116.3631	116.3631	1.4600e-003		116.3995
<b>Total</b>	<b>0.0378</b>	<b>0.4009</b>	<b>0.3524</b>	<b>2.5900e-003</b>	<b>0.2061</b>	<b>1.0500e-003</b>	<b>0.2071</b>	<b>0.0555</b>	<b>9.8000e-004</b>	<b>0.0565</b>	<b>268.7444</b>	<b>268.7444</b>	<b>268.7444</b>	<b>8.7700e-003</b>		<b>268.9637</b>

**3.4 Building Construction - 2036**

**Unmitigated Construction On-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
<b>Total</b>	<b>1.2168</b>	<b>7.1613</b>	<b>16.1178</b>	<b>0.0310</b>		<b>0.0904</b>	<b>0.0904</b>		<b>0.0904</b>	<b>0.0904</b>		<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1079</b>		<b>2,900.2448</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2036**

**Unmitigated Construction Off-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0516	1.8740	0.5410	6.8400e-003	0.1857	1.9600e-003	0.1877	0.0535	1.8700e-003	0.0553	736.5098	736.5098	0.0353	0.0353		737.3934	
Worker	0.1321	0.0644	1.1701	5.6700e-003	0.8160	3.1400e-003	0.8191	0.2164	2.8900e-003	0.2193	566.3002	566.3002	7.1000e-003	7.1000e-003		566.4777	
<b>Total</b>	<b>0.1837</b>	<b>1.9383</b>	<b>1.7111</b>	<b>0.0125</b>	<b>1.0017</b>	<b>5.1000e-003</b>	<b>1.0068</b>	<b>0.2699</b>	<b>4.7600e-003</b>	<b>0.2746</b>	<b>1,302.810</b>	<b>1,302.810</b>	<b>0.0424</b>	<b>0.0424</b>		<b>1,303.871</b>	

**Mitigated Construction On-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
<b>Total</b>	<b>1.2168</b>	<b>7.1613</b>	<b>16.1178</b>	<b>0.0310</b>		<b>0.0904</b>	<b>0.0904</b>		<b>0.0904</b>	<b>0.0904</b>	<b>0.0000</b>	<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1079</b>		<b>2,900.2448</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2036**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0516	1.8740	0.5410	6.8400e-003	0.1857	1.9600e-003	0.1877	0.0535	1.8700e-003	0.0553	736.5098	736.5098	0.0353	0.0353		737.3934	
Worker	0.1321	0.0644	1.1701	5.6700e-003	0.8160	3.1400e-003	0.8191	0.2164	2.8900e-003	0.2193	566.3002	566.3002	7.1000e-003	7.1000e-003		566.4777	
<b>Total</b>	<b>0.1837</b>	<b>1.9383</b>	<b>1.7111</b>	<b>0.0125</b>	<b>1.0017</b>	<b>5.1000e-003</b>	<b>1.0068</b>	<b>0.2699</b>	<b>4.7600e-003</b>	<b>0.2746</b>	<b>1,302.810</b>	<b>1,302.810</b>	<b>0.0424</b>	<b>0.0424</b>		<b>1,303.871</b>	<b>1</b>

**3.4 Building Construction - 2037**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904	0.0904	0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448	
<b>Total</b>	<b>1.2168</b>	<b>7.1613</b>	<b>16.1178</b>	<b>0.0310</b>		<b>0.0904</b>	<b>0.0904</b>	<b>0.0904</b>	<b>0.0904</b>	<b>0.0904</b>		<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1079</b>		<b>2,900.2448</b>	<b>8</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2037**

**Unmitigated Construction Off-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0516	1.8740	0.5410	6.8400e-003	0.1857	1.9600e-003	0.1877	0.0535	1.8700e-003	0.0553	736.5098	736.5098	736.5098	0.0353		737.3934
Worker	0.1321	0.0644	1.1701	5.6700e-003	0.8160	3.1400e-003	0.8191	0.2164	2.8900e-003	0.2193	566.3002	566.3002	566.3002	7.1000e-003		566.4777
<b>Total</b>	<b>0.1837</b>	<b>1.9383</b>	<b>1.7111</b>	<b>0.0125</b>	<b>1.0017</b>	<b>5.1000e-003</b>	<b>1.0068</b>	<b>0.2699</b>	<b>4.7600e-003</b>	<b>0.2746</b>	<b>1,302.810</b>	<b>1,302.810</b>	<b>1,302.810</b>	<b>0.0424</b>		<b>1,303.871</b>

**Mitigated Construction On-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
<b>Total</b>	<b>1.2168</b>	<b>7.1613</b>	<b>16.1178</b>	<b>0.0310</b>		<b>0.0904</b>	<b>0.0904</b>		<b>0.0904</b>	<b>0.0904</b>	<b>0.0000</b>	<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1079</b>		<b>2,900.2448</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.4 Building Construction - 2037**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0516	1.8740	0.5410	6.8400e-003	0.1857	1.9600e-003	0.1877	0.0535	1.8700e-003	0.0553	736.5098	736.5098	736.5098	0.0353		737.3934	
Worker	0.1321	0.0644	1.1701	5.6700e-003	0.8160	3.1400e-003	0.8191	0.2164	2.8900e-003	0.2193	566.3002	566.3002	566.3002	7.1000e-003		566.4777	
<b>Total</b>	<b>0.1837</b>	<b>1.9383</b>	<b>1.7111</b>	<b>0.0125</b>	<b>1.0017</b>	<b>5.1000e-003</b>	<b>1.0068</b>	<b>0.2699</b>	<b>4.7600e-003</b>	<b>0.2746</b>	<b>1,302.810</b>	<b>1,302.810</b>	<b>1,302.810</b>	<b>0.0424</b>		<b>1,303.871</b>	<b>1</b>

**3.5 Paving - 2037**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.9893	4.7441	13.0737	0.0230		0.1540	0.1540		0.1540	0.1540		2,154.260	2,154.260	0.0885		2,156.473	0
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
<b>Total</b>	<b>0.9893</b>	<b>4.7441</b>	<b>13.0737</b>	<b>0.0230</b>		<b>0.1540</b>	<b>0.1540</b>		<b>0.1540</b>	<b>0.1540</b>		<b>2,154.260</b>	<b>2,154.260</b>	<b>0.0885</b>		<b>2,156.473</b>	<b>0</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.5 Paving - 2037**

**Unmitigated Construction Off-Site**

Category	lb/day											lb/day				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0362	0.0176	0.3206	1.5500e-003	0.2236	8.6000e-004	0.2244	0.0593	7.9000e-004	0.0601	155.1508	155.1508	155.1508	1.9500e-003		155.1994
<b>Total</b>	<b>0.0362</b>	<b>0.0176</b>	<b>0.3206</b>	<b>1.5500e-003</b>	<b>0.2236</b>	<b>8.6000e-004</b>	<b>0.2244</b>	<b>0.0593</b>	<b>7.9000e-004</b>	<b>0.0601</b>	<b>155.1508</b>	<b>155.1508</b>	<b>155.1508</b>	<b>1.9500e-003</b>		<b>155.1994</b>

**Mitigated Construction On-Site**

Category	lb/day											lb/day				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.9893	4.7441	13.0737	0.0230		0.1540	0.1540		0.1540	0.1540	0.0000	2,154.2603	2,154.2603	0.0885		2,156.4730
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.9893</b>	<b>4.7441</b>	<b>13.0737</b>	<b>0.0230</b>		<b>0.1540</b>	<b>0.1540</b>		<b>0.1540</b>	<b>0.1540</b>	<b>0.0000</b>	<b>2,154.2603</b>	<b>2,154.2603</b>	<b>0.0885</b>		<b>2,156.4730</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.5 Paving - 2037**

**Mitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0362	0.0176	0.3206	1.5500e-003	0.2236	8.6000e-004	0.2244	0.0593	7.9000e-004	0.0601	155.1508	155.1508	155.1508	1.9500e-003		155.1994	
<b>Total</b>	<b>0.0362</b>	<b>0.0176</b>	<b>0.3206</b>	<b>1.5500e-003</b>	<b>0.2236</b>	<b>8.6000e-004</b>	<b>0.2244</b>	<b>0.0593</b>	<b>7.9000e-004</b>	<b>0.0601</b>	<b>155.1508</b>	<b>155.1508</b>	<b>155.1508</b>	<b>1.9500e-003</b>		<b>155.1994</b>	

**3.6 Architectural Coating - 2036**

**Unmitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	3.4952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081	
<b>Total</b>	<b>3.6131</b>	<b>0.7577</b>	<b>1.7943</b>	<b>2.9700e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0104</b>		<b>281.7081</b>	

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2036**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0272	0.0132	0.2404	1.1700e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	116.3631	116.3631	116.3631	1.4600e-003	116.3995	116.3995
<b>Total</b>	<b>0.0272</b>	<b>0.0132</b>	<b>0.2404</b>	<b>1.1700e-003</b>	<b>0.1677</b>	<b>6.5000e-004</b>	<b>0.1683</b>	<b>0.0445</b>	<b>5.9000e-004</b>	<b>0.0451</b>		<b>116.3631</b>	<b>116.3631</b>	<b>1.4600e-003</b>		<b>116.3995</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.4952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
<b>Total</b>	<b>3.6131</b>	<b>0.7577</b>	<b>1.7943</b>	<b>2.9700e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0104</b>		<b>281.7081</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2036**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0272	0.0132	0.2404	1.1700e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	116.3631	116.3631	116.3631	1.4600e-003		116.3995	116.3995
<b>Total</b>	<b>0.0272</b>	<b>0.0132</b>	<b>0.2404</b>	<b>1.1700e-003</b>	<b>0.1677</b>	<b>6.5000e-004</b>	<b>0.1683</b>	<b>0.0445</b>	<b>5.9000e-004</b>	<b>0.0451</b>		<b>116.3631</b>	<b>116.3631</b>	<b>1.4600e-003</b>		<b>116.3995</b>	<b>116.3995</b>

**3.6 Architectural Coating - 2037**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	3.4952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081	281.7081
<b>Total</b>	<b>3.6131</b>	<b>0.7577</b>	<b>1.7943</b>	<b>2.9700e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0104</b>		<b>281.7081</b>	<b>281.7081</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2037**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0272	0.0132	0.2404	1.1700e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	116.3631	116.3631	116.3631	1.4600e-003	116.3995	116.3995
<b>Total</b>	<b>0.0272</b>	<b>0.0132</b>	<b>0.2404</b>	<b>1.1700e-003</b>	<b>0.1677</b>	<b>6.5000e-004</b>	<b>0.1683</b>	<b>0.0445</b>	<b>5.9000e-004</b>	<b>0.0451</b>	<b>116.3631</b>	<b>116.3631</b>	<b>116.3631</b>	<b>1.4600e-003</b>	<b>116.3995</b>	<b>116.3995</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.4952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
<b>Total</b>	<b>3.6131</b>	<b>0.7577</b>	<b>1.7943</b>	<b>2.9700e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0104</b>		<b>281.7081</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**3.6 Architectural Coating - 2037**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0272	0.0132	0.2404	1.1700e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451		116.3631	116.3631	1.4600e-003		116.3995
<b>Total</b>	<b>0.0272</b>	<b>0.0132</b>	<b>0.2404</b>	<b>1.1700e-003</b>	<b>0.1677</b>	<b>6.5000e-004</b>	<b>0.1683</b>	<b>0.0445</b>	<b>5.9000e-004</b>	<b>0.0451</b>		<b>116.3631</b>	<b>116.3631</b>	<b>1.4600e-003</b>		<b>116.3995</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	6.3605	42.2575	74.5601	0.4121	42.5342	0.1716	42.7058	11.3802	0.1597	11.5399	42,433.62	58	42,433.62	1.6113		42,473.90
Unmitigated	7.2083	46.1386	92.7434	0.5223	55.1063	0.2160	55.3223	14.7439	0.2010	14.9450	53,737.81	21	53,737.81	1.9869		53,787.48

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Junior College (2Yr)	8,576.70	3,132.36	298.32	19,983,631		15,424,521	
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
<b>Total</b>	<b>8,576.70</b>	<b>3,132.36</b>	<b>298.32</b>	<b>19,983,631</b>		<b>15,424,521</b>	

4.3 Trip Type Information

Land Use	Miles						Trip %						Trip Purpose %					
	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-C	Primary	Diverted	Pass-by	Primary	Diverted	Pass-by	Primary	Diverted	Pass-by
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	6.40	88.60	92	7	1	92	7	1				
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0				

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.537194	0.043713	0.210127	0.116181	0.013260	0.006460	0.022765	0.039037	0.002776	0.001599	0.000737	0.000810
Other Non-Asphalt Surfaces	0.537194	0.043713	0.210127	0.116181	0.013260	0.006460	0.022765	0.039037	0.002776	0.001599	0.000737	0.000810

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
NaturalGas Mitigated	0.0672	0.6111	0.5133	3.6700e-003	0.0464	0.0464	0.0464	0.0464	0.0464	0.0464		733.3203	733.3203	0.0141	0.0134	737.6781
NaturalGas Unmitigated	0.0672	0.6111	0.5133	3.6700e-003	0.0464	0.0464	0.0464	0.0464	0.0464	0.0464		733.3203	733.3203	0.0141	0.0134	737.6781

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e								
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O			
Junior College (2Yr)	6233.22	0.0672	0.6111	0.5133	3.6700e-003		0.0464	0.0464		0.0464			0.0464		733.3203	733.3203	0.0134	0.0141	0.0134	737.6781
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000			0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0672</b>	<b>0.6111</b>	<b>0.5133</b>	<b>3.6700e-003</b>		<b>0.0464</b>	<b>0.0464</b>		<b>0.0464</b>			<b>0.0464</b>		<b>733.3203</b>	<b>733.3203</b>	<b>0.0134</b>	<b>0.0141</b>	<b>0.0134</b>	<b>737.6781</b>

Mitigated

Land Use	Natural Gas Use kBTU/yr	lb/day										CO <sub>2</sub> e								
		ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O			
Junior College (2Yr)	6.23322	0.0672	0.6111	0.5133	3.6700e-003		0.0464	0.0464		0.0464			0.0464		733.3203	733.3203	0.0134	0.0141	0.0134	737.6781
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000			0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0672</b>	<b>0.6111</b>	<b>0.5133</b>	<b>3.6700e-003</b>		<b>0.0464</b>	<b>0.0464</b>		<b>0.0464</b>			<b>0.0464</b>		<b>733.3203</b>	<b>733.3203</b>	<b>0.0134</b>	<b>0.0141</b>	<b>0.0134</b>	<b>737.6781</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	1.9849	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003		1.7378
Unmitigated	1.9849	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003		1.7378

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.2203				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6954				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0693	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003		1.7378
<b>Total</b>	<b>1.9849</b>	<b>6.8000e-003</b>	<b>0.7568</b>	<b>6.0000e-005</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>1.6327</b>	<b>1.6327</b>	<b>1.6327</b>	<b>4.2100e-003</b>		<b>1.7378</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

**6.2 Area by SubCategory**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.2203				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6954				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0693	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003		1.7378
<b>Total</b>	<b>1.9849</b>	<b>6.8000e-003</b>	<b>0.7568</b>	<b>6.0000e-005</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>1.6327</b>	<b>1.6327</b>	<b>1.6327</b>	<b>4.2100e-003</b>		<b>1.7378</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**LBCC LAC Year 2041 (2036-2041 Construction)**  
 Los Angeles-South Coast County, Winter

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7,458.00	Student	1.02	84,015.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2040

**Utility Company** Southern California Edison

<b>CO2 Intensity (lb/MW/hr)</b>	702.44	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

Project Characteristics - Opening Year 2041

Land Use - 7,458 student Junior College on 1.02 acre and 84,015 sq ft and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 15,968 SF of building space.

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Table Name	Column Name	Default Value	New Value
tbiConstructionPhase	NumDays	18.00	230.00
tbiConstructionPhase	NumDays	8.00	20.00
tbiConstructionPhase	NumDays	18.00	20.00
tbiConstructionPhase	PhaseEndDate	7/16/2037	6/12/2037
tbiConstructionPhase	PhaseEndDate	5/27/2037	6/12/2037
tbiConstructionPhase	PhaseEndDate	7/9/2036	7/27/2036
tbiConstructionPhase	PhaseEndDate	6/22/2037	7/10/2037
tbiConstructionPhase	PhaseStartDate	6/23/2037	7/28/2036
tbiConstructionPhase	PhaseStartDate	7/10/2036	7/28/2036
tbiConstructionPhase	PhaseStartDate	5/28/2037	6/13/2037
tbiLandUse	LandUseSquareFeet	325,558.38	84,015.00
tbiLandUse	LotAcreage	7.47	1.02
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiVehicleTrips	WD_TR	1.23	1.15

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2036	5.0672	9.8696	19.7680	0.0512	6.7584	0.2287	6.9151	3.4230	0.2286	3.5797	0.0000	4,912.094 <sub>7</sub>	4,912.094 <sub>7</sub>	0.1878	0.0000	4,916.790 <sub>4</sub>
2037	5.0672	9.8696	19.7680	0.0470	1.1693	0.1548	1.2754	0.3143	0.1548	0.4200	0.0000	4,538.488 <sub>8</sub>	4,538.488 <sub>8</sub>	0.1633	0.0000	4,542.572 <sub>2</sub>
<b>Maximum</b>	<b>5.0672</b>	<b>9.8696</b>	<b>19.7680</b>	<b>0.0512</b>	<b>6.7584</b>	<b>0.2287</b>	<b>6.9151</b>	<b>3.4230</b>	<b>0.2286</b>	<b>3.5797</b>	<b>0.0000</b>	<b>4,912.094<sub>7</sub></b>	<b>4,912.094<sub>7</sub></b>	<b>0.1878</b>	<b>0.0000</b>	<b>4,916.790<sub>4</sub></b>

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2036	5.0672	9.8696	19.7680	0.0512	2.7615	0.2287	2.9182	1.3689	0.2286	1.5255	0.0000	4,912.094 <sub>7</sub>	4,912.094 <sub>7</sub>	0.1878	0.0000	4,916.790 <sub>4</sub>
2037	5.0672	9.8696	19.7680	0.0470	1.1693	0.1548	1.2754	0.3143	0.1548	0.4200	0.0000	4,538.488 <sub>8</sub>	4,538.488 <sub>8</sub>	0.1633	0.0000	4,542.572 <sub>2</sub>
<b>Maximum</b>	<b>5.0672</b>	<b>9.8696</b>	<b>19.7680</b>	<b>0.0512</b>	<b>2.7615</b>	<b>0.2287</b>	<b>2.9182</b>	<b>1.3689</b>	<b>0.2286</b>	<b>1.5255</b>	<b>0.0000</b>	<b>4,912.094<sub>7</sub></b>	<b>4,912.094<sub>7</sub></b>	<b>0.1878</b>	<b>0.0000</b>	<b>4,916.790<sub>4</sub></b>



LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Area	1.9849	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003		1.6327	1.6327	4.2100e-003		1.7378
Energy	0.0672	0.6111	0.5133	3.6700e-003	0.0464	0.0464	0.0464	0.0464	0.0464	0.0464		733.3203	733.3203	0.0141	0.0134	737.6781
Mobile	7.0322	46.4323	88.6383	0.4984	55.1063	0.2165	55.3228	14.7439	0.2015	14.9455		51,304.6216	51,304.6216	2.0130		51,354.9476
<b>Total</b>	<b>9.0844</b>	<b>47.0502</b>	<b>89.9084</b>	<b>0.5021</b>	<b>55.1063</b>	<b>0.2656</b>	<b>55.3720</b>	<b>14.7439</b>	<b>0.2507</b>	<b>14.9946</b>		<b>52,039.5746</b>	<b>52,039.5746</b>	<b>2.0313</b>	<b>0.0134</b>	<b>52,094.3634</b>

**Mitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Area	1.9849	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003		1.6327	1.6327	4.2100e-003		1.7378
Energy	0.0672	0.6111	0.5133	3.6700e-003	0.0464	0.0464	0.0464	0.0464	0.0464	0.0464		733.3203	733.3203	0.0141	0.0134	737.6781
Mobile	6.1888	42.3382	71.9218	0.3927	42.5342	0.1721	42.7063	11.3802	0.1601	11.5404		40,452.9851	40,452.9851	1.6411		40,494.0127
<b>Total</b>	<b>8.2410</b>	<b>42.9561</b>	<b>73.1919</b>	<b>0.3964</b>	<b>42.5342</b>	<b>0.2212</b>	<b>42.7555</b>	<b>11.3802</b>	<b>0.2093</b>	<b>11.5895</b>		<b>41,187.9381</b>	<b>41,187.9381</b>	<b>1.6594</b>	<b>0.0134</b>	<b>41,233.4285</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	9.28	8.70	18.59	21.05	22.81	16.72	22.79	22.81	16.52	22.71	0.00	20.85	20.85	18.31	0.00	20.85

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2036	6/27/2036	5	20	
2	Grading	Grading	6/28/2036	7/27/2036	5	20	
3	Building Construction	Building Construction	7/28/2036	6/12/2037	5	230	
4	Paving	Paving	6/13/2037	7/10/2037	5	20	
5	Architectural Coating	Architectural Coating	7/28/2036	6/12/2037	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 2.07

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 126,023; Non-Residential Outdoor: 42,008; Striped Parking Area: 5,410 (Architectural Coating – sqft)

#### OffRoad Equipment

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	73.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	73.00	29.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2036**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.7859	0.0000	0.7859	0.1190	0.0000	0.1190			0.0000			0.0000
Off-Road	1.8311	6.9070	18.7067	0.0462	0.2267	0.2267	0.2267	0.2267	0.2267	0.2267		4,378.5819	4,378.5819	0.1599		4,382.5795
<b>Total</b>	<b>1.8311</b>	<b>6.9070</b>	<b>18.7067</b>	<b>0.0462</b>	<b>0.7859</b>	<b>0.2267</b>	<b>1.0127</b>	<b>0.1190</b>	<b>0.2267</b>	<b>0.3457</b>		<b>4,378.5819</b>	<b>4,378.5819</b>	<b>0.1599</b>		<b>4,382.5795</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.2 Demolition - 2036**

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0185	0.5303	0.2255	2.5100e-003	0.0639	9.2000e-004	0.0648	0.0175	8.8000e-004	0.0184		275.6516	275.6516	0.0189		276.1241
Vendor	0.0112	0.3859	0.1219	1.3800e-003	0.0384	4.1000e-004	0.0388	0.0111	3.9000e-004	0.0115		148.3466	148.3466	7.6700e-003		148.5383
Worker	0.0312	0.0146	0.2159	1.1000e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451		109.5146	109.5146	1.3500e-003		109.5484
<b>Total</b>	<b>0.0609</b>	<b>0.9307</b>	<b>0.5633</b>	<b>4.9900e-003</b>	<b>0.2699</b>	<b>1.9800e-003</b>	<b>0.2719</b>	<b>0.0730</b>	<b>1.8600e-003</b>	<b>0.0749</b>		<b>533.5128</b>	<b>533.5128</b>	<b>0.0279</b>		<b>534.2109</b>

**Mitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.3065	0.0000	0.3065	0.0464	0.0000	0.0464			0.0000			0.0000
Off-Road	1.8311	6.9070	18.7067	0.0462		0.2267	0.2267	0.2267	0.2267	0.2267	0.0000	4,378.5819	4,378.5819	0.1599		4,382.5795
<b>Total</b>	<b>1.8311</b>	<b>6.9070</b>	<b>18.7067</b>	<b>0.0462</b>	<b>0.3065</b>	<b>0.2267</b>	<b>0.5332</b>	<b>0.0464</b>	<b>0.2267</b>	<b>0.2732</b>	<b>0.0000</b>	<b>4,378.5819</b>	<b>4,378.5819</b>	<b>0.1599</b>		<b>4,382.5795</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.2 Demolition - 2036**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0185	0.5303	0.2255	2.5100e-003	0.0639	9.2000e-004	0.0648	0.0175	8.8000e-004	0.0184		275.6516	275.6516	0.0189		276.1241
Vendor	0.0112	0.3859	0.1219	1.3800e-003	0.0384	4.1000e-004	0.0388	0.0111	3.9000e-004	0.0115		148.3466	148.3466	7.6700e-003		148.5383
Worker	0.0312	0.0146	0.2159	1.1000e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451		109.5146	109.5146	1.3500e-003		109.5484
<b>Total</b>	<b>0.0609</b>	<b>0.9307</b>	<b>0.5633</b>	<b>4.9900e-003</b>	<b>0.2699</b>	<b>1.9800e-003</b>	<b>0.2719</b>	<b>0.0730</b>	<b>1.8600e-003</b>	<b>0.0749</b>		<b>533.5128</b>	<b>533.5128</b>	<b>0.0279</b>		<b>534.2109</b>

**3.3 Grading - 2036**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.4619	5.9823	14.3296	0.0363		0.1557	0.1557	0.1557		0.1557		3,439.720	3,439.720	0.1282		3,442.925
<b>Total</b>	<b>1.4619</b>	<b>5.9823</b>	<b>14.3296</b>	<b>0.0363</b>	<b>6.5523</b>	<b>0.1557</b>	<b>6.7080</b>	<b>3.3675</b>	<b>0.1557</b>	<b>3.5231</b>		<b>3,439.720</b>	<b>3,439.720</b>	<b>0.1282</b>		<b>3,442.925</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.3 Grading - 2036**

**Unmitigated Construction Off-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.3859	0.1219	1.3800e-003	0.0384	4.1000e-004	0.0388	0.0111	3.9000e-004	0.0115	148.3466	148.3466	148.3466	7.6700e-003		148.5383
Worker	0.0312	0.0146	0.2159	1.1000e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	109.5146	109.5146	109.5146	1.3500e-003		109.5484
<b>Total</b>	<b>0.0424</b>	<b>0.4005</b>	<b>0.3378</b>	<b>2.4800e-003</b>	<b>0.2061</b>	<b>1.0600e-003</b>	<b>0.2071</b>	<b>0.0555</b>	<b>9.8000e-004</b>	<b>0.0565</b>		<b>257.8612</b>	<b>257.8612</b>	<b>9.0200e-003</b>		<b>258.0868</b>

**Mitigated Construction On-Site**

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.4619	5.9823	14.3296	0.0363	0.1557	0.1557	0.1557	0.1557	0.1557	0.1557	0.0000	3.439.720	3.439.720	0.1282		3,442.9259
<b>Total</b>	<b>1.4619</b>	<b>5.9823</b>	<b>14.3296</b>	<b>0.0363</b>	<b>2.5554</b>	<b>0.1557</b>	<b>2.7111</b>	<b>1.3133</b>	<b>0.1557</b>	<b>1.4690</b>	<b>0.0000</b>	<b>3,439.720</b>	<b>3,439.720</b>	<b>0.1282</b>		<b>3,442.9259</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.3 Grading - 2036**

**Mitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor	0.0112	0.3859	0.1219	1.3800e-003	0.0384	4.1000e-004	0.0388	0.0111	3.9000e-004	0.0115	148.3466	148.3466	148.3466	7.6700e-003			148.5383
Worker	0.0312	0.0146	0.2159	1.1000e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	109.5146	109.5146	109.5146	1.3500e-003			109.5484
<b>Total</b>	<b>0.0424</b>	<b>0.4005</b>	<b>0.3378</b>	<b>2.4800e-003</b>	<b>0.2061</b>	<b>1.0600e-003</b>	<b>0.2071</b>	<b>0.0555</b>	<b>9.8000e-004</b>	<b>0.0565</b>	<b>257.8612</b>	<b>257.8612</b>	<b>257.8612</b>	<b>9.0200e-003</b>			<b>258.0868</b>

**3.4 Building Construction - 2036**

**Unmitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079			2,900.2448
<b>Total</b>	<b>1.2168</b>	<b>7.1613</b>	<b>16.1178</b>	<b>0.0310</b>		<b>0.0904</b>	<b>0.0904</b>		<b>0.0904</b>	<b>0.0904</b>		<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1079</b>			<b>2,900.2448</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2036**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0541	1.8651	0.5894	6.6600e-003	0.1857	1.9900e-003	0.1877	0.0535	1.9000e-003	0.0554	717.0086	717.0086	717.0086	0.0371		717.9353	
Worker	0.1520	0.0709	1.0506	5.3400e-003	0.8160	3.1400e-003	0.8191	0.2164	2.8900e-003	0.2193	532.9708	532.9708	532.9708	6.5900e-003		533.1357	
<b>Total</b>	<b>0.2061</b>	<b>1.9360</b>	<b>1.6400</b>	<b>0.0120</b>	<b>1.0017</b>	<b>5.1300e-003</b>	<b>1.0068</b>	<b>0.2699</b>	<b>4.7900e-003</b>	<b>0.2747</b>	<b>1,249.9795</b>	<b>1,249.9795</b>	<b>1,249.9795</b>	<b>0.0437</b>		<b>1,251.0710</b>	

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448	
<b>Total</b>	<b>1.2168</b>	<b>7.1613</b>	<b>16.1178</b>	<b>0.0310</b>		<b>0.0904</b>	<b>0.0904</b>		<b>0.0904</b>	<b>0.0904</b>	<b>0.0000</b>	<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1079</b>		<b>2,900.2448</b>	

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2036**

**Mitigated Construction Off-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0541	1.8651	0.5894	6.6600e-003	0.1857	1.9900e-003	0.1877	0.0535	1.9000e-003	0.0554	717.0086	717.0086	717.0086	0.0371		717.9353	
Worker	0.1520	0.0709	1.0506	5.3400e-003	0.8160	3.1400e-003	0.8191	0.2164	2.8900e-003	0.2193	532.9708	532.9708	532.9708	6.5900e-003		533.1357	
<b>Total</b>	<b>0.2061</b>	<b>1.9360</b>	<b>1.6400</b>	<b>0.0120</b>	<b>1.0017</b>	<b>5.1300e-003</b>	<b>1.0068</b>	<b>0.2699</b>	<b>4.7900e-003</b>	<b>0.2747</b>	<b>1,249.9795</b>	<b>1,249.9795</b>	<b>1,249.9795</b>	<b>0.0437</b>		<b>1,251.0710</b>	

**3.4 Building Construction - 2037**

**Unmitigated Construction On-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
<b>Total</b>	<b>1.2168</b>	<b>7.1613</b>	<b>16.1178</b>	<b>0.0310</b>		<b>0.0904</b>	<b>0.0904</b>		<b>0.0904</b>	<b>0.0904</b>		<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1079</b>		<b>2,900.2448</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2037**

**Unmitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0541	1.8651	0.5894	6.6600e-003	0.1857	1.9900e-003	0.1877	0.0535	1.9000e-003	0.0554	717.0086	717.0086	717.0086	0.0371		717.9353	
Worker	0.1520	0.0709	1.0506	5.3400e-003	0.8160	3.1400e-003	0.8191	0.2164	2.8900e-003	0.2193	532.9708	532.9708	532.9708	6.5900e-003		533.1357	
<b>Total</b>	<b>0.2061</b>	<b>1.9360</b>	<b>1.6400</b>	<b>0.0120</b>	<b>1.0017</b>	<b>5.1300e-003</b>	<b>1.0068</b>	<b>0.2699</b>	<b>4.7900e-003</b>	<b>0.2747</b>	<b>1,249.9795</b>	<b>1,249.9795</b>	<b>1,249.9795</b>	<b>0.0437</b>		<b>1,251.0710</b>	

**Mitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448	
<b>Total</b>	<b>1.2168</b>	<b>7.1613</b>	<b>16.1178</b>	<b>0.0310</b>		<b>0.0904</b>	<b>0.0904</b>		<b>0.0904</b>	<b>0.0904</b>	<b>0.0000</b>	<b>2,897.5468</b>	<b>2,897.5468</b>	<b>0.1079</b>		<b>2,900.2448</b>	

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.4 Building Construction - 2037**

**Mitigated Construction Off-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0541	1.8651	0.5894	6.6600e-003	0.1857	1.9900e-003	0.1877	0.0535	1.9000e-003	0.0554	717.0086	717.0086	717.0086	0.0371		717.9353	
Worker	0.1520	0.0709	1.0506	5.3400e-003	0.8160	3.1400e-003	0.8191	0.2164	2.8900e-003	0.2193	532.9708	532.9708	532.9708	6.5900e-003		533.1357	
<b>Total</b>	<b>0.2061</b>	<b>1.9360</b>	<b>1.6400</b>	<b>0.0120</b>	<b>1.0017</b>	<b>5.1300e-003</b>	<b>1.0068</b>	<b>0.2699</b>	<b>4.7900e-003</b>	<b>0.2747</b>	<b>1,249.9795</b>	<b>1,249.9795</b>	<b>1,249.9795</b>	<b>0.0437</b>		<b>1,251.0710</b>	

**3.5 Paving - 2037**

**Unmitigated Construction On-Site**

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.9893	4.7441	13.0737	0.0230		0.1540	0.1540		0.1540	0.1540		2,154.2603	2,154.2603	0.0885		2,156.4730	
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
<b>Total</b>	<b>0.9893</b>	<b>4.7441</b>	<b>13.0737</b>	<b>0.0230</b>		<b>0.1540</b>	<b>0.1540</b>		<b>0.1540</b>	<b>0.1540</b>		<b>2,154.2603</b>	<b>2,154.2603</b>	<b>0.0885</b>		<b>2,156.4730</b>	

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.5 Paving - 2037**

**Unmitigated Construction Off-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0417	0.0194	0.2879	1.4600e-003	0.2236	8.6000e-004	0.2244	0.0593	7.9000e-004	0.0601	146.0194	146.0194	146.0194	1.8100e-003	146.0646	146.0646	146.0646
<b>Total</b>	<b>0.0417</b>	<b>0.0194</b>	<b>0.2879</b>	<b>1.4600e-003</b>	<b>0.2236</b>	<b>8.6000e-004</b>	<b>0.2244</b>	<b>0.0593</b>	<b>7.9000e-004</b>	<b>0.0601</b>	<b>146.0194</b>	<b>146.0194</b>	<b>146.0194</b>	<b>1.8100e-003</b>	<b>146.0646</b>	<b>146.0646</b>	<b>146.0646</b>

**Mitigated Construction On-Site**

Category	lb/day											lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.9893	4.7441	13.0737	0.0230	0.1540	0.1540	0.1540	0.1540	0.1540	0.1540	0.0000	2,154.2603	2,154.2603	0.0885	2,156.4730	2,156.4730	
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.9893</b>	<b>4.7441</b>	<b>13.0737</b>	<b>0.0230</b>	<b>0.1540</b>	<b>0.1540</b>	<b>0.1540</b>	<b>0.1540</b>	<b>0.1540</b>	<b>0.1540</b>	<b>0.0000</b>	<b>2,154.2603</b>	<b>2,154.2603</b>	<b>0.0885</b>	<b>2,156.4730</b>	<b>2,156.4730</b>	

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.5 Paving - 2037**

**Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0417	0.0194	0.2879	1.4600e-003	0.2236	8.6000e-004	0.2244	0.0593	7.9000e-004	0.0601	146.0194	146.0194	146.0194	1.8100e-003		146.0646
<b>Total</b>	<b>0.0417</b>	<b>0.0194</b>	<b>0.2879</b>	<b>1.4600e-003</b>	<b>0.2236</b>	<b>8.6000e-004</b>	<b>0.2244</b>	<b>0.0593</b>	<b>7.9000e-004</b>	<b>0.0601</b>	<b>146.0194</b>	<b>146.0194</b>	<b>146.0194</b>	<b>1.8100e-003</b>		<b>146.0646</b>

**3.6 Architectural Coating - 2036**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.4952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
<b>Total</b>	<b>3.6131</b>	<b>0.7577</b>	<b>1.7943</b>	<b>2.9700e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0104</b>		<b>281.7081</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.6 Architectural Coating - 2036**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0312	0.0146	0.2159	1.1000e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	109.5146	109.5146	109.5146	1.3500e-003		109.5484
<b>Total</b>	<b>0.0312</b>	<b>0.0146</b>	<b>0.2159</b>	<b>1.1000e-003</b>	<b>0.1677</b>	<b>6.5000e-004</b>	<b>0.1683</b>	<b>0.0445</b>	<b>5.9000e-004</b>	<b>0.0451</b>	<b>109.5146</b>	<b>109.5146</b>	<b>109.5146</b>	<b>1.3500e-003</b>		<b>109.5484</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.4952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
<b>Total</b>	<b>3.6131</b>	<b>0.7577</b>	<b>1.7943</b>	<b>2.9700e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0104</b>		<b>281.7081</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.6 Architectural Coating - 2036**

**Mitigated Construction Off-Site**

lb/day																	
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0312	0.0146	0.2159	1.1000e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	109.5146	109.5146	109.5146	1.3500e-003		109.5484	
<b>Total</b>	<b>0.0312</b>	<b>0.0146</b>	<b>0.2159</b>	<b>1.1000e-003</b>	<b>0.1677</b>	<b>6.5000e-004</b>	<b>0.1683</b>	<b>0.0445</b>	<b>5.9000e-004</b>	<b>0.0451</b>	<b>109.5146</b>	<b>109.5146</b>	<b>109.5146</b>	<b>1.3500e-003</b>		<b>109.5484</b>	

**3.6 Architectural Coating - 2037**

**Unmitigated Construction On-Site**

lb/day																
Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	3.4952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003		281.4481	281.4481	0.0104		281.7081
<b>Total</b>	<b>3.6131</b>	<b>0.7577</b>	<b>1.7943</b>	<b>2.9700e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0104</b>		<b>281.7081</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.6 Architectural Coating - 2037**  
**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0312	0.0146	0.2159	1.1000e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	109.5146	109.5146	109.5146	1.3500e-003		109.5484
<b>Total</b>	<b>0.0312</b>	<b>0.0146</b>	<b>0.2159</b>	<b>1.1000e-003</b>	<b>0.1677</b>	<b>6.5000e-004</b>	<b>0.1683</b>	<b>0.0445</b>	<b>5.9000e-004</b>	<b>0.0451</b>	<b>109.5146</b>	<b>109.5146</b>	<b>109.5146</b>	<b>1.3500e-003</b>		<b>109.5484</b>

**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	3.4952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1179	0.7577	1.7943	2.9700e-003		9.9000e-003	9.9000e-003		9.9000e-003	9.9000e-003	0.0000	281.4481	281.4481	0.0104		281.7081
<b>Total</b>	<b>3.6131</b>	<b>0.7577</b>	<b>1.7943</b>	<b>2.9700e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>		<b>9.9000e-003</b>	<b>9.9000e-003</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0104</b>		<b>281.7081</b>

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**3.6 Architectural Coating - 2037**

**Mitigated Construction Off-Site**

Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0312	0.0146	0.2159	1.1000e-003	0.1677	6.5000e-004	0.1683	0.0445	5.9000e-004	0.0451	109.5146	1.3500e-003	109.5146	1.3500e-003		109.5484
<b>Total</b>	<b>0.0312</b>	<b>0.0146</b>	<b>0.2159</b>	<b>1.1000e-003</b>	<b>0.1677</b>	<b>6.5000e-004</b>	<b>0.1683</b>	<b>0.0445</b>	<b>5.9000e-004</b>	<b>0.0451</b>	<b>109.5146</b>	<b>1.3500e-003</b>	<b>109.5146</b>	<b>1.3500e-003</b>		<b>109.5484</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	6.1888	42.3382	71.9218	0.3927	42.5342	0.1721	42.7063	11.3802	0.1601	11.5404	40,452.98	51	40,452.98	1.6411		40,494.01
Unmitigated	7.0322	46.4323	88.6383	0.4984	55.1063	0.2165	55.3228	14.7439	0.2015	14.9455	51,304.62	16	51,304.62	2.0130		51,354.94

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT		
Junior College (2Yr)	8,576.70	3,132.36	298.32	19,983,631	15,424,521		
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
<b>Total</b>	<b>8,576.70</b>	<b>3,132.36</b>	<b>298.32</b>	<b>19,983,631</b>	<b>15,424,521</b>		

4.3 Trip Type Information

Land Use	Miles						Trip %						Trip Purpose %					
	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-C	Primary	Diverted	Pass-by						
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	6.40	88.60	92	7	1							
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0.00	0.00	0	0	0							

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.537194	0.043713	0.210127	0.116181	0.013260	0.006460	0.022765	0.002776	0.001599	0.005341	0.000737	0.000810
Other Non-Asphalt Surfaces	0.537194	0.043713	0.210127	0.116181	0.013260	0.006460	0.022765	0.002776	0.001599	0.005341	0.000737	0.000810

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
NaturalGas Mitigated	0.0672	0.6111	0.5133	3.6700e-003	0.0464	0.0464	0.0464	0.0464	0.0464	0.0464		733.3203	733.3203	0.0141	0.0134	737.6781
NaturalGas Unmitigated	0.0672	0.6111	0.5133	3.6700e-003	0.0464	0.0464	0.0464	0.0464	0.0464	0.0464		733.3203	733.3203	0.0141	0.0134	737.6781

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas**

Unmitigated

Land Use	NaturalGas Use kBTU/yr	lb/day										CO2e						
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Junior College (2Yr)	6233.22	0.0672	0.6111	0.5133	3.6700e-003		0.0464	0.0464		0.0464			0.0464		733.3203	0.0141	0.0134	737.6781
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000			0.0000		0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0672</b>	<b>0.6111</b>	<b>0.5133</b>	<b>3.6700e-003</b>		<b>0.0464</b>	<b>0.0464</b>		<b>0.0464</b>			<b>0.0464</b>		<b>733.3203</b>	<b>0.0141</b>	<b>0.0134</b>	<b>737.6781</b>

Mitigated

Land Use	NaturalGas Use kBTU/yr	lb/day										CO2e						
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Junior College (2Yr)	6.23322	0.0672	0.6111	0.5133	3.6700e-003		0.0464	0.0464		0.0464			0.0464		733.3203	0.0141	0.0134	737.6781
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000			0.0000		0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0672</b>	<b>0.6111</b>	<b>0.5133</b>	<b>3.6700e-003</b>		<b>0.0464</b>	<b>0.0464</b>		<b>0.0464</b>			<b>0.0464</b>		<b>733.3203</b>	<b>0.0141</b>	<b>0.0134</b>	<b>737.6781</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

LBCC LAC Year 2041 (2036-2041 Construction) - Los Angeles-South Coast County, Winter

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	1.9849	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003		1.7378
Unmitigated	1.9849	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003		1.7378

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.2203				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6954				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0693	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003		1.7378
<b>Total</b>	<b>1.9849</b>	<b>6.8000e-003</b>	<b>0.7568</b>	<b>6.0000e-005</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>1.6327</b>	<b>1.6327</b>	<b>1.6327</b>	<b>4.2100e-003</b>		<b>1.7378</b>

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**6.2 Area by SubCategory**

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.2203				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	1.6954				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0693	6.8000e-003	0.7568	6.0000e-005	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	2.6900e-003	1.6327	1.6327	1.6327	4.2100e-003		1.7378
<b>Total</b>	<b>1.9849</b>	<b>6.8000e-003</b>	<b>0.7568</b>	<b>6.0000e-005</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>2.6900e-003</b>	<b>1.6327</b>	<b>1.6327</b>	<b>1.6327</b>	<b>4.2100e-003</b>		<b>1.7378</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

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Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**LBCC LAC Year 2041 (2036-2041 Construction)**  
 Los Angeles-South Coast County, Annual

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7,458.00	Student	1.02	84,015.00	0
Other Non-Asphalt Surfaces	2.07	Acre	2.07	90,169.20	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2040

**Utility Company** Southern California Edison

<b>CO2 Intensity (lb/MW/hr)</b>	702.44	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

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Project Characteristics - Opening Year 2041

Land Use - 7,458 student Junior College on 1.02 acre and 84,015 sq ft and 2.07-acres Other Non-Asphalt Surfaces.

Construction Phase - 20 days Demo, 20 days Grading, 230 days Building Construction to occur concurrent with 230 days of Painting, 20 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - Demolition of 15,968 SF of building space.

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Mobile Land Use Mitigation - Transit Station 0.1 mile. Improve Pedestrian Network onsite and connecting offsite

Table Name	Column Name	Default Value	New Value
tbiConstructionPhase	NumDays	18.00	230.00
tbiConstructionPhase	NumDays	8.00	20.00
tbiConstructionPhase	NumDays	18.00	20.00
tbiConstructionPhase	PhaseEndDate	7/16/2037	6/12/2037
tbiConstructionPhase	PhaseEndDate	5/27/2037	6/12/2037
tbiConstructionPhase	PhaseEndDate	7/9/2036	7/27/2036
tbiConstructionPhase	PhaseEndDate	6/22/2037	7/10/2037
tbiConstructionPhase	PhaseStartDate	6/23/2037	7/28/2036
tbiConstructionPhase	PhaseStartDate	7/10/2036	7/28/2036
tbiConstructionPhase	PhaseStartDate	5/28/2037	6/13/2037
tbiLandUse	LandUseSquareFeet	325,558.38	84,015.00
tbiLandUse	LotAcreage	7.47	1.02
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiVehicleTrips	WD_TR	1.23	1.15

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**2.0 Emissions Summary**

**2.1 Overall Construction**

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
2036	0.3189	0.7017	1.4572	3.5700e-003	0.1429	9.8500e-003	0.1527	0.0536	9.8200e-003	0.0634	0.0000	311.9634	311.9634	0.0113	0.0000	312.2453
2037	0.3054	0.6268	1.2911	3.0100e-003	0.0693	7.7500e-003	0.0771	0.0187	7.7300e-003	0.0264	0.0000	262.9215	262.9215	9.4500e-003	0.0000	263.1576
<b>Maximum</b>	<b>0.3189</b>	<b>0.7017</b>	<b>1.4572</b>	<b>3.5700e-003</b>	<b>0.1429</b>	<b>9.8500e-003</b>	<b>0.1527</b>	<b>0.0536</b>	<b>9.8200e-003</b>	<b>0.0634</b>	<b>0.0000</b>	<b>311.9634</b>	<b>311.9634</b>	<b>0.0113</b>	<b>0.0000</b>	<b>312.2453</b>

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
2036	0.3189	0.7017	1.4572	3.5700e-003	0.0981	9.8500e-003	0.1079	0.0323	9.8200e-003	0.0421	0.0000	311.9631	311.9631	0.0113	0.0000	312.2450
2037	0.3054	0.6268	1.2911	3.0100e-003	0.0693	7.7500e-003	0.0771	0.0187	7.7300e-003	0.0264	0.0000	262.9213	262.9213	9.4500e-003	0.0000	263.1574
<b>Maximum</b>	<b>0.3189</b>	<b>0.7017</b>	<b>1.4572</b>	<b>3.5700e-003</b>	<b>0.0981</b>	<b>9.8500e-003</b>	<b>0.1079</b>	<b>0.0323</b>	<b>9.8200e-003</b>	<b>0.0421</b>	<b>0.0000</b>	<b>311.9631</b>	<b>311.9631</b>	<b>0.0113</b>	<b>0.0000</b>	<b>312.2450</b>

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ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	21.10	0.00	19.49	29.45	0.00	23.68	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)						Maximum Mitigated ROG + NOX (tons/quarter)							
1	6-1-2036	8-31-2036														0.3646
2	9-1-2036	11-30-2036														0.4852
3	12-1-2036	2-28-2037														0.4801
4	3-1-2037	5-31-2037														0.4902
5	6-1-2037	8-31-2037														0.1218
		Highest														0.4902

**2.2 Overall Operational Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
Area	0.3583	8.5000e-004	0.0946	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1851	0.1851	4.8000e-004	0.0000	0.1971
Energy	0.0123	0.1115	0.0937	6.7000e-004	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	0.0000	389.6346	389.6346	0.0134	4.5200e-003	391.3156
Mobile	0.9657	6.6195	12.5775	0.0710	7.5876	0.0303	7.6180	2.0334	0.0282	2.0616	0.0000	6,627.7139	6,627.7139	0.2539	0.0000	6,634.0619
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	276.2890	0.0000	276.2890	16.3282	0.0000	684.4942
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.0660	154.6614	159.7274	0.5267	0.0136	176.9502
<b>Total</b>	<b>1.3362</b>	<b>6.7319</b>	<b>12.7658</b>	<b>0.0717</b>	<b>7.5876</b>	<b>0.0391</b>	<b>7.6268</b>	<b>2.0334</b>	<b>0.0370</b>	<b>2.0705</b>	<b>281.3550</b>	<b>7,172.1950</b>	<b>7,453.5500</b>	<b>17.1227</b>	<b>0.0181</b>	<b>7,887.0190</b>

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**2.2 Overall Operational**

Mitigated Operational

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.3583	8.5000e-004	0.0946	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1851	0.1851	4.8000e-004	0.0000	0.1971
Energy	0.0123	0.1115	0.0937	6.7000e-004	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	0.0000	389.6346	389.6346	0.0134	4.5200e-003	391.3156
Mobile	0.8469	6.0333	10.1765	0.0560	5.8566	0.0241	5.8807	1.5695	0.0224	1.5919	0.0000	5,231.751 <sup>1</sup>	5,231.7511	0.2065	0.0000	5,236.912 <sup>8</sup>
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	276.2890	0.0000	276.2890	16.3282	0.0000	684.4942
Water						0.0000	0.0000	0.0000	0.0000	0.0000	5.0660	154.6614	159.7274	0.5267	0.0136	176.9502
<b>Total</b>	<b>1.2174</b>	<b>6.1457</b>	<b>10.3648</b>	<b>0.0567</b>	<b>5.8566</b>	<b>0.0329</b>	<b>5.8895</b>	<b>1.5695</b>	<b>0.0312</b>	<b>1.6007</b>	<b>281.3550</b>	<b>5,776.232<sup>2</sup></b>	<b>6,057.587<sup>2</sup></b>	<b>17.0753</b>	<b>0.0181</b>	<b>6,489.869<sup>8</sup></b>

Percent Reduction	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
8.89		8.71	18.81	20.93	22.81	15.92	22.78	22.81	15.66	22.69	0.00	19.46	18.73	0.28	0.00	17.71

**3.0 Construction Detail**

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2036	6/27/2036	5	20	
2	Grading	Grading	6/28/2036	7/27/2036	5	20	
3	Building Construction	Building Construction	7/28/2036	6/12/2037	5	230	
4	Paving	Paving	6/13/2037	7/10/2037	5	20	
5	Architectural Coating	Architectural Coating	7/28/2036	6/12/2037	5	230	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 2.07**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 126,023; Non-Residential Outdoor: 42,008; Striped Parking Area: 5,410 (Architectural Coating – sqft)**

**OffRoad Equipment**

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	73.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	73.00	29.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2036**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Fugitive Dust					7.8600e-003	0.0000	7.8600e-003	1.1900e-003	0.0000	1.1900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0183	0.0691	0.1871	4.6000e-004	2.2700e-003	2.2700e-003	2.2700e-003	2.2700e-003	2.2700e-003	2.2700e-003	0.0000	39.7218	39.7218	1.4500e-003	0.0000	39.7581
<b>Total</b>	<b>0.0183</b>	<b>0.0691</b>	<b>0.1871</b>	<b>4.6000e-004</b>	<b>7.8600e-003</b>	<b>2.2700e-003</b>	<b>0.0101</b>	<b>1.1900e-003</b>	<b>2.2700e-003</b>	<b>3.4600e-003</b>	<b>0.0000</b>	<b>39.7218</b>	<b>39.7218</b>	<b>1.4500e-003</b>	<b>0.0000</b>	<b>39.7581</b>

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**3.2 Demolition - 2036**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.8000e-004	5.4000e-003	2.2100e-003	3.0000e-005	6.3000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	2.5257	2.5257	1.7000e-004	0.0000	2.5299
Vendor	1.1000e-004	3.9200e-003	1.1700e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3670	1.3670	7.0000e-005	0.0000	1.3687
Worker	2.8000e-004	1.5000e-004	2.2300e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.0102	1.0102	1.0000e-005	0.0000	1.0105
<b>Total</b>	<b>5.7000e-004</b>	<b>9.4700e-003</b>	<b>5.6100e-003</b>	<b>5.0000e-005</b>	<b>2.6500e-003</b>	<b>2.0000e-005</b>	<b>2.6700e-003</b>	<b>7.2000e-004</b>	<b>2.0000e-005</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>4.9029</b>	<b>4.9029</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>4.9091</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					3.0700e-003	0.0000	3.0700e-003	4.6000e-004	0.0000	4.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0183	0.0691	0.1871	4.6000e-004	2.2700e-003	2.2700e-003	2.2700e-003	2.2700e-003	2.2700e-003	2.2700e-003	0.0000	39.7218	39.7218	1.4500e-003	0.0000	39.7581
<b>Total</b>	<b>0.0183</b>	<b>0.0691</b>	<b>0.1871</b>	<b>4.6000e-004</b>	<b>3.0700e-003</b>	<b>2.2700e-003</b>	<b>5.3400e-003</b>	<b>4.6000e-004</b>	<b>2.2700e-003</b>	<b>2.7300e-003</b>	<b>0.0000</b>	<b>39.7218</b>	<b>39.7218</b>	<b>1.4500e-003</b>	<b>0.0000</b>	<b>39.7581</b>

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**3.2 Demolition - 2036**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.8000e-004	5.4000e-003	2.2100e-003	3.0000e-005	6.3000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	2.5257	2.5257	1.7000e-004	0.0000	2.5299
Vendor	1.1000e-004	3.9200e-003	1.1700e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3670	1.3670	7.0000e-005	0.0000	1.3687
Worker	2.8000e-004	1.5000e-004	2.2300e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.0102	1.0102	1.0000e-005	0.0000	1.0105
<b>Total</b>	<b>5.7000e-004</b>	<b>9.4700e-003</b>	<b>5.6100e-003</b>	<b>5.0000e-005</b>	<b>2.6500e-003</b>	<b>2.0000e-005</b>	<b>2.6700e-003</b>	<b>7.2000e-004</b>	<b>2.0000e-005</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>4.9029</b>	<b>4.9029</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>4.9091</b>

**3.3 Grading - 2036**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.0598	0.1433	3.6000e-004	1.5600e-003	1.5600e-003	1.5600e-003	1.5600e-003	1.5600e-003	1.5600e-003	0.0000	31.2046	31.2046	1.1600e-003	0.0000	31.2337
<b>Total</b>	<b>0.0146</b>	<b>0.0598</b>	<b>0.1433</b>	<b>3.6000e-004</b>	<b>0.0655</b>	<b>1.5600e-003</b>	<b>0.0671</b>	<b>0.0337</b>	<b>1.5600e-003</b>	<b>0.0352</b>	<b>0.0000</b>	<b>31.2046</b>	<b>31.2046</b>	<b>1.1600e-003</b>	<b>0.0000</b>	<b>31.2337</b>

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**3.3 Grading - 2036**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.9200e-003	1.1700e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3670	1.3670	7.0000e-005	0.0000	1.3687
Worker	2.8000e-004	1.5000e-004	2.2300e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.0102	1.0102	1.0000e-005	0.0000	1.0105
<b>Total</b>	<b>3.9000e-004</b>	<b>4.0700e-003</b>	<b>3.4000e-003</b>	<b>2.0000e-005</b>	<b>2.0200e-003</b>	<b>1.0000e-005</b>	<b>2.0300e-003</b>	<b>5.5000e-004</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.3772</b>	<b>2.3772</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>2.3792</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0256	0.0000	0.0256	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.0598	0.1433	3.6000e-004	1.5600e-003	1.5600e-003	1.5600e-003	1.5600e-003	1.5600e-003	1.5600e-003	0.0000	31.2046	31.2046	1.1600e-003	0.0000	31.2337
<b>Total</b>	<b>0.0146</b>	<b>0.0598</b>	<b>0.1433</b>	<b>3.6000e-004</b>	<b>0.0256</b>	<b>1.5600e-003</b>	<b>0.0271</b>	<b>0.0131</b>	<b>1.5600e-003</b>	<b>0.0147</b>	<b>0.0000</b>	<b>31.2046</b>	<b>31.2046</b>	<b>1.1600e-003</b>	<b>0.0000</b>	<b>31.2337</b>

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**3.3 Grading - 2036**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.9200e-003	1.1700e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.3670	1.3670	7.0000e-005	0.0000	1.3687
Worker	2.8000e-004	1.5000e-004	2.2300e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.0102	1.0102	1.0000e-005	0.0000	1.0105
<b>Total</b>	<b>3.9000e-004</b>	<b>4.0700e-003</b>	<b>3.4000e-003</b>	<b>2.0000e-005</b>	<b>2.0200e-003</b>	<b>1.0000e-005</b>	<b>2.0300e-003</b>	<b>5.5000e-004</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>2.3772</b>	<b>2.3772</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>2.3792</b>

**3.4 Building Construction - 2036**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0688	0.4046	0.9107	1.7500e-003	5.1100e-003	5.1100e-003	5.1100e-003	5.1100e-003	5.1100e-003	5.1100e-003	0.0000	148.5165	148.5165	5.5300e-003	0.0000	148.6548
<b>Total</b>	<b>0.0688</b>	<b>0.4046</b>	<b>0.9107</b>	<b>1.7500e-003</b>	<b>5.1100e-003</b>	<b>5.1100e-003</b>	<b>5.1100e-003</b>	<b>5.1100e-003</b>	<b>5.1100e-003</b>	<b>5.1100e-003</b>	<b>0.0000</b>	<b>148.5165</b>	<b>148.5165</b>	<b>5.5300e-003</b>	<b>0.0000</b>	<b>148.6548</b>

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**3.4 Building Construction - 2036**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9800e-003	0.1069	0.0320	3.8000e-004	0.0103	1.1000e-004	0.0104	2.9800e-003	1.1000e-004	3.0900e-003	0.0000	37.3307	37.3307	1.8500e-003	0.0000	37.3770
Worker	7.6100e-003	4.1200e-003	0.0612	3.1000e-004	0.0452	1.8000e-004	0.0454	0.0120	1.6000e-004	0.0122	0.0000	27.7764	27.7764	3.4000e-004	0.0000	27.7850
<b>Total</b>	<b>0.0106</b>	<b>0.1110</b>	<b>0.0932</b>	<b>6.9000e-004</b>	<b>0.0555</b>	<b>2.9000e-004</b>	<b>0.0558</b>	<b>0.0150</b>	<b>2.7000e-004</b>	<b>0.0153</b>	<b>0.0000</b>	<b>65.1071</b>	<b>65.1071</b>	<b>2.1900e-003</b>	<b>0.0000</b>	<b>65.1620</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0688	0.4046	0.9107	1.7500e-003		5.1100e-003	5.1100e-003		5.1100e-003	5.1100e-003	0.0000	148.5163	148.5163	5.5300e-003	0.0000	148.6546
<b>Total</b>	<b>0.0688</b>	<b>0.4046</b>	<b>0.9107</b>	<b>1.7500e-003</b>		<b>5.1100e-003</b>	<b>5.1100e-003</b>		<b>5.1100e-003</b>	<b>5.1100e-003</b>	<b>0.0000</b>	<b>148.5163</b>	<b>148.5163</b>	<b>5.5300e-003</b>	<b>0.0000</b>	<b>148.6546</b>

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**3.4 Building Construction - 2036**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9800e-003	0.1069	0.0320	3.8000e-004	0.0103	1.1000e-004	0.0104	2.9800e-003	1.1000e-004	3.0900e-003	0.0000	37.3307	37.3307	1.8500e-003	0.0000	37.3770
Worker	7.6100e-003	4.1200e-003	0.0612	3.1000e-004	0.0452	1.8000e-004	0.0454	0.0120	1.6000e-004	0.0122	0.0000	27.7764	27.7764	3.4000e-004	0.0000	27.7850
<b>Total</b>	<b>0.0106</b>	<b>0.1110</b>	<b>0.0932</b>	<b>6.9000e-004</b>	<b>0.0555</b>	<b>2.9000e-004</b>	<b>0.0558</b>	<b>0.0150</b>	<b>2.7000e-004</b>	<b>0.0153</b>	<b>0.0000</b>	<b>65.1071</b>	<b>65.1071</b>	<b>2.1900e-003</b>	<b>0.0000</b>	<b>65.1620</b>

**3.4 Building Construction - 2037**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0712	0.4189	0.9429	1.8100e-003		5.2900e-003	5.2900e-003		5.2900e-003	5.2900e-003	0.0000	153.7737	153.7737	5.7300e-003	0.0000	153.9169
<b>Total</b>	<b>0.0712</b>	<b>0.4189</b>	<b>0.9429</b>	<b>1.8100e-003</b>		<b>5.2900e-003</b>	<b>5.2900e-003</b>		<b>5.2900e-003</b>	<b>5.2900e-003</b>	<b>0.0000</b>	<b>153.7737</b>	<b>153.7737</b>	<b>5.7300e-003</b>	<b>0.0000</b>	<b>153.9169</b>

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**3.4 Building Construction - 2037**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0800e-003	0.1107	0.0331	4.0000e-004	0.0107	1.2000e-004	0.0108	3.0900e-003	1.1000e-004	3.2000e-003	0.0000	38.6521	38.6521	1.9200e-003	0.0000	38.7001
Worker	7.8800e-003	4.2700e-003	0.0634	3.2000e-004	0.0468	1.8000e-004	0.0470	0.0124	1.7000e-004	0.0126	0.0000	28.7596	28.7596	3.6000e-004	0.0000	28.7685
<b>Total</b>	<b>0.0110</b>	<b>0.1150</b>	<b>0.0965</b>	<b>7.2000e-004</b>	<b>0.0575</b>	<b>3.0000e-004</b>	<b>0.0578</b>	<b>0.0155</b>	<b>2.8000e-004</b>	<b>0.0158</b>	<b>0.0000</b>	<b>67.4118</b>	<b>67.4118</b>	<b>2.2800e-003</b>	<b>0.0000</b>	<b>67.4686</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0712	0.4189	0.9429	1.8100e-003		5.2900e-003	5.2900e-003		5.2900e-003	5.2900e-003	0.0000	153.7735	153.7735	5.7300e-003	0.0000	153.9167
<b>Total</b>	<b>0.0712</b>	<b>0.4189</b>	<b>0.9429</b>	<b>1.8100e-003</b>		<b>5.2900e-003</b>	<b>5.2900e-003</b>		<b>5.2900e-003</b>	<b>5.2900e-003</b>	<b>0.0000</b>	<b>153.7735</b>	<b>153.7735</b>	<b>5.7300e-003</b>	<b>0.0000</b>	<b>153.9167</b>

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**3.4 Building Construction - 2037**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0800e-003	0.1107	0.0331	4.0000e-004	0.0107	1.2000e-004	0.0108	3.0900e-003	1.1000e-004	3.2000e-003	0.0000	38.6521	38.6521	1.9200e-003	0.0000	38.7001
Worker	7.8800e-003	4.2700e-003	0.0634	3.2000e-004	0.0468	1.8000e-004	0.0470	0.0124	1.7000e-004	0.0126	0.0000	28.7596	28.7596	3.6000e-004	0.0000	28.7685
<b>Total</b>	<b>0.0110</b>	<b>0.1150</b>	<b>0.0965</b>	<b>7.2000e-004</b>	<b>0.0575</b>	<b>3.0000e-004</b>	<b>0.0578</b>	<b>0.0155</b>	<b>2.8000e-004</b>	<b>0.0158</b>	<b>0.0000</b>	<b>67.4118</b>	<b>67.4118</b>	<b>2.2800e-003</b>	<b>0.0000</b>	<b>67.4686</b>

**3.5 Paving - 2037**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	9.8900e-003	0.0474	0.1307	2.3000e-004		1.5400e-003	1.5400e-003	1.5400e-003	1.5400e-003	1.5400e-003	0.0000	19.5431	19.5431	8.0000e-004	0.0000	19.5632
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>9.8900e-003</b>	<b>0.0474</b>	<b>0.1307</b>	<b>2.3000e-004</b>		<b>1.5400e-003</b>	<b>1.5400e-003</b>		<b>1.5400e-003</b>	<b>1.5400e-003</b>	<b>0.0000</b>	<b>19.5431</b>	<b>19.5431</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>19.5632</b>

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**3.5 Paving - 2037**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.0000e-004	2.9700e-003	1.0000e-005	2.1900e-003	1.0000e-005	2.2000e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.3469	1.3469	2.0000e-005	0.0000	1.3473
<b>Total</b>	<b>3.7000e-004</b>	<b>2.0000e-004</b>	<b>2.9700e-003</b>	<b>1.0000e-005</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>2.2000e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.3469</b>	<b>1.3469</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.3473</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	9.8900e-003	0.0474	0.1307	2.3000e-004	1.5400e-003	1.5400e-003	1.5400e-003	1.5400e-003	1.5400e-003	1.5400e-003	0.0000	19.5431	19.5431	8.0000e-004	0.0000	19.5632
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>9.8900e-003</b>	<b>0.0474</b>	<b>0.1307</b>	<b>2.3000e-004</b>	<b>1.5400e-003</b>	<b>1.5400e-003</b>	<b>1.5400e-003</b>	<b>1.5400e-003</b>	<b>1.5400e-003</b>	<b>1.5400e-003</b>	<b>0.0000</b>	<b>19.5431</b>	<b>19.5431</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>19.5632</b>

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**3.5 Paving - 2037**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.0000e-004	2.9700e-003	1.0000e-005	2.1900e-003	1.0000e-005	2.2000e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.3469	1.3469	2.0000e-005	0.0000	1.3473
<b>Total</b>	<b>3.7000e-004</b>	<b>2.0000e-004</b>	<b>2.9700e-003</b>	<b>1.0000e-005</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>2.2000e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.3469</b>	<b>1.3469</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>1.3473</b>

**3.6 Architectural Coating - 2036**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.1975					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6600e-003	0.0428	0.1014	1.7000e-004		5.6000e-004	5.6000e-004	5.6000e-004	5.6000e-004	5.6000e-004	0.0000	14.4259	14.4259	5.3000e-004	0.0000	14.4392
<b>Total</b>	<b>0.2041</b>	<b>0.0428</b>	<b>0.1014</b>	<b>1.7000e-004</b>		<b>5.6000e-004</b>	<b>5.6000e-004</b>	<b>5.6000e-004</b>	<b>5.6000e-004</b>	<b>5.6000e-004</b>	<b>0.0000</b>	<b>14.4259</b>	<b>14.4259</b>	<b>5.3000e-004</b>	<b>0.0000</b>	<b>14.4392</b>

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**3.6 Architectural Coating - 2036**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	8.5000e-004	0.0126	6.0000e-005	9.2900e-003	4.0000e-005	9.3200e-003	2.4700e-003	3.0000e-005	2.5000e-003	0.0000	5.7075	5.7075	7.0000e-005	0.0000	5.7092
<b>Total</b>	<b>1.5600e-003</b>	<b>8.5000e-004</b>	<b>0.0126</b>	<b>6.0000e-005</b>	<b>9.2900e-003</b>	<b>4.0000e-005</b>	<b>9.3200e-003</b>	<b>2.4700e-003</b>	<b>3.0000e-005</b>	<b>2.5000e-003</b>	<b>0.0000</b>	<b>5.7075</b>	<b>5.7075</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>5.7092</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.1975					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6600e-003	0.0428	0.1014	1.7000e-004	5.6000e-004	5.6000e-004	5.6000e-004	5.6000e-004	5.6000e-004	5.6000e-004	0.0000	14.4259	14.4259	5.3000e-004	0.0000	14.4392
<b>Total</b>	<b>0.2041</b>	<b>0.0428</b>	<b>0.1014</b>	<b>1.7000e-004</b>	<b>5.6000e-004</b>	<b>5.6000e-004</b>	<b>5.6000e-004</b>	<b>5.6000e-004</b>	<b>5.6000e-004</b>	<b>5.6000e-004</b>	<b>0.0000</b>	<b>14.4259</b>	<b>14.4259</b>	<b>5.3000e-004</b>	<b>0.0000</b>	<b>14.4392</b>

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**3.6 Architectural Coating - 2036**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	8.5000e-004	0.0126	6.0000e-005	9.2900e-003	4.0000e-005	9.3200e-003	2.4700e-003	3.0000e-005	2.5000e-003	0.0000	5.7075	5.7075	7.0000e-005	0.0000	5.7092
<b>Total</b>	<b>1.5600e-003</b>	<b>8.5000e-004</b>	<b>0.0126</b>	<b>6.0000e-005</b>	<b>9.2900e-003</b>	<b>4.0000e-005</b>	<b>9.3200e-003</b>	<b>2.4700e-003</b>	<b>3.0000e-005</b>	<b>2.5000e-003</b>	<b>0.0000</b>	<b>5.7075</b>	<b>5.7075</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>5.7092</b>

**3.6 Architectural Coating - 2037**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.2045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9000e-003	0.0443	0.1050	1.7000e-004		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	14.9365	14.9365	5.5000e-004	0.0000	14.9503
<b>Total</b>	<b>0.2114</b>	<b>0.0443</b>	<b>0.1050</b>	<b>1.7000e-004</b>		<b>5.8000e-004</b>	<b>5.8000e-004</b>		<b>5.8000e-004</b>	<b>5.8000e-004</b>	<b>0.0000</b>	<b>14.9365</b>	<b>14.9365</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>14.9503</b>

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**3.6 Architectural Coating - 2037**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6200e-003	8.8000e-004	0.0130	7.0000e-005	9.6200e-003	4.0000e-005	9.6500e-003	2.5500e-003	3.0000e-005	2.5900e-003	0.0000	5.9095	5.9095	7.0000e-005	0.0000	5.9113
<b>Total</b>	<b>1.6200e-003</b>	<b>8.8000e-004</b>	<b>0.0130</b>	<b>7.0000e-005</b>	<b>9.6200e-003</b>	<b>4.0000e-005</b>	<b>9.6500e-003</b>	<b>2.5500e-003</b>	<b>3.0000e-005</b>	<b>2.5900e-003</b>	<b>0.0000</b>	<b>5.9095</b>	<b>5.9095</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>5.9113</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.2045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9000e-003	0.0443	0.1050	1.7000e-004		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	14.9365	14.9365	5.5000e-004	0.0000	14.9503
<b>Total</b>	<b>0.2114</b>	<b>0.0443</b>	<b>0.1050</b>	<b>1.7000e-004</b>		<b>5.8000e-004</b>	<b>5.8000e-004</b>		<b>5.8000e-004</b>	<b>5.8000e-004</b>	<b>0.0000</b>	<b>14.9365</b>	<b>14.9365</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>14.9503</b>

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**3.6 Architectural Coating - 2037**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6200e-003	8.8000e-004	0.0130	7.0000e-005	9.6200e-003	4.0000e-005	9.6500e-003	2.5500e-003	3.0000e-005	2.5900e-003	0.0000	5.9095	5.9095	7.0000e-005	0.0000	5.9113
<b>Total</b>	<b>1.6200e-003</b>	<b>8.8000e-004</b>	<b>0.0130</b>	<b>7.0000e-005</b>	<b>9.6200e-003</b>	<b>4.0000e-005</b>	<b>9.6500e-003</b>	<b>2.5500e-003</b>	<b>3.0000e-005</b>	<b>2.5900e-003</b>	<b>0.0000</b>	<b>5.9095</b>	<b>5.9095</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>5.9113</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Increase Transit Accessibility

Improve Pedestrian Network

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Category	tons/yr													MT/yr			
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	0.8469	6.0333	10.1765	0.0560	5.8566	0.0241	5.8807	1.5695	0.0224	1.5919	0.0000	5,231.7511	5,231.7511	0.2065	0.0000	5,236.9128	
Unmitigated	0.9657	6.6195	12.5775	0.0710	7.5876	0.0303	7.6180	2.0334	0.0282	2.0616	0.0000	6,627.7139	6,627.7139	0.2539	0.0000	6,634.0619	

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT		
Junior College (2Yr)	8,576.70	3,132.36	298.32	19,983,631	15,424,521		
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
Total	8,576.70	3,132.36	298.32	19,983,631	15,424,521		

4.3 Trip Type Information

Land Use	Miles						Trip %						Trip Purpose %					
	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	H-O or C-C	Primary	Diverted	Pass-by	Primary	Diverted	Pass-by			
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	6.40	88.60	92	7	1	92	7	1				
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0				

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.537194	0.043713	0.210127	0.116181	0.013260	0.006460	0.022765	0.039037	0.002776	0.001599	0.005341	0.000737	0.000810
Other Non-Asphalt Surfaces	0.537194	0.043713	0.210127	0.116181	0.013260	0.006460	0.022765	0.039037	0.002776	0.001599	0.005341	0.000737	0.000810

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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	268.2252	268.2252	0.0111	2.2900e-003	269.1848
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	268.2252	268.2252	0.0111	2.2900e-003	269.1848
NaturalGas Mitigated	0.0123	0.1115	0.0937	6.7000e-004		8.4800e-003	8.4800e-003		8.4800e-003	8.4800e-003	0.0000	121.4094	121.4094	2.3300e-003	2.2300e-003	122.1309
NaturalGas Unmitigated	0.0123	0.1115	0.0937	6.7000e-004		8.4800e-003	8.4800e-003		8.4800e-003	8.4800e-003	0.0000	121.4094	121.4094	2.3300e-003	2.2300e-003	122.1309

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**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

Land Use	NaturalGas Use kBTU/yr	tons/yr										MT/yr					CO2e
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Junior College (2Yr)	2.27513e+006	0.0123	0.1115	0.0937	6.7000e-004	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	0.0000	121.4094	121.4094	2.3300e-003	2.2300e-003	122.1309
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0123</b>	<b>0.1115</b>	<b>0.0937</b>	<b>6.7000e-004</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>0.0000</b>	<b>121.4094</b>	<b>121.4094</b>	<b>2.3300e-003</b>	<b>2.2300e-003</b>	<b>122.1309</b>

**Mitigated**

Land Use	NaturalGas Use kBTU/yr	tons/yr										MT/yr					CO2e
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Junior College (2Yr)	2.27513e+006	0.0123	0.1115	0.0937	6.7000e-004	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	8.4800e-003	0.0000	121.4094	121.4094	2.3300e-003	2.2300e-003	122.1309
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0123</b>	<b>0.1115</b>	<b>0.0937</b>	<b>6.7000e-004</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>8.4800e-003</b>	<b>0.0000</b>	<b>121.4094</b>	<b>121.4094</b>	<b>2.3300e-003</b>	<b>2.2300e-003</b>	<b>122.1309</b>

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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	841830	268.2252	0.0111	2.2900e-003	269.1848
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>268.2252</b>	<b>0.0111</b>	<b>2.2900e-003</b>	<b>269.1848</b>

**Mitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	841830	268.2252	0.0111	2.2900e-003	269.1848
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>268.2252</b>	<b>0.0111</b>	<b>2.2900e-003</b>	<b>269.1848</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Mitigated	0.3583	8.5000e-004	0.0946	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1851	0.1851	4.8000e-004	0.0000	0.1971
Unmitigated	0.3583	8.5000e-004	0.0946	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1851	0.1851	4.8000e-004	0.0000	0.1971

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Architectural Coating	0.0402				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3094				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6600e-003	8.5000e-004	0.0946	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1851	0.1851	4.8000e-004	0.0000	0.1971
<b>Total</b>	<b>0.3583</b>	<b>8.5000e-004</b>	<b>0.0946</b>	<b>1.0000e-005</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>0.1851</b>	<b>0.1851</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>0.1971</b>

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**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0402					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3094					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6600e-003	8.5000e-004	0.0946	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1851	0.1851	4.8000e-004	0.0000	0.1971
<b>Total</b>	<b>0.3583</b>	<b>8.5000e-004</b>	<b>0.0946</b>	<b>1.0000e-005</b>		<b>3.4000e-004</b>	<b>3.4000e-004</b>		<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>0.1851</b>	<b>0.1851</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>0.1971</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	159.7274	0.5267	0.0136	176.9502
Unmitigated	159.7274	0.5267	0.0136	176.9502

**7.2 Water by Land Use**

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	15,9683 / 24,9761	159.7274	0.5267	0.0136	176.9502
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>159.7274</b>	<b>0.5267</b>	<b>0.0136</b>	<b>176.9502</b>

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**7.2 Water by Land Use**

Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Junior College (2Yr)	15.9683	159.7274	0.5267	0.0136	176.9502
Other Non-Asphalt Surfaces	24.9761	0.0000	0.0000	0.0000	0.0000
	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>159.7274</b>	<b>0.5267</b>	<b>0.0136</b>	<b>176.9502</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Category/Year

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	276.2890	16.3282	0.0000	684.4942
Unmitigated	276.2890	16.3282	0.0000	684.4942

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**8.2 Waste by Land Use**

Unmitigated

Land Use	Waste Disposed tons	Total CO2e		
		Total CO2	CH4	N2O
Junior College (2Yr)	1361.09	276.2890	16.3282	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000
<b>Total</b>		<b>276.2890</b>	<b>16.3282</b>	<b>0.0000</b>

Mitigated

Land Use	Waste Disposed tons	Total CO2e		
		Total CO2	CH4	N2O
Junior College (2Yr)	1361.09	276.2890	16.3282	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000
<b>Total</b>		<b>276.2890</b>	<b>16.3282</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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**APPENDIX G**

**CalEEMod Model Master Plan Annual Printouts**

LBCC LAC - Los Angeles-South Coast County, Annual

**LBCC LAC**

**Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7,458.00	Student	8.50	702,240.00	0
Other Non-Asphalt Surfaces	10.34	Acre	10.34	450,410.40	0
Recreational Swimming Pool	1.50	1000sqft	2.00	1,500.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2040

**Utility Company** Southern California Edison

<b>CO2 Intensity (lb/MW/hr)</b>	702.44	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

LACC LAC - Los Angeles-South Coast County, Annual

Project Characteristics - Opening Year 2041

Land Use - 702.24 TSF Junior College, 50,881 SF Recreational Swimming Pool, and 10.34-acres Other Non-Asphalt Surfaces.

Construction Phase - 60 days Demo, 120 days Grading, 674 days Building Construction to occur concurrent with 674 days of Painting, 60 days Paving.

Trips and VMT - To account for water trucks, 6 vendor trips added to Demolition and Grading.

Demolition - 109,156 SF of building space X 0.046 tons of debris/SF = 5,021.18 tons of demolition debris.

Grading -

Vehicle Trips - Weekday trip rate of 1.15 trips/day to Junior College obtained from TIA. Swimming pool is not anticipated to generate any trips.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403 Minimum Requirements, water exposure 3x per day selected.

Table Name	Column Name	Default Value	New Value
tbiConstructionPhase	NumDays	20.00	674.00
tbiConstructionPhase	NumDays	370.00	674.00
tbiConstructionPhase	NumDays	20.00	60.00
tbiConstructionPhase	NumDays	35.00	120.00
tbiConstructionPhase	NumDays	20.00	60.00
tbiLandUse	LandUseSquareFeet	325,558.38	702,240.00
tbiLandUse	LotAcreage	7.47	8.50
tbiLandUse	LotAcreage	0.03	2.00
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiTripsAndVMT	VendorTripNumber	0.00	6.00
tbiVehicleTrips	ST_TR	9.10	0.00
tbiVehicleTrips	SU_TR	13.60	0.00
tbiVehicleTrips	WD_TR	1.23	1.15
tbiVehicleTrips	WD_TR	33.82	0.00

2.0 Emissions Summary

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**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2018	0.3579	4.0341	2.3862	4.5000e-003	0.5120	0.1802	0.6921	0.1836	0.1664	0.3500	0.0000	411.9547	411.9547	0.1129	0.0000	414.7768
2019	2.0354	6.3277	6.4863	0.0180	1.1287	0.2216	1.3503	0.3019	0.2087	0.5106	0.0000	1,651.4860	1,651.4860	0.1555	0.0000	1,655.3725
2020	2.1324	5.7008	6.3117	0.0189	0.9914	0.1805	1.1719	0.2669	0.1706	0.4375	0.0000	1,730.6332	1,730.6332	0.1402	0.0000	1,734.1391
2021	1.4497	3.9298	4.5252	0.0134	0.6823	0.1227	0.8050	0.1837	0.1154	0.2991	0.0000	1,226.7658	1,226.7658	0.1119	0.0000	1,229.5628
<b>Maximum</b>	<b>2.1324</b>	<b>6.3277</b>	<b>6.4863</b>	<b>0.0189</b>	<b>1.1287</b>	<b>0.2216</b>	<b>1.3503</b>	<b>0.3019</b>	<b>0.2087</b>	<b>0.5106</b>	<b>0.0000</b>	<b>1,730.6332</b>	<b>1,730.6332</b>	<b>0.1555</b>	<b>0.0000</b>	<b>1,734.1391</b>

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**2.1 Overall Construction  
Mitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2018	0.3579	4.0341	2.3862	4.5000e-003	0.2132	0.1802	0.3933	0.0752	0.1664	0.2417	0.0000	411.9543	411.9543	0.1129	0.0000	414.7764
2019	2.0354	6.3277	6.4863	0.0180	0.9802	0.2216	1.2018	0.2631	0.2087	0.4718	0.0000	1,651.4856	1,651.4856	0.1555	0.0000	1,655.3721
2020	2.1324	5.7008	6.3117	0.0189	0.9914	0.1805	1.1719	0.2669	0.1706	0.4375	0.0000	1,730.6328	1,730.6328	0.1402	0.0000	1,734.1387
2021	1.4497	3.9298	4.5252	0.0134	0.6823	0.1227	0.8050	0.1837	0.1154	0.2991	0.0000	1,226.7655	1,226.7655	0.1119	0.0000	1,229.5624
Maximum	2.1324	6.3277	6.4863	0.0189	0.9914	0.2216	1.2018	0.2669	0.2087	0.4718	0.0000	1,730.6328	1,730.6328	0.1555	0.0000	1,734.1387

Percent Reduction	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	13.49	0.00	11.13	15.71	0.00	9.21	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Maximum Unmitigated ROG + NOx (tons/quarter)				Maximum Mitigated ROG + NOx (tons/quarter)			
	Start Date	End Date	ROG	NOx	Start Date	End Date	ROG	NOx
1	6-1-2018	8-31-2018	1.5584	2.1315	6-1-2018	8-31-2018	1.5584	2.1315
2	9-1-2018	11-30-2018	2.0258	2.1026	9-1-2018	11-30-2018	2.0258	2.1026
3	12-1-2018	2-28-2019	2.0959	2.0864	12-1-2018	2-28-2019	2.0959	2.0864
4	3-1-2019	5-31-2019	1.9914	1.9489	3-1-2019	5-31-2019	1.9914	1.9489
5	6-1-2019	8-31-2019	1.9914	1.9489	6-1-2019	8-31-2019	1.9914	1.9489
6	9-1-2019	11-30-2019	1.9914	1.9489	9-1-2019	11-30-2019	1.9914	1.9489
7	12-1-2019	2-29-2020	1.9914	1.9489	12-1-2019	2-29-2020	1.9914	1.9489
8	3-1-2020	5-31-2020	1.9914	1.9489	3-1-2020	5-31-2020	1.9914	1.9489

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9	6-1-2020	8-31-2020	1.9431	1.9431
10	9-1-2020	11-30-2020	1.9334	1.9334
11	12-1-2020	2-28-2021	1.8239	1.8239
12	3-1-2021	5-31-2021	1.8042	1.8042
13	6-1-2021	8-31-2021	1.7992	1.7992
14	9-1-2021	9-30-2021	0.2687	0.2687
		Highest	2.1315	2.1315

**2.2 Overall Operational  
Unmitigated Operational**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	3.1145	8.5000e-004	0.0947	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1854	0.1854	4.8000e-004	0.0000	0.1973
Energy	0.1025	0.9322	0.7830	5.5900e-003	0.0709	0.0709	0.0709	0.0709	0.0709	0.0709	0.0000	3,256.7634	3,256.7634	0.1120	0.0378	3,270.8146
Mobile	0.9657	6.6195	12.5775	0.0710	7.5876	0.0303	7.6180	2.0334	0.0282	2.0616	0.0000	6,627.7139	6,627.7139	0.2539	0.0000	6,634.0619
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	278.0245	0.0000	278.0245	16.4308	0.0000	688.7940
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.0942	155.2219	160.3161	0.5296	0.0137	177.6334
<b>Total</b>	<b>4.1827</b>	<b>7.5525</b>	<b>13.4553</b>	<b>0.0766</b>	<b>7.5876</b>	<b>0.1015</b>	<b>7.6891</b>	<b>2.0334</b>	<b>0.0994</b>	<b>2.1328</b>	<b>283.1187</b>	<b>10,039.8846</b>	<b>10,323.0033</b>	<b>17.3268</b>	<b>0.0514</b>	<b>10,771.5013</b>

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**2.2 Overall Operational  
Mitigated Operational**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	3.1145	8.5000e-004	0.0947	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1854	0.1854	4.8000e-004	0.0000	0.1973
Energy	0.1025	0.9322	0.7830	5.5900e-003	0.0709	0.0709	0.0709	0.0709	0.0709	0.0709	0.0000	3,256.7634	3,256.7634	0.1120	0.0378	3,270.8146
Mobile	0.9657	6.6195	12.5775	0.0710	7.5876	0.0303	7.6180	2.0334	0.0282	2.0616	0.0000	6,627.7139	6,627.7139	0.2539	0.0000	6,634.0619
Waste							0.0000	0.0000	0.0000	0.0000	278.0245	0.0000	278.0245	16.4308	0.0000	688.7940
Water							0.0000	0.0000	0.0000	0.0000	5.0942	155.2219	160.3161	0.5296	0.0137	177.6334
<b>Total</b>	<b>4.1827</b>	<b>7.5525</b>	<b>13.4553</b>	<b>0.0766</b>	<b>7.5876</b>	<b>0.1015</b>	<b>7.6891</b>	<b>2.0334</b>	<b>0.0994</b>	<b>2.1328</b>	<b>283.1187</b>	<b>10,039.8846</b>	<b>10,323.0033</b>	<b>17.3268</b>	<b>0.0514</b>	<b>10,771.5013</b>

Percent Reduction	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail**

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2018	8/23/2018	5	60	
2	Grading	Grading	8/24/2018	2/7/2019	5	120	
3	Building Construction	Building Construction	2/8/2019	9/8/2021	5	674	
4	Architectural Coating	Architectural Coating	2/8/2019	9/8/2021	5	674	
5	Paving	Paving	9/9/2021	12/1/2021	5	60	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 300**

**Acres of Paving: 10.34**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,129,682; Non-Residential Outdoor: 376,561; Striped Parking Area: 27,025 (Architectural Coating – sqft)**

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	6.00	496.00	14.70	14.70	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	6.00	0.00	14.70	14.70	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	485.00	189.00	0.00	14.70	14.70	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	97.00	0.00	0.00	14.70	14.70	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	14.70	20.00	LD_Mix	HDT_Mix	HHDT

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**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2018**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Fugitive Dust					0.0537	0.0000	0.0537	8.1300e-003	0.0000	8.1300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1116	1.1497	0.6691	1.1600e-003		0.0582	0.0582		0.0541	0.0541	0.0000	105.3722	105.3722	0.0290	0.0000	0.0000	106.0980
<b>Total</b>	<b>0.1116</b>	<b>1.1497</b>	<b>0.6691</b>	<b>1.1600e-003</b>	<b>0.0537</b>	<b>0.0582</b>	<b>0.1119</b>	<b>8.1300e-003</b>	<b>0.0541</b>	<b>0.0623</b>	<b>0.0000</b>	<b>105.3722</b>	<b>105.3722</b>	<b>0.0290</b>	<b>0.0000</b>	<b>0.0000</b>	<b>106.0980</b>

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**3.2 Demolition - 2018**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	2.4900e-003	0.0828	0.0171	2.0000e-004	4.2600e-003	3.1000e-004	4.5700e-003	1.1700e-003	2.9000e-004	1.4600e-003	0.0000	19.5613	19.5613	1.3800e-003	0.0000	19.5958
Vendor	8.4000e-004	0.0225	6.3400e-003	5.0000e-005	1.1300e-003	1.6000e-004	1.2900e-003	3.3000e-004	1.5000e-004	4.8000e-004	0.0000	4.5480	4.5480	3.1000e-004	0.0000	4.5558
Worker	2.4900e-003	2.1300e-003	0.0229	5.0000e-005	4.9300e-003	4.0000e-005	4.9800e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.8996	4.8996	1.8000e-004	0.0000	4.9042
<b>Total</b>	<b>5.8200e-003</b>	<b>0.1075</b>	<b>0.0464</b>	<b>3.0000e-004</b>	<b>0.0103</b>	<b>5.1000e-004</b>	<b>0.0108</b>	<b>2.8100e-003</b>	<b>4.8000e-004</b>	<b>3.2900e-003</b>	<b>0.0000</b>	<b>29.0089</b>	<b>29.0089</b>	<b>1.8700e-003</b>	<b>0.0000</b>	<b>29.0558</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0210	0.0000	0.0210	3.1700e-003	0.0000	3.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1116	1.1497	0.6691	1.1600e-003		0.0582	0.0582	0.0541	0.0541	0.0541	0.0000	105.3721	105.3721	0.0290	0.0000	106.0979
<b>Total</b>	<b>0.1116</b>	<b>1.1497</b>	<b>0.6691</b>	<b>1.1600e-003</b>	<b>0.0210</b>	<b>0.0582</b>	<b>0.0791</b>	<b>3.1700e-003</b>	<b>0.0541</b>	<b>0.0573</b>	<b>0.0000</b>	<b>105.3721</b>	<b>105.3721</b>	<b>0.0290</b>	<b>0.0000</b>	<b>106.0979</b>

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**3.2 Demolition - 2018**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	2.4900e-003	0.0828	0.0171	2.0000e-004	4.2600e-003	3.1000e-004	4.5700e-003	1.1700e-003	2.9000e-004	1.4600e-003	0.0000	19.5613	19.5613	1.3800e-003	0.0000	19.5958
Vendor	8.4000e-004	0.0225	6.3400e-003	5.0000e-005	1.1300e-003	1.6000e-004	1.2900e-003	3.3000e-004	1.5000e-004	4.8000e-004	0.0000	4.5480	4.5480	3.1000e-004	0.0000	4.5558
Worker	2.4900e-003	2.1300e-003	0.0229	5.0000e-005	4.9300e-003	4.0000e-005	4.9800e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.8996	4.8996	1.8000e-004	0.0000	4.9042
<b>Total</b>	<b>5.8200e-003</b>	<b>0.1075</b>	<b>0.0464</b>	<b>3.0000e-004</b>	<b>0.0103</b>	<b>5.1000e-004</b>	<b>0.0108</b>	<b>2.8100e-003</b>	<b>4.8000e-004</b>	<b>3.2900e-003</b>	<b>0.0000</b>	<b>29.0089</b>	<b>29.0089</b>	<b>1.8700e-003</b>	<b>0.0000</b>	<b>29.0558</b>

**3.3 Grading - 2018**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.4361	0.0000	0.4361	0.1695	0.0000	0.1695	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2342	2.7380	1.6141	2.8500e-003		0.1212	0.1212	0.1115	0.1115	0.1115	0.0000	260.5831	260.5831	0.0811	0.0000	262.6112
<b>Total</b>	<b>0.2342</b>	<b>2.7380</b>	<b>1.6141</b>	<b>2.8500e-003</b>	<b>0.4361</b>	<b>0.1212</b>	<b>0.5572</b>	<b>0.1695</b>	<b>0.1115</b>	<b>0.2809</b>	<b>0.0000</b>	<b>260.5831</b>	<b>260.5831</b>	<b>0.0811</b>	<b>0.0000</b>	<b>262.6112</b>

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**3.3 Grading - 2018**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2900e-003	0.0346	9.7200e-003	7.0000e-005	1.7400e-003	2.4000e-004	1.9800e-003	5.0000e-004	2.3000e-004	7.3000e-004	0.0000	6.9736	6.9736	4.8000e-004	0.0000	6.9856
Worker	5.1000e-003	4.3600e-003	0.0469	1.1000e-004	0.0701	9.0000e-005	0.0102	2.6800e-003	8.0000e-005	2.7600e-003	0.0000	10.0169	10.0169	3.8000e-004	0.0000	10.0263
<b>Total</b>	<b>6.3900e-003</b>	<b>0.0389</b>	<b>0.0566</b>	<b>1.8000e-004</b>	<b>0.0118</b>	<b>3.3000e-004</b>	<b>0.0122</b>	<b>3.1800e-003</b>	<b>3.1000e-004</b>	<b>3.4900e-003</b>	<b>0.0000</b>	<b>16.9905</b>	<b>16.9905</b>	<b>8.6000e-004</b>	<b>0.0000</b>	<b>17.0119</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.1701	0.0000	0.1701	0.0661	0.0000	0.0661	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2342	2.7380	1.6141	2.8500e-003		0.1212	0.1212	0.1115	0.1115	0.1115	0.0000	260.5828	260.5828	0.0811	0.0000	262.6109
<b>Total</b>	<b>0.2342</b>	<b>2.7380</b>	<b>1.6141</b>	<b>2.8500e-003</b>	<b>0.1701</b>	<b>0.1212</b>	<b>0.2912</b>	<b>0.0661</b>	<b>0.1115</b>	<b>0.1775</b>	<b>0.0000</b>	<b>260.5828</b>	<b>260.5828</b>	<b>0.0811</b>	<b>0.0000</b>	<b>262.6109</b>

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**3.3 Grading - 2018**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2900e-003	0.0346	9.7200e-003	7.0000e-005	1.7400e-003	2.4000e-004	1.9800e-003	5.0000e-004	2.3000e-004	7.3000e-004	0.0000	6.9736	6.9736	4.8000e-004	0.0000	6.9886
Worker	5.1000e-003	4.3600e-003	0.0469	1.1000e-004	0.0101	9.0000e-005	0.0102	2.6800e-003	8.0000e-005	2.7600e-003	0.0000	10.0169	10.0169	3.8000e-004	0.0000	10.0263
<b>Total</b>	<b>6.3900e-003</b>	<b>0.0389</b>	<b>0.0566</b>	<b>1.8000e-004</b>	<b>0.0118</b>	<b>3.3000e-004</b>	<b>0.0122</b>	<b>3.1800e-003</b>	<b>3.1000e-004</b>	<b>3.4900e-003</b>	<b>0.0000</b>	<b>16.9905</b>	<b>16.9905</b>	<b>8.6000e-004</b>	<b>0.0000</b>	<b>17.0119</b>

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.2434	0.0000	0.2434	0.0635	0.0000	0.0635	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0663	0.7633	0.4673	8.7000e-004		0.0334	0.0334	0.0307	0.0307	0.0307	0.0000	77.9819	77.9819	0.0247	0.0000	78.5987
<b>Total</b>	<b>0.0663</b>	<b>0.7633</b>	<b>0.4673</b>	<b>8.7000e-004</b>	<b>0.2434</b>	<b>0.0334</b>	<b>0.2767</b>	<b>0.0635</b>	<b>0.0307</b>	<b>0.0942</b>	<b>0.0000</b>	<b>77.9819</b>	<b>77.9819</b>	<b>0.0247</b>	<b>0.0000</b>	<b>78.5987</b>

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**3.3 Grading - 2019**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	9.9200e-003	2.7100e-003	2.0000e-005	5.3000e-004	6.0000e-005	5.9000e-004	1.5000e-004	6.0000e-005	2.1000e-004	0.0000	2.1005	2.1005	1.4000e-004	0.0000	2.1041
Worker	1.4000e-003	1.1700e-003	0.0127	3.0000e-005	3.0700e-003	3.0000e-005	3.1000e-003	8.1000e-004	2.0000e-005	8.4000e-004	0.0000	2.9494	2.9494	1.0000e-004	0.0000	2.9519
<b>Total</b>	<b>1.7600e-003</b>	<b>0.0111</b>	<b>0.0154</b>	<b>5.0000e-005</b>	<b>3.6000e-003</b>	<b>9.0000e-005</b>	<b>3.6900e-003</b>	<b>9.6000e-004</b>	<b>8.0000e-005</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>5.0499</b>	<b>5.0499</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>5.0560</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0949	0.0000	0.0949	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0663	0.7633	0.4673	8.7000e-004		0.0334	0.0334	0.0307	0.0307	0.0307	0.0000	77.9818	77.9818	0.0247	0.0000	78.5986
<b>Total</b>	<b>0.0663</b>	<b>0.7633</b>	<b>0.4673</b>	<b>8.7000e-004</b>	<b>0.0949</b>	<b>0.0334</b>	<b>0.1283</b>	<b>0.0248</b>	<b>0.0307</b>	<b>0.0555</b>	<b>0.0000</b>	<b>77.9818</b>	<b>77.9818</b>	<b>0.0247</b>	<b>0.0000</b>	<b>78.5986</b>

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**3.3 Grading - 2019**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	9.9200e-003	2.7100e-003	2.0000e-005	5.3000e-004	6.0000e-005	5.9000e-004	1.5000e-004	6.0000e-005	2.1000e-004	0.0000	2.1005	2.1005	1.4000e-004	0.0000	2.1041
Worker	1.4000e-003	1.1700e-003	0.0127	3.0000e-005	3.0700e-003	3.0000e-005	3.1000e-003	8.1000e-004	2.0000e-005	8.4000e-004	0.0000	2.9494	2.9494	1.0000e-004	0.0000	2.9519
<b>Total</b>	<b>1.7600e-003</b>	<b>0.0111</b>	<b>0.0154</b>	<b>5.0000e-005</b>	<b>3.6000e-003</b>	<b>9.0000e-005</b>	<b>3.6900e-003</b>	<b>9.6000e-004</b>	<b>8.0000e-005</b>	<b>1.0500e-003</b>	<b>0.0000</b>	<b>5.0499</b>	<b>5.0499</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>5.0560</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2751	2.4557	1.9996	3.1400e-003		0.1503	0.1503		0.1413	0.1413	0.0000	273.8964	273.8964	0.0667	0.0000	275.5645
<b>Total</b>	<b>0.2751</b>	<b>2.4557</b>	<b>1.9996</b>	<b>3.1400e-003</b>		<b>0.1503</b>	<b>0.1503</b>		<b>0.1413</b>	<b>0.1413</b>	<b>0.0000</b>	<b>273.8964</b>	<b>273.8964</b>	<b>0.0667</b>	<b>0.0000</b>	<b>275.5645</b>

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**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0952	2.6008	0.7113	5.6900e-003	0.1387	0.0164	0.1551	0.0400	0.0157	0.0557	0.0000	550.6046	550.6046	0.0368	0.0000	551.5234
Worker	0.2830	0.2359	2.5652	6.5900e-003	0.6192	5.4500e-003	0.6246	0.1645	5.0200e-003	0.1695	0.0000	595.1732	595.1732	0.0205	0.0000	595.6849
<b>Total</b>	<b>0.3762</b>	<b>2.8367</b>	<b>3.2765</b>	<b>0.0123</b>	<b>0.7578</b>	<b>0.0218</b>	<b>0.7797</b>	<b>0.2045</b>	<b>0.0207</b>	<b>0.2252</b>	<b>0.0000</b>	<b>1,145.7778</b>	<b>1,145.7778</b>	<b>0.0572</b>	<b>0.0000</b>	<b>1,147.2082</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2751	2.4557	1.9996	3.1400e-003		0.1503	0.1503		0.1413	0.1413	0.0000	273.8961	273.8961	0.0667	0.0000	275.5642
<b>Total</b>	<b>0.2751</b>	<b>2.4557</b>	<b>1.9996</b>	<b>3.1400e-003</b>		<b>0.1503</b>	<b>0.1503</b>		<b>0.1413</b>	<b>0.1413</b>	<b>0.0000</b>	<b>273.8961</b>	<b>273.8961</b>	<b>0.0667</b>	<b>0.0000</b>	<b>275.5642</b>

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**3.4 Building Construction - 2019**  
**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0952	2.6008	0.7113	5.6900e-003	0.1387	0.0164	0.1551	0.0400	0.0157	0.0557	0.0000	550.6046	550.6046	0.0368	0.0000	551.5234
Worker	0.2830	0.2359	2.5652	6.5900e-003	0.6192	5.4500e-003	0.6246	0.1645	5.0200e-003	0.1695	0.0000	595.1732	595.1732	0.0205	0.0000	595.6849
<b>Total</b>	<b>0.3762</b>	<b>2.8367</b>	<b>3.2765</b>	<b>0.0123</b>	<b>0.7578</b>	<b>0.0218</b>	<b>0.7797</b>	<b>0.2045</b>	<b>0.0207</b>	<b>0.2252</b>	<b>0.0000</b>	<b>1,145.7778</b>	<b>1,145.7778</b>	<b>0.0572</b>	<b>0.0000</b>	<b>1,147.2082</b>

**3.4 Building Construction - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
<b>Total</b>	<b>0.2777</b>	<b>2.5134</b>	<b>2.2072</b>	<b>3.5300e-003</b>		<b>0.1463</b>	<b>0.1463</b>		<b>0.1376</b>	<b>0.1376</b>	<b>0.0000</b>	<b>303.4091</b>	<b>303.4091</b>	<b>0.0740</b>	<b>0.0000</b>	<b>305.2596</b>

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**3.4 Building Construction - 2020**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0898	2.6830	0.7263	6.3500e-003	0.1560	0.0125	0.1684	0.0450	0.0119	0.0570	0.0000	615.0784	615.0784	0.0391	0.0000	616.0555
Worker	0.2933	0.2365	2.6153	7.1800e-003	0.6962	5.9400e-003	0.7022	0.1849	5.4700e-003	0.1904	0.0000	648.9151	648.9151	0.0205	0.0000	649.4263
<b>Total</b>	<b>0.3831</b>	<b>2.9195</b>	<b>3.3416</b>	<b>0.0135</b>	<b>0.8522</b>	<b>0.0184</b>	<b>0.8706</b>	<b>0.2299</b>	<b>0.0174</b>	<b>0.2473</b>	<b>0.0000</b>	<b>1,263.9935</b>	<b>1,263.9935</b>	<b>0.0595</b>	<b>0.0000</b>	<b>1,265.4818</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
<b>Total</b>	<b>0.2777</b>	<b>2.5134</b>	<b>2.2072</b>	<b>3.5300e-003</b>		<b>0.1463</b>	<b>0.1463</b>		<b>0.1376</b>	<b>0.1376</b>	<b>0.0000</b>	<b>303.4087</b>	<b>303.4087</b>	<b>0.0740</b>	<b>0.0000</b>	<b>305.2592</b>

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**3.4 Building Construction - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0898	2.6830	0.7263	6.3500e-003	0.1560	0.0125	0.1684	0.0450	0.0119	0.0570	0.0000	615.0784	615.0784	0.0391	0.0000	616.0555
Worker	0.2933	0.2365	2.6153	7.1800e-003	0.6962	5.9400e-003	0.7022	0.1849	5.4700e-003	0.1904	0.0000	648.9151	648.9151	0.0205	0.0000	649.4263
<b>Total</b>	<b>0.3831</b>	<b>2.9195</b>	<b>3.3416</b>	<b>0.0135</b>	<b>0.8522</b>	<b>0.0184</b>	<b>0.8706</b>	<b>0.2299</b>	<b>0.0174</b>	<b>0.2473</b>	<b>0.0000</b>	<b>1,263.9935</b>	<b>1,263.9935</b>	<b>0.0595</b>	<b>0.0000</b>	<b>1,265.4818</b>

**3.4 Building Construction - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1701	1.5602	1.4835	2.4100e-003		0.0858	0.0858		0.0807	0.0807	0.0000	207.3154	207.3154	0.0500	0.0000	208.5658
<b>Total</b>	<b>0.1701</b>	<b>1.5602</b>	<b>1.4835</b>	<b>2.4100e-003</b>		<b>0.0858</b>	<b>0.0858</b>		<b>0.0807</b>	<b>0.0807</b>	<b>0.0000</b>	<b>207.3154</b>	<b>207.3154</b>	<b>0.0500</b>	<b>0.0000</b>	<b>208.5658</b>

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**3.4 Building Construction - 2021**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0525	1.6694	0.4526	4.3000e-003	0.1066	3.4000e-003	0.1100	0.0308	3.2500e-003	0.0340	0.0000	416.9613	416.9613	0.0256	0.0000	417.6007
Worker	0.1868	0.1454	1.6415	4.7500e-003	0.4757	3.9200e-003	0.4796	0.1263	3.6100e-003	0.1300	0.0000	429.2642	429.2642	0.0126	0.0000	429.5600
<b>Total</b>	<b>0.2393</b>	<b>1.8148</b>	<b>2.0941</b>	<b>9.0500e-003</b>	<b>0.5822</b>	<b>7.3200e-003</b>	<b>0.5695</b>	<b>0.1571</b>	<b>6.8600e-003</b>	<b>0.1640</b>	<b>0.0000</b>	<b>846.2255</b>	<b>846.2255</b>	<b>0.0382</b>	<b>0.0000</b>	<b>847.1806</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1701	1.5602	1.4835	2.4100e-003		0.0858	0.0858		0.0807	0.0807	0.0000	207.3151	207.3151	0.0500	0.0000	208.5655
<b>Total</b>	<b>0.1701</b>	<b>1.5602</b>	<b>1.4835</b>	<b>2.4100e-003</b>		<b>0.0858</b>	<b>0.0858</b>		<b>0.0807</b>	<b>0.0807</b>	<b>0.0000</b>	<b>207.3151</b>	<b>207.3151</b>	<b>0.0500</b>	<b>0.0000</b>	<b>208.5655</b>

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**3.4 Building Construction - 2021**  
**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0525	1.6694	0.4526	4.3000e-003	0.1066	3.4000e-003	0.1100	0.0308	3.2500e-003	0.0340	0.0000	416.9613	416.9613	0.0256	0.0000	417.6007
Worker	0.1868	0.1454	1.6415	4.7500e-003	0.4757	3.9200e-003	0.4796	0.1263	3.6100e-003	0.1300	0.0000	429.2642	429.2642	0.0126	0.0000	429.6800
<b>Total</b>	<b>0.2393</b>	<b>1.8148</b>	<b>2.0941</b>	<b>9.0500e-003</b>	<b>0.5822</b>	<b>7.3200e-003</b>	<b>0.5895</b>	<b>0.1571</b>	<b>6.8600e-003</b>	<b>0.1640</b>	<b>0.0000</b>	<b>846.2255</b>	<b>846.2255</b>	<b>0.0382</b>	<b>0.0000</b>	<b>847.1806</b>

**3.5 Architectural Coating - 2019**  
**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	1.2284					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0310	0.2138	0.2145	3.5000e-004		0.0150	0.0150	0.0150	0.0150	0.0150	0.0000	29.7454	29.7454	2.5100e-003	0.0000	29.8082
<b>Total</b>	<b>1.2594</b>	<b>0.2138</b>	<b>0.2145</b>	<b>3.5000e-004</b>		<b>0.0150</b>	<b>0.0150</b>		<b>0.0150</b>	<b>0.0150</b>	<b>0.0000</b>	<b>29.7454</b>	<b>29.7454</b>	<b>2.5100e-003</b>	<b>0.0000</b>	<b>29.8082</b>

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**3.5 Architectural Coating - 2019**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0566	0.0472	0.5130	1.3200e-003	0.1238	1.0900e-003	0.1249	0.0329	1.0000e-003	0.0339	0.0000	119.0347	119.0347	4.0900e-003	0.0000	119.1370
<b>Total</b>	<b>0.0566</b>	<b>0.0472</b>	<b>0.5130</b>	<b>1.3200e-003</b>	<b>0.1238</b>	<b>1.0900e-003</b>	<b>0.1249</b>	<b>0.0329</b>	<b>1.0000e-003</b>	<b>0.0339</b>	<b>0.0000</b>	<b>119.0347</b>	<b>119.0347</b>	<b>4.0900e-003</b>	<b>0.0000</b>	<b>119.1370</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	1.2284					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0310	0.2138	0.2145	3.5000e-004		0.0150	0.0150	0.0150	0.0150	0.0150	0.0000	29.7454	29.7454	2.5100e-003	0.0000	29.8082
<b>Total</b>	<b>1.2594</b>	<b>0.2138</b>	<b>0.2145</b>	<b>3.5000e-004</b>		<b>0.0150</b>	<b>0.0150</b>	<b>0.0150</b>	<b>0.0150</b>	<b>0.0150</b>	<b>0.0000</b>	<b>29.7454</b>	<b>29.7454</b>	<b>2.5100e-003</b>	<b>0.0000</b>	<b>29.8082</b>

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**3.5 Architectural Coating - 2019**  
**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0566	0.0472	0.5130	1.3200e-003	0.1238	1.0900e-003	0.1249	0.0329	1.0000e-003	0.0339	0.0000	119.0347	119.0347	4.0900e-003	0.0000	119.1370
<b>Total</b>	<b>0.0566</b>	<b>0.0472</b>	<b>0.5130</b>	<b>1.3200e-003</b>	<b>0.1238</b>	<b>1.0900e-003</b>	<b>0.1249</b>	<b>0.0329</b>	<b>1.0000e-003</b>	<b>0.0339</b>	<b>0.0000</b>	<b>119.0347</b>	<b>119.0347</b>	<b>4.0900e-003</b>	<b>0.0000</b>	<b>119.1370</b>

**3.5 Architectural Coating - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	1.3813					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.2206	0.2399	3.9000e-004		0.0145	0.0145	0.0145	0.0145	0.0145	0.0000	33.4476	33.4476	2.5900e-003	0.0000	33.5124
<b>Total</b>	<b>1.4130</b>	<b>0.2206</b>	<b>0.2399</b>	<b>3.9000e-004</b>		<b>0.0145</b>	<b>0.0145</b>	<b>0.0145</b>	<b>0.0145</b>	<b>0.0145</b>	<b>0.0000</b>	<b>33.4476</b>	<b>33.4476</b>	<b>2.5900e-003</b>	<b>0.0000</b>	<b>33.5124</b>

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**3.5 Architectural Coating - 2020**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0587	0.0473	0.5231	1.4400e-003	0.1392	1.1900e-003	0.1404	0.0370	1.0900e-003	0.0381	0.0000	129.7830	129.7830	4.0900e-003	0.0000	129.8853
<b>Total</b>	<b>0.0587</b>	<b>0.0473</b>	<b>0.5231</b>	<b>1.4400e-003</b>	<b>0.1392</b>	<b>1.1900e-003</b>	<b>0.1404</b>	<b>0.0370</b>	<b>1.0900e-003</b>	<b>0.0381</b>	<b>0.0000</b>	<b>129.7830</b>	<b>129.7830</b>	<b>4.0900e-003</b>	<b>0.0000</b>	<b>129.8853</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	1.3813					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.2206	0.2399	3.9000e-004		0.0145	0.0145	0.0145	0.0145	0.0145	0.0000	33.4476	33.4476	2.5900e-003	0.0000	33.5123
<b>Total</b>	<b>1.4130</b>	<b>0.2206</b>	<b>0.2399</b>	<b>3.9000e-004</b>		<b>0.0145</b>	<b>0.0145</b>	<b>0.0145</b>	<b>0.0145</b>	<b>0.0145</b>	<b>0.0000</b>	<b>33.4476</b>	<b>33.4476</b>	<b>2.5900e-003</b>	<b>0.0000</b>	<b>33.5123</b>

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**3.5 Architectural Coating - 2020**  
**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0587	0.0473	0.5231	1.4400e-003	0.1392	1.1900e-003	0.1404	0.0370	1.0900e-003	0.0381	0.0000	129.7830	129.7830	4.0900e-003	0.0000	129.8853
<b>Total</b>	<b>0.0587</b>	<b>0.0473</b>	<b>0.5231</b>	<b>1.4400e-003</b>	<b>0.1392</b>	<b>1.1900e-003</b>	<b>0.1404</b>	<b>0.0370</b>	<b>1.0900e-003</b>	<b>0.0381</b>	<b>0.0000</b>	<b>129.7830</b>	<b>129.7830</b>	<b>4.0900e-003</b>	<b>0.0000</b>	<b>129.8853</b>

**3.5 Architectural Coating - 2021**  
**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.9437					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1367	0.1627	2.7000e-004		8.4200e-003	8.4200e-003		8.4200e-003	8.4200e-003	0.0000	22.8516	22.8516	1.5700e-003	0.0000	22.8908
<b>Total</b>	<b>0.9633</b>	<b>0.1367</b>	<b>0.1627</b>	<b>2.7000e-004</b>		<b>8.4200e-003</b>	<b>8.4200e-003</b>		<b>8.4200e-003</b>	<b>8.4200e-003</b>	<b>0.0000</b>	<b>22.8516</b>	<b>22.8516</b>	<b>1.5700e-003</b>	<b>0.0000</b>	<b>22.8908</b>

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**3.5 Architectural Coating - 2021**  
**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0374	0.0291	0.3283	9.5000e-004	0.0951	7.8000e-004	0.0959	0.0253	7.2000e-004	0.0260	0.0000	85.8528	85.8528	2.5300e-003	0.0000	85.9160
<b>Total</b>	<b>0.0374</b>	<b>0.0291</b>	<b>0.3283</b>	<b>9.5000e-004</b>	<b>0.0951</b>	<b>7.8000e-004</b>	<b>0.0959</b>	<b>0.0253</b>	<b>7.2000e-004</b>	<b>0.0260</b>	<b>0.0000</b>	<b>85.8528</b>	<b>85.8528</b>	<b>2.5300e-003</b>	<b>0.0000</b>	<b>85.9160</b>

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	0.9437					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0196	0.1367	0.1627	2.7000e-004		8.4200e-003	8.4200e-003		8.4200e-003	8.4200e-003	0.0000	22.8516	22.8516	1.5700e-003	0.0000	22.8908
<b>Total</b>	<b>0.9633</b>	<b>0.1367</b>	<b>0.1627</b>	<b>2.7000e-004</b>		<b>8.4200e-003</b>	<b>8.4200e-003</b>		<b>8.4200e-003</b>	<b>8.4200e-003</b>	<b>0.0000</b>	<b>22.8516</b>	<b>22.8516</b>	<b>1.5700e-003</b>	<b>0.0000</b>	<b>22.8908</b>

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**3.5 Architectural Coating - 2021**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0374	0.0291	0.3283	9.5000e-004	0.0951	7.8000e-004	0.0959	0.0253	7.2000e-004	0.0260	0.0000	85.8528	85.8528	2.5300e-003	0.0000	85.9160
<b>Total</b>	<b>0.0374</b>	<b>0.0291</b>	<b>0.3283</b>	<b>9.5000e-004</b>	<b>0.0951</b>	<b>7.8000e-004</b>	<b>0.0959</b>	<b>0.0253</b>	<b>7.2000e-004</b>	<b>0.0260</b>	<b>0.0000</b>	<b>85.8528</b>	<b>85.8528</b>	<b>2.5300e-003</b>	<b>0.0000</b>	<b>85.9160</b>

**3.6 Paving - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0377	0.3876	0.4396	6.8000e-004	0.0203	0.0203	0.0203	0.0187	0.0187	0.0187	0.0000	60.0704	60.0704	0.0194	0.0000	60.5561
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0377</b>	<b>0.3876</b>	<b>0.4396</b>	<b>6.8000e-004</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0203</b>	<b>0.0187</b>	<b>0.0187</b>	<b>0.0187</b>	<b>0.0000</b>	<b>60.0704</b>	<b>60.0704</b>	<b>0.0194</b>	<b>0.0000</b>	<b>60.5561</b>

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**3.6 Paving - 2021**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9400e-003	1.5100e-003	0.0170	5.0000e-005	4.9300e-003	4.0000e-005	4.9700e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.4501	4.4501	1.3000e-004	0.0000	0.0000	4.4534
<b>Total</b>	<b>1.9400e-003</b>	<b>1.5100e-003</b>	<b>0.0170</b>	<b>5.0000e-005</b>	<b>4.9300e-003</b>	<b>4.0000e-005</b>	<b>4.9700e-003</b>	<b>1.3100e-003</b>	<b>4.0000e-005</b>	<b>1.3500e-003</b>	<b>0.0000</b>	<b>4.4501</b>	<b>4.4501</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>4.4534</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.0377	0.3876	0.4396	6.8000e-004		0.0203	0.0203	0.0187	0.0187	0.0187	0.0000	60.0704	60.0704	0.0194	0.0000	0.0000	60.5561
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0377</b>	<b>0.3876</b>	<b>0.4396</b>	<b>6.8000e-004</b>		<b>0.0203</b>	<b>0.0203</b>	<b>0.0187</b>	<b>0.0187</b>	<b>0.0187</b>	<b>0.0000</b>	<b>60.0704</b>	<b>60.0704</b>	<b>0.0194</b>	<b>0.0000</b>	<b>0.0000</b>	<b>60.5561</b>

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**3.6 Paving - 2021**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9400e-003	1.5100e-003	0.0170	5.0000e-005	4.9300e-003	4.0000e-005	4.9700e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.4501	4.4501	1.3000e-004	0.0000	4.4534
<b>Total</b>	<b>1.9400e-003</b>	<b>1.5100e-003</b>	<b>0.0170</b>	<b>5.0000e-005</b>	<b>4.9300e-003</b>	<b>4.0000e-005</b>	<b>4.9700e-003</b>	<b>1.3100e-003</b>	<b>4.0000e-005</b>	<b>1.3500e-003</b>	<b>0.0000</b>	<b>4.4501</b>	<b>4.4501</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>4.4534</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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Category	tons/yr													MT/yr			
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	0.9657	6.6195	12.5775	0.0710	7.5876	0.0303	7.6180	2.0334	0.0282	2.0616	0.0000	6,627.7139	6,627.7139	0.2539	0.0000	6,634.0619	
Unmitigated	0.9657	6.6195	12.5775	0.0710	7.5876	0.0303	7.6180	2.0334	0.0282	2.0616	0.0000	6,627.7139	6,627.7139	0.2539	0.0000	6,634.0619	

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT		
Junior College (2Yr)	8,576.70	3,132.36	298.32	19,983,631	19,983,631		
Other Non-Asphalt Surfaces	0.00	0.00	0.00				
Recreational Swimming Pool	0.00	0.00	0.00				
<b>Total</b>	<b>8,576.70</b>	<b>3,132.36</b>	<b>298.32</b>	<b>19,983,631</b>	<b>19,983,631</b>		

4.3 Trip Type Information

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-CW	H-W or C-NW	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-C	Primary	Diverted	Pass-by	
Junior College (2Yr)	16.60	8.40	6.90	6.40	88.60	5.00	6.40	88.60	92	7	1	
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0.00	0.00	0	0	0	
Recreational Swimming Pool	16.60	8.40	6.90	33.00	48.00	19.00	33.00	48.00	52	39	9	

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.537194	0.043713	0.210127	0.116181	0.013260	0.006460	0.022765	0.039037	0.002776	0.001599	0.005341	0.000737	0.000810
Other Non-Asphalt Surfaces	0.537194	0.043713	0.210127	0.116181	0.013260	0.006460	0.022765	0.039037	0.002776	0.001599	0.005341	0.000737	0.000810
Recreational Swimming Pool	0.537194	0.043713	0.210127	0.116181	0.013260	0.006460	0.022765	0.039037	0.002776	0.001599	0.005341	0.000737	0.000810

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,241.962 <sub>1</sub>	2,241.962 <sub>1</sub>	0.0926	0.0192	2,249.982 <sub>8</sub>
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,241.962 <sub>1</sub>	2,241.962 <sub>1</sub>	0.0926	0.0192	2,249.982 <sub>8</sub>
Natural Gas Mitigated	0.1025	0.9322	0.7830	5.5900e-003	0.0709	0.0709	0.0709	0.0709	0.0709	0.0709	0.0000	1,014.801 <sub>4</sub>	1,014.801 <sub>4</sub>	0.0195	0.0186	1,020.831 <sub>8</sub>
Natural Gas Unmitigated	0.1025	0.9322	0.7830	5.5900e-003	0.0709	0.0709	0.0709	0.0709	0.0709	0.0709	0.0000	1,014.801 <sub>4</sub>	1,014.801 <sub>4</sub>	0.0195	0.0186	1,020.831 <sub>8</sub>

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**5.2 Energy by Land Use - Natural Gas**

Unmitigated

Land Use	Natural Gas Use kBTU/yr	tons/yr										MT/yr								
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e			
Junior College (2Yr)	1.90167e+007	0.1025	0.9322	0.7830	5.5900e-003		0.0709	0.0709		0.0709		0.0709		0.0709	0.0000	1,014.8014	0.0195	0.0186	1,020.8318	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1025</b>	<b>0.9322</b>	<b>0.7830</b>	<b>5.5900e-003</b>		<b>0.0709</b>	<b>0.0709</b>		<b>0.0709</b>		<b>0.0709</b>		<b>0.0709</b>	<b>0.0000</b>	<b>1,014.8014</b>	<b>0.0195</b>	<b>0.0186</b>	<b>1,020.8318</b>	

Mitigated

Land Use	Natural Gas Use kBTU/yr	tons/yr										MT/yr								
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e			
Junior College (2Yr)	1.90167e+007	0.1025	0.9322	0.7830	5.5900e-003		0.0709	0.0709		0.0709		0.0709		0.0709	0.0000	1,014.8014	0.0195	0.0186	1,020.8318	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.1025</b>	<b>0.9322</b>	<b>0.7830</b>	<b>5.5900e-003</b>		<b>0.0709</b>	<b>0.0709</b>		<b>0.0709</b>		<b>0.0709</b>		<b>0.0709</b>	<b>0.0000</b>	<b>1,014.8014</b>	<b>0.0195</b>	<b>0.0186</b>	<b>1,020.8318</b>	



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**6.1 Mitigation Measures Area**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	3.1145	8.5000e-004	0.0947	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1854	0.1854	4.8000e-004	0.0000	0.1973
Unmitigated	3.1145	8.5000e-004	0.0947	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1854	0.1854	4.8000e-004	0.0000	0.1973

**6.2 Area by SubCategory**

Unmitigated

SubCategory	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.3553					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.7505					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6700e-003	8.5000e-004	0.0947	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1854	0.1854	4.8000e-004	0.0000	0.1973
<b>Total</b>	<b>3.1145</b>	<b>8.5000e-004</b>	<b>0.0947</b>	<b>1.0000e-005</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>0.1854</b>	<b>0.1854</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>0.1973</b>

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**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.3553					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.7505					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.6700e-003	8.5000e-004	0.0947	1.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	0.1854	0.1854	4.8000e-004	0.0000	0.1973
<b>Total</b>	<b>3.1145</b>	<b>8.5000e-004</b>	<b>0.0947</b>	<b>1.0000e-005</b>		<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>0.1854</b>	<b>0.1854</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>0.1973</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	160.3161	0.5296	0.0137	177.6334
Unmitigated	160.3161	0.5296	0.0137	177.6334

7.2 Water by Land Use

Unmitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Junior College (2Yr)	15.9683 / 24.9761	159.7274	0.5267	0.0136	176.9502
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0887147 / 0.0543735	0.5887	2.9100e-003	7.0000e-005	0.6833
<b>Total</b>		<b>160.3161</b>	<b>0.5296</b>	<b>0.0137</b>	<b>177.6334</b>

**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Junior College (2Yr)	15.9683 / 24.9761	159.7274	0.5267	0.0136	176.9502
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	0.0887147 / 0.0543735	0.5887	2.9100e-003	7.0000e-005	0.6833
<b>Total</b>		<b>160.3161</b>	<b>0.5296</b>	<b>0.0137</b>	<b>177.6334</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

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**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	278.0245	16.4308	0.0000	688.7940
Unmitigated	278.0245	16.4308	0.0000	688.7940

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	1361.09	276.2890	16.3282	0.0000	684.4942
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	8.55	1.7356	0.1026	0.0000	4.2998
<b>Total</b>		<b>278.0245</b>	<b>16.4308</b>	<b>0.0000</b>	<b>688.7940</b>

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**8.2 Waste by Land Use**

Mitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
		MT/yr			
Junior College (2Yr)	1361.09	276.2890	16.3282	0.0000	684.4942
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Recreational Swimming Pool	8.55	1.7356	0.1026	0.0000	4.2998
<b>Total</b>		<b>278.0245</b>	<b>16.4308</b>	<b>0.0000</b>	<b>688.7940</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

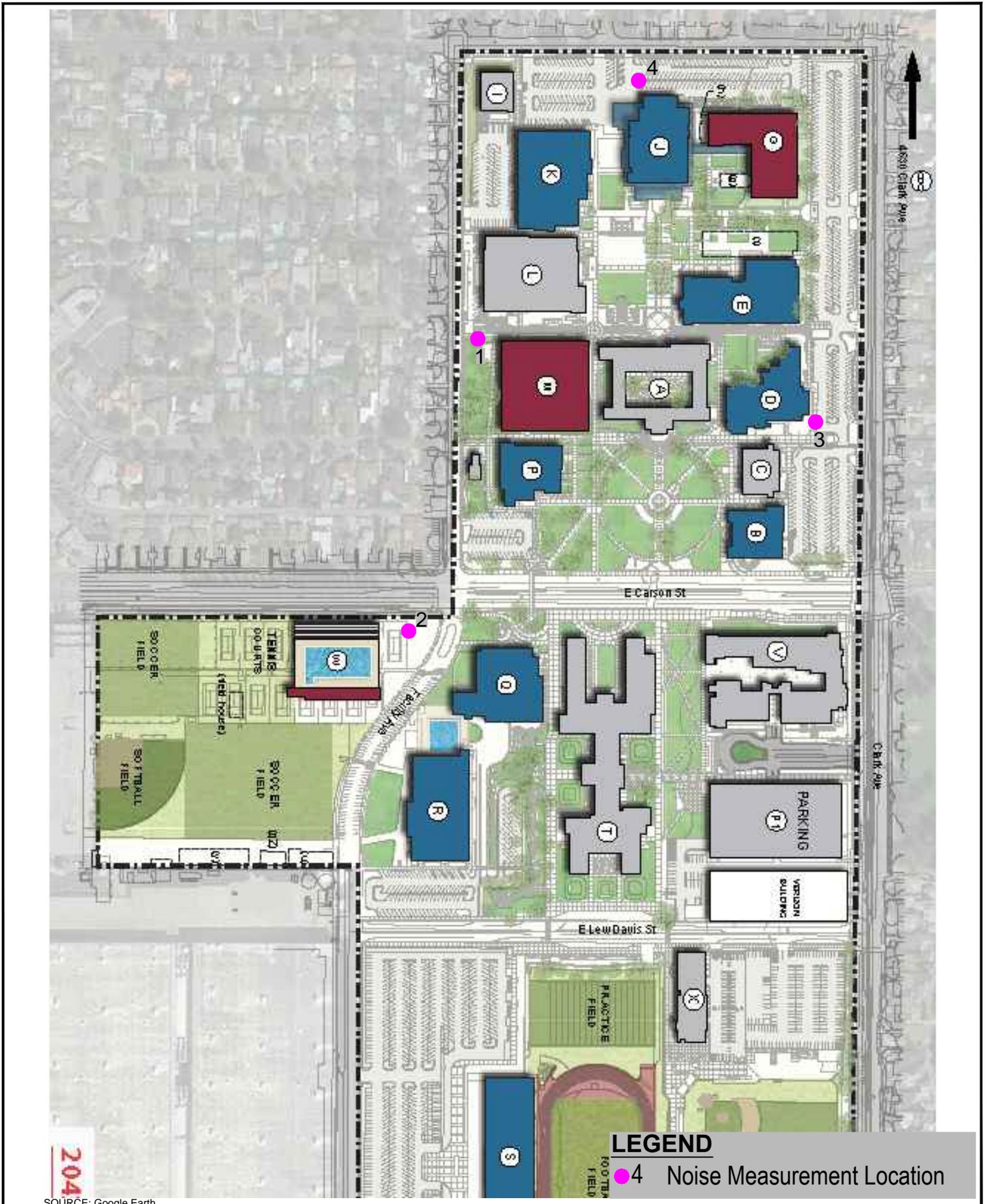
Equipment Type	Number
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## **11.0 Vegetation**

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## APPENDIX C – NOISE ANALYSIS DATA







Noise Measurement Site 1 - Looking North



Noise Measurement Site 1 - Looking Northeast



Noise Measurement Site 1 - Looking East



Noise Measurement Site 1 - Looking Southeast



Noise Measurement Site 1 - Looking South



Noise Measurement Site 1 - Looking Southwest



Noise Measurement Site 1 - Looking West



Noise Measurement Site 1 - Looking Northwest



Noise Measurement Site 2 - Looking North



Noise Measurement Site 2 - Looking Northeast



Noise Measurement Site 2 - Looking East



Noise Measurement Site 2 - Looking Southeast



Noise Measurement Site 2 - Looking South



Noise Measurement Site 2 - Looking Southwest



Noise Measurement Site 2 - Looking West



Noise Measurement Site 2 - Looking Northwest



Noise Measurement Site 3 - Looking North



Noise Measurement Site 3 - Looking Northeast



Noise Measurement Site 3 - Looking East



Noise Measurement Site 3 - Looking Southeast



Noise Measurement Site 3 - Looking South



Noise Measurement Site 3 - Looking Southwest



Noise Measurement Site 3 - Looking West



Noise Measurement Site 3 - Looking Northwest



Noise Measurement Site 4 - Looking North



Noise Measurement Site 4 - Looking Northeast



Noise Measurement Site 4 - Looking East



Noise Measurement Site 4 - Looking Southeast



Noise Measurement Site 4 - Looking South



Noise Measurement Site 4 - Looking Southwest



Noise Measurement Site 4 - Looking West



Noise Measurement Site 4 - Looking Northwest

Site 1 - On Tree East Side of Faculty Ave			
Date	Time=11/01/17	10:23:37 AM	
Sampling	1	Freq Weighting=A	
Record Num	= 86402	Detector=Slow CNEL(24hr)=	59.1
Leq	= 55.5	Ldn(24hr)=	58.8
Max	= 89.2	Min Leq1hr =	40.7 2:57 AM
Min	= 32.9	Max Leq1hr =	60.8 12:38 PM

Site 2 - On Tennis Court South Side of Carson Ave			
Date	Time=11/01/17	9:54:28 AM	
Sampling	1	Freq Weighting=A	
Record Num	= 86402	Detector=Slow CNEL(24hr)=	70.3
Leq	= 66.8	Ldn(24hr)=	69.9
Max	= 93.7	Min Leq1hr =	54.9 2:42 AM
Min	= 39.0	Max Leq1hr =	69.8 7:38 AM

Site 3 - On Bus Stop Sign in front of Building D West of Clark A			
Date	Time=11/01/17	10:09:00 AM	
Sampling	Time=3	Weighting=A	
Record Num	= 29200	Weighting=Slk CNEL(24hr)=	63.6
Leq	= 59.5 SEL	Value=109.1 Ldn(24hr)=	63.2
MAX	88.2	Min Leq1hr =	49.3 2:00 AM
MIN	38.2	Max Leq1hr =	64.2 5:07 PM

Site 4 - Light Post in front of Building J South of Harvey Way			
Date	Time=11/01/17	10:18:00 AM	
Sampling	Time=3	Freq Weighting=A	
Record Num	= 29000	Weighting=Slk CNEL(24hr)=	60.2
Leq	= 57.4 SEL	Value=106.9 Ldn(24hr)=	59.9
MAX	84.2	Min Leq1hr =	46.2 2:58 AM
MIN	42.9	Max Leq1hr =	61.9 12:02 PM

Site 1 - On Tree East Side of Faculty Ave			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
58.2	10:26:08		58.2
54.8	10:26:09		54.8
56.8	10:26:10		56.8
62.9	10:26:11		62.9
69.9	10:26:12		69.9
63.2	10:26:13		63.2
61.9	10:26:14		61.9
60.7	10:26:15		60.7
66.5	10:26:16		66.5
62.4	10:26:17		62.4
68.3	10:26:18		68.3
64.1	10:26:19		64.1
60.2	10:26:20		60.2
66.3	10:26:21		66.3
63.4	10:26:22		63.4
61.4	10:26:23		61.4
63.3	10:26:24		63.3
62.7	10:26:25		62.7
62.9	10:26:26		62.9
61.5	10:26:27		61.5
63.2	10:26:28		63.2
60.8	10:26:29		60.8
62.1	10:26:30		62.1
62.3	10:26:31		62.3
61.6	10:26:32		61.6
61.1	10:26:33		61.1
59.4	10:26:34		59.4
58.4	10:26:35		58.4
62.8	10:26:36		62.8
64.8	10:26:37		64.8
61.3	10:26:38		61.3
58.3	10:26:39		58.3
58.1	10:26:40		58.1
65.9	10:26:41		65.9
65.2	10:26:42		65.2
64.2	10:26:43		64.2
63.0	10:26:44		63.0
64.5	10:26:45		64.5
64.9	10:26:46		64.9
67.0	10:26:47		67.0
64.4	10:26:48		64.4
60.6	10:26:49		60.6
57.0	10:26:50		57.0
55.0	10:26:51		55.0
54.6	10:26:52		54.6
54.6	10:26:53		54.6
54.6	10:26:54		54.6
53.6	10:26:55		53.6
69.7	10:26:56		69.7
67.4	10:26:57		67.4
66.5	10:26:58		66.5
69.9	10:26:59		69.9
63.0	10:27:00		63.0
68.7	10:27:01		68.7
65.0	10:27:02		65.0
61.4	10:27:03		61.4
59.9	10:27:04		59.9
57.7	10:27:05		57.7
64.1	10:27:06		64.1
61.9	10:27:07		61.9
59.4	10:27:08		59.4
56.7	10:27:09		56.7
60.4	10:27:10		60.4
62.1	10:27:11		62.1
63.6	10:27:12		63.6
60.9	10:27:13		60.9
59.3	10:27:14		59.3
58.0	10:27:15		58.0
57.3	10:27:16		57.3
56.7	10:27:17		56.7
57.0	10:27:18		57.0
56.0	10:27:19		56.0
56.6	10:27:20		56.6
55.1	10:27:21		55.1
57.1	10:27:22		57.1
55.6	10:27:23		55.6
55.1	10:27:24		55.1
56.5	10:27:25		56.5
56.5	10:27:26		56.5
56.5	10:27:27		56.5
57.4	10:27:28		57.4
55.7	10:27:29		55.7
54.1	10:27:30		54.1
60.2	10:27:31		60.2
56.7	10:27:32		56.7
54.1	10:27:33		54.1
53.7	10:27:34		53.7
52.2	10:27:35		52.2
68.4	10:27:36		68.4
68.6	10:27:37		68.6
64.5	10:27:38		64.5
60.8	10:27:39		60.8
57.8	10:27:40		57.8
56.5	10:27:41		56.5
56.5	10:27:42		56.5
57.1	10:27:43		57.1
55.5	10:27:44		55.5
54.6	10:27:45		54.6
54.2	10:27:46		54.2
55.3	10:27:47		55.3
54.2	10:27:48		54.2
57.2	10:27:49		57.2
57.4	10:27:50		57.4
56.1	10:27:51		56.1
53.9	10:27:52		53.9
53.5	10:27:53		53.5
53.1	10:27:54		53.1
52.1	10:27:55		52.1
51.1	10:27:56		51.1
51.2	10:27:57		51.2
50.9	10:27:58		50.9
49.7	10:27:59		49.7
53.2	10:28:00		53.2
52.4	10:28:01		52.4
50.5	10:28:02		50.5
49.9	10:28:03		49.9
50.9	10:28:04		50.9
50.9	10:28:05		50.9
53.2	10:28:06		53.2
53.1	10:28:07		53.1
53.6	10:28:08		53.6
55.0	10:28:09		55.0
57.4	10:28:10		57.4
62.0	10:28:11		62.0
62.4	10:28:12		62.4
60.2	10:28:13		60.2
57.7	10:28:14		57.7
55.5	10:28:15		55.5
54.0	10:28:16		54.0
53.2	10:28:17		53.2
53.0	10:28:18		53.0
52.9	10:28:19		52.9
52.6	10:28:20		52.6
52.4	10:28:21		52.4
52.3	10:28:22		52.3
52.1	10:28:23		52.1
52.1	10:28:24		52.1
52.7	10:28:25		52.7
52.7	10:28:26		52.7
52.6	10:28:27		52.6
52.7	10:28:28		52.7
53.0	10:28:29		53.0
53.0	10:28:30		53.0
52.8	10:28:31		52.8
52.7	10:28:32		52.7
52.6	10:28:33		52.6
52.6	10:28:34		52.6
52.4	10:28:35		52.4
53.7	10:28:36		53.7
56.4	10:28:37		56.4
54.9	10:28:38		54.9
54.2	10:28:39		54.2
53.5	10:28:40		53.5
53.1	10:28:41		53.1
53.0	10:28:42		53.0
53.1	10:28:43		53.1
53.1	10:28:44		53.1
53.1	10:28:45		53.1
53.1	10:28:46		53.1
53.1	10:28:47		53.1
52.9	10:28:48		52.9

Site 2 - On Tennis Court South Side of Carson Ave			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
68.8	9:54:29		68.8
65.5	9:54:30		65.5
62.9	9:54:31		62.9
68.6	9:54:32		68.6
62.5	9:54:33		62.5
61.8	9:54:34		61.8
69.5	9:54:35		69.5
65.4	9:54:36		65.4
61.8	9:54:37		61.8
64.7	9:54:38		64.7
60.1	9:54:39		60.1
63.1	9:54:40		63.1
64.8	9:54:41		64.8
61.0	9:54:42		61.0
66.9	9:54:43		66.9
62.9	9:54:44		62.9
60.3	9:54:45		60.3
67.8	9:54:46		67.8
64.1	9:54:47		64.1
68.0	9:54:48		68.0
67.8	9:54:49		67.8
69.0	9:54:50		69.0
69.8	9:54:51		69.8
69.6	9:54:52		69.6
71.1	9:54:53		71.1
70.4	9:54:54		70.4
68.2	9:54:55		68.2
65.8	9:54:56		65.8
65.0	9:54:57		65.0
63.2	9:54:58		63.2
64.4	9:54:59		64.4
62.3	9:55:00		62.3
58.7	9:55:01		58.7
55.9	9:55:02		55.9
53.6	9:55:03		53.6
53.9	9:55:04		53.9
59.6	9:55:05		59.6
57.6	9:55:06		57.6
56.6	9:55:07		56.6
56.9	9:55:08		56.9
58.1	9:55:09		58.1
58.9	9:55:10		58.9
61.6	9:55:11		61.6
61.1	9:55:12		61.1
65.5	9:55:13		65.5
65.5	9:55:14		65.5
67.9	9:55:15		67.9
68.2	9:55:16		68.2
66.0	9:55:17		66.0
64.4	9:55:18		64.4
63.4	9:55:19		63.4
64.8	9:55:20		64.8
72.5	9:55:21		72.5
69.8	9:55:22		69.8
70.0	9:55:23		70.0
70.6	9:55:24		70.6
67.3	9:55:25		67.3
65.4	9:55:26		65.4
62.9	9:55:27		62.9
62.9	9:55:28		62.9
63.8	9:55:29		63.8
63.8	9:55:30		63.8
63.2	9:55:31		63.2
64.4	9:55:32		64.4
64.9	9:55:33		64.9
62.2	9:55:34		62.2
69.2	9:55:35		69.2
69.4	9:55:36		69.4
69.8	9:55:37		69.8
70.4	9:55:38		70.4
70.4	9:55:39		70.4
71.7	9:55:40		71.7
73.0	9:55:41		73.0
63.2	9:55:42		63.2
63.1	9:55:43		63.1
61.7	9:55:44		61.7
61.0	9:55:45		61.0
61.4	9:55:46		61.4
62.1	9:55:47		62.1
62.3	9:55:48		62.3
61.8	9:55:49		61.8
70.9	9:55:50		70.9
70.0	9:55:51		70.0
69.6	9:55:52		69.6
69.3	9:55:53		69.3
69.7	9:55:54		69.7
70.1	9:55:55		70.1
70.8	9:55:56		70.8
71.3	9:55:57		71.3
73.3	9:55:58		73.3
72.2	9:55:59		72.2
72.3	9:56:00		72.3
72.2	9:56:01		72.2
71.3	9:56:02		71.3
71.6	9:56:03		71.6
73.0	9:56:04		73.0
71.9	9:56:05		71.9
71.2	9:56:06		71.2
71.7	9:56:07		71.7
63.6	9:56:08		63.6
65.1	9:56:09		65.1
65.0	9:56:10		65.0
64.3	9:56:11		64.3
62.3	9:56:12		62.3
62.1	9:56:13		62.1
71.5	9:56:14		71.5
70.5	9:56:15		70.5
6			

Site 1 - On Tree East Side of Faculty Ave				Site 2 - On Tennis Court South Side of Carson Ave				Site 3 - On Bus Stop Sign in front of Building D West of Clark				Site 4 - Light Post in front of Building J South of Harvey Way				
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	
52.9	10:28:49		52.9	52.9	49.7	9:57:10	49.7	49.7	57.3	10:17:03	57.3	57.3	51.4	10:26:03	51.4	51.4
52.9	10:28:50		52.9	52.9	50.7	9:57:11	50.7	50.7	55	10:17:06	55	55	49.3	10:26:06	49.3	49.3
53.0	10:28:51		53.0	53.0	52.5	9:57:12	52.5	52.5	52.6	10:17:09	52.6	52.6	49.7	10:26:07	49.7	49.7
53.1	10:28:52		53.1	53.1	55.0	9:57:13	55.0	55.0	52.9	10:17:12	52.9	52.9	54.1	10:26:12	54.1	54.1
53.1	10:28:53		53.1	53.1	55.3	9:57:14	55.3	55.3	56.6	10:17:15	56.6	56.6	54.9	10:26:15	54.9	54.9
53.1	10:28:54		53.1	53.1	57.1	9:57:15	57.1	57.1	57.1	10:17:18	57.1	57.1	53.2	10:26:18	53.2	53.2
53.1	10:28:55		53.1	53.1	58.4	9:57:16	58.4	58.4	60.8	10:17:21	60.8	60.8	47.4	10:26:21	47.4	47.4
53.0	10:28:56		53.0	53.0	61.3	9:57:17	61.3	61.3	63.1	10:17:24	63.1	63.1	55.4	10:26:24	55.4	55.4
52.9	10:28:57		52.9	52.9	64.8	9:57:18	64.8	64.8	65.6	10:17:27	65.6	65.6	54.5	10:26:27	54.5	54.5
53.1	10:28:58		53.1	53.1	66.4	9:57:19	66.4	66.4	63.6	10:17:30	63.6	63.6	51.5	10:26:30	51.5	51.5
53.1	10:28:59		53.1	53.1	66.5	9:57:20	66.5	66.5	63.4	10:17:33	63.4	63.4	50.9	10:26:33	50.9	50.9
53.1	10:29:00		53.1	53.1	66.8	9:57:21	66.8	66.8	69.8	10:17:36	69.8	69.8	51.8	10:26:36	51.8	51.8
53.2	10:29:01		53.2	53.2	66.2	9:57:22	66.2	66.2	67.7	10:17:39	67.7	67.7	60.6	10:26:39	60.6	60.6
53.5	10:29:02		53.5	53.5	67.0	9:57:23	67.0	67.0	56.9	10:17:42	56.9	56.9	52.4	10:26:42	52.4	52.4
54.2	10:29:03		54.2	54.2	70.1	9:57:24	70.1	70.1	57.4	10:17:45	57.4	57.4	53.3	10:26:45	53.3	53.3
54.0	10:29:04		54.0	54.0	75.6	9:57:25	75.6	75.6	54.7	10:17:48	54.7	54.7	61.9	10:26:48	61.9	61.9
53.8	10:29:05		53.8	53.8	73.4	9:57:26	73.4	73.4	53.6	10:17:51	53.6	53.6	60.6	10:26:51	60.6	60.6
53.9	10:29:06		53.9	53.9	70.5	9:57:27	70.5	70.5	53.7	10:17:54	53.7	53.7	58.2	10:26:54	58.2	58.2
53.8	10:29:07		53.8	53.8	67.4	9:57:28	67.4	67.4	56.9	10:17:57	56.9	56.9	59.3	10:26:57	59.3	59.3
53.7	10:29:08		53.7	53.7	64.7	9:57:29	64.7	64.7	60.4	10:18:00	60.4	60.4	59.9	10:27:00	59.9	59.9
54.4	10:29:09		54.4	54.4	62.4	9:57:30	62.4	62.4	60.9	10:18:03	60.9	60.9	58.4	10:27:03	58.4	58.4
54.9	10:29:10		54.9	54.9	60.2	9:57:31	60.2	60.2	61.8	10:18:06	61.8	61.8	58	10:27:06	58	58
54.0	10:29:11		54.0	54.0	58.6	9:57:32	58.6	58.6	58.7	10:18:09	58.7	58.7	63.2	10:27:09	63.2	63.2
53.7	10:29:12		53.7	53.7	58.0	9:57:33	58.0	58.0	54.5	10:18:12	54.5	54.5	59.7	10:27:12	59.7	59.7
53.7	10:29:13		53.7	53.7	59.3	9:57:34	59.3	59.3	59.2	10:18:15	59.2	59.2	58.4	10:27:15	58.4	58.4
53.6	10:29:14		53.6	53.6	60.5	9:57:35	60.5	60.5	59.7	10:18:18	59.7	59.7	54.4	10:27:18	54.4	54.4
53.5	10:29:15		53.5	53.5	64.1	9:57:36	64.1	64.1	59	10:18:21	59	59	53.4	10:27:21	53.4	53.4
53.4	10:29:16		53.4	53.4	59.4	9:57:37	59.4	59.4	57.6	10:18:24	57.6	57.6	57.9	10:27:24	57.9	57.9
53.3	10:29:17		53.3	53.3	70.4	9:57:38	70.4	70.4	65.4	10:18:27	65.4	65.4	55.6	10:27:27	55.6	55.6
53.4	10:29:18		53.4	53.4	72.1	9:57:39	72.1	72.1	65.2	10:18:30	65.2	65.2	58	10:27:30	58	58
53.5	10:29:19		53.5	53.5	72.9	9:57:40	72.9	72.9	64.8	10:18:33	64.8	64.8	61.6	10:27:33	61.6	61.6
53.8	10:29:20		53.8	53.8	72.4	9:57:41	72.4	72.4	54.3	10:18:36	54.3	54.3	56.2	10:27:36	56.2	56.2
53.8	10:29:21		53.8	53.8	71.9	9:57:42	71.9	71.9	55.1	10:18:39	55.1	55.1	54.7	10:27:39	54.7	54.7
53.9	10:29:22		53.9	53.9	71.9	9:57:43	71.9	71.9	59.2	10:18:42	59.2	59.2	60.2	10:27:42	60.2	60.2
53.9	10:29:23		53.9	53.9	72.1	9:57:44	72.1	72.1	53.3	10:18:45	53.3	53.3	55	10:27:45	55	55
54.3	10:29:24		54.3	54.3	72.1	9:57:45	72.1	72.1	53.9	10:18:48	53.9	53.9	53.3	10:27:48	53.3	53.3
54.7	10:29:25		54.7	54.7	70.5	9:57:46	70.5	70.5	54.6	10:18:51	54.6	54.6	53.7	10:27:51	53.7	53.7
54.5	10:29:26		54.5	54.5	68.4	9:57:47	68.4	68.4	56.5	10:18:54	56.5	56.5	51.5	10:27:54	51.5	51.5
54.4	10:29:27		54.4	54.4	66.9	9:57:48	66.9	66.9	56	10:18:57	56	56	52.1	10:27:57	52.1	52.1
54.6	10:29:28		54.6	54.6	70.9	9:57:49	70.9	70.9	59.9	10:19:00	59.9	59.9	52.8	10:28:00	52.8	52.8
54.5	10:29:29		54.5	54.5	70.1	9:57:50	70.1	70.1	63.8	10:19:03	63.8	63.8	51.3	10:28:03	51.3	51.3
54.6	10:29:30		54.6	54.6	70.5	9:57:51	70.5	70.5	63	10:19:06	63	63	52.9	10:28:06	52.9	52.9
54.2	10:29:31		54.2	54.2	69.3	9:57:52	69.3	69.3	62.7	10:19:09	62.7	62.7	56.3	10:28:09	56.3	56.3
54.2	10:29:32		54.2	54.2	69.3	9:57:53	69.3	69.3	61.1	10:19:12	61.1	61.1	55.9	10:28:12	55.9	55.9
54.0	10:29:33		54.0	54.0	69.0	9:57:54	69.0	69.0	63.5	10:19:15	63.5	63.5	53.3	10:28:15	53.3	53.3
54.0	10:29:34		54.0	54.0	68.7	9:57:55	68.7	68.7	68.7	10:19:18	68.7	68.7	64.4	10:28:18	64.4	64.4
54.1	10:29:35		54.1	54.1	67.6	9:57:56	67.6	67.6	52.5	10:19:21	52.5	52.5	57.2	10:28:21	57.2	57.2
54.0	10:29:36		54.0	54.0	69.0	9:57:57	69.0	69.0	52.6	10:19:24	52.6	52.6	58.7	10:28:24	58.7	58.7
53.9	10:29:37		53.9	53.9	70.6	9:57:58	70.6	70.6	55.2	10:19:27	55.2	55.2	49.1	10:28:27	49.1	49.1
54.2	10:29:38		54.2	54.2	70.9	9:57:59	70.9	70.9	53.9	10:19:30	53.9	53.9	47.9	10:28:30	47.9	47.9
54.3	10:29:39		54.3	54.3	69.9	9:58:00	69.9	69.9	59.2	10:19:33	59.2	59.2	47.8	10:28:33	47.8	47.8
54.3	10:29:40		54.3	54.3	69.0	9:58:01	69.0	69.0	61.2	10:19:36	61.2	61.2	48.8	10:28:36	48.8	48.8
54.8	10:29:41		54.8	54.8	69.1	9:58:02	69.1	69.1	58.4	10:19:39	58.4	58.4	47.9	10:28:39	47.9	47.9
54.8	10:29:42		54.8	54.8	68.7	9:58:03	68.7	68.7	55.6	10:19:42	55.6	55.6	49.8	10:28:42	49.8	49.8
54.7	10:29:43		54.7	54.7	67.7	9:58:04	67.7	67.7	54.1	10:19:45	54.1	54.1	48.7	10:28:45	48.7	48.7
54.6	10:29:44		54.6	54.6	67.7	9:58:05	67.7	67.7	54.3	10:19:48	54.3	54.3	49.1	10:28:48	49.1	49.1
54.7	10:29:45		54.7	54.7	66.8	9:58:06	66.8	66.8	55.3	10:19:51	55.3	55.3	54.5	10:28:51	54.5	54.5
55.5	10:29:46		55.5	55.5	66.0	9:58:07	66.0	66.0	56.9	10:19:54	56.9	56.9	48.6	10:28:54	48.6	48.6
56.5	10:29:47		56.5	56.5	66.3	9:58:08	66.3	66.3	60.2	10:19:57	60.2	60.2	51.8	10:28:57	51.8	51.8
58.2	10:29:48		58.2	58.2	65.8	9:58:09	65.8	65.8	59.5	10:20:00	59.5	59.5	59.4	10:29:00	59.4	59.4
62.2	10:29:49		62.2	62.2	65.1	9:58:10	65.1	65.1	57.4	10:20:03	57.4	57.4	57.7	10:29:03	57.7	57.7
63.1	10:29:50		63.1	63.1	64.6	9:58:11	64.6	64.6	56.7	10:20:06	56.7	56.7	49.9	10:29:06	49.9	49.9
62.0	10:29:51		62.0	62.0	66.0	9:58:12	66.0	66.0	58.5	10:20:09	58.5	58.5	47.4	10:29:09	47.4	47.4
62.5	10:29:52		62.5	62.5	66.3	9:58:13	66.3	66.3	53.8	10:20:12	53.8	53.8	45.8	10:29:12	45.8	45.8
62.6	10:29:53		62.6	62.6	64.6	9:58:14	64.6	64.6	54.4	10:20:15	54.4	54.4	45.4	10:29:15	45.4	45.4
62.6	10:29:54		62.6	62.6	62.9	9:58:15	62.9	62.9	52.1	10:20:18	52.1	52.1	47.5	10:29:18	47.5	47.5
62.1	10:29:55		62.1	62.1	61.3	9:58:16	61.3	61.3	53.9	10:20:21	53.9	53.9	54.5	10:29:21	54.5	54.5
60.1	10:29:56		60.1	60.1	60.2	9:58:17	60.2	60.2	53.8	10:20:24	53.8	53.8	52.8	10:29:24	52.8	52.8
58.8	10:29:57		58.8	58.8	60.4	9:58:18	60.4	60.4	54.1	10:20:27	54.1	54.1	61.5	10:29:27	61.5	61.5
57.2	10:29:58		57.2	57.2	61.3	9:58:19	61.3	61.3	54.5	10:20:30	54.5	54.5	52	10:29:30	52	52
56.2	10:29:59		56.2	56.2	60.2	9:58:20	60.2	60.2	53.8	10:20:33	53.8	53.8	46.7	10:29:33	46.7	46.7
55.9	10:30:00		55.9	55.9	64.8	9:58:21	64.8	64.8	52.6	10:20:36	52.6	52.6	45.5	10:29:36	45.5	45.5
56.0	10:30:01		56.0	56.0												

Site 1 - On Tree East Side of Faculty Ave				Site 2 - On Tennis Court South Side of Carson Ave				Site 3 - On Bus Stop Sign in front of Building D West of Clark				Site 4 - Light Post in front of Building J South of Harvey Way				
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	
54.4	10:31:42		54.4	54.4	71.4	10:00:03	71.4	71.4	58.2	10:25:42	58.2	58.2	45.5	10:34:42	45.5	45.5
54.5	10:31:43		54.5	54.4	70.9	10:00:04	70.9	70.9	57.9	10:25:45	57.9	57.9	45.1	10:34:45	45.1	45.1
54.3	10:31:44		54.3	54.3	70.3	10:00:05	70.3	70.3	56.5	10:25:46	56.5	56.5	45.4	10:34:46	45.4	45.4
54.2	10:31:45		54.2	54.2	69.6	10:00:06	69.6	69.6	54.6	10:25:51	54.6	54.6	45.5	10:34:51	45.5	45.5
54.2	10:31:46		54.2	54.2	68.1	10:00:07	68.1	68.1	56.5	10:25:54	56.5	56.5	45.4	10:34:54	45.4	45.4
53.9	10:31:47		53.9	53.9	66.3	10:00:08	66.3	66.3	62.3	10:25:53	62.3	62.3	45.7	10:34:57	45.7	45.7
53.7	10:31:48		53.7	53.7	64.6	10:00:09	64.6	64.6	57.2	10:26:00	57.2	57.2	48.6	10:35:00	48.6	48.6
53.7	10:31:49		53.7	53.7	63.5	10:00:10	63.5	63.5	54	10:26:03	54	54	50.1	10:35:03	50.1	50.1
53.8	10:31:50		53.8	53.8	61.8	10:00:11	61.8	61.8	61.8	10:26:06	61.8	61.8	54.6	10:35:06	54.6	54.6
53.8	10:31:51		53.8	53.8	60.3	10:00:12	60.3	60.3	55.2	10:26:09	55.2	55.2	49.8	10:35:09	49.8	49.8
53.9	10:31:52		53.9	53.9	58.6	10:00:13	58.6	58.6	62.3	10:26:12	62.3	62.3	51	10:35:12	51	51
54.0	10:31:53		54.0	54.0	57.3	10:00:14	57.3	57.3	60.2	10:26:15	60.2	60.2	53.1	10:35:15	53.1	53.1
54.3	10:31:54		54.3	54.3	56.5	10:00:15	56.5	56.5	55.9	10:26:18	55.9	55.9	52.7	10:35:18	52.7	52.7
55.9	10:31:55		55.9	55.9	57.0	10:00:16	57.0	57.0	53.8	10:26:21	53.8	53.8	50.9	10:35:21	50.9	50.9
55.1	10:31:56		55.1	55.1	56.7	10:00:17	56.7	56.7	57.4	10:26:24	57.4	57.4	47.4	10:35:24	47.4	47.4
54.9	10:31:57		54.9	54.9	63.5	10:00:18	63.5	63.5	55.7	10:26:27	55.7	55.7	49.6	10:35:27	49.6	49.6
55.1	10:31:58		55.1	55.1	68.6	10:00:19	68.6	68.6	55.3	10:26:30	55.3	55.3	56	10:35:30	56	56
55.2	10:31:59		55.2	55.2	70.9	10:00:20	70.9	70.9	57.6	10:26:33	57.6	57.6	58.5	10:35:33	58.5	58.5
55.0	10:32:00		55.0	55.0	71.1	10:00:21	71.1	71.1	56.4	10:26:36	56.4	56.4	57.9	10:35:36	57.9	57.9
55.2	10:32:01		55.2	55.2	70.9	10:00:22	70.9	70.9	56.6	10:26:39	56.6	56.6	52.7	10:35:39	52.7	52.7
55.8	10:32:02		55.8	55.8	70.4	10:00:23	70.4	70.4	56.6	10:26:42	56.6	56.6	52.6	10:35:42	52.6	52.6
57.0	10:32:03		57.0	57.0	69.9	10:00:24	69.9	69.9	60.3	10:26:45	60.3	60.3	50.6	10:35:45	50.6	50.6
58.1	10:32:04		58.1	58.1	69.7	10:00:25	69.7	69.7	61.7	10:26:48	61.7	61.7	52.7	10:35:48	52.7	52.7
59.2	10:32:05		59.2	59.2	69.4	10:00:26	69.4	69.4	63.7	10:26:51	63.7	63.7	53.5	10:35:51	53.5	53.5
59.3	10:32:06		59.3	59.3	69.7	10:00:27	69.7	69.7	61.1	10:26:54	61.1	61.1	49.5	10:35:54	49.5	49.5
59.9	10:32:07		59.9	59.9	69.8	10:00:28	69.8	69.8	60.4	10:26:57	60.4	60.4	49.2	10:35:57	49.2	49.2
59.0	10:32:08		59.0	59.0	69.9	10:00:29	69.9	69.9	61.6	10:27:00	61.6	61.6	51.7	10:36:00	51.7	51.7
57.4	10:32:09		57.4	57.4	68.4	10:00:30	68.4	68.4	61.6	10:27:03	61.6	61.6	53.7	10:36:03	53.7	53.7
56.3	10:32:10		56.3	56.3	66.8	10:00:31	66.8	66.8	62.8	10:27:06	62.8	62.8	60.1	10:36:06	60.1	60.1
56.4	10:32:11		56.4	56.4	64.7	10:00:32	64.7	64.7	69.2	10:27:09	69.2	69.2	56.6	10:36:09	56.6	56.6
56.0	10:32:12		56.0	56.0	63.0	10:00:33	63.0	63.0	70.9	10:27:12	70.9	70.9	53.8	10:36:12	53.8	53.8
56.0	10:32:13		56.0	56.0	60.3	10:00:34	60.3	60.3	64.1	10:27:15	64.1	64.1	46.7	10:36:15	46.7	46.7
55.4	10:32:14		55.4	55.4	59.1	10:00:35	59.1	59.1	61.1	10:27:18	61.1	61.1	45.8	10:36:18	45.8	45.8
55.2	10:32:15		55.2	55.2	61.0	10:00:36	61.0	61.0	60	10:27:21	60	60	47.6	10:36:21	47.6	47.6
55.0	10:32:16		55.0	55.0	63.8	10:00:37	63.8	63.8	59.3	10:27:24	59.3	59.3	45.8	10:36:24	45.8	45.8
55.0	10:32:17		55.0	55.0	66.1	10:00:38	66.1	66.1	57.1	10:27:27	57.1	57.1	46.8	10:36:27	46.8	46.8
54.7	10:32:18		54.7	54.7	67.6	10:00:39	67.6	67.6	61.7	10:27:30	61.7	61.7	48.1	10:36:30	48.1	48.1
54.7	10:32:19		54.7	54.7	68.0	10:00:40	68.0	68.0	58.3	10:27:33	58.3	58.3	50.1	10:36:33	50.1	50.1
54.7	10:32:20		54.7	54.7	67.1	10:00:41	67.1	67.1	64.9	10:27:36	64.9	64.9	51.9	10:36:36	51.9	51.9
54.9	10:32:21		54.9	54.9	65.7	10:00:42	65.7	65.7	61.3	10:27:39	61.3	61.3	53.1	10:36:39	53.1	53.1
55.1	10:32:22		55.1	55.1	63.8	10:00:43	63.8	63.8	65.2	10:27:42	65.2	65.2	53.2	10:36:42	53.2	53.2
56.3	10:32:23		56.3	56.3	61.8	10:00:44	61.8	61.8	66	10:27:45	66	66	56.2	10:36:45	56.2	56.2
56.3	10:32:24		56.3	56.3	60.5	10:00:45	60.5	60.5	60.4	10:27:48	60.4	60.4	56.6	10:36:48	56.6	56.6
54.9	10:32:25		54.9	54.9	58.4	10:00:46	58.4	58.4	65.2	10:27:51	65.2	65.2	54	10:36:51	54	54
54.5	10:32:26		54.5	54.5	57.1	10:00:47	57.1	57.1	66	10:27:54	66	66	52.7	10:36:54	52.7	52.7
54.5	10:32:27		54.5	54.5	54.5	10:00:48	54.5	54.5	60.2	10:27:57	60.2	60.2	50.6	10:36:57	50.6	50.6
54.4	10:32:28		54.4	54.4	53.3	10:00:49	53.3	53.3	65.2	10:28:00	65.2	65.2	49.7	10:37:00	49.7	49.7
54.5	10:32:29		54.5	54.5	51.7	10:00:50	51.7	51.7	65.5	10:28:03	65.5	65.5	51.7	10:37:03	51.7	51.7
54.5	10:32:30		54.5	54.5	51.6	10:00:51	51.6	51.6	65.1	10:28:06	65.1	65.1	55	10:37:06	55	55
54.2	10:32:31		54.2	54.2	51.0	10:00:52	51.0	51.0	66	10:28:09	66	66	54.1	10:37:09	54.1	54.1
53.7	10:32:32		53.7	53.7	49.5	10:00:53	49.5	49.5	65.5	10:28:12	65.5	65.5	53.6	10:37:12	53.6	53.6
53.4	10:32:33		53.4	53.4	49.0	10:00:54	49.0	49.0	65.2	10:28:15	65.2	65.2	50.7	10:37:15	50.7	50.7
53.2	10:32:34		53.2	53.2	50.3	10:00:55	50.3	50.3	65	10:28:18	65	65	47.8	10:37:18	47.8	47.8
53.1	10:32:35		53.1	53.1	54.1	10:00:56	54.1	54.1	65.2	10:28:21	65.2	65.2	51.8	10:37:21	51.8	51.8
53.2	10:32:36		53.2	53.2	55.9	10:00:57	55.9	55.9	65.1	10:28:24	65.1	65.1	61.3	10:37:24	61.3	61.3
53.3	10:32:37		53.3	53.3	59.3	10:00:58	59.3	59.3	65.2	10:28:27	65.2	65.2	50.7	10:37:27	50.7	50.7
53.6	10:32:38		53.6	53.6	62.7	10:00:59	62.7	62.7	65	10:28:30	65	65	46.6	10:37:30	46.6	46.6
54.1	10:32:39		54.1	54.1	66.5	10:01:00	66.5	66.5	64.9	10:28:33	64.9	64.9	45.6	10:37:33	45.6	45.6
54.3	10:32:40		54.3	54.3	67.2	10:01:01	67.2	67.2	65.1	10:28:36	65.1	65.1	46.1	10:37:36	46.1	46.1
54.4	10:32:41		54.4	54.4	66.8	10:01:02	66.8	66.8	65.2	10:28:39	65.2	65.2	49.6	10:37:39	49.6	49.6
55.3	10:32:42		55.3	55.3	65.2	10:01:03	65.2	65.2	65.2	10:28:42	65.2	65.2	58.2	10:37:42	58.2	58.2
57.4	10:32:43		57.4	57.4	62.8	10:01:04	62.8	62.8	65.3	10:28:45	65.3	65.3	60.9	10:37:45	60.9	60.9
60.8	10:32:44		60.8	60.8	60.7	10:01:05	60.7	60.7	65.4	10:28:48	65.4	65.4	62.3	10:37:48	62.3	62.3
63.7	10:32:45		63.7	63.7	59.3	10:01:06	59.3	59.3	65.6	10:28:51	65.6	65.6	51	10:37:51	51	51
62.4	10:32:46		62.4	62.4	61.7	10:01:07	61.7	61.7	65.7	10:28:54	65.7	65.7	48.5	10:37:54	48.5	48.5
59.6	10:32:47		59.6	59.6	58.7	10:01:08	58.7	58.7	65.4	10:28:57	65.4	65.4	52.5	10:37:57	52.5	52.5
57.2	10:32:48		57.2	57.2	60.0	10:01:09	60.0	60.0	67.7	10:29:00	67.7	67.7	61.9	10:38:00	61.9	61.9
55.4	10:32:49		55.4	55.4	62.7	10:01:10	62.7	62.7	66.4	10:29:03	66.4	66.4	57	10:38:03	57	57
54.5	10:32:50		54.5	54.5	62.2	10:01:11	62.2	62.2	66.5	10:29:06	66.5	66.5	49.1	10:38:06	49.1	49.1
54.1	10:32:51		54.1	54.1	60.9	10:01:12	60.9	60.9	65.2	10:29:09	65.2	65.2	48	10:38:09	48	48
53.8	10:32:52		53.8	53.8	60.4	10:01:13	60.4	60.4	66.6	10:29:12	66.6	66.6	50.2	10:38:12	50.2	50.2
53.4	10:32:53		53.4	53.4	57.7	10:01:14	57.7	57.7	68.8	10:29:15	68.8	68.8	59.4	10:38:15	59.4	59.4
53.																

Site 1 - On Tree East Side of Faculty Ave				Site 2 - On Tennis Court South Side of Carson Ave				Site 3 - On Bus Stop Sign in front of Building D West of Clark				Site 4 - Light Post in front of Building J South of Harvey Way			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
53.8	10/34/38		53.8	53.8	62.7	10/34/39	62.7	50.8	10/34/30		50.8	50.8	46	10/43/30	
53.8	10/34/38		53.8	53.8	60.1	10/34/31	60.1	50.8	10/34/30		50.8	50.8	46	10/43/30	46.1
53.7	10/34/40		53.7	53.7	57.3	10/34/31	57.3	51.9	10/34/30		51.9	51.9	47.4	10/43/30	47.4
53.8	10/34/41		53.8	53.8	55.4	10/34/32	55.4	50.8	10/34/30		50.8	50.8	47.2	10/43/30	47.2
54.0	10/34/42		54.0	54.0	53.4	10/34/34	53.4	50.8	10/34/30		50.8	50.8	46.5	10/43/30	46.5
54.0	10/34/43		54.0	54.0	51.2	10/34/34	51.2	51.2	10/34/30		51.2	51.2	46.7	10/43/30	46.7
53.9	10/34/44		53.9	53.9	49.2	10/34/34	49.2	50.8	10/34/30		50.8	50.8	46.1	10/43/30	46.1
53.8	10/34/45		53.8	53.8	48.4	10/34/35	48.4	48.4	10/34/31		48.4	48.4	46.5	10/43/31	46.5
53.9	10/34/46		53.9	53.9	47.9	10/34/37	47.9	47.9	10/34/34		47.9	47.9	47.6	10/43/34	47.6
53.8	10/34/47		53.8	53.8	47.5	10/34/38	47.5	47.5	10/34/37		47.5	47.5	47.0	10/43/37	47.0
53.8	10/34/48		53.8	53.8	47.4	10/34/39	47.4	47.4	10/34/30		47.4	47.4	47.3	10/43/30	47.3
53.8	10/34/49		53.8	53.8	47.1	10/34/40	47.1	47.1	10/34/30		47.1	47.1	47.3	10/43/30	47.3
53.8	10/34/50		53.8	53.8	46.8	10/34/41	46.8	46.8	10/34/30		46.8	46.8	46.8	10/43/30	46.8
53.8	10/34/51		53.8	53.8	46.6	10/34/42	46.6	46.6	10/34/30		46.6	46.6	46.8	10/43/30	46.8
53.8	10/34/52		53.8	53.8	46.5	10/34/43	46.5	46.5	10/34/30		46.5	46.5	46.8	10/43/30	46.8
53.9	10/34/53		53.9	53.9	46.4	10/34/34	46.4	46.4	10/34/30		46.4	46.4	46.8	10/43/30	46.8
53.8	10/34/54		53.8	53.8	46.3	10/34/35	46.3	46.3	10/34/30		46.3	46.3	46.8	10/43/30	46.8
53.8	10/34/55		53.8	53.8	46.2	10/34/36	46.2	46.2	10/34/30		46.2	46.2	46.8	10/43/30	46.8
53.9	10/34/56		53.9	53.9	46.1	10/34/37	46.1	46.1	10/34/30		46.1	46.1	46.8	10/43/30	46.8
53.9	10/34/57		53.9	53.9	47.1	10/34/37	47.1	47.1	10/34/30		47.1	47.1	46.8	10/43/30	46.8
53.8	10/34/58		53.8	53.8	47.1	10/34/39	47.1	47.1	10/34/30		47.1	47.1	46.8	10/43/30	46.8
54.4	10/34/59		54.4	54.4	47.5	10/34/40	47.5	47.5	10/34/30		47.5	47.5	46.8	10/43/30	46.8
53.8	10/34/60		53.8	53.8	47.3	10/34/41	47.3	47.3	10/34/30		47.3	47.3	46.7	10/43/30	46.7
53.2	10/34/61		53.2	53.2	47.2	10/34/42	47.2	47.2	10/34/30		47.2	47.2	46.7	10/43/30	46.7
53.0	10/34/62		53.0	53.0	48.2	10/34/43	48.2	48.2	10/34/30		48.2	48.2	46.7	10/43/30	46.7
53.2	10/34/63		53.2	53.2	48.2	10/34/44	48.2	48.2	10/34/30		48.2	48.2	46.7	10/43/30	46.7
53.0	10/34/64		53.0	53.0	49.1	10/34/45	49.1	49.1	10/34/30		49.1	49.1	46.7	10/43/30	46.7
53.2	10/34/65		53.2	53.2	50.2	10/34/46	50.2	50.2	10/34/30		50.2	50.2	46.7	10/43/30	46.7
54.0	10/34/66		54.0	54.0	51.8	10/34/47	51.8	51.8	10/34/30		51.8	51.8	46.7	10/43/30	46.7
55.0	10/34/67		55.0	55.0	54.1	10/34/48	54.1	54.1	10/34/30		54.1	54.1	46.7	10/43/30	46.7
54.3	10/34/68		54.3	54.3	53.0	10/34/49	53.0	53.0	10/34/30		53.0	53.0	46.7	10/43/30	46.7
53.7	10/34/69		53.7	53.7	52.9	10/34/50	52.9	52.9	10/34/30		52.9	52.9	46.7	10/43/30	46.7
53.4	10/34/70		53.4	53.4	53.9	10/34/51	53.9	53.9	10/34/30		53.9	53.9	46.7	10/43/30	46.7
53.4	10/34/71		53.4	53.4	50.6	10/34/52	50.6	50.6	10/34/30		50.6	50.6	46.7	10/43/30	46.7
53.4	10/34/72		53.4	53.4	61.7	10/34/53	61.7	61.7	10/34/30		61.7	61.7	46.7	10/43/30	46.7
53.2	10/34/73		53.2	53.2	63.4	10/34/54	63.4	63.4	10/34/30		63.4	63.4	46.7	10/43/30	46.7
52.9	10/34/74		52.9	52.9	59.2	10/34/55	59.2	59.2	10/34/30		59.2	59.2	46.7	10/43/30	46.7
53.1	10/34/75		53.1	53.1	69.3	10/34/56	69.3	69.3	10/34/30		69.3	69.3	46.7	10/43/30	46.7
53.7	10/34/76		53.7	53.7	70.5	10/34/57	70.5	70.5	10/34/30		70.5	70.5	46.7	10/43/30	46.7
53.4	10/34/77		53.4	53.4	70.9	10/34/58	70.9	70.9	10/34/30		70.9	70.9	46.7	10/43/30	46.7
53.4	10/34/78		53.4	53.4	71.4	10/34/59	71.4	71.4	10/34/30		71.4	71.4	46.7	10/43/30	46.7
53.4	10/34/79		53.4	53.4	72.4	10/34/60	72.4	72.4	10/34/30		72.4	72.4	46.7	10/43/30	46.7
53.0	10/34/80		53.0	53.0	73.7	10/34/61	73.7	73.7	10/34/30		73.7	73.7	46.7	10/43/30	46.7
52.8	10/34/81		52.8	52.8	73.7	10/34/62	73.7	73.7	10/34/30		73.7	73.7	46.7	10/43/30	46.7
52.9	10/34/82		52.9	52.9	73.3	10/34/63	73.3	73.3	10/34/30		73.3	73.3	46.7	10/43/30	46.7
53.0	10/34/83		53.0	53.0	73.0	10/34/64	73.0	73.0	10/34/30		73.0	73.0	46.7	10/43/30	46.7
53.0	10/34/84		53.0	53.0	72.4	10/34/65	72.4	72.4	10/34/30		72.4	72.4	46.7	10/43/30	46.7
53.3	10/34/85		53.3	53.3	74.4	10/34/66	74.4	74.4	10/34/30		74.4	74.4	46.7	10/43/30	46.7
54.2	10/34/86		54.2	54.2	74.5	10/34/67	74.5	74.5	10/34/30		74.5	74.5	46.7	10/43/30	46.7
53.8	10/34/87		53.8	53.8	73.5	10/34/68	73.5	73.5	10/34/30		73.5	73.5	46.7	10/43/30	46.7
53.4	10/34/88		53.4	53.4	73.0	10/34/69	73.0	73.0	10/34/30		73.0	73.0	46.7	10/43/30	46.7
53.4	10/34/89		53.4	53.4	71.1	10/34/70	71.1	71.1	10/34/30		71.1	71.1	46.7	10/43/30	46.7
53.5	10/34/90		53.5	53.5	71.1	10/34/71	71.1	71.1	10/34/30		71.1	71.1	46.7	10/43/30	46.7
53.4	10/34/91		53.4	53.4	71.1	10/34/72	71.1	71.1	10/34/30		71.1	71.1	46.7	10/43/30	46.7
53.3	10/34/92		53.3	53.3	72.7	10/34/73	72.7	72.7	10/34/30		72.7	72.7	46.7	10/43/30	46.7
53.0	10/34/93		53.0	53.0	73.1	10/34/74	73.1	73.1	10/34/30		73.1	73.1	46.7	10/43/30	46.7
54.0	10/34/94		54.0	54.0	74.0	10/34/75	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/95		54.0	54.0	74.0	10/34/76	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/96		54.0	54.0	74.0	10/34/77	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/97		54.0	54.0	74.0	10/34/78	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/98		54.0	54.0	74.0	10/34/79	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/99		54.0	54.0	74.0	10/34/80	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/100		54.0	54.0	74.0	10/34/81	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/101		54.0	54.0	74.0	10/34/82	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/102		54.0	54.0	74.0	10/34/83	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/103		54.0	54.0	74.0	10/34/84	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/104		54.0	54.0	74.0	10/34/85	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/105		54.0	54.0	74.0	10/34/86	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/106		54.0	54.0	74.0	10/34/87	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/107		54.0	54.0	74.0	10/34/88	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/108		54.0	54.0	74.0	10/34/89	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/109		54.0	54.0	74.0	10/34/90	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/110		54.0	54.0	74.0	10/34/91	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/111		54.0	54.0	74.0	10/34/92	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/112		54.0	54.0	74.0	10/34/93	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/113		54.0	54.0	74.0	10/34/94	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/114		54.0	54.0	74.0	10/34/95	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7
54.0	10/34/115		54.0	54.0	74.0	10/34/96	74.0	74.0	10/34/30		74.0	74.0	46.7	10/43/30	46.7



Site 1 - On Tree East Side of Faculty Ave				Site 2 - On Tennis Court South Side of Carson Ave				Site 3 - On Bus Stop Sign in front of Building D West of Clark				Site 4 - Light Post in front of Building J South of Harvey Way						
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL			
49.9	10:40:49		49.9	49.9	58.6	10:09:10	58.6	58.6	64.5	10:53:03	60.2	64.5	64.5	55	11:02:03	57.9	55	55
49.9	10:40:50		49.9	49.9	59.4	10:09:11	59.4	59.4	61.5	10:53:06	60.2	61.5	61.5	54.8	11:02:06	57.9	54.8	54.8
49.9	10:40:51		49.9	49.9	59.9	10:09:12	59.9	59.9	62.6	10:53:09	60.2	62.6	62.6	55.9	11:02:09	57.9	55.9	55.9
49.9	10:40:52		49.9	49.9	60.6	10:09:13	60.6	60.6	60	10:53:12	60.2	60	60	58.4	11:02:12	57.9	58.4	58.4
49.9	10:40:53		49.9	49.9	63.0	10:09:14	63.0	63.0	63.9	10:53:15	60.2	63.9	63.9	55.6	11:02:15	57.9	55.6	55.6
49.9	10:40:54		49.9	49.9	62.4	10:09:15	62.4	62.4	62.4	10:53:18	60.2	62.4	62.4	61.6	11:02:18	57.9	61.6	61.6
49.9	10:40:55		49.9	49.9	61.2	10:09:16	61.2	61.2	61.4	10:53:21	60.2	61.4	61.4	56.2	11:02:21	57.9	56.2	56.2
49.8	10:40:56		49.8	49.8	60.5	10:09:17	60.5	60.5	62.2	10:53:24	60.2	62.2	62.2	57.4	11:02:24	57.9	57.4	57.4
49.7	10:40:57		49.7	49.7	59.6	10:09:18	59.6	59.6	58.8	10:53:27	60.2	58.8	58.8	57.4	11:02:27	57.9	57.4	57.4
49.8	10:40:58		49.8	49.8	58.3	10:09:19	58.3	58.3	58.2	10:53:30	60.2	58.2	58.2	55.3	11:02:30	57.9	55.3	55.3
49.8	10:40:59		49.8	49.8	57.0	10:09:20	57.0	57.0	59.6	10:53:33	60.2	59.6	59.6	55.1	11:02:33	57.9	55.1	55.1
49.8	10:41:00		49.8	49.8	56.0	10:09:21	56.0	56.0	60.4	10:53:36	60.2	60.4	60.4	60.4	11:02:36	57.9	60.4	60.4
49.6	10:41:01		49.6	49.6	55.0	10:09:22	55.0	55.0	59.7	10:53:39	60.2	59.7	59.7	58.8	11:02:39	57.9	58.8	58.8
49.5	10:41:02		49.5	49.5	54.9	10:09:23	54.9	54.9	60.4	10:53:42	60.2	60.4	60.4	57	11:02:42	57.9	57	57
49.2	10:41:03		49.2	49.2	55.8	10:09:24	55.8	55.8	60.4	10:53:45	60.2	60.4	60.4	57.4	11:02:45	57.9	57.4	57.4
49.1	10:41:04		49.1	49.1	56.2	10:09:25	56.2	56.2	59.2	10:53:48	60.2	59.2	59.2	57.8	11:02:48	57.9	57.8	57.8
49.0	10:41:05		49.0	49.0	55.8	10:09:26	55.8	55.8	57.4	10:53:51	60.2	57.4	57.4	57.2	11:02:51	57.9	57.2	57.2
49.1	10:41:06		49.1	49.1	55.4	10:09:27	55.4	55.4	57.8	10:53:54	60.2	57.8	57.8	57.3	11:02:54	57.9	57.3	57.3
49.2	10:41:07		49.2	49.2	55.3	10:09:28	55.3	55.3	57.3	10:53:57	60.2	57.3	57.3	58.3	11:02:57	57.9	58.3	58.3
49.2	10:41:08		49.2	49.2	56.5	10:09:29	56.5	56.5	60.8	10:54:00	60.2	60.8	60.8	61	11:03:00	57.9	61	61
49.4	10:41:09		49.4	49.4	58.2	10:09:30	58.2	58.2	62.9	10:54:03	60.2	62.9	62.9	60.6	11:03:03	58.0	60.6	60.6
49.8	10:41:10		49.8	49.8	59.0	10:09:31	59.0	59.0	60.6	10:54:06	60.2	60.6	60.6	59.7	11:03:06	58.0	59.7	59.7
49.9	10:41:11		49.9	49.9	62.7	10:09:32	62.7	62.7	61.2	10:54:09	60.2	61.2	61.2	59.1	11:03:09	58.0	59.1	59.1
50.2	10:41:12		50.2	50.2	66.7	10:09:33	66.7	66.7	58.2	10:54:12	60.2	58.2	58.2	62.1	11:03:12	58.0	62.1	62.1
50.6	10:41:13		50.6	50.6	68.1	10:09:34	68.1	68.1	62	10:54:15	60.2	62	62	56.1	11:03:15	58.0	56.1	56.1
51.5	10:41:14		51.5	51.5	69.4	10:09:35	69.4	69.4	58.1	10:54:18	60.2	58.1	58.1	58.1	11:03:18	58.0	58.1	58.1
52.4	10:41:15		52.4	52.4	70.1	10:09:36	70.1	70.1	59	10:54:21	60.2	59	59	54.8	11:03:21	58.0	54.8	54.8
52.7	10:41:16		52.7	52.7	70.7	10:09:37	70.7	70.7	59.5	10:54:24	60.2	59.5	59.5	57.4	11:03:24	58.0	57.4	57.4
53.8	10:41:17		53.8	53.8	70.8	10:09:38	70.8	70.8	59.2	10:54:27	60.2	59.2	59.2	57.4	11:03:27	58.0	57.4	57.4
58.0	10:41:18		58.0	58.0	71.5	10:09:39	71.5	71.5	56.3	10:54:30	60.2	56.3	56.3	58.4	11:03:30	58.0	58.4	58.4
58.9	10:41:19		58.9	58.9	71.9	10:09:40	71.9	71.9	55	10:54:33	60.2	55	55	56.6	11:03:33	58.0	56.6	56.6
60.0	10:41:20		60.0	60.0	72.2	10:09:41	72.2	72.2	55.6	10:54:36	60.2	55.6	55.6	57.2	11:03:36	58.0	57.2	57.2
61.0	10:41:21		61.0	61.0	72.8	10:09:42	72.8	72.8	60.9	10:54:39	60.2	60.9	60.9	54.1	11:03:39	58.0	54.1	54.1
62.6	10:41:22		62.6	62.6	72.7	10:09:43	72.7	72.7	56.9	10:54:42	60.2	56.9	56.9	54.8	11:03:42	58.0	54.8	54.8
61.9	10:41:23		61.9	61.9	72.3	10:09:44	72.3	72.3	59.4	10:54:45	60.2	59.4	59.4	54.8	11:03:45	58.0	54.8	54.8
60.1	10:41:24		60.1	60.1	71.4	10:09:45	71.4	71.4	58.1	10:54:48	60.2	58.1	58.1	54.6	11:03:48	58.0	54.6	54.6
57.8	10:41:25		57.8	57.8	71.2	10:09:46	71.2	71.2	61.2	10:54:51	60.2	61.2	61.2	61.4	11:03:51	58.0	61.4	61.4
55.3	10:41:26		55.3	55.3	71.1	10:09:47	71.1	71.1	57.9	10:54:54	60.2	57.9	57.9	56.1	11:03:54	58.0	56.1	56.1
53.0	10:41:27		53.0	53.0	71.2	10:09:48	71.2	71.2	58.9	10:54:57	60.2	58.9	58.9	55.1	11:03:57	58.0	55.1	55.1
51.5	10:41:28		51.5	51.5	70.6	10:09:49	70.6	70.6	60.4	10:55:00	60.2	60.4	60.4	62.2	11:04:00	58.0	62.2	62.2
51.1	10:41:29		51.1	51.1	69.5	10:09:50	69.5	69.5	60.9	10:55:03	60.2	60.9	60.9	60.9	11:04:03	58.0	60.9	60.9
51.5	10:41:30		51.5	51.5	68.9	10:09:51	68.9	68.9	60.9	10:55:06	60.2	60.9	60.9	55	11:04:06	58.0	55	55
51.6	10:41:31		51.6	51.6	70.4	10:09:52	70.4	70.4	63.7	10:55:09	60.2	63.7	63.7	58.8	11:04:09	58.0	58.8	58.8
51.2	10:41:32		51.2	51.2	71.6	10:09:53	71.6	71.6	63.9	10:55:12	60.2	63.9	63.9	63.5	11:04:12	58.0	63.5	63.5
50.5	10:41:33		50.5	50.5	72.3	10:09:54	72.3	72.3	64.3	10:55:15	60.2	64.3	64.3	59.4	11:04:15	58.0	59.4	59.4
50.3	10:41:34		50.3	50.3	70.8	10:09:55	70.8	70.8	61.2	10:55:18	60.2	61.2	61.2	55.8	11:04:18	58.0	55.8	55.8
50.0	10:41:35		50.0	50.0	69.7	10:09:56	69.7	69.7	56.7	10:55:21	60.2	56.7	56.7	56.3	11:04:21	58.0	56.3	56.3
49.7	10:41:36		49.7	49.7	69.3	10:09:57	69.3	69.3	57.2	10:55:24	60.2	57.2	57.2	62.7	11:04:24	58.0	62.7	62.7
49.5	10:41:37		49.5	49.5	68.5	10:09:58	68.5	68.5	55.4	10:55:27	60.2	55.4	55.4	58.2	11:04:27	58.0	58.2	58.2
49.5	10:41:38		49.5	49.5	68.5	10:09:59	68.5	68.5	57	10:55:30	60.2	57	57	58.1	11:04:30	58.0	58.1	58.1
49.8	10:41:39		49.8	49.8	67.8	10:10:00	67.8	67.8	57.7	10:55:33	60.2	57.7	57.7	55.3	11:04:33	58.0	55.3	55.3
50.4	10:41:40		50.4	50.4	68.2	10:10:01	68.2	68.2	59.6	10:55:36	60.2	59.6	59.6	54.8	11:04:36	58.0	54.8	54.8
50.8	10:41:41		50.8	50.8	70.0	10:10:02	70.0	70.0	59.5	10:55:39	60.2	59.5	59.5	54.6	11:04:39	58.0	54.6	54.6
51.5	10:41:42		51.5	51.5	72.0	10:10:03	72.0	72.0	57.9	10:55:42	60.2	57.9	57.9	56	11:04:42	58.0	56	56
52.6	10:41:43		52.6	52.6	72.1	10:10:04	72.1	72.1	56	10:55:45	60.2	56	56	54.6	11:04:45	58.0	54.6	54.6
53.6	10:41:44		53.6	53.6	71.1	10:10:05	71.1	71.1	54.4	10:55:48	60.2	54.4	54.4	55	11:04:48	58.0	55	55
53.9	10:41:45		53.9	53.9	69.8	10:10:06	69.8	69.8	57.3	10:55:51	60.2	57.3	57.3	57.9	11:04:51	58.0	57.9	57.9
53.1	10:41:46		53.1	53.1	68.7	10:10:07	68.7	68.7	58.7	10:55:54	60.2	58.7	58.7	54.7	11:04:54	58.0	54.7	54.7
52.7	10:41:47		52.7	52.7	68.7	10:10:08	68.7	68.7	58.4	10:55:57	60.2	58.4	58.4	53.3	11:04:57	58.0	53.3	53.3
52.0	10:41:48		52.0	52.0	68.1	10:10:09	68.1	68.1	55.8	10:56:00	60.3	55.8	55.8	55.5	11:05:00	58.0	55.5	55.5
51.5	10:41:49		51.5	51.5	67.7	10:10:10	67.7	67.7	57.8	10:56:03	60.3	57.8	57.8	54.9	11:05:03	58.0	54.9	54.9
50.9	10:41:50		50.9	50.9	67.4	10:10:11	67.4	67.4	64.4	10:56:06	60.3	64.4	64.4	54.8	11:05:06	58.0	54.8	54.8
50.5	10:41:51		50.5	50.5	67.1	10:10:12	67.1	67.1	56.8	10:56:09	60.3	56.8	56.8	55.2	11:05:09	58.0	55.2	55.2
50.7	10:41:52		50.7	50.7	66.4	10:10:13	66.4	66.4	63.6	10:56:12	60.3	63.6	63.6	55.5	11:05:12	58.0	55.5	55.5
50.7	10:41:53		50.7	50.7	66.1	10:10:14	66.1	66.1	60	10:56:15	60.3	60	60	55.1	11:05:15	58.0	55.1	55.1
50.5	1																	

Site 1 - On Tree East Side of Faculty Ave				Site 2 - On Tennis Court South Side of Carson Ave				Site 3 - On Bus Stop Sign in front of Building D West of Clark				Site 4 - Light Post in front of Building J South of Harvey Way			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
50.9	10:43:23		50.9	50.9	73.2	10:11:44	73.2	73.2	55.8	11:00:45	55.8	55.8	55.8	11:09:45	55.8
51.0	10:43:24		51.0	51.0	73.2	10:11:45	73.2	73.2	53.7	11:00:48	53.7	53.7	57.9	11:09:48	53.7
51.3	10:43:25		51.3	51.3	73.5	10:11:46	73.5	73.5	57.6	11:00:51	57.6	57.6	57.6	11:09:51	57.6
51.2	10:43:26		51.2	51.2	73.5	10:11:47	73.5	73.5	56.1	11:00:54	56.1	56.1	63	11:09:54	63
51.4	10:43:27		51.4	51.4	74.1	10:11:48	74.1	74.1	58.3	11:00:57	58.3	58.3	60	11:09:57	60
51.7	10:43:28		51.7	51.7	73.9	10:11:49	73.9	73.9	54.7	11:01:00	54.7	54.7	60.1	11:10:00	60.1
51.6	10:43:29		51.6	51.6	73.4	10:11:50	73.4	73.4	54.9	11:01:03	54.9	54.9	61.1	11:10:03	61.1
51.4	10:43:30		51.4	51.4	72.8	10:11:51	72.8	72.8	53.3	11:01:06	53.3	53.3	58.8	11:10:06	58.8
51.7	10:43:31		51.7	51.7	71.5	10:11:52	71.5	71.5	52.8	11:01:09	52.8	52.8	60.8	11:10:09	60.8
51.7	10:43:32		51.7	51.7	70.4	10:11:53	70.4	70.4	54.5	11:01:12	54.5	54.5	62.7	11:10:12	62.7
51.5	10:43:33		51.5	51.5	70.6	10:11:54	70.6	70.6	59.8	11:01:15	59.8	59.8	63	11:10:15	63
51.2	10:43:34		51.2	51.2	71.3	10:11:55	71.3	71.3	58.7	11:01:18	58.7	58.7	61.3	11:10:18	61.3
50.9	10:43:35		50.9	50.9	71.6	10:11:56	71.6	71.6	59.2	11:01:21	59.2	59.2	62.7	11:10:21	62.7
50.7	10:43:36		50.7	50.7	71.3	10:11:57	71.3	71.3	59.8	11:01:24	59.8	59.8	58.8	11:10:24	58.8
50.6	10:43:37		50.6	50.6	74.2	10:11:58	74.2	74.2	62.4	11:01:27	62.4	62.4	58.5	11:10:27	58.5
50.7	10:43:38		50.7	50.7	74.9	10:11:59	74.9	74.9	61.6	11:01:30	61.6	61.6	55.7	11:10:30	55.7
51.3	10:43:39		51.3	51.3	73.5	10:12:00	73.5	73.5	60.5	11:01:33	60.5	60.5	64.3	11:10:33	64.3
51.9	10:43:40		51.9	51.9	72.3	10:12:01	72.3	72.3	61.1	11:01:36	61.1	61.1	58.2	11:10:36	58.2
52.5	10:43:41		52.5	52.5	72.2	10:12:02	72.2	72.2	59.1	11:01:39	59.1	59.1	54.5	11:10:39	54.5
53.7	10:43:42		53.7	53.7	72.2	10:12:03	72.2	72.2	59.5	11:01:42	59.5	59.5	56.3	11:10:42	56.3
53.8	10:43:43		53.8	53.8	71.9	10:12:04	71.9	71.9	60.4	11:01:45	60.4	60.4	54.6	11:10:45	54.6
52.9	10:43:44		52.9	52.9	70.5	10:12:05	70.5	70.5	60.5	11:01:48	60.5	60.5	53.3	11:10:48	53.3
51.9	10:43:45		51.9	51.9	69.6	10:12:06	69.6	69.6	55.9	11:01:51	55.9	55.9	60.3	11:10:51	60.3
51.0	10:43:46		51.0	51.0	68.8	10:12:07	68.8	68.8	57.1	11:01:54	57.1	57.1	57.7	11:10:54	57.7
52.1	10:43:47		52.1	52.1	68.6	10:12:08	68.6	68.6	56.6	11:01:57	56.6	56.6	55.7	11:10:57	55.7
52.3	10:43:48		52.3	52.3	68.3	10:12:09	68.3	68.3	53.3	11:02:00	53.3	53.3	54.8	11:11:00	54.8
51.0	10:43:49		51.0	51.0	68.4	10:12:10	68.4	68.4	55.9	11:02:03	55.9	55.9	57.8	11:11:03	57.8
50.3	10:43:50		50.3	50.3	68.5	11:02:11	68.5	68.5	55.5	11:02:06	55.5	55.5	55.5	11:11:06	55.5
50.2	10:43:51		50.2	50.2	67.7	10:12:12	67.7	67.7	57.3	11:02:09	57.3	57.3	54.5	11:11:09	54.5
50.0	10:43:52		50.0	50.0	67.1	10:12:13	67.1	67.1	59.6	11:02:12	59.6	59.6	59.3	11:11:12	59.3
49.8	10:43:53		49.8	49.8	67.9	10:12:14	67.9	67.9	58.9	11:02:15	58.9	58.9	55	11:11:15	55
49.4	10:43:54		49.4	49.4	69.9	10:12:15	69.9	69.9	56.6	11:02:18	56.6	56.6	54.6	11:11:18	54.6
49.1	10:43:55		49.1	49.1	72.4	10:12:16	72.4	72.4	59.2	11:02:21	59.2	59.2	60.3	11:11:21	60.3
49.2	10:43:56		49.2	49.2	74.1	10:12:17	74.1	74.1	56.3	11:02:24	56.3	56.3	54.7	11:11:24	54.7
49.2	10:43:57		49.2	49.2	73.4	10:12:18	73.4	73.4	55.3	11:02:27	55.3	55.3	54.7	11:11:27	54.7
49.2	10:43:58		49.2	49.2	70.4	10:12:19	70.4	70.4	55	11:02:30	55	54.1	54.1	11:11:30	54.1
49.4	10:43:59		49.4	49.4	68.5	10:12:20	68.5	68.5	58.5	11:02:33	58.5	58.5	53.9	11:11:33	53.9
49.4	10:44:00		49.4	49.4	69.0	10:12:21	69.0	69.0	54.8	11:02:36	54.8	54.8	54	11:11:36	54
49.6	10:44:01		49.6	49.6	70.2	10:12:22	70.2	70.2	57.5	11:02:39	57.5	57.5	55	11:11:39	55
50.0	10:44:02		50.0	50.0	70.4	10:12:23	70.4	70.4	56.7	11:02:42	56.7	56.7	63.8	11:11:42	63.8
49.9	10:44:03		49.9	49.9	69.2	10:12:24	69.2	69.2	59.2	11:02:45	59.2	59.2	54.1	11:11:45	54.1
49.9	10:44:04		49.9	49.9	68.1	10:12:25	68.1	68.1	55.7	11:02:48	55.7	55.7	56.1	11:11:48	56.1
49.9	10:44:05		49.9	49.9	66.9	10:12:26	66.9	66.9	52.1	11:02:51	52.1	54.8	54.8	11:11:51	54.8
49.9	10:44:06		49.9	49.9	67.0	10:12:27	67.0	67.0	52.6	11:02:54	52.6	52.6	54.2	11:11:54	54.2
50.3	10:44:07		50.3	50.3	65.9	10:12:28	65.9	65.9	55.2	11:02:57	55.2	55.2	54.2	11:11:57	54.2
50.6	10:44:08		50.6	50.6	67.2	10:12:29	67.2	67.2	54.9	11:03:00	54.9	54.9	55.3	11:12:00	55.3
50.8	10:44:09		50.8	50.8	68.3	10:12:30	68.3	68.3	58.6	11:03:03	58.6	58.6	59.5	11:12:03	59.5
51.3	10:44:10		51.3	51.3	69.1	10:12:31	69.1	69.1	60.1	11:03:06	60.1	60.1	60	11:12:06	60
52.1	10:44:11		52.1	52.1	69.2	10:12:32	69.2	69.2	57.4	11:03:09	57.4	57.4	57.4	11:12:09	57.4
52.8	10:44:12		52.8	52.8	68.0	10:12:33	68.0	68.0	54	11:03:12	54	54	56.3	11:12:12	56.3
54.9	10:44:13		54.9	54.9	67.0	10:12:34	67.0	67.0	53.9	11:03:15	53.9	53.9	59.6	11:12:15	59.6
57.0	10:44:14		57.0	57.0	66.9	10:12:35	66.9	66.9	54.5	11:03:18	54.5	54.5	67.3	11:12:18	67.3
60.2	10:44:15		60.2	60.2	66.2	10:12:36	66.2	66.2	56.2	11:03:21	56.2	56.2	57.4	11:12:21	57.4
61.1	10:44:16		61.1	61.1	64.8	10:12:37	64.8	64.8	57.5	11:03:24	57.5	57.5	61.3	11:12:24	61.3
59.8	10:44:17		59.8	59.8	62.9	10:12:38	62.9	62.9	62.4	11:03:27	62.4	62.4	56.3	11:12:27	56.3
57.8	10:44:18		57.8	57.8	60.6	10:12:39	60.6	60.6	59.8	11:03:30	59.8	59.8	55.6	11:12:30	55.6
55.7	10:44:19		55.7	55.7	58.3	10:12:40	58.3	58.3	59.4	11:03:33	59.4	59.4	55.9	11:12:33	55.9
55.0	10:44:20		55.0	55.0	56.9	10:12:41	56.9	56.9	60.2	11:03:36	60.2	60.2	57.6	11:12:36	57.6
56.0	10:44:21		56.0	56.0	56.2	10:12:42	56.2	56.2	60.1	11:03:39	60.1	60.1	58.6	11:12:39	58.6
57.5	10:44:22		57.5	57.5	56.7	10:12:43	56.7	56.7	57.8	11:03:42	57.8	57.8	58.1	11:12:42	58.1
59.5	10:44:23		59.5	59.5	56.1	10:12:44	56.1	56.1	59	11:03:45	59	59	54.5	11:12:45	54.5
60.8	10:44:24		60.8	60.8	55.7	10:12:45	55.7	55.7	58.7	11:03:48	58.7	58.7	58.8	11:12:48	58.8
59.1	10:44:25		59.1	59.1	55.0	10:12:46	55.0	55.0	57.4	11:03:51	57.4	57.4	54.5	11:12:51	54.5
56.2	10:44:26		56.2	56.2	54.0	10:12:47	54.0	54.0	59.2	11:03:54	59.2	59.2	63.5	11:12:54	63.5
53.8	10:44:27		53.8	53.8	53.5	10:12:48	53.5	53.5	57.2	11:03:57	57.2	57.2	58.9	11:12:57	58.9
52.2	10:44:28		52.2	52.2	54.2	10:12:49	54.2	54.2	54.8	11:04:00	54.8	54.8	51.7	11:13:00	51.7
51.8	10:44:29		51.8	51.8	55.3	10:12:50	55.3	55.3	53.5	11:04:03	53.5	53.5	60.5	11:13:03	60.5
51.9	10:44:30		51.9	51.9	55.5	10:12:51	55.5	55.5	54.8	11:04:06	54.8	54.8	62.3	11:13:06	62.3
51.6	10:44:31		51.6	51.6	56.1	10:12:52	56.1	56.1	57	11:04:09	57	57	56.1	11:13:09	56.1
51.2	10:44:32		51.2	51.2	56.3	10:12:53	56.3	56.3	62.4	11:04:12	62.4	62.4	54.5	11:13:12	54.5
50.8	10:44:33		50.8	50.8	56.4	10:12:54	56.4	56.4	56.7	11:04:15	56.7	56.7	54.8	11:13:15	54.8
50.8	10:44:34		50.8	50.8	57.7	10:12:55	57.7	57.7	56.5	11:04:18	56.5	56.5	58.8	11:13:18	58.8
50.7	10:44:35		50.7	50.7	60.9	10:12:56	60.9	60.9	56.3	11:04:21	56.3	56.3	60.9	11:13:21	60.9
50.5	10:44:36		50.5	50.5	66.6	10:12:57	66.6	66.6	57.6	11:04:24	57.6	57.6	54.5	11:13:24	54.5
50.5	10:44:37		50.5	50.5	71.2	10:12:58	71.2	71.2	59	11:04:27	59	59	55.6	11:13:27	55.6
50.4	10:44:38		50.4	50.4	73.0	10:12:59	73.0	73.0	55	11:04:30	55	61.2	61.2	11:13:30	6

Site 1 - On Tree East Side of Faculty Ave				Site 2 - On Tennis Court South Side of Carson Ave				Site 3 - On Bus Stop Sign in front of Building D West of Clark				Site 4 - Light Post in front of Building J South of Harvey Way			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
50.3	10:45:57		50.3	50.3	64.6	10:14:18	64.6	64.6	54	11:08:27	59.6	54	54.9	11:17:27	58.3
50.5	10:46:58		50.5	50.5	64.1	10:14:19	64.1	64.1	53.5	11:08:30	59.6	53.5	53.5	11:17:30	58.3
50.5	10:46:59		50.5	50.5	64.1	10:14:20	64.1	64.1	53.5	11:08:33	59.6	53.5	53.5	11:17:33	58.3
50.3	10:46:00		50.3	50.3	63.2	10:14:21	63.2	63.2	51.9	11:08:36	59.6	51.9	51.9	11:17:36	58.3
50.5	10:46:01		50.5	50.5	61.3	10:14:22	61.3	61.3	52.6	11:08:39	59.6	52.6	52.6	11:17:39	58.3
51.1	10:46:02		51.1	51.1	59.0	10:14:23	59.0	59.0	56.4	11:08:42	59.6	56.4	56.4	11:17:42	58.3
51.6	10:46:03		51.6	51.6	57.5	10:14:24	57.5	57.5	56.3	11:08:45	59.6	56.3	56.3	11:17:45	58.3
52.9	10:46:04		52.9	52.9	57.1	10:14:25	57.1	57.1	55.1	11:08:48	59.6	55.1	55.1	11:17:48	58.3
53.0	10:46:05		53.0	53.0	58.7	10:14:26	58.7	58.7	55.4	11:08:51	59.6	55.4	55.4	11:17:51	58.3
52.7	10:46:06		52.7	52.7	62.3	10:14:27	62.3	62.3	55.1	11:08:54	59.6	55.1	55.1	11:17:54	58.3
52.7	10:46:07		52.7	52.7	65.9	10:14:28	65.9	65.9	54.9	11:08:57	59.6	54.9	54.9	11:17:57	58.3
52.6	10:46:08		52.6	52.6	62.9	10:14:29	62.9	62.9	54.9	11:09:00	59.6	54.9	54.9	11:18:00	58.3
52.8	10:46:09		52.8	52.8	70.0	10:14:30	70.0	70.0	56.1	11:09:03	59.6	56.1	56.1	11:18:03	58.3
53.1	10:46:10		53.1	53.1	70.9	10:14:31	70.9	70.9	61	11:09:06	59.6	61	61	11:18:06	58.3
54.1	10:46:11		54.1	54.1	71.6	10:14:32	71.6	71.6	65.6	11:09:09	59.6	65.6	65.6	11:18:09	58.3
54.9	10:46:12		54.9	54.9	71.8	10:14:33	71.8	71.8	61.4	11:09:12	59.6	61.4	61.4	11:18:12	58.3
55.0	10:46:13		55.0	55.0	71.3	10:14:34	71.3	71.3	63.4	11:09:15	59.6	63.4	63.4	11:18:15	58.3
54.1	10:46:14		54.1	54.1	70.2	10:14:35	70.2	70.2	60.8	11:09:18	59.6	60.8	60.8	11:18:18	58.3
53.2	10:46:15		53.2	53.2	67.9	10:14:36	67.9	67.9	62.8	11:09:21	59.6	62.8	62.8	11:18:21	58.3
52.5	10:46:16		52.5	52.5	65.4	10:14:37	65.4	65.4	61.4	11:09:24	59.6	61.4	61.4	11:18:24	58.3
52.1	10:46:17		52.1	52.1	63.0	10:14:38	63.0	63.0	61.9	11:09:27	59.6	61.9	61.9	11:18:27	58.3
51.7	10:46:18		51.7	51.7	61.6	10:14:39	61.6	61.6	59.9	11:09:30	59.6	59.9	59.9	11:18:30	58.3
51.9	10:46:19		51.9	51.9	62.2	10:14:40	62.2	62.2	58.4	11:09:33	59.6	58.4	58.4	11:18:33	58.3
51.9	10:46:20		51.9	51.9	66.8	10:14:41	66.8	66.8	59.3	11:09:36	59.6	59.3	59.3	11:18:36	58.3
51.9	10:46:21		51.9	51.9	71.2	10:14:42	71.2	71.2	57.2	11:09:39	59.6	57.2	57.2	11:18:39	58.3
51.7	10:46:22		51.7	51.7	71.9	10:14:43	71.9	71.9	59.4	11:09:42	59.6	59.4	59.4	11:18:42	58.3
52.0	10:46:23		52.0	52.0	71.3	10:14:44	71.3	71.3	60.5	11:09:45	59.6	60.5	60.5	11:18:45	58.3
52.2	10:46:24		52.2	52.2	68.7	10:14:45	68.7	68.7	62.1	11:09:48	59.6	62.1	62.1	11:18:48	58.3
52.3	10:46:25		52.3	52.3	67.4	10:14:46	67.4	67.4	61	11:09:51	59.6	61	61	11:18:51	58.3
53.0	10:46:26		53.0	53.0	65.9	10:14:47	65.9	65.9	55.3	11:09:54	59.6	55.3	55.3	11:18:54	58.3
53.4	10:46:27		53.4	53.4	63.5	10:14:48	63.5	63.5	55.1	11:09:57	59.6	55.1	55.1	11:18:57	58.3
53.9	10:46:28		53.9	53.9	62.0	10:14:49	62.0	62.0	56.4	11:10:00	59.6	56.4	56.4	11:19:00	58.3
54.8	10:46:29		54.8	54.8	62.5	10:14:50	62.5	62.5	60.7	11:10:03	59.6	60.7	60.7	11:19:03	58.3
54.7	10:46:30		54.7	54.7	64.8	10:14:51	64.8	64.8	62.3	11:10:06	59.6	62.3	62.3	11:19:06	58.3
54.9	10:46:31		54.9	54.9	67.7	10:14:52	67.7	67.7	61.6	11:10:09	59.6	61.6	61.6	11:19:09	58.3
55.8	10:46:32		55.8	55.8	70.4	10:14:53	70.4	70.4	58.2	11:10:12	59.6	58.2	58.2	11:19:12	58.3
57.1	10:46:33		57.1	57.1	72.0	10:14:54	72.0	72.0	59.1	11:10:15	59.6	59.1	59.1	11:19:15	58.3
56.3	10:46:34		56.3	56.3	72.4	10:14:55	72.4	72.4	56.9	11:10:18	59.6	56.9	56.9	11:19:18	58.3
55.1	10:46:35		55.1	55.1	71.8	10:14:56	71.8	71.8	57	11:10:21	59.6	57	57	11:19:21	58.3
53.6	10:46:36		53.6	53.6	69.9	10:14:57	69.9	69.9	58.2	11:10:24	59.6	58.2	58.2	11:19:24	58.3
52.3	10:46:37		52.3	52.3	69.3	10:14:58	69.3	69.3	59.2	11:10:27	59.6	59.2	59.2	11:19:27	58.3
51.9	10:46:38		51.9	51.9	69.2	10:14:59	69.2	69.2	56.3	11:10:30	59.6	56.3	56.3	11:19:30	58.3
51.6	10:46:39		51.6	51.6	69.3	10:15:00	69.3	69.3	50.4	11:10:33	59.6	50.4	50.4	11:19:33	58.3
51.2	10:46:40		51.2	51.2	68.8	10:15:01	68.8	68.8	54.1	11:10:36	59.6	54.1	54.1	11:19:36	58.3
50.7	10:46:41		50.7	50.7	68.9	10:15:02	68.9	68.9	59.2	11:10:39	59.6	59.2	59.2	11:19:39	58.3
50.9	10:46:42		50.9	50.9	68.8	10:15:03	68.8	68.8	57.5	11:10:42	59.6	57.5	57.5	11:19:42	58.3
50.9	10:46:43		50.9	50.9	68.6	10:15:04	68.6	68.6	59.3	11:10:45	59.6	59.3	59.3	11:19:45	58.3
50.9	10:46:44		50.9	50.9	67.7	10:15:05	67.7	67.7	56.1	11:10:48	59.6	56.1	56.1	11:19:48	58.3
51.0	10:46:45		51.0	51.0	69.2	10:15:06	69.2	69.2	60.2	11:10:51	59.6	60.2	60.2	11:19:51	58.3
51.4	10:46:46		51.4	51.4	68.0	10:15:07	68.0	68.0	57.8	11:10:54	59.6	57.8	57.8	11:19:54	58.3
52.3	10:46:47		52.3	52.3	67.8	10:15:08	67.8	67.8	58	11:10:57	59.6	58	58	11:19:57	58.3
54.4	10:46:48		54.4	54.4	66.2	10:15:09	66.2	66.2	58.9	11:11:00	59.6	58.9	58.9	11:20:00	58.3
57.7	10:46:49		57.7	57.7	63.8	10:15:10	63.8	63.8	62.7	11:11:03	59.6	62.7	62.7	11:20:03	58.3
58.4	10:46:50		58.4	58.4	61.9	10:15:11	61.9	61.9	62.2	11:11:06	59.6	62.2	62.2	11:20:06	58.3
57.3	10:46:51		57.3	57.3	60.2	10:15:12	60.2	60.2	58.5	11:11:09	59.6	58.5	58.5	11:20:09	58.3
54.9	10:46:52		54.9	54.9	58.9	10:15:13	58.9	58.9	61.4	11:11:12	59.6	61.4	61.4	11:20:12	58.3
52.8	10:46:53		52.8	52.8	56.6	10:15:14	56.6	56.6	58.9	11:11:15	59.6	58.9	58.9	11:20:15	58.3
51.5	10:46:54		51.5	51.5	61.5	10:15:15	61.5	61.5	61.8	11:11:18	59.6	61.8	61.8	11:20:18	58.3
50.7	10:46:55		50.7	50.7	67.1	10:15:16	67.1	67.1	59	11:11:21	59.6	59	59	11:20:21	58.3
50.2	10:46:56		50.2	50.2	72.5	10:15:17	72.5	72.5	60.2	11:11:24	59.6	60.2	60.2	11:20:24	58.3
50.0	10:46:57		50.0	50.0	72.8	10:15:18	72.8	72.8	60.2	11:11:27	59.6	60.2	60.2	11:20:27	58.3
50.1	10:46:58		50.1	50.1	74.5	10:15:19	74.5	74.5	63	11:11:30	59.6	63	63	11:20:30	58.3
51.0	10:46:59		51.0	51.0	73.4	10:15:20	73.4	73.4	60.5	11:11:33	59.6	60.5	60.5	11:20:33	58.3
51.1	10:47:00		51.1	51.1	71.8	10:15:21	71.8	71.8	62.1	11:11:36	59.6	62.1	62.1	11:20:36	58.3
50.2	10:47:01		50.2	50.2	70.0	10:15:22	70.0	70.0	60.3	11:11:39	59.6	60.3	60.3	11:20:39	58.3
50.5	10:47:02		50.5	50.5	67.7	10:15:23	67.7	67.7	62.4	11:11:42	59.6	62.4	62.4	11:20:42	58.3
50.6	10:47:03		50.6	50.6	66.0	10:15:24	66.0	66.0	60.3	11:11:45	59.6	60.3	60.3	11:20:45	58.3
51.8	10:47:04		51.8	51.8	64.3	10:15:25	64.3	64.3	58.7	11:11:48	59.6	58.7	58.7	11:20:48	58.3
54.7	10:47:05		54.7	54.7	63.3	10:15:26	63.3	63.3	59.4	11:11:51	59.6	59.4	59.4	11:20:51	58.3
53.5	10:47:06		53.5	53.5	65.1	10:15:27	65.1	65.1	57.8	11:11:54	59.6	57.8	57.8	11:20:54	58.3
53.0	10:47:07		53.0	53.0	66.1	10:15:28	66.1	66.1	56	11:11:57	59.6	56	56	11:20:57	58.3
51.9	10:47:08		51.9	51.9	64.8	10:15:29	64.8	64.8	57	11:12:00	59.6	57	57	11:21:00	58.3
50.8	10:47:09		50.8	50.8	63.3	10:15:30	63.3	63.3	61.6	11:12:03	59.6	61.6	61.6	11:21:03	58.3
50.1	10:47:10		50.1	50.1	61.6	10:15:31	61.6	61.6	60.7	11:12:06	59.6	60.7	60.7	11:21:06	58.3
49.7	10:47:11		49.7	49.7	60.3	10:15:32	60.3	60.3	62	11:12:09	59.6	62	62	11:21:09	58.3
49.7	10:47:12		49.7	49.7	60.7	10:15:33	60.7	60.7	59.9	11:12:12	59.6	59.9	59.9	11:21:12	

Site 1 - On Tree East Side of Faculty Ave			Site 2 - On Tennis Court South Side of Carson Ave			Site 3 - On Bus Stop Sign in front of Building D West of Clark			Site 4 - Light Post in front of Building J South of Harvey Way									
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL			
49.8	10:48:31		49.8	49.8	55.5	10:16:52	55.5	55.5	61.6	11:16:09	59.5	61.6	61.6	56.8	11:25:09	58.2	56.8	56.8
49.7	10:48:32		49.7	49.7	53.8	10:16:53	53.8	53.8	61.2	11:16:12	59.5	61.2	61.2	56.5	11:25:12	58.2	56.5	56.5
49.7	10:48:33		49.7	49.7	52.2	10:16:54	52.2	52.2	60.6	11:16:15	59.5	60.6	60.6	56.2	11:25:15	58.2	56.2	56.2
49.8	10:48:34		49.8	49.8	51.4	10:16:55	51.4	51.4	62.1	11:16:18	59.5	62.1	62.1	56.5	11:25:18	58.2	56.5	56.5
49.7	10:48:35		49.7	49.7	50.6	10:16:56	50.6	50.6	58.4	11:16:21	59.5	58.4	58.4	53.6	11:25:21	58.2	53.6	53.6
49.8	10:48:36		49.8	49.8	50.8	10:16:57	50.8	50.8	56.3	11:16:24	59.5	56.3	56.3	54	11:25:24	58.2	54	54
49.8	10:48:37		49.8	49.8	50.6	10:16:58	50.6	50.6	53.4	11:16:27	59.5	53.4	53.4	53.8	11:25:27	58.2	53.8	53.8
49.8	10:48:38		49.8	49.8	50.9	10:16:59	50.9	50.9	53.4	11:16:30	59.5	53.4	53.4	53.4	11:25:30	58.2	53.4	53.4
49.8	10:48:39		49.8	49.8	52.3	10:17:00	52.3	52.3	52.4	11:16:33	59.5	52.4	52.4	57.8	11:25:33	58.2	57.8	57.8
49.8	10:48:40		49.8	49.8	53.3	10:17:01	53.3	53.3	52.6	11:16:36	59.5	52.6	52.6	56.1	11:25:36	58.2	56.1	56.1
49.9	10:48:41		49.9	49.9	54.6	10:17:02	54.6	54.6	55.4	11:16:39	59.5	55.4	55.4	59	11:25:39	58.2	59	59
50.2	10:48:42		50.2	50.2	58.0	10:17:03	58.0	58.0	57	11:16:42	59.5	57	57	57	11:25:42	58.2	57	57
50.2	10:48:43		50.2	50.2	61.2	10:17:04	61.2	61.2	59.2	11:16:45	59.5	59.2	59.2	52.7	11:25:45	58.2	52.7	52.7
49.9	10:48:44		49.9	49.9	63.7	10:17:05	63.7	63.7	55.9	11:16:48	59.5	55.9	55.9	52.6	11:25:48	58.2	52.6	52.6
50.0	10:48:45		50.0	50.0	64.8	10:17:06	64.8	64.8	58.6	11:16:51	59.5	58.6	58.6	53.3	11:25:51	58.2	53.3	53.3
49.5	10:48:46		49.5	49.5	64.7	10:17:07	64.7	64.7	59.1	11:16:54	59.5	59.1	59.1	52.8	11:25:54	58.2	52.8	52.8
49.5	10:48:47		49.5	49.5	63.9	10:17:08	63.9	63.9	59.3	11:16:57	59.5	59.3	59.3	52.9	11:25:57	58.2	52.9	52.9
49.5	10:48:48		49.5	49.5	62.3	10:17:09	62.3	62.3	58.8	11:17:00	59.5	58.8	58.8	53.1	11:26:00	58.2	53.1	53.1
49.7	10:48:49		49.7	49.7	61.8	10:17:10	61.8	61.8	60.1	11:17:03	59.5	60.1	60.1	54.3	11:26:03	58.2	54.3	54.3
50.1	10:48:50		50.1	50.1	62.3	10:17:11	62.3	62.3	62	11:17:06	59.5	62	62	52	11:26:06	58.2	52	52
50.2	10:48:51		50.2	50.2	63.7	10:17:12	63.7	63.7	58.7	11:17:09	59.5	58.7	58.7	58	11:26:09	58.2	58	58
50.4	10:48:52		50.4	50.4	64.9	10:17:13	64.9	64.9	62.2	11:17:12	59.5	62.2	62.2	55.1	11:26:12	58.5	55.1	55.1
50.5	10:48:53		50.5	50.5	65.0	10:17:14	65.0	65.0	61.6	11:17:15	59.5	61.6	61.6	52.9	11:26:15	58.5	52.9	52.9
51.2	10:48:54		51.2	51.2	65.6	10:17:15	65.6	65.6	57.7	11:17:18	59.5	57.7	57.7	64	11:26:18	58.5	64	64
51.9	10:48:55		51.9	51.9	65.6	10:17:16	65.6	65.6	61.9	11:17:21	59.5	61.9	61.9	56.2	11:26:21	58.5	56.2	56.2
53.0	10:48:56		53.0	53.0	67.4	10:17:17	67.4	67.4	61.2	11:17:24	59.5	61.2	61.2	54.3	11:26:24	58.5	54.3	54.3
54.8	10:48:57		54.8	54.8	72.0	10:17:18	72.0	72.0	58.8	11:17:27	59.5	58.8	58.8	55.8	11:26:27	58.5	55.8	55.8
56.8	10:48:58		56.8	56.8	73.7	10:17:19	73.7	73.7	60.3	11:17:30	59.5	60.3	60.3	54.2	11:26:30	58.5	54.2	54.2
59.1	10:48:59		59.1	59.1	73.7	10:17:20	73.7	73.7	59.4	11:17:33	59.5	59.4	59.4	55.7	11:26:33	58.4	55.7	55.7
62.6	10:49:00		62.6	62.6	71.2	10:17:21	71.2	71.2	60.3	11:17:36	59.6	60.3	60.3	56	11:26:36	58.4	56	56
62.8	10:49:01		62.8	62.8	68.1	10:17:22	68.1	68.1	62.1	11:17:39	59.6	62.1	62.1	57.6	11:26:39	58.4	57.6	57.6
60.8	10:49:02		60.8	60.8	65.7	10:17:23	65.7	65.7	62.8	11:17:42	59.6	62.8	62.8	62.3	11:26:42	58.4	62.3	62.3
60.7	10:49:03		60.7	60.7	64.3	10:17:24	64.3	64.3	59.4	11:17:45	59.6	59.4	59.4	61	11:26:45	58.4	61	61
61.0	10:49:04		61.0	61.0	65.0	10:17:25	65.0	65.0	58.7	11:17:48	59.6	58.7	58.7	58.1	11:26:48	58.4	58.1	58.1
58.6	10:49:05		58.6	58.6	65.8	10:17:26	65.8	65.8	61.6	11:17:51	59.6	61.6	61.6	55.4	11:26:51	58.4	55.4	55.4
55.9	10:49:06		55.9	55.9	66.1	10:17:27	66.1	66.1	61	11:17:54	59.6	61	61	54.9	11:26:54	58.4	54.9	54.9
53.8	10:49:07		53.8	53.8	67.0	10:17:28	67.0	67.0	59.4	11:17:57	59.6	59.4	59.4	52.8	11:26:57	58.4	52.8	52.8
52.4	10:49:08		52.4	52.4	65.7	10:17:29	65.7	65.7	68.8	11:18:00	59.6	68.8	68.8	56.7	11:27:00	58.4	56.7	56.7
51.4	10:49:09		51.4	51.4	65.2	10:17:30	65.2	65.2	63.2	11:18:03	59.6	63.2	63.2	57.3	11:27:03	58.4	57.3	57.3
50.7	10:49:10		50.7	50.7	65.5	10:17:31	65.5	65.5	59.8	11:18:06	59.6	59.8	59.8	58	11:27:06	58.4	58	58
50.4	10:49:11		50.4	50.4	67.0	10:17:32	67.0	67.0	59.6	11:18:09	59.6	59.6	59.6	56.6	11:27:09	58.4	56.6	56.6
50.1	10:49:12		50.1	50.1	66.9	10:17:33	66.9	66.9	60.6	11:18:12	59.6	60.6	60.6	61.7	11:27:12	58.4	61.7	61.7
50.2	10:49:13		50.2	50.2	69.2	10:17:34	69.2	69.2	61.2	11:18:15	59.6	61.2	61.2	66.5	11:27:15	58.4	66.5	66.5
50.0	10:49:14		50.0	50.0	71.6	10:17:35	71.6	71.6	61.3	11:18:18	59.6	61.3	61.3	68.8	11:27:18	58.4	68.8	68.8
49.8	10:49:15		49.8	49.8	72.8	10:17:36	72.8	72.8	62.1	11:18:21	59.6	62.1	62.1	71.1	11:27:21	58.4	71.1	71.1
49.8	10:49:16		49.8	49.8	72.1	10:17:37	72.1	72.1	65.8	11:18:24	59.6	65.8	65.8	69.9	11:27:24	58.4	69.9	69.9
50.5	10:49:17		50.5	50.5	71.4	10:17:38	71.4	71.4	56.1	11:18:27	59.6	56.1	56.1	65.8	11:27:27	58.4	65.8	65.8
51.2	10:49:18		51.2	51.2	72.6	10:17:39	72.6	72.6	59.9	11:18:30	59.6	59.9	59.9	64	11:27:30	58.4	64	64
53.0	10:49:19		53.0	53.0	74.4	10:17:40	74.4	74.4	64.4	11:18:33	59.6	64.4	64.4	61.1	11:27:33	58.4	61.1	61.1
53.1	10:49:20		53.1	53.1	75.3	10:17:41	75.3	75.3	52.8	11:18:36	59.6	52.8	52.8	58.2	11:27:36	58.4	58.2	58.2
53.3	10:49:21		53.3	53.3	75.2	10:17:42	75.2	75.2	55.8	11:18:39	59.6	55.8	55.8	61.2	11:27:39	58.4	61.2	61.2
53.3	10:49:22		53.3	53.3	74.1	10:17:43	74.1	74.1	57.4	11:18:42	59.6	57.4	57.4	55.8	11:27:42	58.4	55.8	55.8
51.9	10:49:23		51.9	51.9	72.7	10:17:44	72.7	72.7	60.4	11:18:45	59.6	60.4	60.4	54.2	11:27:45	58.4	54.2	54.2
51.6	10:49:24		51.6	51.6	70.8	10:17:45	70.8	70.8	60.4	11:18:48	59.6	60.4	60.4	54.3	11:27:48	58.4	54.3	54.3
53.0	10:49:25		53.0	53.0	68.6	10:17:46	68.6	68.6	56.6	11:18:51	59.6	56.6	56.6	54.1	11:27:51	58.4	54.1	54.1
52.9	10:49:26		52.9	52.9	67.5	10:17:47	67.5	67.5	61.4	11:18:54	59.6	61.4	61.4	60.4	11:27:54	58.4	60.4	60.4
53.1	10:49:27		53.1	53.1	68.0	10:17:48	68.0	68.0	59.2	11:18:57	59.6	59.2	59.2	56.8	11:27:57	58.4	56.8	56.8
53.5	10:49:28		53.5	53.5	68.3	10:17:49	68.3	68.3	59.2	11:19:00	59.6	59.2	59.2	57.1	11:28:00	58.4	57.1	57.1
55.4	10:49:29		55.4	55.4	69.0	10:17:50	69.0	69.0	59.9	11:19:03	59.6	59.9	59.9	54.5	11:28:03	58.4	54.5	54.5
57.2	10:49:30		57.2	57.2	68.6	10:17:51	68.6	68.6	59.8	11:19:06	59.6	59.8	59.8	57.7	11:28:06	58.4	57.7	57.7
58.1	10:49:31		58.1	58.1	67.9	10:17:52	67.9	67.9	61	11:19:09	59.6	61	61	55.5	11:28:09	58.4	55.5	55.5
57.5	10:49:32		57.5	57.5	68.4	10:17:53	68.4	68.4	60.4	11:19:12	59.6	60.4	60.4	53.1	11:28:12	58.4	53.1	53.1
56.2	10:49:33		56.2	56.2	67.0	10:17:54	67.0	67.0	60.4	11:19:15	59.6	60.4	60.4	54.3	11:28:15	58.4	54.3	54.3
54.8	10:49:34		54.8	54.8	66.8	10:17:55	66.8	66.8	59	11:19:18	59.6	59	59	53.7	11:28:18	58.4	53.7	53.7
53.0	10:49:35		53.0	53.0	65.8	10:17:56	65.8	65.8	58.9	11:19:21	59.6	58.9	58.9	54.1	11:28:21	58.4	54.1	54.1
51.6	10:49:36	</																

Site 1 - On Tree East Side of Faculty Ave			Site 2 - On Tennis Court South Side of Carson Ave			Site 3 - On Bus Stop Sign in front of Building D West of Clark			Site 4 - Light Post in front of Building J South of Harvey Way								
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL		
60.4	10:51:05		60.4	60.4	49.8	10:19:27	49.8	49.8	53.9	11:23:51	53.9	53.9	59.4	11:32:51	60.8	59.4	59.4
58.7	10:51:06		58.7	58.7	49.9	10:19:27	49.9	49.9	53.1	11:23:54	53.1	53.1	59.3	11:32:54	60.8	59.3	59.3
56.7	10:51:07		56.7	56.7	50.4	10:19:28	50.4	50.4	52.9	11:24:00	52.9	52.9	58.8	11:33:00	60.8	58.8	58.8
54.6	10:51:08		54.6	54.6	51.1	10:19:29	51.1	51.1	52.8	11:24:00	52.8	52.8	58.8	11:33:00	60.8	58.8	58.8
53.1	10:51:09		53.1	53.1	51.8	10:19:30	51.8	51.8	56.8	11:24:03	56.8	56.8	59.1	11:33:03	60.8	59.1	59.1
52.0	10:51:10		52.0	52.0	52.7	10:19:31	52.7	52.7	58.6	11:24:06	58.6	58.6	58.6	11:33:06	60.8	58.6	58.6
51.5	10:51:11		51.5	51.5	54.4	10:19:32	54.4	54.4	57.2	11:24:09	57.2	57.2	57	11:33:09	60.8	57	57
51.8	10:51:12		51.8	51.8	56.0	10:19:33	56.0	56.0	54.2	11:24:12	54.2	54.2	54.2	11:33:12	60.8	54.2	54.2
52.8	10:51:13		52.8	52.8	58.7	10:19:34	58.7	58.7	58.5	11:24:15	58.5	58.5	54.5	11:33:15	60.8	54.5	54.5
54.3	10:51:14		54.3	54.3	64.5	10:19:35	64.5	64.5	53.4	11:24:18	53.4	53.4	54.9	11:33:18	60.8	54.9	54.9
56.5	10:51:15		56.5	56.5	69.7	10:19:36	69.7	69.7	54.8	11:24:21	54.8	54.8	62.9	11:33:21	60.8	62.9	62.9
59.2	10:51:16		59.2	59.2	72.1	10:19:37	72.1	72.1	54.7	11:24:24	54.7	54.7	54.7	11:33:24	60.8	54.7	54.7
59.0	10:51:17		59.0	59.0	72.5	10:19:38	72.5	72.5	58.3	11:24:27	58.3	58.3	54.5	11:33:27	60.8	54.5	54.5
56.8	10:51:18		56.8	56.8	71.5	10:19:39	71.5	71.5	61.7	11:24:30	61.7	61.7	54.8	11:33:30	60.8	54.8	54.8
54.9	10:51:19		54.9	54.9	70.0	10:19:40	70.0	70.0	57.3	11:24:33	57.3	57.3	57.2	11:33:33	60.8	57.2	57.2
53.3	10:51:20		53.3	53.3	70.7	10:19:41	70.7	70.7	58.1	11:24:36	58.1	58.1	58	11:33:36	60.8	58	58
52.5	10:51:21		52.5	52.5	71.5	10:19:42	71.5	71.5	56.1	11:24:39	56.1	56.1	59.7	11:33:39	60.8	59.7	59.7
52.5	10:51:22		52.5	52.5	71.8	10:19:43	71.8	71.8	57	11:24:42	57	57	59.4	11:33:42	60.8	59.4	59.4
53.4	10:51:23		53.4	53.4	71.6	10:19:44	71.6	71.6	58.7	11:24:45	58.7	58.7	58	11:33:45	60.8	58	58
56.3	10:51:24		56.3	56.3	70.5	10:19:45	70.5	70.5	55.6	11:24:48	55.6	55.6	59.3	11:33:48	60.8	59.3	59.3
58.9	10:51:25		58.9	58.9	69.2	10:19:46	69.2	69.2	56.3	11:24:51	56.3	56.3	61.2	11:33:51	60.8	61.2	61.2
58.0	10:51:26		58.0	58.0	68.2	10:19:47	68.2	68.2	51.8	11:24:54	51.8	51.8	63.1	11:33:54	60.8	63.1	63.1
55.4	10:51:27		55.4	55.4	68.5	10:19:48	68.5	68.5	52.7	11:24:57	52.7	52.7	62.5	11:33:57	60.8	62.5	62.5
53.0	10:51:28		53.0	53.0	69.9	10:19:49	69.9	69.9	55	11:25:00	55	55	56	11:34:00	60.8	56	56
51.3	10:51:29		51.3	51.3	71.6	10:19:50	71.6	71.6	60.8	11:25:03	60.8	60.8	53.6	11:34:03	60.8	53.6	53.6
50.4	10:51:30		50.4	50.4	72.6	10:19:51	72.6	72.6	58.4	11:25:06	58.4	58.4	53.2	11:34:06	60.8	53.2	53.2
50.3	10:51:31		50.3	50.3	72.8	10:19:52	72.8	72.8	60.3	11:25:09	60.3	60.3	52.9	11:34:09	60.8	52.9	52.9
49.8	10:51:32		49.8	49.8	73.3	10:19:53	73.3	73.3	63.4	11:25:12	63.4	63.4	53.1	11:34:12	60.8	53.1	53.1
49.5	10:51:33		49.5	49.5	73.5	10:19:54	73.5	73.5	62	11:25:15	62	62	53.6	11:34:15	60.8	53.6	53.6
49.4	10:51:34		49.4	49.4	73.0	10:19:55	73.0	73.0	62.1	11:25:18	62.1	62.1	53.7	11:34:18	60.8	53.7	53.7
49.3	10:51:35		49.3	49.3	72.8	10:19:56	72.8	72.8	63.1	11:25:21	63.1	63.1	54.1	11:34:21	60.8	54.1	54.1
49.2	10:51:36		49.2	49.2	72.4	10:19:57	72.4	72.4	62.5	11:25:24	62.5	62.5	53.8	11:34:24	60.8	53.8	53.8
49.1	10:51:37		49.1	49.1	71.9	10:19:58	71.9	71.9	62.2	11:25:27	62.2	62.2	54.2	11:34:27	60.8	54.2	54.2
49.1	10:51:38		49.1	49.1	72.2	10:19:59	72.2	72.2	60.8	11:25:30	60.8	60.8	54.8	11:34:30	60.8	54.8	54.8
49.1	10:51:39		49.1	49.1	73.3	10:20:00	73.3	73.3	66	11:25:33	66	66	55.1	11:34:33	60.8	55.1	55.1
49.3	10:51:40		49.3	49.3	73.9	10:20:01	73.9	73.9	60	11:25:36	60	60	60.2	11:34:36	60.8	60.2	60.2
49.4	10:51:41		49.4	49.4	73.6	10:20:02	73.6	73.6	52.4	11:25:39	52.4	52.4	59.5	11:34:39	60.8	59.5	59.5
49.3	10:51:42		49.3	49.3	72.7	10:20:03	72.7	72.7	65.9	11:25:42	65.9	65.9	54.5	11:34:42	60.8	54.5	54.5
49.4	10:51:43		49.4	49.4	71.8	10:20:04	71.8	71.8	62	11:25:45	62	62	55.3	11:34:45	60.8	55.3	55.3
49.6	10:51:44		49.6	49.6	70.6	10:20:05	70.6	70.6	59.4	11:25:48	59.4	59.4	54.8	11:34:48	60.8	54.8	54.8
49.4	10:51:45		49.4	49.4	69.1	10:20:06	69.1	69.1	60	11:25:51	60	60	56	11:34:51	60.8	56	56
49.4	10:51:46		49.4	49.4	68.0	10:20:07	68.0	68.0	58.8	11:25:54	58.8	58.8	58.4	11:34:54	60.8	58.4	58.4
49.6	10:51:47		49.6	49.6	67.1	10:20:08	67.1	67.1	65.8	11:25:57	65.8	65.8	57.1	11:34:57	60.8	57.1	57.1
49.8	10:51:48		49.8	49.8	66.7	10:20:09	66.7	66.7	60.7	11:26:00	60.7	60.7	57.8	11:35:00	60.8	57.8	57.8
50.2	10:51:49		50.2	50.2	65.8	10:20:10	65.8	65.8	61.1	11:26:03	61.1	61.1	56	11:35:03	60.8	56	56
50.5	10:51:50		50.5	50.5	66.6	10:20:11	66.6	66.6	55.5	11:26:06	55.5	55.5	55.1	11:35:06	60.8	55.1	55.1
50.3	10:51:51		50.3	50.3	66.2	10:20:12	66.2	66.2	52.9	11:26:09	52.9	52.9	57	11:35:09	60.8	57	57
50.3	10:51:52		50.3	50.3	65.8	10:20:13	65.8	65.8	57.4	11:26:12	57.4	57.4	60.5	11:35:12	60.8	60.5	60.5
50.5	10:51:53		50.5	50.5	65.9	10:20:14	65.9	65.9	54.3	11:26:15	54.3	54.3	58.5	11:35:15	60.8	58.5	58.5
51.0	10:51:54		51.0	51.0	64.9	10:20:15	64.9	64.9	55.2	11:26:18	55.2	55.2	54.7	11:35:18	60.8	54.7	54.7
51.3	10:51:55		51.3	51.3	63.8	10:20:16	63.8	63.8	56.5	11:26:21	56.5	56.5	55.4	11:35:21	60.8	55.4	55.4
51.3	10:51:56		51.3	51.3	62.3	10:20:17	62.3	62.3	60.3	11:26:24	60.3	60.3	60.8	11:35:24	60.8	60.8	60.8
52.0	10:51:57		52.0	52.0	60.3	10:20:18	60.3	60.3	62.4	11:26:27	62.4	62.4	53.4	11:35:27	60.8	53.4	53.4
52.0	10:51:58		52.0	52.0	59.5	10:20:19	59.5	59.5	56	11:26:30	56	56	55.6	11:35:30	60.8	55.6	55.6
51.6	10:51:59		51.6	51.6	59.7	10:20:20	59.7	59.7	54.2	11:26:33	54.2	54.2	57	11:35:33	60.8	57	57
51.4	10:52:00		51.4	51.4	59.8	10:20:21	59.8	59.8	59	11:26:36	59	59	63.2	11:35:36	60.8	63.2	63.2
51.6	10:52:01		51.6	51.6	58.6	10:20:22	58.6	58.6	56.9	11:26:39	56.9	56.9	57.2	11:35:39	60.8	57.2	57.2
51.7	10:52:02		51.7	51.7	58.1	10:20:23	58.1	58.1	58.4	11:26:42	58.4	58.4	58.4	11:35:42	60.8	58.4	58.4
51.8	10:52:03		51.8	51.8	56.6	10:20:24	56.6	56.6	64.3	11:26:45	64.3	64.3	54.9	11:35:45	61.0	54.9	54.9
51.8	10:52:04		51.8	51.8	55.1	10:20:25	55.1	55.1	62	11:26:48	62	62	57.5	11:35:48	61.0	57.5	57.5
51.9	10:52:05		51.9	51.9	53.6	10:20:26	53.6	53.6	61.2	11:26:51	61.2	61.2	56.7	11:35:51	61.0	56.7	56.7
52.4	10:52:06		52.4	52.4	53.4	10:20:27	53.4	53.4	62.4	11:26:54	62.4	62.4	56.9	11:35:54	61.0	56.9	56.9
52.4	10:52:07		52.4	52.4	54.2	10:20:28	54.2	54.2	60.9	11:26:57	60.9	60.9	57.9	11:35:57	61.0	57.9	57.9
52.2	10:52:08		52.2	52.2	52.3	10:20:29	52.3	52.3	60.2	11:27:00	60.2	60.2	61.5	11:36:00	61.0	61.5	61.5
52.3	10:52:09		52.3	52.3	51.6	10:20:30	51.6	51.6	61.3	11:27:03	61.3	61.3	57	11:36:03	61.0	57	57
52.4	10:52:10		52.4	52.4	51.5	10:20:31	51.5	51.5	61.7	11:27:06	61.7	61.7	61.7	11:36:06	61.0	61.7	61.7
52.6	10:52:11		52.6	52.6	54.2	10:20:32	54.2	54.2	64.3	11:27:09	64.3	64.3	64.5	11:36:09	61.0	64.5	64.5
52.7	10:52:12		52.7	52.7	61.4	10:20:33	61.4	61.4	60.6	11:27:12	60.6	60.6	63.8	11:36:12	61.0	63.8	63.8
53.3	10:52:13		53.3	53.3	61.4	10:20:34	61.4	61.4	62.4	11:2							

Site 1 - On Tree East Side of Faculty Ave				Site 2 - On Tennis Court South Side of Carson Ave				Site 3 - On Bus Stop Sign in front of Building D West of Clark				Site 4 - Light Post in front of Building J South of Harvey Way			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
52.6	10:53:39		52.6	65.9	10:22:00		65.9	61.4	11:31:33		59.8	61.4	59	11:40:33	59
52.2	10:53:40		52.2	64.8	10:22:01		64.8	60.6	11:31:36		59.8	60.6	60.4	11:40:36	60.4
51.6	10:53:41		51.6	62.4	10:22:02		62.4	60.2	11:31:39		59.8	60.2	61.3	11:40:39	61.3
51.6	10:53:42		51.6	59.4	10:22:03		59.4	63.3	11:31:42		59.8	63.3	61.3	11:40:42	61.3
53.0	10:53:43		53.0	56.6	10:22:04		56.6	60.7	11:31:45		59.8	60.7	60.7	11:40:45	60.7
53.9	10:53:44		53.9	54.2	10:22:05		54.2	54.2	11:31:48		59.8	54.2	57.5	11:40:48	57.5
53.6	10:53:45		53.6	52.9	10:22:06		52.9	52.9	11:31:51		59.8	52.9	57.7	11:40:51	57.7
53.6	10:53:46		53.6	52.8	10:22:07		52.8	60.3	11:31:54		59.8	60.3	60.3	11:40:54	60.3
53.7	10:53:47		53.7	52.6	10:22:08		52.6	56	11:31:57		59.8	56	56	11:40:57	56
52.7	10:53:48		52.7	52.0	10:22:09		52.0	55.8	11:32:00		59.8	55.8	55.8	11:41:00	55.8
53.5	10:53:49		53.5	52.4	10:22:10		52.4	56.2	11:32:03		59.8	56.2	56.2	11:41:03	56.2
57.1	10:53:51		57.1	57.4	10:22:11		57.4	52.7	11:32:06		59.8	52.7	52.7	11:41:06	52.7
56.1	10:53:51		56.1	56.5	10:22:12		56.5	59.4	11:32:09		59.8	59.4	59.4	11:41:09	59.4
54.6	10:53:52		54.6	61.5	10:22:13		61.5	56.1	11:32:12		59.8	56.1	56.1	11:41:12	56.1
54.1	10:53:53		54.1	64.5	10:22:14		64.5	64.5	11:32:15		59.8	64.5	58	11:41:15	58
53.7	10:53:54		53.7	66.0	10:22:15		66.0	66.0	11:32:18		59.8	66.0	57.4	11:41:18	57.4
53.4	10:53:55		53.4	66.9	10:22:16		66.9	66.9	11:32:21		59.8	66.9	57.9	11:41:21	57.9
53.0	10:53:56		53.0	65.8	10:22:17		65.8	58.3	11:32:24		59.8	58.3	58.3	11:41:24	58.3
53.2	10:53:57		53.2	67.4	10:22:18		67.4	67.4	11:32:27		59.8	67.4	57.7	11:41:27	57.7
54.2	10:53:58		54.2	69.0	10:22:19		69.0	69.0	11:32:30		59.8	69.0	53.7	11:41:30	53.7
55.7	10:53:59		55.7	69.8	10:22:20		69.8	69.8	11:32:33		59.8	69.8	52.3	11:41:33	52.3
56.0	10:54:00		56.0	68.3	10:22:21		68.3	68.3	11:32:36		59.8	68.3	55.6	11:41:36	55.6
56.2	10:54:01		56.2	66.5	10:22:22		66.5	66.5	11:32:39		59.8	66.5	57.7	11:41:39	57.7
55.8	10:54:02		55.8	66.5	10:22:23		66.5	66.5	11:32:42		59.8	66.5	56.5	11:41:42	56.5
55.6	10:54:03		55.6	66.1	10:22:24		66.1	66.1	11:32:45		59.8	66.1	60.1	11:41:45	60.1
57.4	10:54:04		57.4	67.6	10:22:25		67.6	67.6	11:32:48		59.8	67.6	59.6	11:41:48	59.6
59.2	10:54:05		59.2	69.2	10:22:26		69.2	69.2	11:32:51		59.8	69.2	60.0	11:41:51	60.0
58.9	10:54:06		58.9	70.9	10:22:27		70.9	70.9	11:32:54		59.8	70.9	56	11:41:54	56
57.4	10:54:07		57.4	71.9	10:22:28		71.9	71.9	11:32:57		59.8	71.9	58.6	11:41:57	58.6
54.9	10:54:08		54.9	72.2	10:22:29		72.2	72.2	11:33:00		59.8	72.2	61	11:42:00	61
52.9	10:54:09		52.9	71.9	10:22:30		71.9	71.9	11:33:03		59.8	71.9	58.5	11:42:03	58.5
52.1	10:54:10		52.1	72.4	10:22:31		72.4	72.4	11:33:06		59.8	72.4	60.9	11:42:06	60.9
51.9	10:54:11		51.9	71.8	10:22:32		71.8	71.8	11:33:09		59.8	71.8	59	11:42:09	59
51.9	10:54:12		51.9	70.9	10:22:33		70.9	70.9	11:33:12		59.8	70.9	59.6	11:42:12	59.6
52.3	10:54:13		52.3	69.5	10:22:34		69.5	69.5	11:33:15		59.8	69.5	62.6	11:42:15	62.6
52.2	10:54:14		52.2	68.1	10:22:35		68.1	68.1	11:33:18		59.8	68.1	63	11:42:18	63
51.9	10:54:15		51.9	66.9	10:22:36		66.9	66.9	11:33:21		59.8	66.9	62.3	11:42:21	62.3
52.4	10:54:16		52.4	66.2	10:22:37		66.2	66.2	11:33:24		60.0	66.2	64.6	11:42:24	64.6
52.7	10:54:17		52.7	66.7	10:22:38		66.7	66.7	11:33:27		60.0	66.7	66.7	11:42:27	66.7
54.3	10:54:18		54.3	66.2	10:22:39		66.2	66.2	11:33:30		60.0	66.2	65.3	11:42:30	65.3
55.0	10:54:19		55.0	66.0	10:22:40		66.0	66.0	11:33:33		60.0	66.0	66.4	11:42:33	66.4
56.8	10:54:20		56.8	65.2	10:22:41		65.2	65.2	11:33:36		60.0	65.2	56.6	11:42:36	56.6
57.5	10:54:21		57.5	64.9	10:22:42		64.9	64.9	11:33:39		59.9	64.9	59	11:42:39	59
59.0	10:54:22		59.0	64.1	10:22:43		64.1	64.1	11:33:42		59.9	64.1	56.5	11:42:42	56.5
59.6	10:54:23		59.6	65.9	10:22:44		65.9	65.9	11:33:45		59.9	65.9	59.7	11:42:45	59.7
60.6	10:54:24		60.6	62.2	10:22:45		62.2	62.2	11:33:48		59.9	62.2	59.7	11:42:48	59.7
60.5	10:54:25		60.5	61.2	10:22:46		61.2	61.2	11:33:51		59.9	61.2	58	11:42:51	58
59.9	10:54:26		59.9	59.7	10:22:47		59.7	59.7	11:33:54		59.9	59.7	58.4	11:42:54	58.4
59.6	10:54:27		59.6	59.6	10:22:48		59.6	59.6	11:33:57		59.9	59.6	57.5	11:42:57	57.5
59.9	10:54:28		59.9	55.6	10:22:49		55.6	55.6	11:34:00		59.9	55.6	57.6	11:43:00	57.6
60.4	10:54:29		60.4	53.9	10:22:50		53.9	53.9	11:34:03		60.0	53.9	57.9	11:43:03	57.9
62.3	10:54:30		62.3	62.3	10:22:51		62.3	62.3	11:34:06		60.0	62.3	59.9	11:43:06	59.9
64.3	10:54:31		64.3	51.2	10:22:52		51.2	51.2	11:34:09		60.0	51.2	56.2	11:43:09	56.2
66.1	10:54:32		66.1	50.3	10:22:53		50.3	50.3	11:34:12		60.0	50.3	57.4	11:43:12	57.4
66.7	10:54:33		66.7	49.3	10:22:54		49.3	49.3	11:34:15		60.0	49.3	56.5	11:43:15	56.5
68.0	10:54:34		68.0	48.6	10:22:55		48.6	48.6	11:34:18		60.0	48.6	55.6	11:43:18	55.6
69.5	10:54:35		69.5	48.1	10:22:56		48.1	48.1	11:34:21		60.0	48.1	52.9	11:43:21	52.9
69.6	10:54:36		69.6	48.2	10:22:57		48.2	48.2	11:34:24		60.0	48.2	49.2	11:43:24	49.2
69.0	10:54:37		69.0	48.4	10:22:58		48.4	48.4	11:34:27		60.0	48.4	55.2	11:43:27	55.2
67.4	10:54:38		67.4	49.2	10:22:59		49.2	49.2	11:34:30		60.0	49.2	57	11:43:30	57
65.5	10:54:39		65.5	49.2	10:23:00		49.2	49.2	11:34:33		60.0	49.2	54.8	11:43:33	54.8
63.7	10:54:40		63.7	49.2	10:23:01		49.2	49.2	11:34:36		60.0	49.2	54.6	11:43:36	54.6
62.5	10:54:41		62.5	49.0	10:23:02		49.0	49.0	11:34:39		59.9	49.0	51.6	11:43:39	51.6
61.0	10:54:42		61.0	49.3	10:23:03		49.3	49.3	11:34:42		59.9	49.3	54.3	11:43:42	54.3
60.4	10:54:43		60.4	49.5	10:23:04		49.5	49.5	11:34:45		59.9	49.5	58.8	11:43:45	58.8
61.4	10:54:44		61.4	48.8	10:23:05		48.8	48.8	11:34:48		59.9	48.8	59.2	11:43:48	59.2
59.7	10:54:45		59.7	48.4	10:23:06		48.4	48.4	11:34:51		60.0	48.4	56.5	11:43:51	56.5
57.6	10:54:46		57.6	48.1	10:23:07		48.1	48.1	11:34:54		60.0	48.1	57.7	11:43:54	57.7
56.8	10:54:47		56.8	47.9	10:23:08		47.9	47.9	11:34:57		60.0	47.9	57	11:43:57	57
55.7	10:54:48		55.7	47.8	10:23:09		47.8	47.8	11:35:00		60.0	47.8	56.9	11:44:00	56.9
55.1	10:54:49		55.1	47.8	10:23:10		47.8	47.8	11:35:03		60.0	47.8	57.2	11:44:03	57.2
54.7	10:54:50		54.7	47.9	10:23:11		47.9	47.9	11:35:06		60.0	47.9	59	11:44:06	59
54.5	10:54:51		54.5	48.5	10:23:12		48.5	48.5	11:35:09		60.0	48.5	59.2	11:44:09	59.2
54.6	10:54:52		54.6	48.7	10:23:13		48.7	48.7	11:35:12		60.0	48.7	54.7	11:44:12	54.7
56.0	10:54:53		56.0	48.8	10:23:14		48.8	48.8	11:35:15		60.0	48.8	60.7	11:44:15	60.7
58.1	10:54:54		58.1	48.8	10:23:15		48.8	48.8	11:35:18		60.0	48.8	61.4	11:44:18	61.4
59.0	10:54:55		59.0	49.4	10:23:16		49.4	49.4	11:35:21		60.0	49.4	56.7	11:44:21	56.7
58.9	10:54:56		58.9	50.3	10:23:17		50.3	50.3	11:35:24		60.0	50.3	56.4	11:44:24	56.4
57.5	10:54:57		57.5	50.0	10:23:18		50.0	50.0	11:35:27		60.0	50.0	59.1	11:44:27	59.1
56.3	10:54:58		56.3	48.8	10:23:19		48.8	48.8	11:35:30		60.0	48.8	59.8	11:44:30	59.8
55.7	10:54:59		55.7	48.1	10:23:20		48.1	48.1	11:35:33		60.0	48.1	62	11:44:33	62

Site 1 - On Tree East Side of Faculty Ave				Site 2 - On Tennis Court South Side of Carson Ave				Site 3 - On Bus Stop Sign in front of Building D West of Clard				Site 4 - Light Post in front of Building J South of Harvey Way						
SPL	Time	Leq (1 hr Avg.)	Ldn CNEL	SPL	Time	Leq (1 hr Avg.)	Ldn CNEL	SPL	Time	Leq (1 hr Avg.)	Ldn CNEL	SPL	Time	Leq (1 hr Avg.)	Ldn CNEL			
54.7	10:56:13	56.4	54.7	68.7	10:24:37	67.5	68.7	68.7	64.1	11:39:15	60.1	64.1	64.1	57.8	11:48:15	61.3	57.8	57.8
54.8	10:56:14	56.4	54.8	68.8	10:24:38	67.5	68.8	68.8	63.8	11:39:18	60.1	63.8	63.8	58.3	11:48:18	61.3	58.3	58.3
56.3	10:56:15	56.3	56.3	69.3	10:24:39	67.5	69.3	69.3	62.6	11:39:21	60.1	62.6	62.6	58.8	11:48:21	61.3	58.8	58.8
57.2	10:56:16	56.4	57.2	69.6	10:24:37	67.5	69.6	69.6	62.3	11:39:24	60.1	62.3	62.3	59.2	11:48:24	61.3	59.2	59.2
56.6	10:56:17	56.6	56.6	67.7	10:24:38	67.5	67.7	67.7	60.6	11:39:27	60.1	60.6	60.6	53.4	11:48:27	61.3	53.4	53.4
57.3	10:56:18	56.4	57.3	57.3	10:24:39	67.5	57.3	57.3	62.4	11:39:30	60.1	62.4	62.4	55	11:48:30	61.3	55	55
56.4	10:56:19	56.4	56.4	56.4	10:24:40	67.5	56.4	56.4	61	11:39:33	60.1	61	61	55.9	11:48:33	61.3	55.9	55.9
55.9	10:56:20	56.4	55.9	49.9	10:24:41	67.5	49.9	49.9	61.6	11:39:36	60.1	61.6	61.6	54.6	11:48:36	61.3	54.6	54.6
55.6	10:56:21	56.4	55.6	48.5	10:24:42	67.5	48.5	48.5	56.5	11:39:39	60.1	56.5	56.5	54.9	11:48:39	61.4	54.9	54.9
55.0	10:56:22	56.4	55.0	47.6	10:24:43	67.5	47.6	47.6	60.3	11:39:42	60.1	60.3	60.3	57.3	11:48:42	61.4	57.3	57.3
54.8	10:56:23	56.4	54.8	47.5	10:24:44	67.5	47.5	47.5	59.2	11:39:45	60.1	59.2	59.2	54.3	11:48:45	61.4	54.3	54.3
55.1	10:56:24	56.4	55.1	48.1	10:24:45	67.5	48.1	48.1	58	11:39:48	60.1	58	58	58.5	11:48:48	61.4	58.5	58.5
55.3	10:56:25	56.4	55.3	48.5	10:24:46	67.5	48.5	48.5	59.3	11:39:51	60.1	59.3	59.3	58.5	11:48:51	61.4	58.5	58.5
56.0	10:56:26	56.3	56.0	49.0	10:24:47	67.5	49.0	49.0	58.9	11:39:54	60.1	58.9	58.9	54	11:48:54	61.4	54	54
57.4	10:56:27	56.3	57.4	49.8	10:24:48	67.5	49.8	49.8	58.3	11:39:57	60.1	58.3	58.3	54	11:48:57	61.4	54	54
57.8	10:56:28	56.3	57.8	50.7	10:24:49	67.5	50.7	50.7	60.3	11:40:00	60.1	60.3	60.3	53.8	11:49:00	61.4	53.8	53.8
58.4	10:56:29	56.3	58.4	51.9	10:24:50	67.5	51.9	51.9	56.2	11:40:03	60.1	56.2	56.2	54.5	11:49:03	61.4	54.5	54.5
57.9	10:56:30	56.3	57.9	53.7	10:24:51	67.5	53.7	53.7	56.9	11:40:06	60.1	56.9	56.9	54.7	11:49:06	61.4	54.7	54.7
59.9	10:56:31	56.3	59.9	55.7	10:24:52	67.5	55.7	55.7	53	11:40:09	60.1	53	53	54.3	11:49:09	61.4	54.3	54.3
59.2	10:56:32	56.3	59.2	57.9	10:24:53	67.5	57.9	57.9	52.6	11:40:12	60.1	52.6	52.6	54.9	11:49:12	61.4	54.9	54.9
57.9	10:56:33	56.3	57.9	61.2	10:24:54	67.5	61.2	61.2	54.1	11:40:15	60.1	54.1	54.1	58.2	11:49:15	61.4	58.2	58.2
56.6	10:56:34	56.3	56.6	61.2	10:24:55	67.5	61.2	61.2	54.2	11:40:18	60.1	54.2	54.2	59.1	11:49:18	61.4	59.1	59.1
56.8	10:56:35	56.3	56.8	60.1	10:24:56	67.5	60.1	60.1	56.3	11:40:21	60.1	56.3	56.3	61.2	11:49:21	61.4	61.2	61.2
57.7	10:56:36	56.3	57.7	58.6	10:24:57	67.5	58.6	58.6	58.8	11:40:24	60.1	58.8	58.8	61.6	11:49:24	61.4	61.6	61.6
57.4	10:56:37	56.3	57.4	56.6	10:24:58	67.5	56.6	56.6	58.4	11:40:27	60.1	58.4	58.4	60.4	11:49:27	61.5	60.4	60.4
57.3	10:56:38	56.3	57.3	55.1	10:24:59	67.5	55.1	55.1	55.7	11:40:30	60.1	55.7	55.7	63.5	11:49:30	61.5	63.5	63.5
58.0	10:56:39	56.3	58.0	55.3	10:25:00	67.5	55.3	55.3	54.5	11:40:33	60.1	54.5	54.5	63.3	11:49:33	61.5	63.3	63.3
60.3	10:56:40	56.3	60.3	60.3	10:25:01	67.5	60.3	60.3	54.3	11:40:36	60.1	54.3	54.3	65.5	11:49:36	61.5	65.5	65.5
60.6	10:56:41	56.3	60.6	57.4	10:25:02	67.5	57.4	57.4	54	11:40:39	60.1	54	54	60.3	11:49:39	61.5	60.3	60.3
59.8	10:56:42	56.3	59.8	57.4	10:25:03	67.5	57.4	57.4	56.1	11:40:42	60.1	56.1	56.1	58.5	11:49:42	61.5	58.5	58.5
62.3	10:56:43	56.3	62.3	56.8	10:25:04	67.5	56.8	56.8	53.6	11:40:45	60.1	53.6	53.6	56.1	11:49:45	61.5	56.1	56.1
62.9	10:56:44	56.3	62.9	56.6	10:25:05	67.5	56.6	56.6	54.9	11:40:48	60.1	54.9	54.9	55	11:49:48	61.5	55	55
60.3	10:56:45	56.3	60.3	53.7	10:25:06	67.5	53.7	53.7	56.5	11:40:51	60.1	56.5	56.5	57.5	11:49:51	61.5	57.5	57.5
59.4	10:56:46	56.3	59.4	55.9	10:25:07	67.5	55.9	55.9	56.5	11:40:54	60.1	56.5	56.5	55.2	11:49:54	61.5	55.2	55.2
60.5	10:56:47	56.3	60.5	55.5	10:25:08	67.5	55.5	55.5	58.5	11:40:57	60.1	58.5	58.5	54.5	11:49:57	61.5	54.5	54.5
59.3	10:56:48	56.3	59.3	57.7	10:25:09	67.5	57.7	57.7	58.7	11:41:00	60.2	58.7	58.7	58.7	11:50:00	61.5	58.7	58.7
58.5	10:56:49	56.2	58.5	59.5	10:25:10	67.5	59.5	59.5	57	11:41:03	60.2	57	57	54	11:50:03	61.5	54	54
59.9	10:56:50	56.2	59.9	57.8	10:25:11	67.5	57.8	57.8	55.5	11:41:06	60.2	55.5	55.5	64.9	11:50:06	61.5	64.9	64.9
60.0	10:56:51	56.2	60.0	56.3	10:25:12	67.5	56.3	56.3	58	11:41:09	60.2	58	58	61.2	11:50:09	61.5	61.2	61.2
59.8	10:56:52	56.2	59.8	54.9	10:25:13	67.5	54.9	54.9	58.6	11:41:12	60.2	58.6	58.6	59.3	11:50:12	61.5	59.3	59.3
58.5	10:56:53	56.2	58.5	53.7	10:25:14	67.5	53.7	53.7	56.6	11:41:15	60.2	56.6	56.6	57.5	11:50:15	61.5	57.5	57.5
56.7	10:56:54	56.3	56.7	51.9	10:25:15	67.5	51.9	51.9	59.6	11:41:18	60.2	59.6	59.6	59.6	11:50:18	61.5	59.6	59.6
61.1	10:56:55	56.3	61.1	50.5	10:25:16	67.5	50.5	50.5	64.4	11:41:21	60.2	64.4	64.4	55.1	11:50:21	61.5	55.1	55.1
63.6	10:56:56	56.3	63.6	49.8	10:25:17	67.6	49.8	49.8	61	11:41:24	60.2	61	61	56.2	11:50:24	61.5	56.2	56.2
60.8	10:56:57	56.2	60.8	49.6	10:25:18	67.6	49.6	49.6	58.8	11:41:27	60.2	58.8	58.8	56.2	11:50:27	61.5	56.2	56.2
61.3	10:56:58	56.2	61.3	49.9	10:25:19	67.6	49.9	49.9	60	11:41:30	60.2	60	60	57.7	11:50:30	61.5	57.7	57.7
60.8	10:56:59	56.2	60.8	49.9	10:25:20	67.6	49.9	49.9	57.6	11:41:33	60.2	57.6	57.6	58.1	11:50:33	61.5	58.1	58.1
58.6	10:57:00	56.2	58.6	50.6	10:25:21	67.6	50.6	50.6	54.6	11:41:36	60.2	54.6	54.6	68.2	11:50:36	61.5	68.2	68.2
58.1	10:57:01	56.2	58.1	51.1	10:25:22	67.6	51.1	51.1	51.1	11:41:39	60.2	51.1	51.1	61.2	11:50:39	61.5	61.2	61.2
56.6	10:57:02	56.2	56.6	52.2	10:25:23	67.6	52.2	52.2	57.5	11:41:42	60.2	57.5	57.5	61	11:50:42	61.5	61	61
55.6	10:57:03	56.2	55.6	53.1	10:25:24	67.6	53.1	53.1	56.6	11:41:45	60.2	56.6	56.6	56.1	11:50:45	61.5	56.1	56.1
55.1	10:57:04	56.2	55.1	54.0	10:25:25	67.6	54.0	54.0	57.7	11:41:48	60.2	57.7	57.7	56.5	11:50:48	61.5	56.5	56.5
55.9	10:57:05	56.2	55.9	55.9	10:25:26	67.6	55.9	55.9	58.2	11:41:51	60.2	58.2	58.2	55.5	11:50:51	61.5	55.5	55.5
56.9	10:57:06	56.2	56.9	58.5	10:25:27	67.6	58.5	58.5	58.5	11:41:54	60.2	58.5	58.5	64.7	11:50:54	61.5	64.7	64.7
57.9	10:57:07	56.2	57.9	62.1	10:25:28	67.6	62.1	62.1	54.3	11:41:57	60.2	54.3	54.3	58.2	11:50:57	61.5	58.2	58.2
60.1	10:57:08	56.2	60.1	61.1	10:25:29	67.6	61.1	61.1	56.4	11:42:00	60.2	56.4	56.4	54.5	11:51:00	61.5	54.5	54.5
63.6	10:57:09	56.2	63.6	63.6	10:25:30	67.6	63.6	63.6	60	11:42:03	60.2	60	60	54.7	11:51:03	61.5	54.7	54.7
60.3	10:57:10	56.2	60.3	64.0	10:25:31	67.6	64.0	64.0	60.5	11:42:06	60.2	60.5	60.5	61.5	11:51:06	61.5	61.5	61.5
63.2	10:57:11	56.2	63.2	63.7	10:25:32	67.6	63.7	63.7	57	11:42:09	60.1	57	57	54.9	11:51:09	61.5	54.9	54.9
61.1	10:57:12	56.2	61.1	62.2	10:25:33	67.6	62.2	62.2	55.7	11:42:12	60.1	55.7	55.7	57.6	11:51:12	61.5	57.6	57.6
59.3	10:57:13	56.2	59.3	60.2	10:25:34	67.6	60.2	60.2	52.4	11:42:15	60.1	52.4	52.4	57.7	11:51:15	61.5	57.7	57.7
60.5	10:57:14	56.2	60.5	57.7	10:25:35	67.6	57.7	57.7	52.7	11:42:18	60.1	52.7	52.7	51.1	11:51:18	61.5	51.1	51.1
61.3	10:57:15	56.2	61.3	55.7	10:25:36	67.6	55.7	55.7	52.2	11:42:21	60.1	52.2	52.2	59.2	11:51:21	61.5	59.2	59.2
64.2	10:57:16	56.2	64.2	55.1	10:25:37	67.6	55.1	55.1										

**Roadway Construction Noise Model (RCNM),Version 1.1**

Report date: 4/13/2018  
 Case Description: LAC 2041 Facilities Master Plan - Demolition

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on West Side	Residential	55.5	55.5	55.5

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	160	0
Dozer	No	40		81.7	210	0
Dozer	No	40		81.7	260	0
Excavator	No	40		80.7	310	0
Excavator	No	40		80.7	360	0
Excavator	No	40		80.7	410	0

Equipment	Results						
	Calculated (dBA)			Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	
Concrete Saw	79.5	72.5	N/A	N/A	N/A	N/A	N/A
Dozer	69.2	65.2	N/A	N/A	N/A	N/A	N/A
Dozer	67.3	63.4	N/A	N/A	N/A	N/A	N/A
Excavator	64.9	60.9	N/A	N/A	N/A	N/A	N/A
Excavator	63.6	59.6	N/A	N/A	N/A	N/A	N/A
Excavator	62.4	58.5	N/A	N/A	N/A	N/A	N/A
<b>Total</b>	<b>80</b>	<b>74</b>	N/A	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Sid Residential		67	67	66.8

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	135	0
Dozer	No	40		81.7	185	0
Dozer	No	40.0		81.7	235	0
Excavator	No	40.0		80.7	285	0
Excavator	No	40.0		80.7	335	0
Excavator	No	40		80.7	385	0

Equipment	Calculated (dBA)			Results		
	*Lmax	Leq	Day Lmax	Noise Limits (dBA)		
				Leq	Lmax	Leq
Concrete Saw	81.00	74.00	N/A	N/A	N/A	N/A
Dozer	70.30	66.30	N/A	N/A	N/A	N/A
Dozer	68.20	64.20	N/A	N/A	N/A	N/A
Excavator	65.60	61.60	N/A	N/A	N/A	N/A
Excavator	64.20	60.20	N/A	N/A	N/A	N/A
Excavator	63.00	59.00	N/A	N/A	N/A	N/A
<b>Total</b>	<b>81</b>	<b>76</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on East Side	Residential	60	60	59.5

Description	Impact Device	Usage(%)	Equipment			Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	
Concrete Saw	No	20	89.6	260	0	
Dozer	No	40	81.7	310	0	
Dozer	No	40	81.7	360	0	
Excavator	No	40	80.7	410	0	
Excavator	No	40	80.7	460	0	
Excavator	No	40	80.7	510	0	

Equipment	Calculated (dBA)			Results			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Day		Evening			
				Leq	Lmax	Leq	Lmax		
Concrete Saw	75.3	68.3	N/A	N/A	N/A	N/A	N/A		
Dozer	65.8	61.8	N/A	N/A	N/A	N/A	N/A		
Dozer	64.5	60.5	N/A	N/A	N/A	N/A	N/A		
Excavator	62.4	58.5	N/A	N/A	N/A	N/A	N/A		
Excavator	61.4	57.5	N/A	N/A	N/A	N/A	N/A		
Excavator	60.5	56.6	N/A	N/A	N/A	N/A	N/A		
<b>Total</b>	<b>75</b>	<b>70</b>	N/A	N/A	N/A	N/A	N/A		

\*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Sid Residential		57	57	57.4

Description	Impact Device	Usage(%)	Equipment			Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	
Concrete Saw	No	20		89.6	230	0
Dozer	No	40		81.7	280	0
Dozer	No	40		81.7	330	0
Excavator	No	40		80.7	380	0
Excavator	No	40		80.7	430	0
Excavator	No	40		80.7	480	0

Equipment	Calculated (dBA)			Results		
	*Lmax	Leq	Day Lmax	Noise Limits (dBA)		
				Leq	Lmax	Leq
Concrete Saw	76.3	69.3	N/A	N/A	N/A	N/A
Dozer	66.7	62.7	N/A	N/A	N/A	N/A
Dozer	65.3	61.3	N/A	N/A	N/A	N/A
Excavator	63.1	59.1	N/A	N/A	N/A	N/A
Excavator	62.0	58.0	N/A	N/A	N/A	N/A
Excavator	61.1	57.1	N/A	N/A	N/A	N/A
<b>Total</b>	<b>76</b>	<b>71</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

**Roadway Construction Noise Model (RCNM), Version 1.1**

Report date: 4/13/2018  
 Case Description: LAC 2041 Facilities Master Plan - Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on West Side	Residential	55.5	55.5	55.5

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Grader	No	40	85		160	0
Dozer	No	40		81.7	210	0
Excavator	No	40		80.7	260	0
Excavator	No	40		80.7	310	0
Scraper	No	40		83.6	360	0
Scraper	No	40		83.6	410	0
Tractor	No	40	84		460	0
Tractor	No	40	84		510	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Grader	74.9	70.9	N/A	N/A	N/A	N/A
Dozer	69.2	65.2	N/A	N/A	N/A	N/A
Excavator	66.4	62.4	N/A	N/A	N/A	N/A
Excavator	64.9	60.9	N/A	N/A	N/A	N/A
Scraper	66.4	62.5	N/A	N/A	N/A	N/A
Scraper	65.3	61.3	N/A	N/A	N/A	N/A
Tractor	64.7	60.7	N/A	N/A	N/A	N/A
Tractor	63.8	59.8	N/A	N/A	N/A	N/A
<b>Total</b>	<b>75</b>	<b>74</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Sid Residential		67	67	66.8

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)	
			Spec Lmax (dBA)	Actual Lmax (dBA)			
Grader	No	40		85	135	0	
Dozer	No	40.0			81.7	185	0
Excavator	No	40.0			80.7	235	0
Excavator	No	40.0			80.7	285	0
Scraper	No	40.0			83.6	335	0
Scraper	No	40			83.6	385	0
Tractor	No	40		84		435	0
Tractor	No	40		84		485	0

Equipment	Results						
	Calculated (dBA)			Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening		
Grader	76.4	72.4	N/A	N/A	N/A	N/A	N/A
Dozer	70.3	66.3	N/A	N/A	N/A	N/A	N/A
Excavator	67.3	63.3	N/A	N/A	N/A	N/A	N/A
Excavator	65.6	61.6	N/A	N/A	N/A	N/A	N/A
Scraper	67.1	63.1	N/A	N/A	N/A	N/A	N/A
Scraper	65.9	61.9	N/A	N/A	N/A	N/A	N/A
Tractor	65.2	61.2	N/A	N/A	N/A	N/A	N/A
Tractor	64.3	60.3	N/A	N/A	N/A	N/A	N/A
<b>Total</b>	<b>76</b>	<b>75</b>	N/A	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on East Side	Residential	59.5	59.5	59.5

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Grader	No	40	85		260	0
Dozer	No	40		81.7	310	0
Excavator	No	40		80.7	360	0
Excavator	No	40		80.7	410	0
Scraper	No	40		83.6	460	0
Scraper	No	40		83.6	510	0
Tractor	No	40	84		560	0
Tractor	No	40	84		610	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Grader	70.7	66.7	N/A	N/A	N/A	N/A
Dozer	65.8	61.8	N/A	N/A	N/A	N/A
Excavator	63.6	59.6	N/A	N/A	N/A	N/A
Excavator	62.4	58.5	N/A	N/A	N/A	N/A
Scraper	64.3	60.3	N/A	N/A	N/A	N/A
Scraper	63.4	59.4	N/A	N/A	N/A	N/A
Tractor	63.0	59.0	N/A	N/A	N/A	N/A
Tractor	62.3	58.3	N/A	N/A	N/A	N/A
<b>Total</b>	<b>71</b>	<b>71</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Sid	Residential	57	57	57.4

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Grader	No	40	85		230	0
Dozer	No	40		81.7	280	0
Excavator	No	40		80.7	330	0
Excavator	No	40		80.7	380	0
Scraper	No	40		83.6	430	0
Scraper	No	40		83.6	480	0
Tractor	No	40	84		530	0
Tractor	No	40	84		580	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Grader	71.7	67.8	N/A	N/A	N/A	N/A
Dozer	66.7	62.7	N/A	N/A	N/A	N/A
Excavator	64.3	60.3	N/A	N/A	N/A	N/A
Excavator	63.1	59.1	N/A	N/A	N/A	N/A
Scraper	64.9	60.9	N/A	N/A	N/A	N/A
Scraper	63.9	60.0	N/A	N/A	N/A	N/A
Tractor	63.5	59.5	N/A	N/A	N/A	N/A
Tractor	62.7	58.7	N/A	N/A	N/A	N/A
Total	<b>72</b>	<b>71</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

## Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 4/13/2018

Case Description: LAC 2041 Facilities Master Plan - Construction

### ---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on West Sic	Residential	55.5	55.5	55.5

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	160	0
Gradall	No	40		83.4	210	0
Gradall	No	40		83.4	260	0
Gradall	No	40		83.4	310	0
Generator	No	50		80.6	360	0
Welder / Torch	No	40		74	410	0
Tractor	No	40	84		460	0
Tractor	No	40	84		510	0
Tractor	No	40	84		560	0

### Results

Equipment	Calculated (dBA)			Noise Limits (dBA)			
	*Lmax	Leq	Day	Leq	Evening		
			Lmax		Lmax	Leq	
Crane	70.4	62.5	N/A	N/A	N/A	N/A	
Gradall	70.9	67.0	N/A	N/A	N/A	N/A	
Gradall	69.1	65.1	N/A	N/A	N/A	N/A	
Gradall	67.6	63.6	N/A	N/A	N/A	N/A	
Generator	63.5	60.5	N/A	N/A	N/A	N/A	
Welder / Torch	55.7	51.7	N/A	N/A	N/A	N/A	
Tractor	64.7	60.7	N/A	N/A	N/A	N/A	
Tractor	63.8	59.8	N/A	N/A	N/A	N/A	
Tractor	63.0	59.0	N/A	N/A	N/A	N/A	
<b>Total</b>	<b>71</b>	<b>72</b>	N/A	N/A	N/A	N/A	

\*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Six	Residential	66.8	66.8	66.8

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	135	0
Gradall	No	40		83.4	185	0
Gradall	No	40		83.4	235	0
Gradall	No	40		83.4	285	0
Generator	No	50		80.6	335	0
Welder / Torch	No	40		74	385	0
Tractor	No	40	84		435	0
Tractor	No	40	84		485	0
Tractor	No	40	84		535	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Crane	71.9	64.0	N/A	N/A	N/A	N/A
Gradall	72.0	68.1	N/A	N/A	N/A	N/A
Gradall	70.0	66.0	N/A	N/A	N/A	N/A
Gradall	68.3	64.3	N/A	N/A	N/A	N/A
Generator	64.1	61.1	N/A	N/A	N/A	N/A
Welder / Torch	56.3	52.3	N/A	N/A	N/A	N/A
Tractor	65.2	61.2	N/A	N/A	N/A	N/A
Tractor	64.3	60.3	N/A	N/A	N/A	N/A
Tractor	63.4	59.4	N/A	N/A	N/A	N/A
<b>Total</b>	<b>72</b>	<b>73</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on East Sid	Residential	60	60	59.5

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	230	0
Gradall	No	40		83.4	280	0
Gradall	No	40		83.4	330	0
Gradall	No	40		83.4	380	0
Generator	No	50		80.6	430	0
Welder / Torch	No	40		74	480	0
Tractor	No	40	84		530	0
Tractor	No	40	84		580	0
Tractor	No	40	84		630	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Crane	67.3	59.3	N/A	N/A	N/A	N/A
Gradall	68.4	64.5	N/A	N/A	N/A	N/A
Gradall	67.0	63.0	N/A	N/A	N/A	N/A
Gradall	65.8	61.8	N/A	N/A	N/A	N/A
Generator	61.9	58.9	N/A	N/A	N/A	N/A
Welder / Torch	54.4	50.4	N/A	N/A	N/A	N/A
Tractor	63.5	59.5	N/A	N/A	N/A	N/A
Tractor	62.7	58.7	N/A	N/A	N/A	N/A
Tractor	62.0	58.0	N/A	N/A	N/A	N/A
<b>Total</b>	<b>68</b>	<b>70</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Side	Residential	57	57	57.4

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	180	0
Gradall	No	40		83.4	230	0
Gradall	No	40		83.4	280	0
Gradall	No	40		83.4	330	0
Generator	No	50		80.6	380	0
Welder / Torch	No	40		74	430	0
Tractor	No	40	84		480	0
Tractor	No	40	84		530	0
Tractor	No	40	84		580	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Crane	69.4	61.5	N/A	N/A	N/A	N/A
Gradall	70.1	66.2	N/A	N/A	N/A	N/A
Gradall	68.4	64.5	N/A	N/A	N/A	N/A
Gradall	67.0	63.0	N/A	N/A	N/A	N/A
Generator	63.0	60.0	N/A	N/A	N/A	N/A
Welder / Torch	55.3	51.3	N/A	N/A	N/A	N/A
Tractor	64.4	60.4	N/A	N/A	N/A	N/A
Tractor	63.5	59.5	N/A	N/A	N/A	N/A
Tractor	62.7	58.7	N/A	N/A	N/A	N/A
<b>Total</b>	<b>70</b>	<b>72</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

**Roadway Construction Noise Model (RCNM), Version 1.1**

Report date: 4/13/2018  
 Case Description: LAC 2041 Facilities Master Plan - Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on West Side	Residential	55.5	55.5	55.5

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50	77.2	77.2	160	0
Paver	No	50	77.2	77.2	210	0
Paver	No	50	77.2	77.2	260	0
Paver	No	50	77.2	77.2	310	0
Roller	No	20	80	80	360	0
Roller	No	20	80	80	410	0

Equipment	Results				Noise Limits (dBA)		
	Calculated (dBA)		Day Lmax	Leq	Day Leq	Evening	
	*Lmax	Leq				Lmax	Leq
Paver	67.1	64.1	N/A	N/A	N/A	N/A	N/A
Paver	64.8	61.7	N/A	N/A	N/A	N/A	N/A
Paver	62.9	59.9	N/A	N/A	N/A	N/A	N/A
Paver	61.4	58.4	N/A	N/A	N/A	N/A	N/A
Roller	62.9	55.9	N/A	N/A	N/A	N/A	N/A
Roller	61.7	54.7	N/A	N/A	N/A	N/A	N/A
<b>Total</b>	<b>67</b>	<b>68</b>	N/A	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Side	Residential	67	67	66.8

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	135	0
Paver	No	50		77.2	185	0
Paver	No	50		77.2	235	0
Paver	No	50		77.2	285	0
Roller	No	20		80	335	0
Roller	No	20		80	385	0

Equipment	Results				Noise Limits (dBA)	
	Calculated (dBA)		Day		Evening	
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	68.6	65.6	N/A	N/A	N/A	N/A
Paver	65.9	62.8	N/A	N/A	N/A	N/A
Paver	63.8	60.8	N/A	N/A	N/A	N/A
Paver	62.1	59.1	N/A	N/A	N/A	N/A
Roller	63.5	56.5	N/A	N/A	N/A	N/A
Roller	62.3	55.3	N/A	N/A	N/A	N/A
<b>Total</b>	<b>69</b>	<b>69</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on East Side	Residential	59.5	59.5	59.5

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	260	0
Paver	No	50		77.2	310	0
Paver	No	50		77.2	360	0
Paver	No	50		77.2	410	0
Roller	No	20		80	460	0
Roller	No	20		80	510	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Paver	62.9	59.9	N/A	N/A	N/A	N/A
Paver	61.4	58.4	N/A	N/A	N/A	N/A
Paver	60.1	57.1	N/A	N/A	N/A	N/A
Paver	58.9	55.9	N/A	N/A	N/A	N/A
Roller	60.7	53.7	N/A	N/A	N/A	N/A
Roller	59.8	52.8	N/A	N/A	N/A	N/A
<b>Total</b>	<b>63</b>	<b>65</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Side	Residential	57	57	57.4

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	230	0
Paver	No	50		77.2	280	0
Paver	No	50		77.2	330	0
Paver	No	50		77.2	380	0
Roller	No	20		80	430	0
Roller	No	20		80	480	0

Equipment	Results					
	Calculated (dBA)			Noise Limits (dBA)		
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Paver	64.0	61.0	N/A	N/A	N/A	N/A
Paver	62.3	59.2	N/A	N/A	N/A	N/A
Paver	60.8	57.8	N/A	N/A	N/A	N/A
Paver	59.6	56.6	N/A	N/A	N/A	N/A
Roller	61.3	54.3	N/A	N/A	N/A	N/A
Roller	60.4	53.4	N/A	N/A	N/A	N/A
<b>Total</b>	<b>64</b>	<b>66</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

**Roadway Construction Noise Model (RCNM), Version 1.1**

Report date: 4/13/2018  
 Case Description: LAC 2041 Facilities Master Plan - Painting

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on West Sid	Residential	55.5	55.5	55.5

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	160	0

Equipment	Calculated (dBA)	Results					
		Noise Limits (dBA)		Noise Limits (dBA)			
		Day	Evening	Day	Evening	Day	Evening
Compressor (air)		*Lmax	Leq	Lmax	Leq	Lmax	Leq
		67.6	63.6	N/A	N/A	N/A	N/A
<b>Total</b>	<b>68</b>	<b>64</b>	N/A	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Sic	Residential	66.8	66.8	66.8

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	135	0

Equipment	Calculated (dBA)	Results					
		Noise Limits (dBA)		Noise Limits (dBA)			
		Day	Evening	Day	Evening	Day	Evening
Compressor (air)		*Lmax	Leq	Lmax	Leq	Lmax	Leq
		69.0	65.1	N/A	N/A	N/A	N/A
<b>Total</b>	<b>69</b>	<b>65</b>	N/A	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on East Side	Residential	59.5	59.5	59.5

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	230	0

Equipment	Total	Calculated (dBA)		Results			
		*Lmax	Leq	Day	Noise Limits (dBA)		
				Lmax	Leq	Evening	Leq
Compressor (air)		64.4	60.4	N/A	N/A	N/A	N/A
	<b>Total</b>	<b>64</b>	<b>60</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes on North Side	Residential	57	57	57.4

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	180	0

Equipment	Total	Calculated (dBA)		Results			
		*Lmax	Leq	Day	Noise Limits (dBA)		
				Lmax	Leq	Evening	Leq
Compressor (air)		67	63	N/A	N/A	N/A	N/A
	<b>Total</b>	<b>67</b>	<b>63</b>	N/A	N/A	N/A	N/A

\*Calculated Lmax is the Loudest value.

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Local)			Vehicle Mix 2 (Arterial)			Vehicle Mix 3 (SR-19)					
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night			
Automobiles	73.60%	13.60%	10.22%	97.42%	69.50%	12.90%	9.60%	92.00%	67.68%	13.87%	16.22%	97.77%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.44%	0.06%	1.50%	3.00%	0.96%	0.17%	0.48%	1.61%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	2.40%	0.10%	2.50%	5.00%	0.34%	0.03%	0.25%	0.62%

**Road Name: Cherry Avenue**

**Segment: North of Carson Street**

Average Daily Traffic: 33300 Vehicles

Vehicle Speed: 40 MPH

Vehicle Mix: 2

Roadway Classification: Major Avenue

NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 83.33 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels						Centerline Distance to		
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Noise Contour (in feet)		
Automobiles	67.36	3.54	-3.43	-1.20	66.3	63.9	62.6	56.5	65.0	65.61	70 dBA:	48
Medium Trucks	76.31	-11.33	-3.43	-1.20	60.4	41.1	33.4	42.6	48.7	48.76	65 dBA:	103
Heavy Trucks	81.16	-9.11	-3.43	-1.20	67.4	50.4	42.6	51.9	58.0	58.04	60 dBA:	221
<b>Total:</b>					<b>70.3</b>	<b>64.1</b>	<b>62.6</b>	<b>57.9</b>	<b>65.9</b>	<b>66.4</b>	<b>55 dBA:</b>	<b>476</b>

**Road Name: Cherry Avenue**

**Segment: South of Carson Street**

Average Daily Traffic: 33250 Vehicles

Vehicle Speed: 40 MPH

Vehicle Mix: 2

Roadway Classification: Major Avenue

NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 83.33 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels						Centerline Distance to		
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Noise Contour (in feet)		
Automobiles	67.36	3.53	-3.43	-1.20	66.3	63.9	62.6	56.5	65.0	65.6	70 dBA:	48
Medium Trucks	76.31	-11.34	-3.43	-1.20	60.3	41.1	33.4	42.6	48.7	48.8	65 dBA:	103
Heavy Trucks	81.16	-9.12	-3.43	-1.20	67.4	50.4	42.6	51.8	58.0	58.0	60 dBA:	221
<b>Total:</b>					<b>70.3</b>	<b>64.1</b>	<b>62.6</b>	<b>57.9</b>	<b>65.9</b>	<b>66.4</b>	<b>55 dBA:</b>	<b>476</b>

**Road Name: Paramount Boulevard**

**Segment: North of Carson Street**

Average Daily Traffic: 22510 Vehicles

Vehicle Speed: 40 MPH

Vehicle Mix: 1

Roadway Classification: Local

NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 59.32 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels						Centerline Distance to		
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Noise Contour (in feet)		
Automobiles	67.36	2.08	-1.22	-1.20	67.0	64.9	63.6	57.6	66.0	66.6	70 dBA:	33
Medium Trucks	76.31	-15.15	-1.22	-1.20	58.7	37.5	43.5	25.2	38.4	41.1	65 dBA:	70
Heavy Trucks	81.16	-19.11	-1.22	-1.20	59.6	34.3	30.9	35.5	41.7	41.8	60 dBA:	151
<b>Total:</b>					<b>68.3</b>	<b>64.9</b>	<b>63.6</b>	<b>57.6</b>	<b>66.0</b>	<b>66.7</b>	<b>55 dBA:</b>	<b>326</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Lakewood Boulevard		Segment: South of Del Amo Boulevard		Roadway Classification: Regional Corridor															
Average Daily Traffic: 32460 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3															
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE (Equiv. Lane Dist: 103.94 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	67.36	3.69	-4.87	-1.20	65.0	62.5	61.6	57.5	65.0	65.6	65.6	70 dBA:	52	56					
Medium Trucks	76.31	-14.13	-4.87	-1.20	56.1	35.1	33.7	33.4	40.1	40.3	40.3	65 dBA:	111	120					
Heavy Trucks	81.16	-18.32	-4.87	-1.20	56.8	31.3	27.1	31.1	37.5	37.6	37.6	60 dBA:	239	259					
<b>Total:</b>											<b>66.1</b>	<b>62.5</b>	<b>61.6</b>	<b>57.6</b>	<b>65.1</b>	<b>65.6</b>	<b>55 dBA:</b>	<b>516</b>	<b>557</b>

Road Name: Lakewood Boulevard		Segment: North of Harvey Way		Roadway Classification: Regional Corridor															
Average Daily Traffic: 33980 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3															
NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 27 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	67.36	3.89	3.91	-1.20	74.0	71.5	70.6	66.5	74.0	74.5	74.5	70 dBA:	84	90					
Medium Trucks	76.31	-13.93	3.91	-1.20	65.1	44.1	42.7	42.4	49.1	49.3	49.3	65 dBA:	180	195					
Heavy Trucks	81.16	-18.12	3.91	-1.20	65.7	40.2	36.1	40.1	46.5	46.6	46.6	60 dBA:	389	420					
<b>Total:</b>											<b>75.0</b>	<b>71.5</b>	<b>70.6</b>	<b>66.5</b>	<b>74.0</b>	<b>74.6</b>	<b>55 dBA:</b>	<b>838</b>	<b>905</b>

Road Name: Lakewood Boulevard		Segment: North of Carson Street		Roadway Classification: Regional Corridor															
Average Daily Traffic: 32771 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 48 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	67.36	3.73	0.16	-1.20	70.1	67.6	66.7	62.6	70.1	70.6	70.6	70 dBA:	61	66					
Medium Trucks	76.31	-14.09	0.16	-1.20	61.2	40.2	38.8	38.5	45.1	45.4	45.4	65 dBA:	132	143					
Heavy Trucks	81.16	-18.28	0.16	-1.20	61.8	36.3	32.2	36.2	42.6	42.7	42.7	60 dBA:	285	307					
<b>Total:</b>											<b>71.1</b>	<b>67.6</b>	<b>66.7</b>	<b>62.6</b>	<b>70.1</b>	<b>70.6</b>	<b>55 dBA:</b>	<b>613</b>	<b>662</b>

Road Name: Faculty Avenue		Segment: North of Carson Street		Roadway Classification: Local															
Average Daily Traffic: 3235 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.18 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	59.44	-4.30	0.00	-1.20	53.9	51.8	50.5	44.5	52.9	53.5	53.5	70 dBA:	4	4					
Medium Trucks	71.09	-21.54	0.00	-1.20	48.4	27.1	33.1	14.8	28.0	30.7	30.7	65 dBA:	8	9					
Heavy Trucks	78.74	-25.49	0.00	-1.20	52.1	26.7	23.3	27.9	34.1	34.2	34.2	60 dBA:	17	19					
<b>Total:</b>											<b>56.8</b>	<b>51.8</b>	<b>50.6</b>	<b>44.6</b>	<b>53.0</b>	<b>53.6</b>	<b>55 dBA:</b>	<b>37</b>	<b>40</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Clark Avenue		Segment: South of Del Amo Boulevard		Roadway Classification: Minor Avenue															
Average Daily Traffic: 22280 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to												
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL										
Automobiles	65.11	2.62	-0.72	-1.20	65.8	63.7	62.4	56.4	64.8	65.4	70 dBA:	27	30						
Medium Trucks	74.83	-14.62	-0.72	-1.20	58.3	37.0	43.1	24.8	37.9	40.7	65 dBA:	58	64						
Heavy Trucks	80.05	-18.57	-0.72	-1.20	59.5	34.2	30.8	35.4	41.6	41.7	60 dBA:	126	138						
<b>Total:</b>											<b>67.3</b>	<b>63.7</b>	<b>62.4</b>	<b>56.4</b>	<b>64.8</b>	<b>65.4</b>	<b>55 dBA:</b>	<b>270</b>	<b>298</b>

Road Name: Clark Avenue		Segment: North of Harvey Way		Roadway Classification: Minor Avenue															
Average Daily Traffic: 19130 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to												
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL										
Automobiles	65.11	1.96	-0.72	-1.20	65.1	63.0	61.7	55.7	64.1	64.7	70 dBA:	24	27						
Medium Trucks	74.83	-15.28	-0.72	-1.20	57.6	36.4	42.4	24.1	37.2	40.0	65 dBA:	53	58						
Heavy Trucks	80.05	-19.24	-0.72	-1.20	58.9	33.5	30.1	34.8	41.0	41.1	60 dBA:	113	125						
<b>Total:</b>											<b>66.6</b>	<b>63.0</b>	<b>61.8</b>	<b>55.7</b>	<b>64.1</b>	<b>64.8</b>	<b>55 dBA:</b>	<b>244</b>	<b>269</b>

Road Name: Clark Avenue		Segment: North of Carson Street		Roadway Classification: Minor Avenue															
Average Daily Traffic: 17488 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.86 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to												
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL										
Automobiles	65.11	1.57	0.75	-1.20	66.2	64.1	62.8	56.8	65.2	65.8	70 dBA:	24	26						
Medium Trucks	74.83	-15.67	0.75	-1.20	58.7	37.5	43.5	25.2	38.3	41.1	65 dBA:	52	57						
Heavy Trucks	80.05	-19.63	0.75	-1.20	60.0	34.6	31.2	35.9	42.1	42.2	60 dBA:	112	123						
<b>Total:</b>											<b>67.7</b>	<b>64.1</b>	<b>62.8</b>	<b>56.8</b>	<b>65.2</b>	<b>65.9</b>	<b>55 dBA:</b>	<b>240</b>	<b>265</b>

Road Name: Clark Avenue		Segment: South of Carson Street		Roadway Classification: Minor Avenue															
Average Daily Traffic: 23898 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to												
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL										
Automobiles	65.11	2.92	-0.72	-1.20	66.1	64.0	62.7	56.7	65.1	65.7	70 dBA:	28	31						
Medium Trucks	74.83	-14.31	-0.72	-1.20	58.6	37.3	43.4	25.1	38.2	41.0	65 dBA:	61	67						
Heavy Trucks	80.05	-18.27	-0.72	-1.20	59.9	34.5	31.1	35.8	42.0	42.0	60 dBA:	132	145						
<b>Total:</b>											<b>67.6</b>	<b>64.0</b>	<b>62.7</b>	<b>56.7</b>	<b>65.1</b>	<b>65.7</b>	<b>55 dBA:</b>	<b>283</b>	<b>312</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

**Scenario: EXISTING CONDITIONS**

**Project: LBCC 2041 Master Plan for the LAC Improvements**  
**Site Conditions: Soft**

<b>Road Name: Clark Avenue</b>		<b>Segment: South of Lew Davis Street</b>		Roadway Classification: Minor Avenue									
Average Daily Traffic: 18612 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 65.76 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)				
Automobiles	67.36	1.26	-1.89	-1.20	65.5	63.4	62.1	56.1	64.5	65.1	70 dBA:	30	33
Medium Trucks	76.31	-15.98	-1.89	-1.20	57.2	36.0	42.0	23.7	36.9	39.6	65 dBA:	65	72
Heavy Trucks	81.16	-19.94	-1.89	-1.20	58.1	32.8	29.4	34.0	40.2	40.3	60 dBA:	140	154
<b>Total:</b>				<b>66.8</b>	<b>63.4</b>	<b>62.1</b>	<b>56.1</b>	<b>64.5</b>	<b>65.2</b>		55 dBA:	<b>302</b>	<b>333</b>

<b>Road Name: Clark Avenue</b>		<b>Segment: South of Conant Street</b>		Roadway Classification: Minor Avenue									
Average Daily Traffic: 19277 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 102.22 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)				
Automobiles	67.36	1.41	-4.76	-1.20	62.8	60.7	59.4	53.4	61.8	62.4	70 dBA:	30	33
Medium Trucks	76.31	-15.83	-4.76	-1.20	54.5	33.3	39.3	21.0	34.1	36.9	65 dBA:	64	71
Heavy Trucks	81.16	-19.78	-4.76	-1.20	55.4	30.1	26.7	31.3	37.5	37.6	60 dBA:	139	153
<b>Total:</b>				<b>64.0</b>	<b>60.7</b>	<b>59.4</b>	<b>53.4</b>	<b>61.8</b>	<b>62.4</b>		55 dBA:	<b>298</b>	<b>329</b>

<b>Road Name: Clark Avenue</b>		<b>Segment: South of Wardlow Road</b>		Roadway Classification: Minor Avenue									
Average Daily Traffic: 22150 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 102.22 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)				
Automobiles	67.36	2.01	-4.76	-1.20	63.4	61.3	60.0	54.0	62.4	63.0	70 dBA:	33	36
Medium Trucks	76.31	-15.22	-4.76	-1.20	55.1	33.9	39.9	21.6	34.7	37.5	65 dBA:	71	78
Heavy Trucks	81.16	-19.18	-4.76	-1.20	56.0	30.7	27.3	31.9	38.1	38.2	60 dBA:	152	167
<b>Total:</b>				<b>64.7</b>	<b>61.3</b>	<b>60.0</b>	<b>54.0</b>	<b>62.4</b>	<b>63.0</b>		55 dBA:	<b>327</b>	<b>361</b>

<b>Road Name: Clark Avenue</b>		<b>Segment: South of Spring Street</b>		Roadway Classification: Minor Avenue									
Average Daily Traffic: 18500 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 65.76 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)				
Automobiles	67.36	1.23	-1.89	-1.20	65.5	63.4	62.1	56.1	64.5	65.1	70 dBA:	30	33
Medium Trucks	76.31	-16.01	-1.89	-1.20	57.2	36.0	42.0	23.7	36.8	39.6	65 dBA:	65	71
Heavy Trucks	81.16	-19.96	-1.89	-1.20	58.1	32.8	29.4	34.0	40.2	40.3	60 dBA:	140	154
<b>Total:</b>				<b>66.7</b>	<b>63.4</b>	<b>62.1</b>	<b>56.1</b>	<b>64.5</b>	<b>65.1</b>		55 dBA:	<b>301</b>	<b>331</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>North of Carson Street</b>		Roadway Classification: Boulevard						
Average Daily Traffic: 26160 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2						
NOISE PARAMETERS AT 95 FEET FROM CENTERLINE (Equiv. Lane Dist: 88.71 ft)										
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to			
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	
Automobiles	67.36	2.49	-3.84	-1.20	64.8	62.4	61.1	55.1	64.2	70 dBA: <b>40</b>
Medium Trucks	76.31	-12.38	-3.84	-1.20	58.9	39.7	31.9	41.1	47.3	65 dBA: <b>87</b>
Heavy Trucks	81.16	-10.16	-3.84	-1.20	66.0	49.0	41.2	50.4	56.6	60 dBA: <b>187</b>
<b>Total:</b>					<b>68.9</b>	<b>62.7</b>	<b>61.2</b>	<b>56.5</b>	<b>64.4</b>	<b>64.9</b>

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>South of Wardlow Road</b>		Roadway Classification: Boulevard						
Average Daily Traffic: 27480 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2						
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 94.04 ft)										
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to			
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	
Automobiles	67.36	2.70	-4.22	-1.20	64.6	62.3	61.0	54.9	64.0	70 dBA: <b>41</b>
Medium Trucks	76.31	-12.16	-4.22	-1.20	58.7	39.5	31.7	40.9	47.1	65 dBA: <b>89</b>
Heavy Trucks	81.16	-9.95	-4.22	-1.20	65.8	48.8	41.0	50.2	56.4	60 dBA: <b>192</b>
<b>Total:</b>					<b>68.7</b>	<b>62.5</b>	<b>61.0</b>	<b>56.3</b>	<b>64.2</b>	<b>64.8</b>

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>South of Spring Street</b>		Roadway Classification: Boulevard						
Average Daily Traffic: 30170 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2						
NOISE PARAMETERS AT 85 FEET FROM CENTERLINE (Equiv. Lane Dist: 77.9 ft)										
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to			
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	
Automobiles	67.36	3.11	-2.99	-1.20	66.3	63.9	62.6	56.6	65.6	70 dBA: <b>45</b>
Medium Trucks	76.31	-11.76	-2.99	-1.20	60.4	41.2	33.4	42.6	48.8	65 dBA: <b>97</b>
Heavy Trucks	81.16	-9.54	-2.99	-1.20	67.4	50.4	42.7	51.9	58.1	60 dBA: <b>209</b>
<b>Total:</b>					<b>70.4</b>	<b>64.1</b>	<b>62.7</b>	<b>58.0</b>	<b>65.9</b>	<b>66.4</b>

Road Name: <b>Del Amo Boulevard</b>		Segment: <b>West of Lakewood Boulevard</b>		Roadway Classification: Major Avenue						
Average Daily Traffic: 35410 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2						
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 36.66 ft)										
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to			
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	
Automobiles	67.36	3.80	1.92	-1.20	71.9	69.5	68.2	62.2	70.6	70 dBA: <b>63</b>
Medium Trucks	76.31	-11.06	1.92	-1.20	66.0	46.8	39.0	48.2	54.3	65 dBA: <b>135</b>
Heavy Trucks	81.16	-8.85	1.92	-1.20	73.0	56.0	48.3	57.5	63.6	60 dBA: <b>291</b>
<b>Total:</b>					<b>76.0</b>	<b>69.7</b>	<b>68.3</b>	<b>63.6</b>	<b>71.5</b>	<b>72.0</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

**Scenario: EXISTING CONDITIONS**

**Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft**

Road Name: <b>Del Amo Boulevard</b>		Segment: <b>East of Clark Avenue</b>		Roadway Classification: Major Avenue					
Average Daily Traffic: 33790 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2					
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.44 ft)									
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels					
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	
Automobiles	67.36	3.60	-1.20	69.7	67.4	66.1	68.4	69.1	70 dBA: <b>54</b>
Medium Trucks	76.31	-11.27	-0.03	63.8	44.6	36.8	52.2	52.2	65 dBA: <b>126</b>
Heavy Trucks	81.16	-9.05	-0.03	70.9	53.9	46.1	61.5	61.5	60 dBA: <b>272</b>
Total:				<b>73.8</b>	<b>67.6</b>	<b>66.1</b>	<b>69.3</b>	<b>69.8</b>	55 dBA: <b>586</b>

Road Name: <b>Harvey Way</b>		Segment: <b>East of Lakewood Boulevard</b>		Roadway Classification: Local					
Average Daily Traffic: 4240 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1					
NOISE PARAMETERS AT 30 FEET FROM CENTERLINE (Equiv. Lane Dist: 28.62 ft)									
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels					
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	
Automobiles	59.44	-3.12	3.53	58.6	56.5	55.2	57.6	58.2	70 dBA: <b>5</b>
Medium Trucks	71.09	-20.36	3.53	53.1	31.8	37.8	32.7	35.4	65 dBA: <b>11</b>
Heavy Trucks	78.74	-24.32	3.53	56.8	31.4	28.0	38.9	38.9	60 dBA: <b>23</b>
Total:				<b>61.5</b>	<b>56.6</b>	<b>55.3</b>	<b>57.7</b>	<b>58.3</b>	55 dBA: <b>45</b>

Road Name: <b>Harvey Way</b>		Segment: <b>East of Clark Avenue</b>		Roadway Classification: Local					
Average Daily Traffic: 4543 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1					
NOISE PARAMETERS AT 35 FEET FROM CENTERLINE (Equiv. Lane Dist: 33.82 ft)									
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels					
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	
Automobiles	59.44	-2.82	2.44	57.9	55.7	54.4	56.8	57.5	70 dBA: <b>5</b>
Medium Trucks	71.09	-20.06	2.44	52.3	31.0	37.0	31.9	34.6	65 dBA: <b>11</b>
Heavy Trucks	78.74	-24.02	2.44	56.0	30.6	27.2	38.1	38.2	60 dBA: <b>24</b>
Total:				<b>60.7</b>	<b>55.8</b>	<b>54.5</b>	<b>56.9</b>	<b>57.5</b>	55 dBA: <b>47</b>

Road Name: <b>Carson Street</b>		Segment: <b>West of Cherry Avenue</b>		Roadway Classification: Major Avenue					
Average Daily Traffic: 23460 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2					
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.23 ft)									
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels					
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	
Automobiles	67.36	2.02	0.84	69.0	66.6	65.4	67.7	68.4	70 dBA: <b>44</b>
Medium Trucks	76.31	-12.85	0.84	63.1	43.9	36.1	45.3	51.5	65 dBA: <b>96</b>
Heavy Trucks	81.16	-10.63	0.84	70.2	53.2	45.4	60.8	60.8	60 dBA: <b>206</b>
Total:				<b>73.1</b>	<b>66.9</b>	<b>65.4</b>	<b>60.7</b>	<b>68.6</b>	55 dBA: <b>444</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Carson Street		Segment: West of Paramount Boulevard		Roadway Classification: Major Avenue														
Average Daily Traffic: 33710 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 94.04 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL										
Automobiles	67.36	3.59	-4.22	-1.20	65.5	63.2	61.9	55.8	64.2	64.9	70 dBA:	47	51					
Medium Trucks	76.31	-11.28	-4.22	-1.20	59.6	40.4	32.6	41.8	48.0	48.0	65 dBA:	102	110					
Heavy Trucks	81.16	-9.06	-4.22	-1.20	66.7	49.7	41.9	51.1	57.3	57.3	60 dBA:	220	238					
Total:											69.6	63.4	61.9	57.2	65.1	65.7	473	513

Road Name: Carson Street		Segment: West of Lakewood Boulevard		Roadway Classification: Major Avenue														
Average Daily Traffic: 29130 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 120 FEET FROM CENTERLINE (Equiv. Lane Dist: 115.08 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL										
Automobiles	67.36	2.96	-5.53	-1.20	63.6	61.2	59.9	53.9	62.3	62.9	70 dBA:	42	46					
Medium Trucks	76.31	-11.91	-5.53	-1.20	57.7	38.5	30.7	39.9	46.0	46.1	65 dBA:	91	98					
Heavy Trucks	81.16	-9.69	-5.53	-1.20	64.7	47.7	40.0	49.2	55.3	55.4	60 dBA:	195	212					
Total:											67.7	61.4	60.0	55.3	63.2	63.7	421	456

Road Name: Carson Street		Segment: West of Faculty Avenue		Roadway Classification: Major Avenue														
Average Daily Traffic: 33730 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 61.19 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL										
Automobiles	67.36	3.59	-1.42	-1.20	68.3	66.0	64.7	58.6	67.0	67.7	70 dBA:	51	55					
Medium Trucks	76.31	-11.27	-1.42	-1.20	62.4	43.2	35.4	44.6	50.8	50.8	65 dBA:	110	119					
Heavy Trucks	81.16	-9.06	-1.42	-1.20	69.5	52.5	44.7	53.9	60.1	60.1	60 dBA:	236	256					
Total:											72.4	66.2	64.7	60.0	67.9	68.5	509	552

Road Name: Carson Street		Segment: East of Clark Avenue		Roadway Classification: Major Avenue														
Average Daily Traffic: 38110 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 75 FEET FROM CENTERLINE (Equiv. Lane Dist: 66.85 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL										
Automobiles	67.36	4.12	-2.00	-1.20	68.3	65.9	64.6	58.6	67.0	67.6	70 dBA:	54	59					
Medium Trucks	76.31	-10.74	-2.00	-1.20	62.4	43.2	35.4	44.6	50.7	50.8	65 dBA:	117	127					
Heavy Trucks	81.16	-8.53	-2.00	-1.20	69.4	52.4	44.7	53.9	60.0	60.1	60 dBA:	251	273					
Total:											72.4	66.1	64.7	60.0	67.9	68.4	542	587

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Carson Street		Segment: East of Bellflower Boulevard		Roadway Classification: Major Avenue														
Average Daily Traffic: 34370 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.44 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to											
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL									
Automobiles	67.36	3.67	-0.03	-1.20	69.8	67.4	66.1	60.1	68.5	69.1	70 dBA: 55	59						
Medium Trucks	76.31	-11.19	-0.03	-1.20	63.9	44.7	36.9	46.1	52.3	52.3	65 dBA: 118	128						
Heavy Trucks	81.16	-8.97	-0.03	-1.20	71.0	54.0	46.2	55.4	61.5	61.6	60 dBA: 254	275						
Total:											73.9	67.6	66.2	61.5	69.4	69.9	55 dBA: 547	593

Road Name: Carson Street		Segment: East of Woodruff Avenue		Roadway Classification: Major Avenue														
Average Daily Traffic: 32930 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 99.34 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to											
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL									
Automobiles	67.36	3.49	-4.58	-1.20	65.1	62.7	61.4	55.4	63.8	64.4	70 dBA: 46	50						
Medium Trucks	76.31	-11.38	-4.58	-1.20	59.2	39.9	32.2	41.4	47.5	47.6	65 dBA: 100	108						
Heavy Trucks	81.16	-9.16	-4.58	-1.20	66.2	49.2	41.5	50.7	56.8	56.8	60 dBA: 215	233						
Total:											69.2	62.9	61.5	56.7	64.7	65.2	55 dBA: 463	502

Road Name: Conant Street		Segment: East of Clark Avenue		Roadway Classification: Neighborhood Connector														
Average Daily Traffic: 3320 Vehicles		Vehicle Speed: 15 MPH		Vehicle Mix: 1														
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.34 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to											
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL									
Automobiles	50.83	-1.97	-1.11	-1.20	46.6	44.4	43.1	37.1	45.5	46.2	70 dBA: 1	2						
Medium Trucks	65.41	-19.21	-1.11	-1.20	43.9	22.6	28.7	10.4	23.5	26.3	65 dBA: 3	3						
Heavy Trucks	74.48	-23.16	-1.11	-1.20	49.0	23.7	20.3	24.9	31.1	31.2	60 dBA: 7	7						
Total:											51.7	44.5	43.3	37.4	45.7	46.3	55 dBA: 14	16

Road Name: Wardlow Road		Segment: East of Clark Avenue		Roadway Classification: Minor Avenue														
Average Daily Traffic: 14440 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1														
NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 38.07 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to											
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL									
Automobiles	65.11	0.74	1.67	-1.20	66.3	64.2	62.9	56.9	65.3	65.9	70 dBA: 22	24						
Medium Trucks	74.83	-16.50	1.67	-1.20	58.8	37.5	43.6	25.3	38.4	41.2	65 dBA: 47	52						
Heavy Trucks	80.05	-20.46	1.67	-1.20	60.1	34.7	31.3	36.0	42.2	42.3	60 dBA: 102	112						
Total:											67.8	64.2	62.9	56.9	65.3	66.0	55 dBA: 219	242

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: <b>Wardlow Road</b>		Segment: <b>East of Bellflower Boulevard</b>		Roadway Classification: Minor Avenue															
Average Daily Traffic: 18260 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.49 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to												
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL										
Automobiles	65.11	1.76	-0.04	-1.20	65.6	63.5	62.2	56.2	64.6	65.2	70 dBA:	24	27						
Medium Trucks	74.83	-15.48	-0.04	-1.20	58.1	36.9	42.9	24.6	37.7	40.5	65 dBA:	52	57						
Heavy Trucks	80.05	-19.44	-0.04	-1.20	59.4	34.0	30.6	35.3	41.5	41.6	60 dBA:	112	123						
Total:											<b>67.1</b>	<b>63.5</b>	<b>62.2</b>	<b>56.2</b>	<b>64.6</b>	<b>65.3</b>	<b>55 dBA:</b>	<b>241</b>	<b>266</b>

Road Name: <b>Spring Street</b>		Segment: <b>East of Clark Avenue</b>		Roadway Classification: Major Avenue															
Average Daily Traffic: 27590 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 115 FEET FROM CENTERLINE (Equiv. Lane Dist: 109.86 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to												
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL										
Automobiles	67.36	2.72	-5.23	-1.20	63.6	61.3	60.0	53.9	62.4	63.0	70 dBA:	41	44						
Medium Trucks	76.31	-12.15	-5.23	-1.20	57.7	38.5	30.7	40.0	46.1	46.1	65 dBA:	88	95						
Heavy Trucks	81.16	-9.93	-5.23	-1.20	64.8	47.8	40.0	49.2	55.4	55.4	60 dBA:	189	205						
Total:											<b>67.7</b>	<b>61.5</b>	<b>60.0</b>	<b>55.3</b>	<b>63.2</b>	<b>63.8</b>	<b>55 dBA:</b>	<b>407</b>	<b>442</b>

Road Name: <b>Spring Street</b>		Segment: <b>East of Bellflower Boulevard</b>		Roadway Classification: Major Avenue															
Average Daily Traffic: 27320 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE (Equiv. Lane Dist: 104.61 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to												
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL										
Automobiles	67.36	2.68	-4.91	-1.20	63.9	61.6	60.3	54.2	62.6	63.3	70 dBA:	41	44						
Medium Trucks	76.31	-12.19	-4.91	-1.20	58.0	38.8	31.0	40.2	46.4	46.4	65 dBA:	88	95						
Heavy Trucks	81.16	-9.97	-4.91	-1.20	65.1	48.1	40.3	49.5	55.7	55.7	60 dBA:	189	205						
Total:											<b>68.0</b>	<b>61.8</b>	<b>60.3</b>	<b>55.6</b>	<b>63.5</b>	<b>64.0</b>	<b>55 dBA:</b>	<b>407</b>	<b>441</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

### Scenario: EXISTING WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Local))			Vehicle Mix 2 (Vehicle Mix 2 (Arterial))			Vehicle Mix 3 (SR-19)			
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	
Automobiles	73.60%	13.60%	10.22%	69.50%	12.90%	9.60%	92.00%	67.68%	13.87%	16.22%
Medium Trucks	0.90%	0.90%	0.04%	1.44%	0.06%	1.50%	3.00%	0.96%	0.17%	0.48%
Heavy Trucks	0.35%	0.04%	0.35%	2.40%	0.10%	2.50%	5.00%	0.34%	0.03%	0.25%

Road Name: <b>Cherry Avenue</b>		Segment: <b>North of Carson Street</b>		Roadway Classification: Major Avenue					
Average Daily Traffic: 33790 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2					
NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 83.33 ft)									
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Noise Contour (in feet)		
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	3.60	-3.43	66.3	64.0	62.7	56.6	65.0	65.7
Medium Trucks	76.31	-11.27	-3.43	60.4	41.2	33.4	42.6	48.8	48.8
Heavy Trucks	81.16	-9.05	-3.43	67.5	50.5	42.7	51.9	58.1	58.1
<b>Total:</b>				<b>70.4</b>	<b>64.2</b>	<b>62.7</b>	<b>58.0</b>	<b>65.9</b>	<b>66.4</b>

Road Name: <b>Cherry Avenue</b>		Segment: <b>South of Carson Street</b>		Roadway Classification: Major Avenue					
Average Daily Traffic: 33740 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2					
NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 83.33 ft)									
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Noise Contour (in feet)		
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	3.59	-3.43	66.3	64.0	62.7	56.6	65.0	65.7
Medium Trucks	76.31	-11.27	-3.43	60.4	41.2	33.4	42.6	48.8	48.8
Heavy Trucks	81.16	-9.05	-3.43	67.5	50.5	42.7	51.9	58.1	58.1
<b>Total:</b>				<b>70.4</b>	<b>64.2</b>	<b>62.7</b>	<b>58.0</b>	<b>65.9</b>	<b>66.4</b>

Road Name: <b>Paramount Boulevard</b>		Segment: <b>North of Carson Street</b>		Roadway Classification: Local					
Average Daily Traffic: 23000 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1					
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 59.32 ft)									
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Noise Contour (in feet)		
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	2.18	-1.22	67.1	65.0	63.7	57.7	66.1	66.7
Medium Trucks	76.31	-15.06	-1.22	58.8	37.6	43.6	25.3	38.5	41.2
Heavy Trucks	81.16	-19.02	-1.22	59.7	34.4	31.0	35.6	41.8	41.9
<b>Total:</b>				<b>68.4</b>	<b>65.0</b>	<b>63.7</b>	<b>57.7</b>	<b>66.1</b>	<b>66.7</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Lakewood Boulevard		Segment: South of Del Amo Boulevard		Roadway Classification: Regional Corridor															
Average Daily Traffic: 33640 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3															
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE (Equiv. Lane Dist: 103.94 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	67.36	3.84	-4.87	-1.20	65.1	62.6	61.8	57.7	65.2	65.7	65.7	70 dBA:	53	57					
Medium Trucks	76.31	-13.98	-4.87	-1.20	56.3	35.3	33.9	33.6	40.2	40.5	40.5	65 dBA:	114	123					
Heavy Trucks	81.16	-18.17	-4.87	-1.20	56.9	31.4	27.2	31.3	37.6	37.7	37.7	60 dBA:	245	265					
<b>Total:</b>											<b>66.2</b>	<b>62.7</b>	<b>61.8</b>	<b>57.7</b>	<b>65.2</b>	<b>65.7</b>	<b>55 dBA:</b>	<b>528</b>	<b>571</b>

Road Name: Lakewood Boulevard		Segment: North of Harvey Way		Roadway Classification: Regional Corridor															
Average Daily Traffic: 35350 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3															
NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 27 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	67.36	4.06	3.91	-1.20	74.1	71.6	70.8	66.7	74.2	74.7	74.7	70 dBA:	86	93					
Medium Trucks	76.31	-13.76	3.91	-1.20	65.3	44.3	42.9	42.6	49.2	49.5	49.5	65 dBA:	185	200					
Heavy Trucks	81.16	-17.95	3.91	-1.20	65.9	40.4	36.2	40.3	46.6	46.7	46.7	60 dBA:	399	431					
<b>Total:</b>											<b>75.2</b>	<b>71.7</b>	<b>70.8</b>	<b>66.7</b>	<b>74.2</b>	<b>74.7</b>	<b>55 dBA:</b>	<b>860</b>	<b>929</b>

Road Name: Lakewood Boulevard		Segment: North of Carson Street		Roadway Classification: Regional Corridor															
Average Daily Traffic: 33800 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 48 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	67.36	3.87	0.16	-1.20	70.2	67.7	66.8	62.7	70.3	70.8	70.8	70 dBA:	63	68					
Medium Trucks	76.31	-13.96	0.16	-1.20	61.3	40.3	38.9	38.6	45.3	45.5	45.5	65 dBA:	135	146					
Heavy Trucks	81.16	-18.14	0.16	-1.20	62.0	36.5	32.3	36.3	42.7	42.8	42.8	60 dBA:	291	314					
<b>Total:</b>											<b>71.3</b>	<b>67.7</b>	<b>66.8</b>	<b>62.8</b>	<b>70.3</b>	<b>70.8</b>	<b>55 dBA:</b>	<b>626</b>	<b>676</b>

Road Name: Faculty Avenue		Segment: North of Carson Street		Roadway Classification: Local															
Average Daily Traffic: 3492 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.18 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	59.44	-3.97	0.00	-1.20	54.3	52.2	50.8	44.8	53.2	53.9	53.9	70 dBA:	4	4					
Medium Trucks	71.09	-21.21	0.00	-1.20	48.7	27.4	33.5	15.2	28.3	31.1	31.1	65 dBA:	8	9					
Heavy Trucks	78.74	-25.16	0.00	-1.20	52.4	27.0	23.6	28.3	34.5	34.6	34.6	60 dBA:	18	20					
<b>Total:</b>											<b>57.1</b>	<b>52.2</b>	<b>50.9</b>	<b>44.9</b>	<b>53.3</b>	<b>53.9</b>	<b>55 dBA:</b>	<b>39</b>	<b>43</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Clark Avenue		Segment: South of Del Amo Boulevard		Roadway Classification: Minor Avenue															
Average Daily Traffic: 2280 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	65.11	2.73	-0.72	-1.20	65.9	63.8	62.5	56.5	64.9	65.5	70 dBA:	28	30						
Medium Trucks	74.83	-14.50	-0.72	-1.20	58.4	37.2	43.2	24.9	38.0	40.8	65 dBA:	59	65						
Heavy Trucks	80.05	-18.46	-0.72	-1.20	59.7	34.3	30.9	35.6	41.8	41.9	60 dBA:	128	141						
<b>Total:</b>											<b>67.4</b>	<b>63.8</b>	<b>62.5</b>	<b>56.5</b>	<b>64.9</b>	<b>65.6</b>	<b>55 dBA:</b>	<b>275</b>	<b>303</b>

Road Name: Clark Avenue		Segment: North of Harvey Way		Roadway Classification: Minor Avenue															
Average Daily Traffic: 19730 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	65.11	2.09	-0.72	-1.20	65.3	63.2	61.8	55.8	64.3	64.9	70 dBA:	25	27						
Medium Trucks	74.83	-15.15	-0.72	-1.20	57.8	36.5	42.5	24.2	37.4	40.1	65 dBA:	54	59						
Heavy Trucks	80.05	-19.10	-0.72	-1.20	59.0	33.7	30.3	34.9	41.1	41.2	60 dBA:	116	127						
<b>Total:</b>											<b>66.8</b>	<b>63.2</b>	<b>61.9</b>	<b>55.9</b>	<b>64.3</b>	<b>64.9</b>	<b>55 dBA:</b>	<b>249</b>	<b>275</b>

Road Name: Clark Avenue		Segment: North of Carson Street		Roadway Classification: Minor Avenue															
Average Daily Traffic: 18431 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.86 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	65.11	1.80	0.75	-1.20	66.5	64.3	63.0	57.0	65.4	66.1	70 dBA:	25	27						
Medium Trucks	74.83	-15.44	0.75	-1.20	58.9	37.7	43.7	25.4	38.6	41.3	65 dBA:	54	59						
Heavy Trucks	80.05	-19.40	0.75	-1.20	60.2	34.8	31.4	36.1	42.3	42.4	60 dBA:	116	127						
<b>Total:</b>											<b>68.0</b>	<b>64.3</b>	<b>63.1</b>	<b>57.0</b>	<b>65.5</b>	<b>66.1</b>	<b>55 dBA:</b>	<b>249</b>	<b>274</b>

Road Name: Clark Avenue		Segment: South of Carson Street		Roadway Classification: Minor Avenue															
Average Daily Traffic: 25956 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	65.11	3.28	-0.72	-1.20	66.5	64.3	63.0	57.0	65.4	66.1	70 dBA:	30	33						
Medium Trucks	74.83	-13.96	-0.72	-1.20	58.9	37.7	43.7	25.4	38.6	41.3	65 dBA:	64	71						
Heavy Trucks	80.05	-17.91	-0.72	-1.20	60.2	34.9	31.5	36.1	42.3	42.4	60 dBA:	139	153						
<b>Total:</b>											<b>68.0</b>	<b>64.4</b>	<b>63.1</b>	<b>57.1</b>	<b>65.5</b>	<b>66.1</b>	<b>55 dBA:</b>	<b>299</b>	<b>330</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Clark Avenue		Segment: South of Lew Davis Street		Roadway Classification: Minor Avenue													
Average Daily Traffic: 19384 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1													
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 65.76 ft)																	
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels													
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL										
Automobiles	67.36	1.43	-1.89	65.7	63.6	62.3	64.7	65.3	70 dBA:	31	34						
Medium Trucks	76.31	-15.80	-1.89	57.4	36.2	42.2	37.0	39.8	65 dBA:	67	74						
Heavy Trucks	81.16	-19.76	-1.89	58.3	33.0	29.6	40.4	40.5	60 dBA:	144	159						
<b>Total:</b>										<b>66.9</b>	<b>63.6</b>	<b>62.3</b>	<b>64.7</b>	<b>65.3</b>	<b>55 dBA:</b>	<b>310</b>	<b>342</b>

Road Name: Clark Avenue		Segment: South of Conant Street		Roadway Classification: Minor Avenue													
Average Daily Traffic: 20821 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1													
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 102.22 ft)																	
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels													
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL										
Automobiles	67.36	1.75	-4.76	63.1	61.0	59.7	62.1	62.7	70 dBA:	31	35						
Medium Trucks	76.31	-15.49	-4.76	54.9	33.6	39.6	34.5	37.2	65 dBA:	68	75						
Heavy Trucks	81.16	-19.45	-4.76	55.7	30.4	27.0	37.8	37.9	60 dBA:	146	161						
<b>Total:</b>										<b>64.4</b>	<b>61.0</b>	<b>59.8</b>	<b>62.1</b>	<b>62.8</b>	<b>55 dBA:</b>	<b>314</b>	<b>346</b>

Road Name: Clark Avenue		Segment: South of Wardlow Road		Roadway Classification: Minor Avenue													
Average Daily Traffic: 23330 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1													
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 102.22 ft)																	
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels													
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL										
Automobiles	67.36	2.24	-4.76	63.6	61.5	60.2	62.6	63.2	70 dBA:	34	37						
Medium Trucks	76.31	-15.00	-4.76	55.4	34.1	40.1	35.0	37.7	65 dBA:	73	80						
Heavy Trucks	81.16	-18.95	-4.76	56.2	30.9	27.5	38.3	38.4	60 dBA:	157	173						
<b>Total:</b>										<b>64.9</b>	<b>61.5</b>	<b>60.2</b>	<b>62.6</b>	<b>63.3</b>	<b>55 dBA:</b>	<b>339</b>	<b>373</b>

Road Name: Clark Avenue		Segment: South of Spring Street		Roadway Classification: Minor Avenue													
Average Daily Traffic: 19000 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1													
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 65.76 ft)																	
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels													
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL										
Automobiles	67.36	1.35	-1.89	65.6	63.5	62.2	64.6	65.2	70 dBA:	31	34						
Medium Trucks	76.31	-15.89	-1.89	57.3	36.1	42.1	37.0	39.7	65 dBA:	66	73						
Heavy Trucks	81.16	-19.85	-1.89	58.2	32.9	29.5	40.3	40.4	60 dBA:	142	157						
<b>Total:</b>										<b>66.9</b>	<b>63.5</b>	<b>62.2</b>	<b>64.6</b>	<b>65.2</b>	<b>55 dBA:</b>	<b>306</b>	<b>337</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

### Scenario: EXISTING WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>North of Carson Street</b>		Roadway Classification: Boulevard							
Average Daily Traffic: 26650 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 95 FEET FROM CENTERLINE (Equiv. Lane Dist: 88.71 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL
Automobiles	67.36	2.57	-3.84	-1.20	64.9	62.5	61.2	55.2	63.6	64.2	70 dBA: 41
Medium Trucks	76.31	-12.30	-3.84	-1.20	59.0	39.8	32.0	41.2	47.3	47.4	65 dBA: 88
Heavy Trucks	81.16	-10.08	-3.84	-1.20	66.0	49.1	41.3	50.5	56.6	56.7	60 dBA: 189
<b>Total:</b>				<b>69.0</b>	<b>62.7</b>	<b>61.3</b>	<b>56.6</b>	<b>64.5</b>	<b>65.0</b>	<b>65.0</b>	<b>55 dBA: 407</b>

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>South of Wardlow Road</b>		Roadway Classification: Boulevard							
Average Daily Traffic: 27670 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 94.04 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL
Automobiles	67.36	2.73	-4.22	-1.20	64.7	62.3	61.0	55.0	63.4	64.0	70 dBA: 41
Medium Trucks	76.31	-12.13	-4.22	-1.20	58.8	39.6	31.8	41.0	47.1	47.2	65 dBA: 89
Heavy Trucks	81.16	-9.92	-4.22	-1.20	65.8	48.8	41.1	50.3	56.4	56.4	60 dBA: 192
<b>Total:</b>				<b>68.8</b>	<b>62.5</b>	<b>61.1</b>	<b>56.4</b>	<b>64.3</b>	<b>64.8</b>	<b>64.8</b>	<b>55 dBA: 415</b>

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>South of Spring Street</b>		Roadway Classification: Boulevard							
Average Daily Traffic: 30660 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 85 FEET FROM CENTERLINE (Equiv. Lane Dist: 77.9 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL
Automobiles	67.36	3.18	-2.99	-1.20	66.3	64.0	62.7	56.6	65.1	65.7	70 dBA: 46
Medium Trucks	76.31	-11.69	-2.99	-1.20	60.4	41.2	33.4	42.6	48.8	48.8	65 dBA: 98
Heavy Trucks	81.16	-9.47	-2.99	-1.20	67.5	50.5	42.7	51.9	58.1	58.1	60 dBA: 211
<b>Total:</b>				<b>70.4</b>	<b>64.2</b>	<b>62.7</b>	<b>58.0</b>	<b>65.9</b>	<b>66.5</b>	<b>66.5</b>	<b>55 dBA: 456</b>

Road Name: <b>Del Amo Boulevard</b>		Segment: <b>West of Lakewood Boulevard</b>		Roadway Classification: Major Avenue							
Average Daily Traffic: 35900 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 36.66 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL
Automobiles	67.36	3.86	1.92	-1.20	71.9	69.6	68.3	62.2	70.7	71.3	70 dBA: 63
Medium Trucks	76.31	-11.00	1.92	-1.20	66.0	46.8	39.0	48.2	54.4	54.4	65 dBA: 136
Heavy Trucks	81.16	-8.79	1.92	-1.20	73.1	56.1	48.3	57.5	63.7	63.7	60 dBA: 294
<b>Total:</b>				<b>76.0</b>	<b>69.8</b>	<b>68.3</b>	<b>63.6</b>	<b>71.5</b>	<b>72.1</b>	<b>72.1</b>	<b>55 dBA: 633</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

### Scenario: EXISTING WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Del Amo Boulevard		Segment: East of Clark Avenue		Roadway Classification: Major Avenue															
Average Daily Traffic: 34090 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.44 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	67.36	3.64	-0.03	-1.20	69.8	67.4	66.1	60.0	68.5	69.1	70 dBA:	54	59						
Medium Trucks	76.31	-11.23	-0.03	-1.20	63.9	44.6	36.9	46.1	52.2	52.3	65 dBA:	117	127						
Heavy Trucks	81.16	-9.01	-0.03	-1.20	70.9	53.9	46.1	55.4	61.5	61.5	60 dBA:	252	274						
Total:											73.9	67.6	66.2	61.4	69.4	69.9	55 dBA:	544	590

Road Name: Harvey Way		Segment: East of Lakewood Boulevard		Roadway Classification: Local															
Average Daily Traffic: 4430 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 30 FEET FROM CENTERLINE (Equiv. Lane Dist: 28.62 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	59.44	-2.93	3.53	-1.20	58.8	56.7	55.4	49.4	57.8	58.4	70 dBA:	5	5						
Medium Trucks	71.09	-20.17	3.53	-1.20	53.2	32.0	38.0	19.7	32.9	35.6	65 dBA:	10	11						
Heavy Trucks	78.74	-24.13	3.53	-1.20	56.9	31.6	28.2	32.8	39.0	39.1	60 dBA:	22	24						
Total:											61.7	56.7	55.5	49.5	57.9	58.5	55 dBA:	47	51

Road Name: Harvey Way		Segment: East of Clark Avenue		Roadway Classification: Local															
Average Daily Traffic: 4886 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 35 FEET FROM CENTERLINE (Equiv. Lane Dist: 33.82 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	59.44	-2.51	2.44	-1.20	58.2	56.1	54.7	48.7	57.1	57.8	70 dBA:	5	5						
Medium Trucks	71.09	-19.75	2.44	-1.20	52.6	31.3	37.4	19.1	32.2	35.0	65 dBA:	11	12						
Heavy Trucks	78.74	-23.70	2.44	-1.20	56.3	30.9	27.5	32.2	38.4	38.5	60 dBA:	23	25						
Total:											61.0	56.1	54.8	48.8	57.2	57.8	55 dBA:	49	54

Road Name: Carson Street		Segment: West of Cherry Avenue		Roadway Classification: Major Avenue															
Average Daily Traffic: 23950 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.23 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	67.36	2.10	0.84	-1.20	69.1	66.7	65.4	59.4	67.8	68.5	70 dBA:	45	49						
Medium Trucks	76.31	-12.76	0.84	-1.20	63.2	44.0	36.2	45.4	51.6	51.6	65 dBA:	97	105						
Heavy Trucks	81.16	-10.54	0.84	-1.20	70.3	53.3	45.5	54.7	60.9	60.9	60 dBA:	209	227						
Total:											73.2	67.0	65.5	60.8	68.7	69.2	55 dBA:	451	489

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: <b>Carson Street</b>		Segment: <b>West of Paramount Boulevard</b>		Roadway Classification: Major Avenue															
Average Daily Traffic: 35180 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 94.04 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	3.77	-4.22	-1.20	65.7	63.3	62.1	56.0	64.4	65.1	70 dBA:	49	53						
Medium Trucks	76.31	-11.09	-4.22	-1.20	59.8	40.6	32.8	42.0	48.2	48.2	65 dBA:	105	114						
Heavy Trucks	81.16	-8.87	-4.22	-1.20	66.9	49.9	42.1	51.3	57.5	57.5	60 dBA:	226	245						
Total:											69.8	63.6	62.1	57.4	65.3	65.8	55 dBA:	487	528

Road Name: <b>Carson Street</b>		Segment: <b>West of Lakewood Boulevard</b>		Roadway Classification: Major Avenue															
Average Daily Traffic: 30845 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 120 FEET FROM CENTERLINE (Equiv. Lane Dist: 115.08 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	3.20	-5.53	-1.20	63.8	61.5	60.2	54.1	62.5	63.2	70 dBA:	44	47						
Medium Trucks	76.31	-11.66	-5.53	-1.20	57.9	38.7	30.9	40.1	46.3	46.3	65 dBA:	94	102						
Heavy Trucks	81.16	-9.44	-5.53	-1.20	65.0	48.0	40.2	49.4	55.6	55.6	60 dBA:	203	220						
Total:											67.9	61.7	60.2	55.5	63.4	63.9	55 dBA:	437	474

Road Name: <b>Carson Street</b>		Segment: <b>West of Faculty Avenue</b>		Roadway Classification: Major Avenue															
Average Daily Traffic: 35400 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 61.19 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	3.80	-1.42	-1.20	68.5	66.2	64.9	58.8	67.3	67.9	70 dBA:	53	57						
Medium Trucks	76.31	-11.06	-1.42	-1.20	62.6	43.4	35.6	44.8	51.0	51.0	65 dBA:	113	123						
Heavy Trucks	81.16	-8.85	-1.42	-1.20	69.7	52.7	44.9	54.1	60.3	60.3	60 dBA:	244	265						
Total:											72.6	66.4	64.9	60.2	68.1	68.7	55 dBA:	526	570

Road Name: <b>Carson Street</b>		Segment: <b>East of Clark Avenue</b>		Roadway Classification: Major Avenue															
Average Daily Traffic: 39780 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 75 FEET FROM CENTERLINE (Equiv. Lane Dist: 66.85 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	4.31	-2.00	-1.20	68.5	66.1	64.8	58.8	67.2	67.8	70 dBA:	56	60						
Medium Trucks	76.31	-10.56	-2.00	-1.20	62.6	43.4	35.6	44.8	50.9	51.0	65 dBA:	120	130						
Heavy Trucks	81.16	-8.34	-2.00	-1.20	69.6	52.6	44.9	54.1	60.2	60.2	60 dBA:	259	280						
Total:											72.6	66.3	64.9	60.2	68.1	68.6	55 dBA:	557	604

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Carson Street		Segment: East of Bellflower Boulevard		Roadway Classification: Major Avenue														
Average Daily Traffic: 35540 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.44 ft)																		
Noise Adjustments			Unmitigated Noise Levels															
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	67.36	3.82	-0.03	-1.20	69.9	67.6	66.3	60.2	68.7	69.3	70 dBA:	56	61					
Medium Trucks	76.31	-11.05	-0.03	-1.20	64.0	44.8	37.0	46.3	52.4	52.4	65 dBA:	120	131					
Heavy Trucks	81.16	-8.83	-0.03	-1.20	71.1	54.1	46.3	55.5	61.7	61.7	60 dBA:	260	281					
Total:											<b>74.0</b>	<b>67.8</b>	<b>66.3</b>	<b>61.6</b>	<b>69.5</b>	<b>70.1</b>	55 dBA:	<b>606</b>

Road Name: Carson Street		Segment: East of Woodruff Avenue		Roadway Classification: Major Avenue														
Average Daily Traffic: 33610 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 99.34 ft)																		
Noise Adjustments			Unmitigated Noise Levels															
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	67.36	3.58	-4.58	-1.20	65.2	62.8	61.5	55.4	63.9	64.5	70 dBA:	47	51					
Medium Trucks	76.31	-11.29	-4.58	-1.20	59.2	40.0	32.3	41.5	47.6	47.7	65 dBA:	101	110					
Heavy Trucks	81.16	-9.07	-4.58	-1.20	66.3	49.3	41.5	50.7	56.9	56.9	60 dBA:	218	236					
Total:											<b>69.2</b>	<b>63.0</b>	<b>61.5</b>	<b>56.8</b>	<b>64.8</b>	<b>65.3</b>	55 dBA:	<b>509</b>

Road Name: Conant Street		Segment: East of Clark Avenue		Roadway Classification: Neighborhood Connector														
Average Daily Traffic: 3820 Vehicles		Vehicle Speed: 15 MPH		Vehicle Mix: 1														
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.34 ft)																		
Noise Adjustments			Unmitigated Noise Levels															
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	50.83	-1.36	-1.11	-1.20	47.2	45.0	43.7	37.7	46.1	46.8	70 dBA:	2	2					
Medium Trucks	65.41	-18.60	-1.11	-1.20	44.5	23.3	29.3	11.0	24.1	26.9	65 dBA:	3	4					
Heavy Trucks	74.48	-22.55	-1.11	-1.20	49.6	24.3	20.9	25.5	31.7	31.8	60 dBA:	7	8					
Total:											<b>52.4</b>	<b>45.1</b>	<b>43.9</b>	<b>38.0</b>	<b>46.3</b>	<b>46.9</b>	55 dBA:	<b>16</b>

Road Name: Wardlow Road		Segment: East of Clark Avenue		Roadway Classification: Minor Avenue														
Average Daily Traffic: 15040 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1														
NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 38.07 ft)																		
Noise Adjustments			Unmitigated Noise Levels															
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	65.11	0.91	1.67	-1.20	66.5	64.4	63.1	57.0	65.5	66.1	70 dBA:	23	25					
Medium Trucks	74.83	-16.33	1.67	-1.20	59.0	37.7	43.7	25.5	38.6	41.4	65 dBA:	49	54					
Heavy Trucks	80.05	-20.28	1.67	-1.20	60.2	34.9	31.5	36.1	42.3	42.4	60 dBA:	105	115					
Total:											<b>68.0</b>	<b>64.4</b>	<b>63.1</b>	<b>57.1</b>	<b>65.5</b>	<b>66.1</b>	55 dBA:	<b>248</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: <b>Wardlow Road</b>		Segment: <b>East of Bellflower Boulevard</b>		Roadway Classification: Minor Avenue														
Average Daily Traffic: 18650 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1														
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.49 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL											
Automobiles	65.11	1.85	-0.04	-1.20	65.7	63.6	62.3	56.3	64.7	65.3	70 dBA: <b>24</b>							
Medium Trucks	74.83	-15.39	-0.04	-1.20	58.2	37.0	43.0	24.7	37.8	40.6	65 dBA: <b>53</b>							
Heavy Trucks	80.05	-19.35	-0.04	-1.20	59.5	34.1	30.7	35.4	41.6	41.7	60 dBA: <b>114</b>							
Total:											<b>67.2</b>	<b>63.6</b>	<b>62.3</b>	<b>56.3</b>	<b>64.7</b>	<b>65.4</b>	<b>55 dBA: 245</b>	<b>269</b>

Road Name: <b>Spring Street</b>		Segment: <b>East of Clark Avenue</b>		Roadway Classification: Major Avenue														
Average Daily Traffic: 28270 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 115 FEET FROM CENTERLINE (Equiv. Lane Dist: 109.86 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL											
Automobiles	67.36	2.83	-5.23	-1.20	63.8	61.4	60.1	54.0	62.5	63.1	70 dBA: <b>41</b>							
Medium Trucks	76.31	-12.04	-5.23	-1.20	57.8	38.6	30.9	40.1	46.2	46.2	65 dBA: <b>89</b>							
Heavy Trucks	81.16	-9.82	-5.23	-1.20	64.9	47.9	40.1	49.3	55.5	55.5	60 dBA: <b>192</b>							
Total:											<b>67.8</b>	<b>61.6</b>	<b>60.1</b>	<b>55.4</b>	<b>63.3</b>	<b>63.9</b>	<b>55 dBA: 414</b>	<b>449</b>

Road Name: <b>Spring Street</b>		Segment: <b>East of Bellflower Boulevard</b>		Roadway Classification: Major Avenue														
Average Daily Traffic: 27710 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE (Equiv. Lane Dist: 104.61 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL											
Automobiles	67.36	2.74	-4.91	-1.20	64.0	61.6	60.3	54.3	62.7	63.3	70 dBA: <b>41</b>							
Medium Trucks	76.31	-12.13	-4.91	-1.20	58.1	38.9	31.1	40.3	46.4	46.5	65 dBA: <b>88</b>							
Heavy Trucks	81.16	-9.91	-4.91	-1.20	65.1	48.1	40.4	49.6	55.7	55.8	60 dBA: <b>190</b>							
Total:											<b>68.1</b>	<b>61.8</b>	<b>60.4</b>	<b>55.7</b>	<b>63.6</b>	<b>64.1</b>	<b>55 dBA: 410</b>	<b>445</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITHOUT PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Local))			Vehicle Mix 2 (Vehicle Mix 2 (Arterial))			Vehicle Mix 3 (SR-19)			
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	
Automobiles	73.60%	13.60%	10.22%	69.50%	12.90%	9.60%	92.00%	67.68%	13.87%	16.22%
Medium Trucks	0.90%	0.90%	0.04%	1.44%	0.06%	1.50%	3.00%	0.96%	0.17%	0.48%
Heavy Trucks	0.35%	0.04%	0.35%	2.40%	0.10%	2.50%	5.00%	0.34%	0.03%	0.25%

Road Name: Cherry Avenue		Segment: North of Carson Street		Roadway Classification: Major Avenue							
Average Daily Traffic: 39220 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 83.33 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)		
Automobiles	67.36	4.25	-3.43	-1.20	67.0	64.6	63.3	57.3	65.7	66.3	70 dBA: 53
Medium Trucks	76.31	-10.62	-3.43	-1.20	61.1	41.9	34.1	43.3	49.4	49.5	65 dBA: 114
Heavy Trucks	81.16	-8.40	-3.43	-1.20	68.1	51.1	43.4	52.6	58.7	58.8	60 dBA: 247
<b>Total:</b>				<b>71.1</b>	<b>64.8</b>	<b>63.4</b>	<b>58.7</b>	<b>67.1</b>	<b>66.6</b>	<b>67.1</b>	<b>55 dBA: 531</b>

Road Name: Cherry Avenue		Segment: South of Carson Street		Roadway Classification: Major Avenue							
Average Daily Traffic: 39180 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 90 FEET FROM CENTERLINE (Equiv. Lane Dist: 83.33 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)		
Automobiles	67.36	4.24	-3.43	-1.20	67.0	64.6	63.3	57.3	65.7	66.3	70 dBA: 53
Medium Trucks	76.31	-10.62	-3.43	-1.20	61.1	41.8	34.1	43.3	49.4	49.5	65 dBA: 114
Heavy Trucks	81.16	-8.41	-3.43	-1.20	68.1	51.1	43.4	52.6	58.7	58.7	60 dBA: 246
<b>Total:</b>				<b>71.1</b>	<b>64.8</b>	<b>63.4</b>	<b>58.6</b>	<b>67.1</b>	<b>66.6</b>	<b>67.1</b>	<b>55 dBA: 531</b>

Road Name: Paramount Boulevard		Segment: North of Carson Street		Roadway Classification: Local							
Average Daily Traffic: 26400 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1							
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 59.32 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)		
Automobiles	67.36	2.78	-1.22	-1.20	67.7	65.6	64.3	58.3	66.7	67.3	70 dBA: 36
Medium Trucks	76.31	-14.46	-1.22	-1.20	59.4	38.2	44.2	25.9	39.1	41.8	65 dBA: 78
Heavy Trucks	81.16	-18.42	-1.22	-1.20	60.3	35.0	31.6	36.2	42.4	42.5	60 dBA: 168
<b>Total:</b>				<b>69.0</b>	<b>65.6</b>	<b>64.3</b>	<b>58.3</b>	<b>67.3</b>	<b>66.7</b>	<b>67.3</b>	<b>55 dBA: 362</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITHOUT PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Lakewood Boulevard		Segment: South of Del Amo Boulevard		Roadway Classification: Regional Corridor									
Average Daily Traffic: 38690 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3									
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE (Equiv. Lane Dist: 103.94 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)				
Automobiles	67.36	4.45	-4.87	-1.20	65.7	63.3	62.4	58.3	65.8	66.3	70 dBA:	58	63
Medium Trucks	76.31	-13.37	-4.87	-1.20	56.9	35.9	34.5	34.2	40.8	41.1	65 dBA:	125	135
Heavy Trucks	81.16	-17.56	-4.87	-1.20	57.5	32.0	27.9	31.9	38.2	38.4	60 dBA:	269	291
<b>Total:</b>				<b>66.8</b>	<b>63.3</b>	<b>62.4</b>	<b>58.3</b>	<b>65.8</b>	<b>66.3</b>	<b>66.3</b>	55 dBA:	<b>580</b>	<b>627</b>

Road Name: Lakewood Boulevard		Segment: North of Harvey Way		Roadway Classification: Regional Corridor									
Average Daily Traffic: 40480 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3									
NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 27 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)				
Automobiles	67.36	4.65	3.91	-1.20	74.7	72.2	71.4	67.3	74.8	75.3	70 dBA:	94	102
Medium Trucks	76.31	-13.17	3.91	-1.20	65.9	44.9	43.5	43.2	49.8	50.1	65 dBA:	203	219
Heavy Trucks	81.16	-17.36	3.91	-1.20	66.5	41.0	36.8	40.9	47.2	47.3	60 dBA:	437	472
<b>Total:</b>				<b>75.8</b>	<b>72.2</b>	<b>71.4</b>	<b>67.3</b>	<b>74.8</b>	<b>75.3</b>	<b>75.3</b>	55 dBA:	<b>941</b>	<b>1017</b>

Road Name: Lakewood Boulevard		Segment: North of Carson Street		Roadway Classification: Regional Corridor									
Average Daily Traffic: 39060 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3									
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 48 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)				
Automobiles	67.36	4.49	0.16	-1.20	70.8	68.3	67.5	63.4	70.9	71.4	70 dBA:	69	74
Medium Trucks	76.31	-13.33	0.16	-1.20	61.9	41.0	39.6	39.3	45.9	46.2	65 dBA:	149	160
Heavy Trucks	81.16	-17.52	0.16	-1.20	62.6	37.1	32.9	37.0	43.3	43.4	60 dBA:	320	346
<b>Total:</b>				<b>71.9</b>	<b>68.3</b>	<b>67.5</b>	<b>63.4</b>	<b>70.9</b>	<b>71.4</b>	<b>71.4</b>	55 dBA:	<b>689</b>	<b>745</b>

Road Name: Faculty Avenue		Segment: North of Carson Street		Roadway Classification: Local									
Average Daily Traffic: 3785 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.18 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)				
Automobiles	59.44	-3.62	0.00	-1.20	54.6	52.5	51.2	45.2	53.6	54.2	70 dBA:	4	4
Medium Trucks	71.09	-20.86	0.00	-1.20	49.0	27.8	33.8	15.5	28.7	31.4	65 dBA:	9	10
Heavy Trucks	78.74	-24.81	0.00	-1.20	52.7	27.4	24.0	28.6	34.8	34.9	60 dBA:	19	21
<b>Total:</b>				<b>57.5</b>	<b>52.5</b>	<b>51.3</b>	<b>45.3</b>	<b>53.7</b>	<b>54.3</b>	<b>54.3</b>	55 dBA:	<b>41</b>	<b>45</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITHOUT PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Clark Avenue		Segment: South of Del Amo Boulevard		Roadway Classification: Minor Avenue									
Average Daily Traffic: 26180 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL					
Automobiles	65.11	3.32	-0.72	-1.20	66.5	64.4	63.1	57.1	65.5	66.1	70 dBA:	30	33
Medium Trucks	74.83	-13.92	-0.72	-1.20	59.0	37.7	43.8	25.5	38.6	41.4	65 dBA:	65	71
Heavy Trucks	80.05	-17.87	-0.72	-1.20	60.2	34.9	31.5	36.1	42.3	42.4	60 dBA:	140	154
<b>Total:</b>				<b>68.0</b>	<b>64.4</b>	<b>63.1</b>	<b>57.1</b>	<b>65.5</b>	<b>66.1</b>	<b>66.1</b>	55 dBA:	<b>301</b>	<b>332</b>

Road Name: Clark Avenue		Segment: North of Harvey Way		Roadway Classification: Minor Avenue									
Average Daily Traffic: 22480 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL					
Automobiles	65.11	2.66	-0.72	-1.20	65.8	63.7	62.4	56.4	64.8	65.4	70 dBA:	27	30
Medium Trucks	74.83	-14.58	-0.72	-1.20	58.3	37.1	43.1	24.8	37.9	40.7	65 dBA:	59	65
Heavy Trucks	80.05	-18.54	-0.72	-1.20	59.6	34.2	30.8	35.5	41.7	41.8	60 dBA:	126	139
<b>Total:</b>				<b>67.3</b>	<b>63.7</b>	<b>62.5</b>	<b>56.4</b>	<b>64.8</b>	<b>65.5</b>	<b>65.5</b>	55 dBA:	<b>272</b>	<b>300</b>

Road Name: Clark Avenue		Segment: North of Carson Street		Roadway Classification: Minor Avenue									
Average Daily Traffic: 20682 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.86 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL					
Automobiles	65.11	2.30	0.75	-1.20	67.0	64.8	63.5	57.5	65.9	66.6	70 dBA:	27	30
Medium Trucks	74.83	-14.94	0.75	-1.20	59.4	38.2	44.2	25.9	39.1	41.8	65 dBA:	58	64
Heavy Trucks	80.05	-18.90	0.75	-1.20	60.7	35.3	31.9	36.6	42.8	42.9	60 dBA:	125	137
<b>Total:</b>				<b>68.5</b>	<b>64.8</b>	<b>63.6</b>	<b>57.5</b>	<b>66.0</b>	<b>66.6</b>	<b>66.6</b>	55 dBA:	<b>269</b>	<b>296</b>

Road Name: Clark Avenue		Segment: South of Carson Street		Roadway Classification: Minor Avenue									
Average Daily Traffic: 27964 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL					
Automobiles	65.11	3.61	-0.72	-1.20	66.8	64.7	63.4	57.3	65.8	66.4	70 dBA:	31	35
Medium Trucks	74.83	-13.63	-0.72	-1.20	59.3	38.0	44.0	25.8	38.9	41.6	65 dBA:	68	75
Heavy Trucks	80.05	-17.59	-0.72	-1.20	60.5	35.2	31.8	36.4	42.6	42.7	60 dBA:	146	161
<b>Total:</b>				<b>68.3</b>	<b>64.7</b>	<b>63.4</b>	<b>57.4</b>	<b>65.8</b>	<b>66.4</b>	<b>66.4</b>	55 dBA:	<b>315</b>	<b>347</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITHOUT PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Clark Avenue		Segment: South of Lew Davis Street		Roadway Classification: Minor Avenue															
Average Daily Traffic: 21780 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 65.76 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL												
Automobiles	67.36	1.94	-1.89	-1.20	66.2	64.1	62.8	56.8	65.2	65.8	70 dBA:	34	37						
Medium Trucks	76.31	-15.30	-1.89	-1.20	57.9	36.7	42.7	24.4	37.5	40.3	65 dBA:	72	80						
Heavy Trucks	81.16	-19.25	-1.89	-1.20	58.8	33.5	30.1	34.7	40.9	41.0	60 dBA:	156	172						
<b>Total:</b>											<b>67.5</b>	<b>64.1</b>	<b>62.8</b>	<b>56.8</b>	<b>65.2</b>	<b>65.8</b>	<b>55 dBA:</b>	<b>335</b>	<b>370</b>

Road Name: Clark Avenue		Segment: South of Conant Street		Roadway Classification: Minor Avenue															
Average Daily Traffic: 22558 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 102.22 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL												
Automobiles	67.36	2.09	-4.76	-1.20	63.5	61.4	60.1	54.0	62.5	63.1	70 dBA:	33	36						
Medium Trucks	76.31	-15.14	-4.76	-1.20	55.2	34.0	40.0	21.7	34.8	37.6	65 dBA:	71	79						
Heavy Trucks	81.16	-19.10	-4.76	-1.20	56.1	30.7	27.3	32.0	38.2	38.3	60 dBA:	154	169						
<b>Total:</b>											<b>64.7</b>	<b>61.4</b>	<b>60.1</b>	<b>54.1</b>	<b>62.5</b>	<b>63.1</b>	<b>55 dBA:</b>	<b>331</b>	<b>365</b>

Road Name: Clark Avenue		Segment: South of Wardlow Road		Roadway Classification: Minor Avenue															
Average Daily Traffic: 25920 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 102.22 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL												
Automobiles	67.36	2.70	-4.76	-1.20	64.1	62.0	60.7	54.6	63.1	63.7	70 dBA:	36	40						
Medium Trucks	76.31	-14.54	-4.76	-1.20	55.8	34.6	40.6	22.3	35.4	38.2	65 dBA:	78	86						
Heavy Trucks	81.16	-18.50	-4.76	-1.20	56.7	31.3	27.9	32.6	38.8	38.9	60 dBA:	169	186						
<b>Total:</b>											<b>65.3</b>	<b>62.0</b>	<b>60.7</b>	<b>54.7</b>	<b>63.1</b>	<b>63.7</b>	<b>55 dBA:</b>	<b>364</b>	<b>400</b>

Road Name: Clark Avenue		Segment: South of Spring Street		Roadway Classification: Minor Avenue															
Average Daily Traffic: 21660 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 65.76 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL												
Automobiles	67.36	1.92	-1.89	-1.20	66.2	64.1	62.8	56.7	65.2	65.8	70 dBA:	33	37						
Medium Trucks	76.31	-15.32	-1.89	-1.20	57.9	36.7	42.7	24.4	37.5	40.3	65 dBA:	72	79						
Heavy Trucks	81.16	-19.28	-1.89	-1.20	58.8	33.4	30.0	34.7	40.9	41.0	60 dBA:	155	171						
<b>Total:</b>											<b>67.4</b>	<b>64.1</b>	<b>62.8</b>	<b>56.8</b>	<b>65.2</b>	<b>65.8</b>	<b>55 dBA:</b>	<b>334</b>	<b>368</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITHOUT PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>North of Carson Street</b>		Roadway Classification: <b>Boulevard</b>							
Average Daily Traffic: 30600 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 95 FEET FROM CENTERLINE (Equiv. Lane Dist: 88.71 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL
Automobiles	67.36	3.17	-3.84	-1.20	65.5	63.1	61.8	55.8	64.2	64.8	70 dBA: <b>45</b>
Medium Trucks	76.31	-11.70	-3.84	-1.20	59.6	40.4	32.6	41.8	47.9	48.0	65 dBA: <b>104</b>
Heavy Trucks	81.16	-9.48	-3.84	-1.20	66.6	49.7	41.9	51.1	57.2	57.3	60 dBA: <b>225</b>
<b>Total:</b>				<b>69.6</b>	<b>63.3</b>	<b>61.9</b>	<b>57.2</b>	<b>65.1</b>	<b>65.6</b>	<b>55 dBA:</b>	<b>447</b>

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>South of Wardlow Road</b>		Roadway Classification: <b>Boulevard</b>							
Average Daily Traffic: 32150 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 94.04 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL
Automobiles	67.36	3.38	-4.22	-1.20	65.3	63.0	61.7	55.6	64.0	64.7	70 dBA: <b>46</b>
Medium Trucks	76.31	-11.48	-4.22	-1.20	59.4	40.2	32.4	41.6	47.8	47.8	65 dBA: <b>107</b>
Heavy Trucks	81.16	-9.26	-4.22	-1.20	66.5	49.5	41.7	50.9	57.1	57.1	60 dBA: <b>231</b>
<b>Total:</b>				<b>69.4</b>	<b>63.2</b>	<b>61.7</b>	<b>57.0</b>	<b>64.9</b>	<b>65.4</b>	<b>55 dBA:</b>	<b>458</b>

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>South of Spring Street</b>		Roadway Classification: <b>Boulevard</b>							
Average Daily Traffic: 35350 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 85 FEET FROM CENTERLINE (Equiv. Lane Dist: 77.9 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL
Automobiles	67.36	3.80	-2.99	-1.20	67.0	64.6	63.3	57.2	65.7	66.3	70 dBA: <b>50</b>
Medium Trucks	76.31	-11.07	-2.99	-1.20	61.0	41.8	34.1	43.3	49.4	49.5	65 dBA: <b>117</b>
Heavy Trucks	81.16	-8.85	-2.99	-1.20	68.1	51.1	43.3	52.6	58.7	58.7	60 dBA: <b>252</b>
<b>Total:</b>				<b>71.0</b>	<b>64.8</b>	<b>63.3</b>	<b>58.6</b>	<b>66.6</b>	<b>67.1</b>	<b>55 dBA:</b>	<b>501</b>

Road Name: <b>Del Amo Boulevard</b>		Segment: <b>West of Lakewood Boulevard</b>		Roadway Classification: <b>Major Avenue</b>							
Average Daily Traffic: 42490 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 36.66 ft)											
Noise Adjustments			Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL
Automobiles	67.36	4.59	1.92	-1.20	72.7	70.3	69.0	63.0	71.4	72.0	70 dBA: <b>71</b>
Medium Trucks	76.31	-10.27	1.92	-1.20	66.8	47.6	39.8	49.0	55.1	55.2	65 dBA: <b>165</b>
Heavy Trucks	81.16	-8.05	1.92	-1.20	73.8	56.8	49.1	58.3	64.4	64.4	60 dBA: <b>356</b>
<b>Total:</b>				<b>76.8</b>	<b>70.5</b>	<b>69.1</b>	<b>64.4</b>	<b>72.3</b>	<b>72.8</b>	<b>55 dBA:</b>	<b>708</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITHOUT PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Del Amo Boulevard		Segment: East of Clark Avenue		Roadway Classification: Major Avenue															
Average Daily Traffic: 40240 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.44 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	67.36	4.36	-0.03	-1.20	70.5	68.1	66.8	60.8	69.2	69.8	70 dBA:	61	66						
Medium Trucks	76.31	-10.51	-0.03	-1.20	64.6	45.4	37.6	46.8	52.9	53.0	65 dBA:	131	142						
Heavy Trucks	81.16	-8.29	-0.03	-1.20	71.6	54.7	46.9	56.1	62.2	62.3	60 dBA:	282	306						
<b>Total:</b>											<b>74.6</b>	<b>68.3</b>	<b>66.9</b>	<b>62.2</b>	<b>70.1</b>	<b>70.6</b>	<b>55 dBA:</b>	<b>607</b>	<b>659</b>

Road Name: Harvey Way		Segment: East of Lakewood Boulevard		Roadway Classification: Local															
Average Daily Traffic: 4940 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 30 FEET FROM CENTERLINE (Equiv. Lane Dist: 28.62 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	59.44	-2.46	3.53	-1.20	59.3	57.2	55.9	49.9	58.3	58.9	70 dBA:	5	6						
Medium Trucks	71.09	-19.70	3.53	-1.20	53.7	32.5	38.5	20.2	33.3	36.1	65 dBA:	11	12						
Heavy Trucks	78.74	-23.66	3.53	-1.20	57.4	32.1	28.7	33.3	39.5	39.6	60 dBA:	23	26						
<b>Total:</b>											<b>62.1</b>	<b>57.2</b>	<b>56.0</b>	<b>50.0</b>	<b>58.4</b>	<b>59.0</b>	<b>55 dBA:</b>	<b>50</b>	<b>55</b>

Road Name: Harvey Way		Segment: East of Clark Avenue		Roadway Classification: Local															
Average Daily Traffic: 5337 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 35 FEET FROM CENTERLINE (Equiv. Lane Dist: 33.82 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	59.44	-2.13	2.44	-1.20	58.6	56.4	55.1	49.1	57.5	58.2	70 dBA:	5	6						
Medium Trucks	71.09	-19.36	2.44	-1.20	53.0	31.7	37.7	19.4	32.6	35.3	65 dBA:	11	12						
Heavy Trucks	78.74	-23.32	2.44	-1.20	56.7	31.3	27.9	32.6	38.8	38.9	60 dBA:	24	27						
<b>Total:</b>											<b>61.4</b>	<b>56.5</b>	<b>55.2</b>	<b>49.2</b>	<b>57.6</b>	<b>58.2</b>	<b>55 dBA:</b>	<b>52</b>	<b>57</b>

Road Name: Carson Street		Segment: West of Cherry Avenue		Roadway Classification: Major Avenue															
Average Daily Traffic: 27640 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.23 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)									
Automobiles	67.36	2.73	0.84	-1.20	69.7	67.4	66.1	60.0	68.4	69.1	70 dBA:	50	54						
Medium Trucks	76.31	-12.14	0.84	-1.20	63.8	44.6	36.8	46.0	52.2	52.2	65 dBA:	107	116						
Heavy Trucks	81.16	-9.92	0.84	-1.20	70.9	53.9	46.1	55.3	61.5	61.5	60 dBA:	230	249						
<b>Total:</b>											<b>73.8</b>	<b>67.6</b>	<b>66.1</b>	<b>61.4</b>	<b>69.3</b>	<b>69.9</b>	<b>55 dBA:</b>	<b>496</b>	<b>538</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITHOUT PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Carson Street		Segment: West of Paramount Boulevard		Roadway Classification: Major Avenue										
Average Daily Traffic: 39610 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2										
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 94.04 ft)														
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels										
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL						
Automobiles	67.36	4.29	-4.22	-1.20	66.2	63.9	62.6	64.9	65.6	70 dBA: 53				
Medium Trucks	76.31	-10.58	-4.22	-1.20	60.3	41.1	33.3	42.5	48.7	65 dBA: 113				
Heavy Trucks	81.16	-8.36	-4.22	-1.20	67.4	50.4	42.6	51.8	58.0	60 dBA: 244				
Total:										66.4	65.8	57.9	62.6	55 dBA: 571

Road Name: Carson Street		Segment: West of Lakewood Boulevard		Roadway Classification: Major Avenue										
Average Daily Traffic: 34414 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2										
NOISE PARAMETERS AT 120 FEET FROM CENTERLINE (Equiv. Lane Dist: 115.08 ft)														
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels										
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL						
Automobiles	67.36	3.68	-5.53	-1.20	64.3	61.9	60.6	54.6	63.0	70 dBA: 47				
Medium Trucks	76.31	-11.19	-5.53	-1.20	58.4	39.2	31.4	40.6	46.8	65 dBA: 101				
Heavy Trucks	81.16	-8.97	-5.53	-1.20	65.5	48.5	40.7	49.9	56.0	60 dBA: 218				
Total:										64.4	63.9	56.0	60.7	55 dBA: 470

Road Name: Carson Street		Segment: West of Faculty Avenue		Roadway Classification: Major Avenue										
Average Daily Traffic: 39920 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2										
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 61.19 ft)														
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels										
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL						
Automobiles	67.36	4.32	-1.42	-1.20	69.1	66.7	65.4	59.3	67.8	70 dBA: 57				
Medium Trucks	76.31	-10.54	-1.42	-1.20	63.2	43.9	36.2	45.4	51.5	65 dBA: 123				
Heavy Trucks	81.16	-8.32	-1.42	-1.20	70.2	53.2	45.4	54.7	60.8	60 dBA: 264				
Total:										69.2	68.7	60.7	65.4	55 dBA: 570

Road Name: Carson Street		Segment: East of Clark Avenue		Roadway Classification: Major Avenue										
Average Daily Traffic: 45180 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2										
NOISE PARAMETERS AT 75 FEET FROM CENTERLINE (Equiv. Lane Dist: 66.85 ft)														
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels										
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL						
Automobiles	67.36	4.86	-2.00	-1.20	69.0	66.7	65.4	59.3	67.7	70 dBA: 61				
Medium Trucks	76.31	-10.01	-2.00	-1.20	63.1	43.9	36.1	45.3	51.5	65 dBA: 131				
Heavy Trucks	81.16	-7.79	-2.00	-1.20	70.2	53.2	45.4	54.6	60.8	60 dBA: 282				
Total:										69.1	68.6	60.7	65.4	55 dBA: 607

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITHOUT PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Carson Street		Segment:		East of Bellflower Boulevard		Roadway Classification: Major Avenue						
Average Daily Traffic: 40780 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2		Centerline Distance to						
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.44 ft)												
Noise Adjustments				Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to	Noise Contour (in feet)	
Automobiles	67.36	4.42	-0.03	-1.20	70.5	68.2	66.9	60.8	69.3	69.9	70 dBA:	61
Medium Trucks	76.31	-10.45	-0.03	-1.20	64.6	45.4	37.6	46.9	53.0	53.0	65 dBA:	132
Heavy Trucks	81.16	-8.23	-0.03	-1.20	71.7	54.7	46.9	56.1	62.3	62.3	60 dBA:	284
Total:				<b>74.6</b>	<b>68.4</b>	<b>66.9</b>	<b>62.2</b>	<b>70.1</b>	<b>70.7</b>		55 dBA:	<b>613</b>

Road Name: Carson Street		Segment:		East of Woodruff Avenue		Roadway Classification: Major Avenue						
Average Daily Traffic: 39070 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2		Centerline Distance to						
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 99.34 ft)												
Noise Adjustments				Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to	Noise Contour (in feet)	
Automobiles	67.36	4.23	-4.58	-1.20	65.8	63.4	62.1	56.1	64.5	65.2	70 dBA:	52
Medium Trucks	76.31	-10.64	-4.58	-1.20	59.9	40.7	32.9	42.1	48.3	48.3	65 dBA:	112
Heavy Trucks	81.16	-8.42	-4.58	-1.20	67.0	50.0	42.2	51.4	57.6	57.6	60 dBA:	241
Total:				<b>69.9</b>	<b>63.7</b>	<b>62.2</b>	<b>57.5</b>	<b>65.4</b>	<b>65.9</b>		55 dBA:	<b>519</b>

Road Name: Conant Street		Segment:		East of Clark Avenue		Roadway Classification: Neighborhood Connector						
Average Daily Traffic: 3890 Vehicles		Vehicle Speed: 15 MPH		Vehicle Mix: 1		Centerline Distance to						
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.34 ft)												
Noise Adjustments				Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to	Noise Contour (in feet)	
Automobiles	50.83	-1.28	-1.11	-1.20	47.2	45.1	43.8	37.8	46.2	46.8	70 dBA:	2
Medium Trucks	65.41	-18.52	-1.11	-1.20	44.6	23.3	29.4	11.1	24.2	27.0	65 dBA:	3
Heavy Trucks	74.48	-22.47	-1.11	-1.20	49.7	24.3	20.9	25.6	31.8	31.9	60 dBA:	7
Total:				<b>52.4</b>	<b>45.2</b>	<b>44.0</b>	<b>38.1</b>	<b>46.4</b>	<b>47.0</b>		55 dBA:	<b>16</b>

Road Name: Wardlow Road		Segment:		East of Clark Avenue		Roadway Classification: Minor Avenue						
Average Daily Traffic: 16960 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1		Centerline Distance to						
NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 38.07 ft)												
Noise Adjustments				Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to	Noise Contour (in feet)	
Automobiles	65.11	1.43	1.67	-1.20	67.0	64.9	63.6	57.6	66.0	66.6	70 dBA:	24
Medium Trucks	74.83	-15.80	1.67	-1.20	59.5	38.2	44.3	26.0	39.1	41.9	65 dBA:	53
Heavy Trucks	80.05	-19.76	1.67	-1.20	60.8	35.4	32.0	36.7	42.9	43.0	60 dBA:	113
Total:				<b>68.5</b>	<b>64.9</b>	<b>63.6</b>	<b>57.6</b>	<b>66.0</b>	<b>66.6</b>		55 dBA:	<b>244</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITHOUT PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: <b>Wardlow Road</b>		Segment: <b>East of Bellflower Boulevard</b>		Roadway Classification: Minor Avenue														
Average Daily Traffic: 21430 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1														
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.49 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL											
Automobiles	65.11	2.45	-0.04	-1.20	66.3	64.2	62.9	56.9	65.3	65.9	70 dBA:	<b>27</b>	<b>30</b>					
Medium Trucks	74.83	-14.79	-0.04	-1.20	58.8	37.6	43.6	25.3	38.4	41.2	65 dBA:	<b>58</b>	<b>64</b>					
Heavy Trucks	80.05	-18.74	-0.04	-1.20	60.1	34.7	31.3	36.0	42.2	42.3	60 dBA:	<b>125</b>	<b>137</b>					
Total:											<b>67.8</b>	<b>64.2</b>	<b>62.9</b>	<b>56.9</b>	<b>65.3</b>	<b>66.0</b>	<b>268</b>	<b>296</b>

Road Name: <b>Spring Street</b>		Segment: <b>East of Clark Avenue</b>		Roadway Classification: Major Avenue														
Average Daily Traffic: 32560 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 115 FEET FROM CENTERLINE (Equiv. Lane Dist: 109.86 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL											
Automobiles	67.36	3.44	-5.23	-1.20	64.4	62.0	60.7	54.6	63.1	63.7	70 dBA:	<b>45</b>	<b>49</b>					
Medium Trucks	76.31	-11.43	-5.23	-1.20	58.5	39.2	31.5	40.7	46.8	46.9	65 dBA:	<b>98</b>	<b>106</b>					
Heavy Trucks	81.16	-9.21	-5.23	-1.20	65.5	48.5	40.7	50.0	56.1	56.1	60 dBA:	<b>211</b>	<b>229</b>					
Total:											<b>68.4</b>	<b>62.2</b>	<b>60.8</b>	<b>56.0</b>	<b>64.0</b>	<b>64.5</b>	<b>455</b>	<b>493</b>

Road Name: <b>Spring Street</b>		Segment: <b>East of Bellflower Boulevard</b>		Roadway Classification: Major Avenue														
Average Daily Traffic: 32290 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE (Equiv. Lane Dist: 104.61 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels														
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve. Leq Night	Ldn CNEL											
Automobiles	67.36	3.40	-4.91	-1.20	64.6	62.3	61.0	54.9	63.4	64.0	70 dBA:	<b>45</b>	<b>49</b>					
Medium Trucks	76.31	-11.46	-4.91	-1.20	58.7	39.5	31.7	41.0	47.1	47.1	65 dBA:	<b>98</b>	<b>106</b>					
Heavy Trucks	81.16	-9.25	-4.91	-1.20	65.8	48.8	41.0	50.2	56.4	56.4	60 dBA:	<b>211</b>	<b>229</b>					
Total:											<b>68.7</b>	<b>62.5</b>	<b>61.0</b>	<b>56.3</b>	<b>64.2</b>	<b>64.8</b>	<b>454</b>	<b>493</b>



## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Lakewood Boulevard		Segment: South of Del Amo Boulevard		Roadway Classification: Regional Corridor															
Average Daily Traffic: 39860 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3															
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE (Equiv. Lane Dist: 103.94 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	67.36	4.58	-4.87	-1.20	65.9	63.4	62.5	58.4	65.9	66.4	66.4	70 dBA:	59	CNEL					
Medium Trucks	76.31	-13.24	-4.87	-1.20	57.0	36.0	34.6	34.3	41.0	41.2	41.2	65 dBA:	127	138					
Heavy Trucks	81.16	-17.43	-4.87	-1.20	57.7	32.1	28.0	32.0	38.4	38.5	38.5	60 dBA:	275	297					
<b>Total:</b>											<b>66.9</b>	<b>63.4</b>	<b>62.5</b>	<b>58.5</b>	<b>66.0</b>	<b>66.5</b>	<b>55 dBA:</b>	<b>592</b>	<b>639</b>

Road Name: Lakewood Boulevard		Segment: North of Harvey Way		Roadway Classification: Regional Corridor															
Average Daily Traffic: 41840 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3															
NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 27 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	67.36	4.79	3.91	-1.20	74.9	72.4	71.5	67.4	74.9	75.4	75.4	70 dBA:	96	104					
Medium Trucks	76.31	-13.03	3.91	-1.20	66.0	45.0	43.6	43.3	50.0	50.2	50.2	65 dBA:	207	224					
Heavy Trucks	81.16	-17.22	3.91	-1.20	66.7	41.1	37.0	41.0	47.4	47.5	47.5	60 dBA:	447	483					
<b>Total:</b>											<b>75.9</b>	<b>72.4</b>	<b>71.5</b>	<b>67.4</b>	<b>75.0</b>	<b>75.5</b>	<b>55 dBA:</b>	<b>962</b>	<b>1040</b>

Road Name: Lakewood Boulevard		Segment: North of Carson Street		Roadway Classification: Regional Corridor															
Average Daily Traffic: 40089 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3															
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 48 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	67.36	4.61	0.16	-1.20	70.9	68.4	67.6	63.5	71.0	71.5	71.5	70 dBA:	70	76					
Medium Trucks	76.31	-13.22	0.16	-1.20	62.1	41.1	39.7	39.4	46.0	46.3	46.3	65 dBA:	151	163					
Heavy Trucks	81.16	-17.40	0.16	-1.20	62.7	37.2	33.0	37.1	43.4	43.5	43.5	60 dBA:	326	352					
<b>Total:</b>											<b>72.0</b>	<b>68.5</b>	<b>67.6</b>	<b>63.5</b>	<b>71.0</b>	<b>71.5</b>	<b>55 dBA:</b>	<b>702</b>	<b>758</b>

Road Name: Faculty Avenue		Segment: North of Carson Street		Roadway Classification: Local															
Average Daily Traffic: 4042 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.18 ft)																			
Noise Adjustments			Unmitigated Noise Levels																
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night													
Automobiles	59.44	-3.33	0.00	-1.20	54.9	52.8	51.5	45.5	53.9	54.5	54.5	70 dBA:	4	5					
Medium Trucks	71.09	-20.57	0.00	-1.20	49.3	28.1	34.1	15.8	28.9	31.7	31.7	65 dBA:	9	10					
Heavy Trucks	78.74	-24.53	0.00	-1.20	53.0	27.7	24.3	28.9	35.1	35.2	35.2	60 dBA:	20	22					
<b>Total:</b>											<b>57.8</b>	<b>52.8</b>	<b>51.6</b>	<b>45.6</b>	<b>54.0</b>	<b>54.6</b>	<b>55 dBA:</b>	<b>43</b>	<b>47</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Clark Avenue		Segment: South of Del Amo Boulevard		Roadway Classification: Minor Avenue								
Average Daily Traffic: 26780 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1								
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels								
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL				
Automobiles	65.11	3.42	-0.72	-1.20	66.6	64.5	63.2	57.2	65.6	66.2	70 dBA:	31
Medium Trucks	74.83	-13.82	-0.72	-1.20	59.1	37.8	43.9	25.6	38.7	41.5	65 dBA:	66
Heavy Trucks	80.05	-17.78	-0.72	-1.20	60.3	35.0	31.6	36.2	42.4	42.5	60 dBA:	142
<b>Total:</b>												
<b>68.1    64.5    63.2    57.2    65.6    66.2    55 dBA:    306    337</b>												

Road Name: Clark Avenue		Segment: North of Harvey Way		Roadway Classification: Minor Avenue								
Average Daily Traffic: 23080 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1								
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels								
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL				
Automobiles	65.11	2.77	-0.72	-1.20	66.0	63.8	62.5	56.5	64.9	65.6	70 dBA:	28
Medium Trucks	74.83	-14.47	-0.72	-1.20	58.4	37.2	43.2	24.9	38.1	40.8	65 dBA:	60
Heavy Trucks	80.05	-18.42	-0.72	-1.20	59.7	34.4	31.0	35.6	41.8	41.9	60 dBA:	128
<b>Total:</b>												
<b>67.5    63.9    62.6    56.5    65.0    65.6    55 dBA:    277    305</b>												

Road Name: Clark Avenue		Segment: North of Carson Street		Roadway Classification: Minor Avenue								
Average Daily Traffic: 21625 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1								
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.86 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels								
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL				
Automobiles	65.11	2.49	0.75	-1.20	67.1	65.0	63.7	57.7	66.1	66.7	70 dBA:	28
Medium Trucks	74.83	-14.75	0.75	-1.20	59.6	38.4	44.4	26.1	39.3	42.0	65 dBA:	60
Heavy Trucks	80.05	-18.70	0.75	-1.20	60.9	35.5	32.1	36.8	43.0	43.1	60 dBA:	129
<b>Total:</b>												
<b>68.7    65.0    63.8    57.7    66.2    66.8    55 dBA:    277    305</b>												

Road Name: Clark Avenue		Segment: South of Carson Street		Roadway Classification: Minor Avenue								
Average Daily Traffic: 30022 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1								
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 54.99 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels								
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL				
Automobiles	65.11	3.91	-0.72	-1.20	67.1	65.0	63.7	57.7	66.1	66.7	70 dBA:	33
Medium Trucks	74.83	-13.32	-0.72	-1.20	59.6	38.3	44.4	26.1	39.2	42.0	65 dBA:	71
Heavy Trucks	80.05	-17.28	-0.72	-1.20	60.8	35.5	32.1	36.7	42.9	43.0	60 dBA:	153
<b>Total:</b>												
<b>68.6    65.0    63.7    57.7    66.1    66.7    55 dBA:    330    363</b>												

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Clark Avenue		Segment: South of Lew Davis Street		Roadway Classification: Minor Avenue									
Average Daily Traffic: 22552 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 65.76 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL	
Automobiles	67.36	2.09	-1.89	-1.20	66.4	64.2	62.9	56.9	65.3	66.0	70 dBA:	34	38
Medium Trucks	76.31	-15.15	-1.89	-1.20	58.1	36.8	42.9	24.6	37.7	40.5	65 dBA:	74	81
Heavy Trucks	81.16	-19.10	-1.89	-1.20	59.0	33.6	30.2	34.9	41.1	41.2	60 dBA:	159	176
<b>Total:</b>				<b>67.6</b>	<b>64.3</b>	<b>63.0</b>	<b>56.9</b>	<b>65.4</b>	<b>66.0</b>		<b>55 dBA:</b>	<b>343</b>	<b>378</b>

Road Name: Clark Avenue		Segment: South of Conant Street		Roadway Classification: Minor Avenue									
Average Daily Traffic: 24102 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 102.22 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL	
Automobiles	67.36	2.38	-4.76	-1.20	63.8	61.7	60.3	54.3	62.8	63.4	70 dBA:	35	38
Medium Trucks	76.31	-14.86	-4.76	-1.20	55.5	34.2	40.3	22.0	35.1	37.9	65 dBA:	75	82
Heavy Trucks	81.16	-18.81	-4.76	-1.20	56.4	31.0	27.6	32.3	38.5	38.6	60 dBA:	161	177
<b>Total:</b>				<b>65.0</b>	<b>61.7</b>	<b>60.4</b>	<b>54.4</b>	<b>62.8</b>	<b>63.4</b>		<b>55 dBA:</b>	<b>346</b>	<b>381</b>

Road Name: Clark Avenue		Segment: South of Wardlow Road		Roadway Classification: Minor Avenue									
Average Daily Traffic: 27100 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 102.22 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL	
Automobiles	67.36	2.89	-4.76	-1.20	64.3	62.2	60.9	54.8	63.3	63.9	70 dBA:	37	41
Medium Trucks	76.31	-14.35	-4.76	-1.20	56.0	34.8	40.8	22.5	35.6	38.4	65 dBA:	81	89
Heavy Trucks	81.16	-18.30	-4.76	-1.20	56.9	31.5	28.1	32.8	39.0	39.1	60 dBA:	174	191
<b>Total:</b>				<b>65.5</b>	<b>62.2</b>	<b>60.9</b>	<b>54.9</b>	<b>63.3</b>	<b>63.9</b>		<b>55 dBA:</b>	<b>374</b>	<b>412</b>

Road Name: Clark Avenue		Segment: South of Spring Street		Roadway Classification: Minor Avenue									
Average Daily Traffic: 22150 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 65.76 ft)													
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	Ldn	CNEL	
Automobiles	67.36	2.01	-1.89	-1.20	66.3	64.2	62.9	56.8	65.3	65.9	70 dBA:	34	37
Medium Trucks	76.31	-15.22	-1.89	-1.20	58.0	36.8	42.8	24.5	37.6	40.4	65 dBA:	73	81
Heavy Trucks	81.16	-19.18	-1.89	-1.20	58.9	33.5	30.1	34.8	41.0	41.1	60 dBA:	157	173
<b>Total:</b>				<b>67.5</b>	<b>64.2</b>	<b>62.9</b>	<b>56.9</b>	<b>65.3</b>	<b>65.9</b>		<b>55 dBA:</b>	<b>339</b>	<b>374</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>North of Carson Street</b>		Roadway Classification: Boulevard								
Average Daily Traffic: 31090 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 95 FEET FROM CENTERLINE (Equiv. Lane Dist: 88.71 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels								
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL				
Automobiles	67.36	3.24	-3.84	-1.20	65.6	63.2	61.9	55.8	64.3	64.9	70 dBA:	<b>45</b>
Medium Trucks	76.31	-11.63	-3.84	-1.20	59.6	40.4	32.7	41.9	48.0	48.1	65 dBA:	<b>97</b>
Heavy Trucks	81.16	-9.41	-3.84	-1.20	66.7	49.7	41.9	51.1	57.3	57.3	60 dBA:	<b>209</b>
<b>Total:</b>											55 dBA:	<b>451</b>
<b>69.6 63.4 61.9 57.2 65.2 65.7</b>												<b>489</b>

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>South of Wardlow Road</b>		Roadway Classification: Boulevard								
Average Daily Traffic: 32340 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 94.04 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels								
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL				
Automobiles	67.36	3.41	-4.22	-1.20	65.4	63.0	61.7	55.6	64.1	64.7	70 dBA:	<b>46</b>
Medium Trucks	76.31	-11.46	-4.22	-1.20	59.4	40.2	32.4	41.7	47.8	47.8	65 dBA:	<b>99</b>
Heavy Trucks	81.16	-9.24	-4.22	-1.20	66.5	49.5	41.7	50.9	57.1	57.1	60 dBA:	<b>214</b>
<b>Total:</b>											55 dBA:	<b>460</b>
<b>69.4 63.2 61.7 57.0 64.9 65.5</b>												<b>499</b>

Road Name: <b>Bellflower Boulevard</b>		Segment: <b>South of Spring Street</b>		Roadway Classification: Boulevard								
Average Daily Traffic: 35840 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 85 FEET FROM CENTERLINE (Equiv. Lane Dist: 77.9 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels								
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL				
Automobiles	67.36	3.86	-2.99	-1.20	67.0	64.7	63.4	57.3	65.7	66.4	70 dBA:	<b>51</b>
Medium Trucks	76.31	-11.01	-2.99	-1.20	61.1	41.9	34.1	43.3	49.5	49.5	65 dBA:	<b>109</b>
Heavy Trucks	81.16	-8.79	-2.99	-1.20	68.2	51.2	43.4	52.6	58.8	58.8	60 dBA:	<b>254</b>
<b>Total:</b>											55 dBA:	<b>506</b>
<b>71.1 64.9 63.4 58.7 66.6 67.1</b>												<b>548</b>

Road Name: <b>Del Amo Boulevard</b>		Segment: <b>West of Lakewood Boulevard</b>		Roadway Classification: Major Avenue								
Average Daily Traffic: 42980 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 36.66 ft)												
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels								
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL				
Automobiles	67.36	4.64	1.92	-1.20	72.7	70.4	69.1	63.0	71.4	72.1	70 dBA:	<b>71</b>
Medium Trucks	76.31	-10.22	1.92	-1.20	66.8	47.6	39.8	49.0	55.2	55.2	65 dBA:	<b>154</b>
Heavy Trucks	81.16	-8.00	1.92	-1.20	73.9	56.9	49.1	58.3	64.5	64.5	60 dBA:	<b>331</b>
<b>Total:</b>											55 dBA:	<b>713</b>
<b>76.8 70.6 69.1 64.4 72.3 72.8</b>												<b>773</b>

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Del Amo Boulevard		Segment: East of Clark Avenue		Roadway Classification: Major Avenue							
Average Daily Traffic: 40540 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.44 ft)											
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to Noise Contour (in feet)				
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night		Ldn			
Automobiles	67.36	4.39	-0.03	-1.20	70.5	68.1	66.9	69.2	69.9	70 dBA:	61
Medium Trucks	76.31	-10.48	-0.03	-1.20	64.6	45.4	37.6	46.8	53.0	65 dBA:	132
Heavy Trucks	81.16	-8.26	-0.03	-1.20	71.7	54.7	46.9	56.1	62.3	60 dBA:	283
Total:											
74.6    68.4    66.9    62.2    70.1    70.6											

Road Name: Harvey Way		Segment: East of Lakewood Boulevard		Roadway Classification: Local							
Average Daily Traffic: 5140 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1							
NOISE PARAMETERS AT 30 FEET FROM CENTERLINE (Equiv. Lane Dist: 28.62 ft)											
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to Noise Contour (in feet)				
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night		Ldn			
Automobiles	59.44	-2.29	3.53	-1.20	59.5	57.4	56.0	50.0	59.1	70 dBA:	5
Medium Trucks	71.09	-19.53	3.53	-1.20	53.9	32.6	38.7	20.4	33.5	65 dBA:	11
Heavy Trucks	78.74	-23.48	3.53	-1.20	57.6	32.2	28.8	33.5	39.7	60 dBA:	24
Total:											
62.3    57.4    56.1    50.1    58.5    59.2											

Road Name: Harvey Way		Segment: East of Clark Avenue		Roadway Classification: Local							
Average Daily Traffic: 5680 Vehicles		Vehicle Speed: 25 MPH		Vehicle Mix: 1							
NOISE PARAMETERS AT 35 FEET FROM CENTERLINE (Equiv. Lane Dist: 33.82 ft)											
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to Noise Contour (in feet)				
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night		Ldn			
Automobiles	59.44	-1.85	2.44	-1.20	58.8	56.7	55.4	49.4	57.8	70 dBA:	5
Medium Trucks	71.09	-19.09	2.44	-1.20	53.2	32.0	38.0	19.7	32.9	65 dBA:	12
Heavy Trucks	78.74	-23.05	2.44	-1.20	56.9	31.6	28.2	32.8	39.0	60 dBA:	25
Total:											
61.7    56.7    55.5    49.5    57.9    58.5											

Road Name: Carson Street		Segment: West of Cherry Avenue		Roadway Classification: Major Avenue							
Average Daily Traffic: 28130 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2							
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.23 ft)											
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to Noise Contour (in feet)				
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night		Ldn			
Automobiles	67.36	2.80	0.84	-1.20	69.8	67.4	66.1	60.1	68.5	70 dBA:	50
Medium Trucks	76.31	-12.06	0.84	-1.20	63.9	44.7	36.9	46.1	52.3	65 dBA:	108
Heavy Trucks	81.16	-9.84	0.84	-1.20	71.0	54.0	46.2	55.4	61.6	60 dBA:	233
Total:											
73.9    67.6    66.2    61.5    69.4    69.9											

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Carson Street		Segment: West of Paramount Boulevard		Roadway Classification: Major Avenue															
Average Daily Traffic: 41090 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 94.04 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	4.45	-4.22	-1.20	66.4	64.0	62.7	56.7	65.1	65.7	70 dBA:	54	59						
Medium Trucks	76.31	-10.42	-4.22	-1.20	60.5	41.3	33.5	42.7	48.8	48.9	65 dBA:	116	126						
Heavy Trucks	81.16	-8.20	-4.22	-1.20	67.5	50.6	42.8	52.0	58.1	58.2	60 dBA:	251	272						
Total:											70.5	64.2	62.8	58.1	66.0	66.5	55 dBA:	540	585

Road Name: Carson Street		Segment: West of Lakewood Boulevard		Roadway Classification: Major Avenue															
Average Daily Traffic: 36129 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 120 FEET FROM CENTERLINE (Equiv. Lane Dist: 115.08 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	3.89	-5.53	-1.20	64.5	62.1	60.9	54.8	63.2	63.9	70 dBA:	49	53						
Medium Trucks	76.31	-10.98	-5.53	-1.20	58.6	39.4	31.6	40.8	47.0	47.0	65 dBA:	105	113						
Heavy Trucks	81.16	-8.76	-5.53	-1.20	65.7	48.7	40.9	50.1	56.3	56.3	60 dBA:	225	244						
Total:											68.6	62.4	60.9	56.2	64.1	64.6	55 dBA:	486	527

Road Name: Carson Street		Segment: West of Faculty Avenue		Roadway Classification: Major Avenue															
Average Daily Traffic: 41590 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 61.19 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	4.50	-1.42	-1.20	69.2	66.9	65.6	59.5	68.0	68.6	70 dBA:	59	63						
Medium Trucks	76.31	-10.36	-1.42	-1.20	63.3	44.1	36.3	45.5	51.7	51.7	65 dBA:	126	137						
Heavy Trucks	81.16	-8.15	-1.42	-1.20	70.4	53.4	45.6	54.8	61.0	61.0	60 dBA:	272	295						
Total:											73.3	67.1	65.6	60.9	68.8	69.4	55 dBA:	585	635

Road Name: Carson Street		Segment: East of Clark Avenue		Roadway Classification: Major Avenue															
Average Daily Traffic: 46850 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 75 FEET FROM CENTERLINE (Equiv. Lane Dist: 66.85 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	5.02	-2.00	-1.20	69.2	66.8	65.5	59.5	67.9	68.5	70 dBA:	62	67						
Medium Trucks	76.31	-9.85	-2.00	-1.20	63.3	44.1	36.3	45.5	51.6	51.7	65 dBA:	134	145						
Heavy Trucks	81.16	-7.63	-2.00	-1.20	70.3	53.3	45.6	54.8	60.9	61.0	60 dBA:	288	313						
Total:											73.3	67.0	65.6	60.9	68.8	69.3	55 dBA:	621	674

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: Carson Street		Segment: East of Bellflower Boulevard		Roadway Classification: Major Avenue														
Average Daily Traffic: 41950 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.44 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to											
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL									
Automobiles	67.36	4.54	-0.03	-1.20	70.7	68.3	67.0	60.9	69.4	70.0	70 dBA: 62	68						
Medium Trucks	76.31	-10.33	-0.03	-1.20	64.8	45.5	37.8	47.0	53.1	53.2	65 dBA: 135	146						
Heavy Trucks	81.16	-8.11	-0.03	-1.20	71.8	54.8	47.0	56.3	62.4	62.4	60 dBA: 290	314						
Total:											74.8	68.5	67.1	62.3	70.3	70.8	55 dBA: 625	677

Road Name: Carson Street		Segment: East of Woodruff Avenue		Roadway Classification: Major Avenue														
Average Daily Traffic: 39760 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2														
NOISE PARAMETERS AT 105 FEET FROM CENTERLINE (Equiv. Lane Dist: 99.34 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to											
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL									
Automobiles	67.36	4.31	-4.58	-1.20	65.9	63.5	62.2	56.2	64.6	65.2	70 dBA: 52	57						
Medium Trucks	76.31	-10.56	-4.58	-1.20	60.0	40.8	33.0	42.2	48.3	48.4	65 dBA: 113	123						
Heavy Trucks	81.16	-8.34	-4.58	-1.20	67.0	50.1	42.3	51.5	57.6	57.7	60 dBA: 244	264						
Total:											70.0	63.7	62.3	57.6	65.5	66.0	55 dBA: 525	569

Road Name: Conant Street		Segment: East of Clark Avenue		Roadway Classification: Neighborhood Connector														
Average Daily Traffic: 4380 Vehicles		Vehicle Speed: 15 MPH		Vehicle Mix: 1														
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 58.34 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to											
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL									
Automobiles	50.83	-0.77	-1.11	-1.20	47.8	45.6	44.3	38.3	46.7	47.4	70 dBA: 2	2						
Medium Trucks	65.41	-18.00	-1.11	-1.20	45.1	23.8	29.9	11.6	24.7	27.5	65 dBA: 4	4						
Heavy Trucks	74.48	-21.96	-1.11	-1.20	50.2	24.9	21.5	26.1	32.3	32.4	60 dBA: 8	9						
Total:											52.9	45.7	44.5	38.6	46.9	47.5	55 dBA: 17	19

Road Name: Wardlow Road		Segment: East of Clark Avenue		Roadway Classification: Minor Avenue														
Average Daily Traffic: 17560 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1														
NOISE PARAMETERS AT 45 FEET FROM CENTERLINE (Equiv. Lane Dist: 38.07 ft)																		
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to											
	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL									
Automobiles	65.11	1.59	1.67	-1.20	67.2	65.0	63.7	57.7	66.1	66.8	70 dBA: 25	28						
Medium Trucks	74.83	-15.65	1.67	-1.20	59.6	38.4	44.4	26.1	39.3	42.0	65 dBA: 54	59						
Heavy Trucks	80.05	-19.61	1.67	-1.20	60.9	35.6	32.2	36.8	43.0	43.1	60 dBA: 116	128						
Total:											68.7	65.1	63.8	57.8	66.2	66.8	55 dBA: 250	275

## FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2041 WITH PROJECT CONDITIONS

Project: LBCC 2041 Master Plan for the LAC Improvements  
Site Conditions: Soft

Road Name: <b>Wardlow Road</b>		Segment: <b>East of Bellflower Boulevard</b>		Roadway Classification: Minor Avenue															
Average Daily Traffic: 21820 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1															
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE (Equiv. Lane Dist: 49.49 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	65.11	2.53	-0.04	-1.20	66.4	64.3	63.0	57.0	65.4	66.0	70 dBA:	27	30						
Medium Trucks	74.83	-14.71	-0.04	-1.20	58.9	37.6	43.7	25.4	38.5	41.3	65 dBA:	59	64						
Heavy Trucks	80.05	-18.67	-0.04	-1.20	60.1	34.8	31.4	36.0	42.2	42.3	60 dBA:	126	139						
Total:											<b>67.9</b>	<b>64.3</b>	<b>63.0</b>	<b>57.0</b>	<b>65.4</b>	<b>66.0</b>	<b>55 dBA:</b>	<b>272</b>	<b>299</b>

Road Name: <b>Spring Street</b>		Segment: <b>East of Clark Avenue</b>		Roadway Classification: Major Avenue															
Average Daily Traffic: 33240 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 115 FEET FROM CENTERLINE (Equiv. Lane Dist: 109.86 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	3.53	-5.23	-1.20	64.5	62.1	60.8	54.7	63.2	63.8	70 dBA:	46	50						
Medium Trucks	76.31	-11.34	-5.23	-1.20	58.5	39.3	31.6	40.8	46.9	46.9	65 dBA:	99	108						
Heavy Trucks	81.16	-9.12	-5.23	-1.20	65.6	48.6	40.8	50.0	56.2	56.2	60 dBA:	214	232						
Total:											<b>68.5</b>	<b>62.3</b>	<b>60.8</b>	<b>56.1</b>	<b>64.0</b>	<b>64.6</b>	<b>55 dBA:</b>	<b>461</b>	<b>500</b>

Road Name: <b>Spring Street</b>		Segment: <b>East of Bellflower Boulevard</b>		Roadway Classification: Major Avenue															
Average Daily Traffic: 32680 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2															
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE (Equiv. Lane Dist: 104.61 ft)																			
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels															
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Night	Ldn	CNEL											
Automobiles	67.36	3.45	-4.91	-1.20	64.7	62.3	61.0	55.0	63.4	64.0	70 dBA:	46	50						
Medium Trucks	76.31	-11.41	-4.91	-1.20	58.8	39.6	31.8	41.0	47.2	47.2	65 dBA:	99	107						
Heavy Trucks	81.16	-9.19	-4.91	-1.20	65.9	48.9	41.1	50.3	56.4	56.5	60 dBA:	213	231						
Total:											<b>68.8</b>	<b>62.5</b>	<b>61.1</b>	<b>56.4</b>	<b>64.3</b>	<b>64.8</b>	<b>55 dBA:</b>	<b>458</b>	<b>497</b>

**General Information**

Serial Number	02509
Model	831
Firmware Version	2.112
Filename	831_Data.005
User	GT
Job Description	Northwest Fresno Walmart Relocation
Location	Rooftop HVAC Unit
Measurement Description	
Start Time	Saturday, 2013 July 27 18:31:43
Stop Time	Saturday, 2013 July 27 18:41:44
Duration	00:10:01.1
Run Time	00:10:01.1
Pause	00:00:00.0
Pre Calibration	Saturday, 2013 July 27 17:53:07
Post Calibration	None
Calibration Deviation	---

**Note**

Located 10 feet southeast of rooftop HVAC Unit 14 located on western side of roof  
 94 F, 30% Hu., 29.45 in Hg, no wind, partly cloudy

**Overall Data**

LAeq		66.6	dB
LASmax	2013 Jul 27 18:33:16	67.6	dB
LApeak (max)	2013 Jul 27 18:32:17	81.6	dB
LASmin	2013 Jul 27 18:41:08	65.8	dB
LCeq		75.8	dB
LAeq		66.6	dB
LCeq - LAeq		9.2	dB
LAIeq		67.2	dB
LAeq		66.6	dB
LAIeq - LAeq		0.6	dB
Ldn		66.6	dB
LDay 07:00-23:00		66.6	dB
LNight 23:00-07:00		---	dB
Lden		66.6	dB
LDay 07:00-19:00		66.6	dB
LEvening 19:00-23:00		---	dB
LNight 23:00-07:00		---	dB
LAE		94.4	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

**Statistics**

LAS5.00	67.0	dBA
LAS10.00	66.9	dBA
LAS33.30	66.7	dBA
LAS50.00	66.6	dBA
LAS66.60	66.5	dBA
LAS90.00	66.3	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	1 / 601.1	s
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

**Settings**

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRM831	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Gain	+0	dB
Under Range Limit	26.2	dB
Under Range Peak	75.8	dB
Noise Floor	17.1	dB
Overload	143.4	dB

**1/1 Spectra**

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	70.9	64.4	61.4	74.2	68.2	64.9	66.3	61.7	55.1	49.9	44.3	44.0
LZSmax	83.8	78.9	70.0	78.4	72.3	66.1	67.8	63.1	56.9	53.2	46.7	45.4
LZSmin	53.2	56.5	56.7	67.7	66.1	63.5	65.0	60.7	53.9	48.4	43.2	43.7

### 1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	68.1	65.7	63.2	61.0	58.0	59.3	56.0	57.8	55.8	69.7	72.0	59.3
LZSmax	82.3	79.5	78.7	77.2	72.8	72.3	67.9	63.5	64.0	74.2	76.1	72.0
LZSmin	41.9	46.3	48.8	48.7	46.5	49.7	50.1	51.8	41.2	63.9	67.9	54.5
Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	61.6	63.7	64.5	59.0	58.7	60.9	63.2	60.8	59.9	59.2	56.1	54.6
LZSmax	71.3	68.0	67.3	61.6	61.7	64.1	65.5	64.2	62.0	60.7	57.6	58.6
LZSmin	52.9	60.0	57.2	45.1	56.0	58.9	61.1	58.4	58.4	57.1	54.9	53.3
Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	52.0	49.8	48.4	46.4	45.4	42.8	41.1	38.6	38.5	38.4	39.0	40.2
LZSmax	54.4	52.3	51.2	50.2	49.7	45.7	45.4	41.6	40.4	40.4	41.4	41.3
LZSmin	50.9	48.4	46.9	45.0	43.7	41.4	39.6	37.5	37.9	38.0	38.7	39.9

### Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	27 Jul 2013 17:53:07	-25.9
PRM831	27 Jul 2013 13:36:08	-25.6
PRM831	28 Apr 2013 15:34:24	-25.9
PRM831	23 Apr 2013 10:17:33	-25.0
PRM831	27 Feb 2013 19:15:30	-25.7
PRM831	24 Jan 2013 12:00:16	-25.6
PRM831	15 Jan 2013 07:50:44	-26.2
PRM831	04 Jan 2013 13:47:46	-26.5

**General Information**

```

Serial Number          02509
Model                  831
Firmware Version      2.112
Filename              831_Data.002
User                  GT
Job Description        Northwest Fresno Walmart Relocation
Location              Northwest Fresno Walmart

Measurement Description
Start Time            Saturday, 2013 July 27 15:49:15
Stop Time            Saturday, 2013 July 27 16:09:15
Duration              00:20:00.6
Run Time              00:20:00.6
Pause                 00:00:00.0
Pre Calibration       Saturday, 2013 July 27 13:36:08
Post Calibration
Calibration Deviation ---
  
```

**Note**

Located at the eastern portion of the southern parking lot and approx 140 feet south of the front door  
 96 F, 35% Humidity, 29.48 in Hg, 3 mph wind, partly cloudy

**Overall Data**

```

LAeq          63.1  dB
LASmax        2013 Jul 27 15:59:44  79.2  dB
LApeak (max)  2013 Jul 27 16:06:25  102.2 dB
LASmin        2013 Jul 27 15:50:20  49.6  dB
LCeq          74.0  dB
LAeq          63.1  dB
LCeq - LAeq   10.9  dB
LA1eq         67.4  dB
LAeq          63.1  dB
LA1eq - LAeq  4.3   dB
Ldn           63.1  dB
LDay 07:00-23:00  63.1  dB
LNight 23:00-07:00 ---   dB
Lden          63.1  dB
LDay 07:00-19:00  63.1  dB
LEvening 19:00-23:00 ---   dB
LNight 23:00-07:00 ---   dB
LAE           93.9  dB
# Overloads    0
Overload Duration 0.0  s
# OBA Overloads 0
OBA Overload Duration 0.0  s
  
```

**Statistics**

```

LAS5.00      66.7  dBA
LAS10.00     66.3  dBA
LAS33.30     62.8  dBA
LAS50.00     61.7  dBA
LAS66.60     57.7  dBA
LAS90.00     52.8  dBA

LAS > 65.0 dB (Exceedence Counts / Duration)  17 / 347.8  s
LAS > 85.0 dB (Exceedence Counts / Duration)   0 / 0.0    s
LApeak > 135.0 dB (Exceedence Counts / Duration)  0 / 0.0    s
LApeak > 137.0 dB (Exceedence Counts / Duration)  0 / 0.0    s
LApeak > 140.0 dB (Exceedence Counts / Duration)  0 / 0.0    s
  
```

**Settings**

```

RMS Weight      A Weighting
Peak Weight     A Weighting
Detector         Slow
Preamp          PRM831
Integration Method Linear
OBA Range       Normal
OBA Bandwidth   1/1 and 1/3
OBA Freq. Weighting Z Weighting
OBA Max Spectrum Bin Max
Gain            +0    dB

Under Range Limit 26.1  dB
Under Range Peak  75.6  dB
Noise Floor       17.0  dB
Overload          143.1 dB
  
```

**1/1 Spectra**

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	66.7	66.1	71.1	71.6	64.9	59.5	59.6	58.3	56.2	51.8	46.8	44.6
LZSmax	82.6	84.9	82.2	89.3	77.1	67.1	72.4	76.6	76.6	69.0	67.7	63.1
LZSmin	46.5	55.4	53.6	59.0	55.2	49.9	45.5	43.6	40.9	37.7	39.6	42.8

### 1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	63.6	61.5	59.8	58.7	60.7	63.4	67.2	66.6	65.3	65.7	67.5	67.2
LZSmax	80.9	76.9	73.6	75.5	79.8	83.7	80.9	76.8	78.9	83.8	87.4	88.8
LZSmin	37.3	40.3	43.7	45.3	48.2	51.5	55.9	60.4	54.9	53.2	57.5	47.0
Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	61.7	61.0	54.9	52.9	57.0	53.2	57.3	54.1	52.1	54.5	53.3	52.7
LZSmax	76.0	71.0	69.8	65.8	64.6	65.6	67.0	71.0	67.1	65.9	72.9	73.0
LZSmin	52.1	48.8	46.7	42.4	46.2	44.6	43.2	38.5	38.6	39.0	39.4	38.2
Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	52.5	50.9	50.7	49.0	46.4	44.5	43.0	41.7	41.1	40.0	39.6	40.0
LZSmax	75.9	69.6	63.7	63.8	64.4	64.7	63.3	62.7	62.7	60.8	57.9	52.5
LZSmin	37.2	35.4	34.6	33.1	32.6	32.8	33.6	34.7	35.9	36.7	37.7	39.4

### Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	27 Jul 2013 13:36:08	-25.6
PRM831	28 Apr 2013 15:34:24	-25.9
PRM831	23 Apr 2013 10:17:33	-25.0
PRM831	27 Feb 2013 19:15:30	-25.7
PRM831	24 Jan 2013 12:00:16	-25.6
PRM831	15 Jan 2013 07:50:44	-26.2
PRM831	04 Jan 2013 13:47:46	-26.5

File Translated: V:\Vista Env\2010\10022-Fresno Walmart\Noise Measurements\LD\15.slm.d1  
 Model/Serial Number: 824 / A3176  
 Firmware/Software Revs: 4.283 / 3.120  
 Name:  
 Descr1: 1021 Didrikson Way  
 Descr2: Laguna Beach, CA 92651  
 Setup/Setup Descr: slm&rt.a.ssa / SLM & Real-Time Analyzer  
 Location: 30' N of vendor truck loading area for Fresno Walmart  
 Notel: Approx 70' S of Locust Ave CL  
 Note2: 52F, 29.57 in Hg, 67% Humid., no wind, clear sky

Overall Any Data

Start Time: 19-May-2011 07:05:53  
 Elapsed Time: 00:08:30.5

	A Weight	C Weight	Flat
Leq:	54.8 dBA	65.1 dBC	66.1 dBF
SEL:	81.9 dBA	92.2 dBC	93.2 dBF
Peak:	85.2 dBA	85.8 dBC	86.0 dBF
19-May-2011 07:09:58	19-May-2011 07:09:58	19-May-2011 07:09:52	19-May-2011 07:09:52
Lmax (slow):	67.9 dBA	73.2 dBC	73.8 dBF
19-May-2011 07:09:50	19-May-2011 07:13:57	19-May-2011 07:13:57	19-May-2011 07:13:57
Lmin (slow):	43.7 dBA	60.0 dBC	61.6 dBF
19-May-2011 07:11:17	19-May-2011 07:06:52	19-May-2011 07:06:51	19-May-2011 07:06:51
Lmax (fast):	70.7 dBA	75.5 dBC	75.7 dBF
19-May-2011 07:09:58	19-May-2011 07:11:34	19-May-2011 07:11:34	19-May-2011 07:11:34
Lmin (fast):	43.1 dBA	57.8 dBC	58.9 dBF
19-May-2011 07:11:17	19-May-2011 07:09:10	19-May-2011 07:09:10	19-May-2011 07:09:10
Lmax (impulse):	72.1 dBA	76.8 dBC	77.1 dBF
19-May-2011 07:09:58	19-May-2011 07:11:34	19-May-2011 07:11:34	19-May-2011 07:11:34
Lmin (impulse):	43.6 dBA	61.1 dBC	62.4 dBF
19-May-2011 07:11:17	19-May-2011 07:06:51	19-May-2011 07:06:51	19-May-2011 07:09:10

Spectra

Date: 19-May-2011  
 Time: 07:05:53  
 Run Time: 00:08:30.5

Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1	Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1
12.5	50.2		56.3		35.5		630	46.5		61.4		31.0	
16.0	50.9	55.5	56.1	61.5	37.1	41.8	800	45.4		60.8		30.5	
20.0	51.0		57.6		38.0		1000	44.5	49.3	56.1	63.9	31.7	35.6
25.0	55.8		57.5		41.1		1250	43.5		59.4		30.2	
31.5	57.7	61.6	57.1	63.3	46.2	49.9	1600	42.6		56.3		28.1	
40.0	56.7		60.3		46.3		2000	41.1	46.1	56.4	61.9	24.9	30.4
50.0	56.8		57.9		44.0		2500	40.0		58.4		21.7	
63.0	55.7	61.0	56.5	62.1	45.9	49.1	3150	40.2		60.8		19.4	
80.0	56.2		57.4		42.2		4000	39.5	43.8	58.6	63.4	18.7	24.1
100	55.6		55.1		42.3		5000	36.7		54.4		19.7	
125	54.3	59.2	59.0	63.8	40.7	45.7	6300	32.8		50.2		21.5	
160	52.8		61.0		39.4		8000	30.2	35.2	57.7	58.5	21.2	25.9
200	51.1		57.3		35.5		10000	25.4		41.5		20.5	
250	51.4	55.2	70.6	71.0	34.6	39.0	12500	22.9		32.2		19.4	
315	48.2		58.2		32.0		16000	20.8	26.5	27.4	33.9	19.1	24.4
400	47.0		59.0		30.1		20000	21.2		23.8		20.3	
500	47.0	51.6	64.3	66.9	30.4	35.3							

Ln Start Level: 15 dB  
 L1.00 0.0 dBA L50.00 0.0 dBA L95.00 0.0 dBA  
 L5.00 0.0 dBA L90.00 0.0 dBA L99.00 0.0 dBA

Detector: Slow  
 Weighting: A  
 SPL Exceedance Level 1: 85.0 dB Exceeded: 0 times  
 SPL Exceedance level 2: 120 dB Exceeded: 0 times  
 Peak-1 Exceedance Level: 105 dB Exceeded: 0 times  
 Peak-2 Exceedance Level: 100 dB Exceeded: 0 times  
 Hysteresis: 2  
 Overloaded: 0 time(s)  
 Paused: 0 times for 00:00:00.0

File Translated: V:\Vista Env\2010\10022-Fresno Walmart\Noise Measurements\LD\15.slmdl  
 Model/Serial Number: 824 / A3176

## Current Any Data

Start Time: 19-May-2011 07:05:53  
 Elapsed Time: 00:08:30.5

	A Weight	C Weight	Flat
Leq:	54.8 dBA	65.1 dBC	66.1 dBF
SEL:	81.9 dBA	92.2 dBC	93.2 dBF
Peak:	85.2 dBA	85.8 dBC	86.0 dBF
19-May-2011 07:09:58	19-May-2011 07:09:58	19-May-2011 07:09:52	19-May-2011 07:09:52
Lmax (slow):	67.9 dBA	73.2 dBC	73.8 dBF
19-May-2011 07:09:50	19-May-2011 07:13:57	19-May-2011 07:13:57	
Lmin (slow):	43.7 dBA	60.0 dBC	61.6 dBF
19-May-2011 07:11:17	19-May-2011 07:06:52	19-May-2011 07:06:51	
Lmax (fast):	70.7 dBA	75.5 dBC	75.7 dBF
19-May-2011 07:09:58	19-May-2011 07:11:34	19-May-2011 07:11:34	
Lmin (fast):	43.1 dBA	57.8 dBC	58.9 dBF
19-May-2011 07:11:17	19-May-2011 07:09:10	19-May-2011 07:09:10	
Lmax (impulse):	72.1 dBA	76.8 dBC	77.1 dBF
19-May-2011 07:09:58	19-May-2011 07:11:34	19-May-2011 07:11:34	
Lmin (impulse):	43.6 dBA	61.1 dBC	62.4 dBF
19-May-2011 07:11:17	19-May-2011 07:06:51	19-May-2011 07:09:10	

Calibrated:	18-May-2011 13:09:02	Offset:	-48.2 dB
Checked:	19-May-2011 06:46:08	Level:	113.9 dB
Calibrator	not set	Level:	114.0 dB
Cal Records Count:	0		

Interval Records:	Disabled	Number Interval Records:	0
History Records:	Disabled	Number History Records:	0
Run/Stop Records:		Number Run/Stop Records:	2

**General Information**

Serial Number 02509  
 Model 831  
 Firmware Version 2.314  
 Filename 831\_Data.001  
 User GT  
 Job Description LBCC 2041 Facilities Master Plan  
 Location Approx 30 ft north of pool and 5 ft south of scoreboard

**Measurement Description**

Start Time Friday, 2018 March 30 12:24:51  
 Stop Time Friday, 2018 March 30 12:34:52  
 Duration 00:10:00.5  
 Run Time 00:10:00.5  
 Pause 00:00:00.0  
 Pre Calibration Friday, 2018 March 30 12:23:28  
 Post Calibration  
 Calibration Deviation ---

**Note**

Noise from swim meet at pool 30 ft from pool and 60 ft from loud speaker  
 76F, 29.91 in Hg, 51% hu, 2 mph wind, hazy sky

**Overall Data**

LAEq		71.8	dB
LASmax	2018 Mar 30 12:34:05	89.5	dB
LApeak (max)	2018 Mar 30 12:34:05	100.5	dB
LASmin	2018 Mar 30 12:32:15	56.5	dB
LCeq		73.2	dB
LAEq		71.8	dB
LCeq - LAeq		1.4	dB
LA1eq		78.1	dB
LAEq		71.8	dB
LA1eq - LAeq		6.2	dB
Ldn		71.8	dB
LDay 07:00-22:00		71.8	dB
LNight 22:00-07:00		---	dB
Lden		71.8	dB
LDay 07:00-19:00		71.8	dB
LEvening 19:00-22:00		---	dB
LNight 22:00-07:00		---	dB
LAE		99.6	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

**Statistics**

LAS5.00	77.5	dBA
LAS10.00	75.3	dBA
LAS33.30	70.1	dBA
LAS50.00	67.6	dBA
LAS66.60	65.3	dBA
LAS90.00	62.4	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	28 / 489.8	s
LAS > 85.0 dB (Exceedence Counts / Duration)	2 / 2.8	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

**Settings**

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRM831
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Gain	+0 dB
Under Range Limit	26.1 dB
Under Range Peak	75.8 dB
Noise Floor	17.0 dB
Overload	143.4 dB

**1/1 Spectra**

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	58.3	61.4	64.5	63.1	61.2	59.2	64.8	69.9	62.3	60.1	43.3	34.0
LZSmax	80.3	74.2	70.6	73.0	69.5	66.1	81.7	89.2	75.4	77.9	59.7	47.9
LZSmin	49.2	55.8	60.8	57.2	56.6	53.6	53.7	52.4	48.0	43.0	33.5	23.8

### 1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	52.9	54.4	53.8	56.2	57.5	56.5	60.5	61.7	53.2	53.9	55.6	61.5
LZSmax	73.7	77.7	69.9	70.3	71.4	69.4	65.9	68.2	62.5	60.4	65.8	72.8
LZSmin	40.5	39.9	43.6	48.1	49.2	50.1	56.1	57.5	47.9	48.5	51.3	53.5
Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	58.9	54.3	54.5	55.6	53.2	54.3	56.5	59.5	62.3	62.9	67.9	62.4
LZSmax	67.1	68.4	64.7	63.3	60.9	63.5	68.0	75.3	80.7	77.9	88.4	82.7
LZSmin	52.6	49.1	48.5	48.9	47.4	47.6	49.1	48.9	48.8	48.7	47.1	46.2
Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	58.7	55.5	57.7	59.7	51.6	45.6	40.6	38.0	35.1	31.8	28.4	23.6
LZSmax	70.1	68.7	75.4	78.6	67.7	60.1	52.0	58.6	48.3	45.1	43.1	38.1
LZSmin	44.3	43.3	41.5	39.8	36.4	32.9	30.4	27.9	25.4	21.4	17.7	13.4

### Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	30 Mar 2018 12:23:25	-25.8
PRM831	07 Mar 2018 13:40:34	-25.8
PRM831	28 Feb 2018 12:16:10	-25.9
PRM831	30 Jan 2018 23:18:32	-26.2
PRM831	30 Jan 2018 13:42:45	-26.2
PRM831	30 Jan 2018 13:32:25	-26.0
PRM831	30 Jan 2018 10:54:43	-26.0
PRM831	06 Jan 2018 13:07:04	-26.0
PRM831	19 Dec 2017 10:41:35	-25.5
PRM831	25 Oct 2017 08:21:25	-25.2
PRM831	11 Oct 2017 12:05:04	-25.5

**General Information**

Serial Number 02509  
 Model 831  
 Firmware Version 2.314  
 Filename 831\_Data.002  
 User GT  
 Job Description LBCC 2041 Facilities Master Plan  
 Location Approx 10 ft north of 16 ft wall on north side of pool

**Measurement Description**

Start Time Friday, 2018 March 30 12:36:03  
 Stop Time Friday, 2018 March 30 12:46:03  
 Duration 00:10:00.7  
 Run Time 00:10:00.7  
 Pause 00:00:00.0  
 Pre Calibration Friday, 2018 March 30 12:23:25  
 Post Calibration  
 Calibration Deviation ---

**Note**

Noise from swim meet, vehicles on Carson St and aircraft taking off from Long Beach Airport  
 76F, 29.91 in Hg, 51% hu, 2 mph wind, hazy sky

**Overall Data**

LAEq		58.4	dB
LASmax	2018 Mar 30 12:38:41	67.5	dB
LApeak (max)	2018 Mar 30 12:43:36	94.1	dB
LASmin	2018 Mar 30 12:42:57	48.6	dB
LCeq		70.5	dB
LAEq		58.4	dB
LCeq - LAeq		12.1	dB
LAIeq		60.7	dB
LAEq		58.4	dB
LAIeq - LAeq		2.3	dB
Ldn		58.4	dB
LDay 07:00-22:00		58.4	dB
LNight 22:00-07:00		---	dB
Lden		58.4	dB
LDay 07:00-19:00		58.4	dB
LEvening 19:00-22:00		---	dB
LNight 22:00-07:00		---	dB
LAE		86.2	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

**Statistics**

LAS5.00	63.4	dBA
LAS10.00	61.8	dBA
LAS33.30	58.0	dBA
LAS50.00	56.5	dBA
LAS66.60	55.2	dBA
LAS90.00	52.1	dBA
LAS > 65.0 dB (Exceedence Counts / Duration)	5 / 22.6	s
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

**Settings**

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRM831
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Gain	+0 dB
Under Range Limit	26.1 dB
Under Range Peak	75.8 dB
Noise Floor	17.0 dB
Overload	143.4 dB

**1/1 Spectra**

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	60.0	63.3	64.6	67.6	64.9	59.0	55.3	54.3	47.5	38.6	28.3	22.8
LZSmax	77.4	76.5	77.4	80.2	79.6	71.3	67.5	65.0	57.6	49.9	50.6	47.6
LZSmin	49.8	55.5	58.3	52.8	52.1	45.5	43.9	44.1	36.5	29.9	16.1	13.3

### 1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZeq	54.8	54.3	56.9	57.7	58.0	59.8	60.1	55.0	62.1	62.0	63.3	63.0
LZSmax	72.7	74.6	74.8	71.6	74.1	74.3	70.8	62.2	77.2	76.4	77.1	79.8
LZSmin	38.5	41.7	42.7	45.8	40.8	51.1	53.9	49.7	52.6	47.8	52.7	48.2
Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZeq	62.2	58.1	59.5	55.2	55.2	50.4	51.0	50.2	50.3	50.5	50.1	47.6
LZSmax	79.2	75.9	72.5	69.8	70.8	64.1	66.3	64.1	62.5	63.2	62.9	60.1
LZSmin	49.6	45.0	44.9	38.5	40.0	34.1	38.5	39.1	39.2	39.6	39.4	37.1
Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZeq	45.0	42.3	39.1	37.0	32.5	27.4	24.3	24.0	21.5	18.8	18.1	14.0
LZSmax	55.8	53.0	51.1	50.2	45.4	42.3	42.8	47.4	45.4	43.3	42.6	37.8
LZSmin	34.3	30.5	27.7	26.9	24.5	18.6	12.0	10.7	8.7	7.9	8.9	8.6

### Calibration History

Preamp	Date	dB re. 1V/Pa
PRM831	30 Mar 2018 12:23:25	-25.8
PRM831	07 Mar 2018 13:40:34	-25.8
PRM831	28 Feb 2018 12:16:10	-25.9
PRM831	30 Jan 2018 23:18:32	-26.2
PRM831	30 Jan 2018 13:42:45	-26.2
PRM831	30 Jan 2018 13:32:25	-26.0
PRM831	30 Jan 2018 10:54:43	-26.0
PRM831	06 Jan 2018 13:07:04	-26.0
PRM831	19 Dec 2017 10:41:35	-25.5
PRM831	25 Oct 2017 08:21:25	-25.2
PRM831	11 Oct 2017 12:05:04	-25.5

# Session Report

2/1/2017

## Information Panel

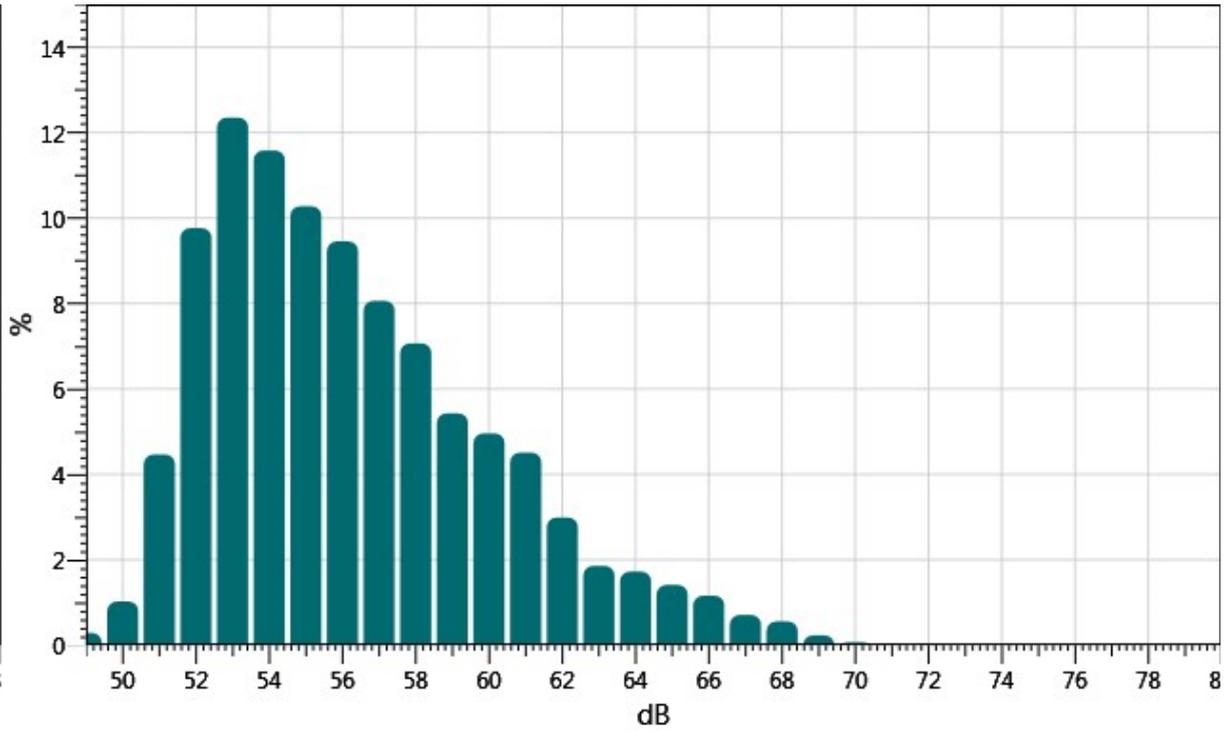
Name S087\_BLH080004\_01022017\_072920  
Start Time 1/30/2017 2:57:12 PM  
Stop Time 1/30/2017 3:12:12 PM  
Device Name BLH080004  
Model Type SoundPro DL  
Device Firmware Rev R.13H  
Comments Located between JV and Varsity Soccer Games (5 feet from each field) at Bellflower High School

## Summary Data Panel

<u>Description</u>	<u>Meter</u>	<u>Value</u>	<u>Description</u>	<u>Meter</u>	<u>Value</u>
Leq	1	58.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

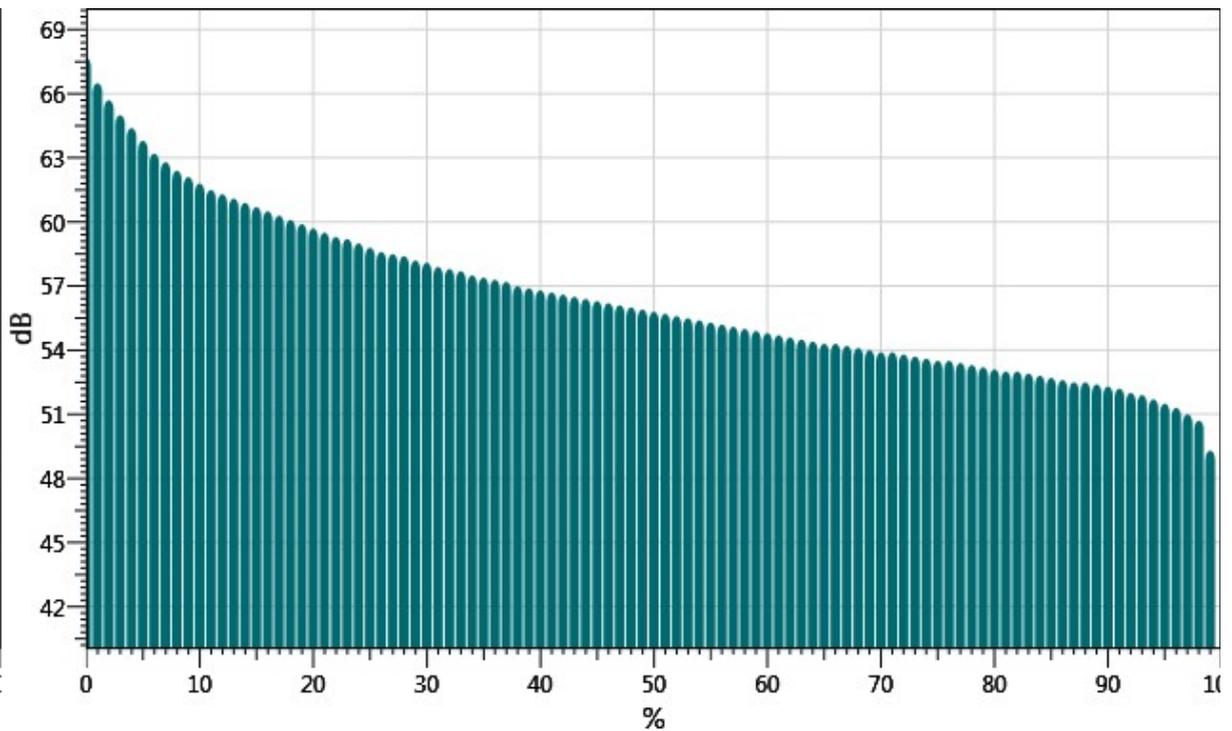
## Statistics Chart

S087\_BLH080004\_01022017\_072920: Statistics Chart



## Exceedance Chart

S087\_BLH080004\_01022017\_072920: Exceedance Chart



## Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
49:	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.06	0.11	0.05	0.29
50:	0.03	0.02	0.02	0.05	0.07	0.13	0.14	0.15	0.20	0.22	1.02
51:	0.27	0.43	0.25	0.49	0.41	0.41	0.45	0.50	0.53	0.73	4.47
52:	0.73	0.66	0.75	0.90	0.93	1.19	1.23	1.08	1.13	1.16	9.76
53:	1.26	1.36	1.12	1.16	1.21	1.29	1.22	1.26	1.20	1.27	12.35
54:	1.51	1.51	0.86	1.14	1.18	1.09	0.99	1.05	1.15	1.10	11.58
55:	1.05	1.08	1.09	1.14	1.07	0.98	1.02	0.93	0.95	0.96	10.27
56:	0.98	0.88	0.95	0.98	0.90	1.08	0.99	0.90	0.93	0.86	9.45
57:	1.02	1.07	0.68	0.95	0.83	0.81	0.69	0.66	0.69	0.67	8.06
58:	0.75	0.73	0.74	0.76	0.72	0.74	0.70	0.65	0.69	0.58	7.07
59:	0.52	0.52	0.57	0.55	0.58	0.51	0.54	0.50	0.54	0.59	5.43
60:	0.55	0.54	0.42	0.47	0.47	0.48	0.48	0.57	0.50	0.47	4.96
61:	0.52	0.47	0.50	0.47	0.46	0.44	0.50	0.42	0.40	0.34	4.51
62:	0.38	0.33	0.30	0.26	0.28	0.31	0.26	0.26	0.33	0.30	2.99
63:	0.26	0.25	0.15	0.18	0.18	0.15	0.21	0.16	0.16	0.15	1.86
64:	0.19	0.22	0.17	0.17	0.16	0.17	0.17	0.18	0.15	0.14	1.72
65:	0.15	0.13	0.13	0.12	0.12	0.11	0.14	0.17	0.19	0.15	1.41
66:	0.14	0.17	0.09	0.14	0.14	0.11	0.11	0.09	0.09	0.08	1.16
67:	0.12	0.08	0.06	0.07	0.06	0.07	0.07	0.07	0.06	0.05	0.71
68:	0.06	0.07	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.56
69:	0.04	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.01	0.23
70:	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.07
71:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03
72:	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

## Exceedance Table

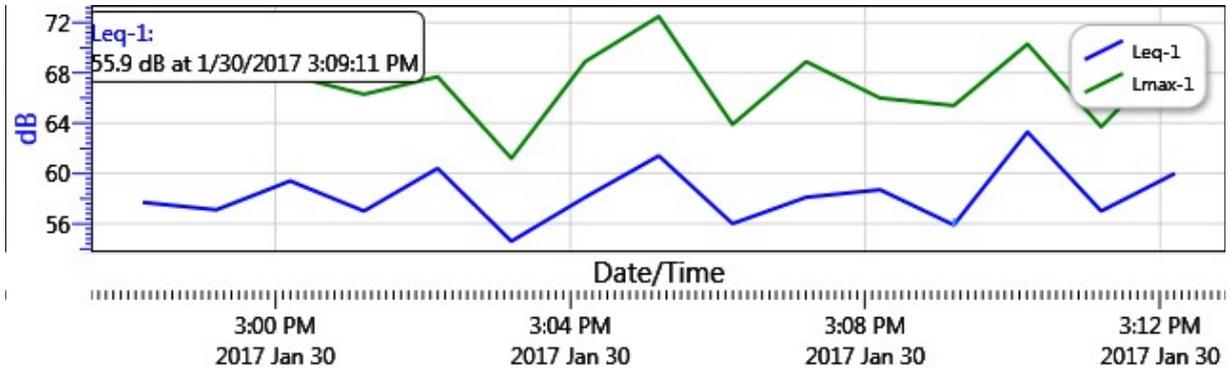
.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		67.7	66.5	65.7	65.0	64.4	63.8	63.2	62.8	62.4
10%:	62.1	61.8	61.5	61.3	61.1	60.9	60.7	60.5	60.3	60.1
20%:	59.9	59.7	59.5	59.3	59.2	59.0	58.8	58.6	58.5	58.4
30%:	58.2	58.1	57.9	57.8	57.7	57.5	57.4	57.3	57.2	57.0
40%:	56.9	56.8	56.7	56.6	56.5	56.4	56.3	56.2	56.1	56.0
50%:	55.9	55.8	55.7	55.6	55.5	55.4	55.3	55.2	55.1	55.0
60%:	54.9	54.8	54.7	54.6	54.5	54.4	54.3	54.3	54.2	54.1



70%:	54.0	53.9	53.9	53.8	53.7	53.6	53.5	53.5	53.4	53.3
80%:	53.2	53.1	53.0	53.0	52.9	52.8	52.7	52.6	52.5	52.5
90%:	52.4	52.3	52.2	52.0	51.9	51.7	51.5	51.3	51.0	50.7
100%:	49.3									

## Logged Data Chart

S087\_BLH080004\_01022017\_072920: Logged Data Chart



## APPENDIX D – TRAFFIC IMPACT ANALYSIS



TRAFFIC IMPACT ANALYSIS REPORT  
**LBCCD 2041 MASTER PLAN**  
**LIBERAL ARTS CAMPUS**  
Long Beach , California  
January 19, 2018

Prepared for:  
**CHAMBERS GROUP, INC.**  
5 Hutton Centre Drive, Suite 750  
Santa Ana, California 92707

LLG Ref. 2-17-3886-1



Prepared by:  
Daniel A. Kloos, P.E.  
Senior Transportation Engineer



Under the Supervision of:  
Paul W. Wilkinson, P.E.  
Principal

**Linscott, Law &  
Greenspan, Engineers**  
2 Executive Circle  
Suite 250  
Irvine, CA 92614  
949.825.6175 T  
949.825.6173 F  
www.llgengineers.com

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TRAFFIC IMPACT ANALYSIS REPORT  
**LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS**

Long Beach, California  
January 19, 2018

## 1.0 INTRODUCTION

This Traffic Impact Analysis report addresses the potential traffic impacts associated with the proposed LBCCD 2041 Master Plan – Liberal Arts Campus (hereinafter referred to as Project). The project site is generally bounded by Harvey Way to the north, Conant Street to the south, Faculty Avenue to the west and Clark Avenue to the east in the City of Long Beach, California. The proposed Project will generally consist of the construction of new campus facilities and the renovation of existing campus facilities to meet the District’s instructional needs and to accommodate growth in the student body over the planning horizon.

### 1.1 Scope of Work

This traffic report documents the findings and recommendations of a traffic impact analysis conducted by Linscott, Law & Greenspan, Engineers (LLG) to determine the potential impacts associated with the proposed Project. The traffic analysis evaluates the operating conditions at twenty-one (21) key study locations within the project vicinity, estimates the trip generation potential of the proposed Project, superimposes the project-related traffic volumes on the circulation system as it currently exists, and forecasts future operating conditions without and with the proposed Project. Where necessary, intersection improvements/mitigation measures are identified.

The project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing peak hour traffic information has been collected at twenty-one (21) key study locations on a “typical” weekday for use in the preparation of intersection level of service calculations. A “typical” weekday constitutes a Tuesday, Wednesday or Thursday and refers to a non-holiday condition when local schools are in session. Information concerning cumulative projects (planned and/or approved) in the vicinity of the proposed Project (i.e. within a 2-mile radius) has been researched at the Cities of Long Beach and Lakewood. Based on our research, there are four (4) cumulative projects located in the City of Long Beach and twenty-two (22) cumulative projects located in the City of Lakewood. These twenty-six (26) cumulative projects were considered in the cumulative traffic analysis for this project.

This traffic report satisfies the traffic impact requirements of the Cities of Long Beach and Lakewood and is consistent with the most current *Congestion Management Program (CMP) for Los Angeles County*. This traffic report analyzes existing and future weekday AM peak hour and PM peak hour traffic conditions for a Year 2041 traffic setting upon completion of the proposed Project. Peak hour traffic forecasts for the Year 2041 horizon year have been projected by increasing existing (2017) traffic volumes by an annual growth rate of 0.708 percent per year and adding traffic volumes generated by twenty-six (26) cumulative projects.

## 1.2 Study Area

A total of twenty-one (21) locations have been selected for evaluation based on discussions with City of Long Beach staff, and based on review of the existing transportation system surrounding the proposed Project site. Of the 21 identified locations, fourteen (14) are located in the City of Long Beach, three (3) are located in the City of Lakewood and four (4) are located jointly in the Cities of Long Beach and Lakewood. The 21 locations listed below provide regional and local access to the study area, as well as the project site, and define the extent of the boundaries for this traffic impact investigation. The local jurisdiction of each key study location is also identified.

### Key Study Locations

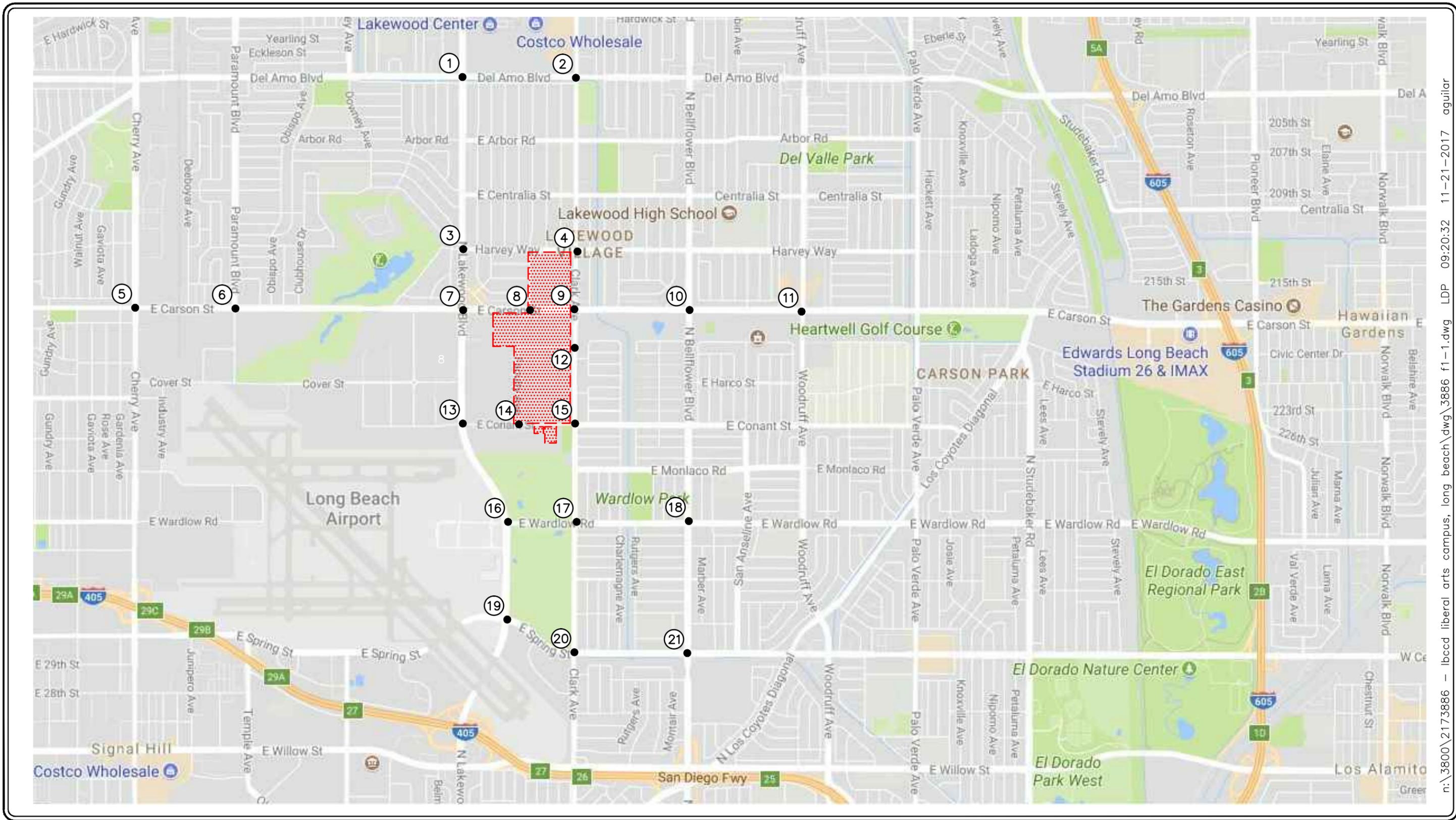
1. Lakewood Boulevard at Del Amo Boulevard (City of Lakewood)
2. Clark Avenue at Del Amo Boulevard (City of Lakewood)
3. Lakewood Boulevard at Harvey Way (City of Long Beach/City of Lakewood)
4. Clark Avenue at Harvey Way (City of Long Beach)
5. Cherry Avenue at Carson Street (City of Long Beach)
6. Paramount Boulevard at Carson Street (City of Long Beach)
7. Lakewood Boulevard at Carson Street (City of Long Beach/City of Lakewood)
8. Faculty Avenue at Carson Street (City of Long Beach)
9. Clark Avenue at Carson Street (City of Long Beach)
10. Bellflower Boulevard at Carson Street (City of Long Beach/City of Lakewood)
11. Woodruff Avenue at Carson Street (City of Long Beach/City of Lakewood)
12. Clark Avenue at Lew Davis Street (City of Long Beach)
13. Lakewood Boulevard at Conant Street (City of Long Beach)
14. Faculty Avenue at Conant Street (City of Long Beach)
15. Clark Avenue at Conant Street (City of Long Beach)
16. Lakewood Boulevard at Wardlow Road (City of Long Beach)
17. Clark Avenue at Wardlow Road (City of Long Beach)
18. Bellflower Boulevard at Wardlow Road (City of Long Beach)
19. Lakewood Boulevard at Spring Street (City of Long Beach)
20. Clark Avenue at Spring Street (City of Long Beach)
21. Bellflower Boulevard at Spring Street (City of Long Beach)

**Figure 1-1** presents a Vicinity Map, which illustrates the general location of the Project. It also identifies the 21 study locations on the surrounding street system.

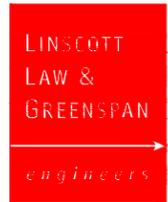
The Volume-Capacity (V/C) and Level of Service (LOS) investigations at these key locations were used to evaluate the potential traffic-related impacts associated with area growth, cumulative projects and the proposed Project. When necessary, this report recommends intersection improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable Level of Service, and/or mitigates the impact of the project.

Included in this Traffic Impact Analysis are:

- Existing traffic counts,
- Forecast project traffic generation/distribution/assignment,
- Forecast cumulative project traffic generation/distribution/assignment,
- AM and PM peak hour capacity analyses for existing conditions,
- AM and PM peak hour capacity analyses for existing plus project conditions,
- AM and PM peak hour capacity analyses for future Year 2041 traffic conditions without and with the proposed Project, and
- Recommended Improvements.



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SOURCE: GOOGLE

KEY

- # = STUDY INTERSECTION
- = PROJECT SITE

**FIGURE 1-1**

**VICINITY MAP**

LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

## 2.0 PROJECT DESCRIPTION

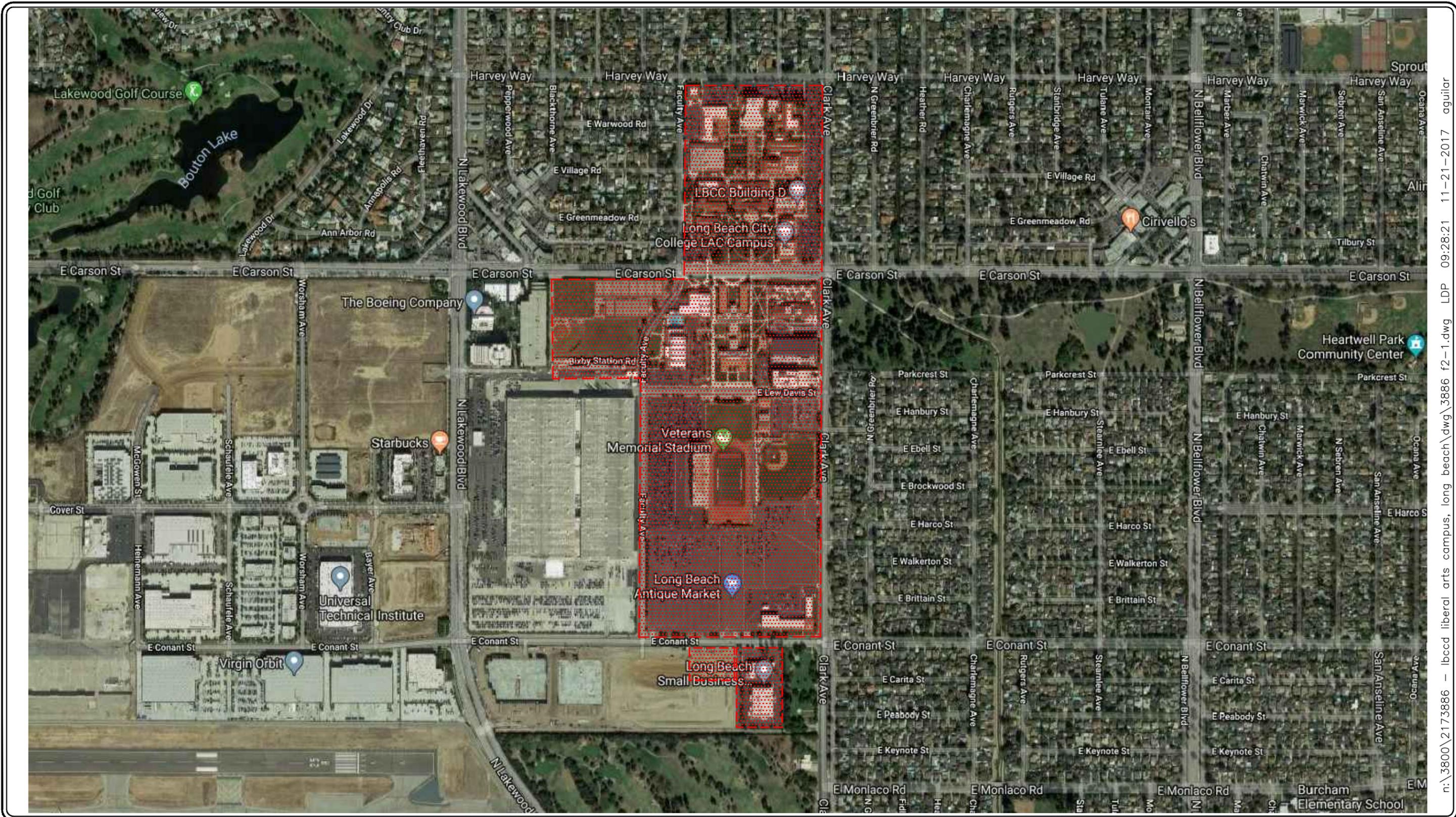
The project site is generally bounded by Harvey Way to the north, Conant Street to the south, Faculty Avenue to the west and Clark Avenue to the east in the City of Long Beach, California. *Figure 2-1* presents an aerial depiction of the existing site.

*Figure 2-2* presents the proposed site plan for the proposed Project, which shows the locations of the proposed renovations and new construction. As shown, the proposed Project will generally consist of the construction of new campus facilities and the renovation of existing campus facilities to meet the District's instructional needs and to accommodate growth in the student body over the planning horizon. All project components are expected to be completed by the Year 2041.

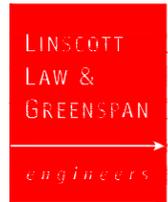
The Liberal Arts Campus has a current baseline (Year 2017) student enrollment of 20,642 students. As stated above, the renovation of existing campus facilities and the construction of new campus facilities are required to meet the District's instructional needs and to accommodate growth in the student body. At completion of the Master Plan in the Year 2041, the Liberal Arts Campus is projected to accommodate a future student enrollment of 28,100 students, resulting in a net increase of 7,458 students over the existing student enrollment.

### 2.1 Site Access

Vehicular access to the Liberal Arts Campus would continue to be provided via various unsignalized access driveways located along Faculty Avenue, Harvey Way, Clark Avenue, Lew Davis Street and Conant Street.



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SOURCE: GOOGLE  
 KEY  
 [Red hatched box] = PROJECT SITE

**FIGURE 2-1**

**EXISTING SITE AERIAL**

**LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH**



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SOURCE: CHAMBER GROUP

LINSCOTT  
LAW &  
GREENSPAN  
engineers



NO SCALE

**FIGURE 2-2**

PROPOSED SITE PLAN

LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH

## 3.0 EXISTING CONDITIONS

### 3.1 Existing Street System

The principal local network of streets serving the project site are Carson Street, Lakewood Boulevard and Clark Avenue. The following discussion provides a brief synopsis of these key area streets. The descriptions are based on an inventory of existing roadway conditions.

**Carson Street** is generally a six-lane, divided roadway, oriented in the east-west direction that bisects the Liberal Arts Campus. The posted speed limit on Carson Street is 40 miles per hour (mph). On-street parking is generally not permitted along this roadway in the vicinity of the project, except between Clark Avenue and Bellflower Boulevard. Traffic signals control the study intersections of Carson Street at Cherry Avenue, Paramount Boulevard, Lakewood Boulevard, Clark Avenue, Bellflower Boulevard and Woodruff Avenue.

**Lakewood Boulevard** is generally a six-lane, divided roadway north of Del Amo Boulevard, generally a four-lane, divided roadway between Del Amo Boulevard and Carson Street, generally a six-lane, divided roadway between Carson Street and Conant Street and generally an eight-lane, divided roadway south of Conant Street, oriented in the north-south direction. The posted speed limit on Lakewood Boulevard is 40 mph north of Carson Street and 45 mph south of Carson Street. On-street parking is generally not permitted along this roadway north of Centralia Street, generally permitted along this roadway between Centralia Street and Carson Street and generally not permitted along this roadway south of Carson Street. Traffic signals control the study intersections of Lakewood Boulevard at Del Amo Boulevard, Harvey Way, Carson Street, Conant Street, Wardlow Road and Spring Street.

**Clark Avenue** is generally a four-lane, divided roadway north of Del Amo Boulevard, generally a three-lane, divided roadway between Del Amo Boulevard and Centralia Street, generally a two-lane, divided roadway between Centralia Street and Harvey Way, generally a three-lane, divided roadway between Harvey Way and Carson Street, generally a four-lane, divided roadway between Carson Street and Wardlow Road and generally a six-lane, divided roadway south of Wardlow Road, oriented in the north-south direction. Clark Avenue borders the project site to the east and currently provides access to the site via several driveways. The posted speed limit on Clark Avenue is 35 mph north of Carson Street and 40 mph south of Carson Street. On-street parking is generally permitted along this roadway between Del Amo Boulevard and Centralia Street, generally permitted on the east side of this roadway between Centralia Street and Conant Street and generally not permitted along this roadway south of Conant Street. Traffic signals control the study intersections of Clark Avenue at Del Amo Boulevard, Harvey Way, Carson Street, Lew Davis Street, Conant Street, Wardlow Road and Spring Street.

*Figure 3-1* presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. This figure identifies the number of travel lanes for key arterials, as well as intersection configurations and controls for the key area study intersections.

## 3.2 Existing Traffic Volumes

Twenty-one (21) key study intersections have been identified as the locations at which to evaluate existing and future traffic operating conditions. Some portion of potential project-related traffic will pass through each of these intersections, and their analysis will reveal the expected relative impacts of the project. Existing daily, AM peak hour and PM peak hour traffic volumes for the locations evaluated in this report were obtained from daily machine and manual peak hour turning movement counts conducted by Transportation Studies Inc. in November 2017.

**Figures 3-2** and **3-3** illustrate the existing AM and PM peak hour traffic volumes at the key study intersections evaluated in this report, respectively. **Appendix A** contains the detailed peak hour count sheets for the key intersections evaluated in this report.

## 3.3 Existing Public Transit

Long Beach Transit (LBT) provides public transit services in the vicinity of the proposed Project. **Figure 3-4** graphically illustrates the LBT routes within the project study area, respectively. **Figure 3-5** identifies the location of the existing bus stops in proximity to the Project site.

## 3.4 Existing Bicycle Master Plan

The City of Long Beach promotes bicycling as a means of mobility and a way in which to improve the quality of life within its community. The Bicycle Master Plan recognizes the needs of bicycle users and aims to create a complete and safe bicycle network throughout the City. The City of Long Beach Bicycle Facilities in the vicinity of the Project site (existing and proposed) is shown on **Figure 3-6**.

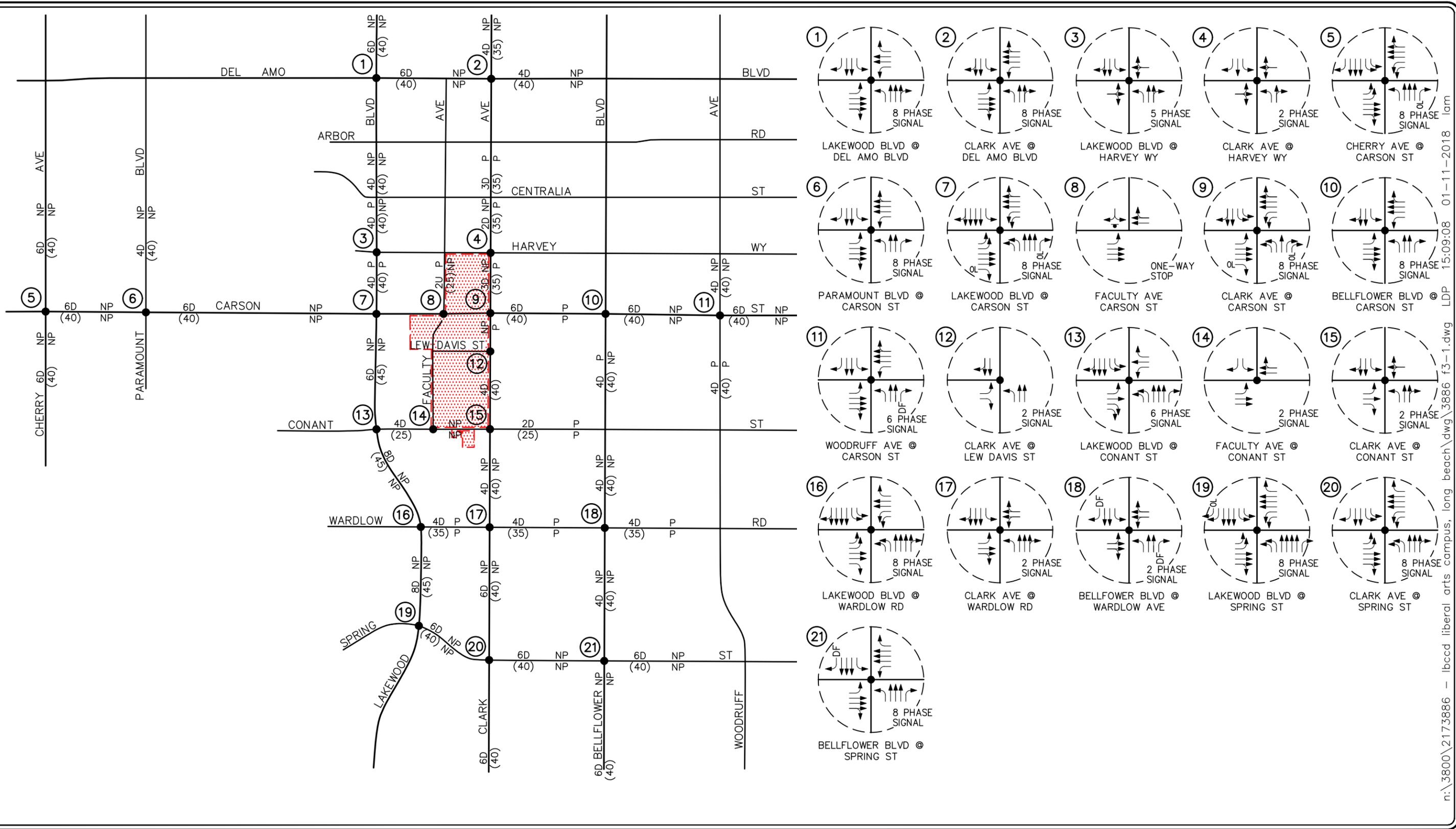
## 3.5 Existing Intersection Conditions

Existing AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the *Intersection Capacity Utilization* (ICU) methodology. All unsignalized intersections were evaluated using the *Highway Capacity Manual* (HCM) Operations methodology.

### 3.5.1 *Intersection Capacity Utilization (ICU) Method of Analysis (Signalized Intersections)*

In conformance with City of Long Beach, City of Lakewood and LA County CMP requirements, existing weekday peak hour operating conditions for the key signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing.

Per City of Long Beach and City of Lakewood requirements, the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and dual left turn capacity of 2,880 vph. A clearance adjustment factor of 0.10 was added to each Level of Service calculation.



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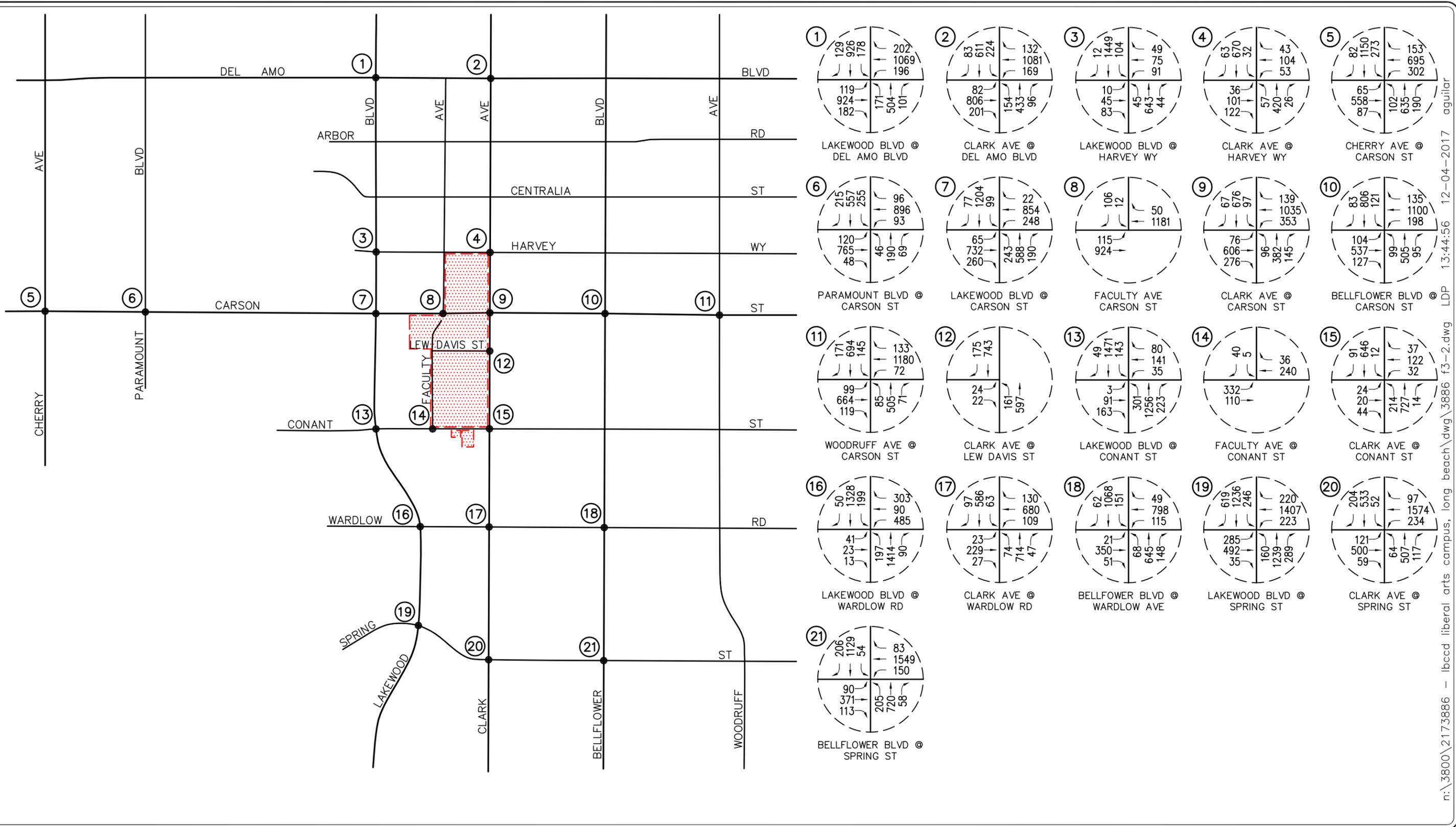


**KEY**

#	= STUDY INTERSECTION	2	= NUMBER OF TRAVEL LANES
↔	= APPROACH LANE ASSIGNMENT	(XX)	= POSTED SPEED LIMIT (MPH)
●	= TRAFFIC SIGNAL, ▼ = STOP SIGN	OL	= OVERLAP
P	= PARKING, NP = NO PARKING	[Hatched Box]	= PROJECT SITE
U	= UNDIVIDED, D = DIVIDED		
DF	= DEFACTO RIGHT-TURN		

**FIGURE 3-1**

**EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS**



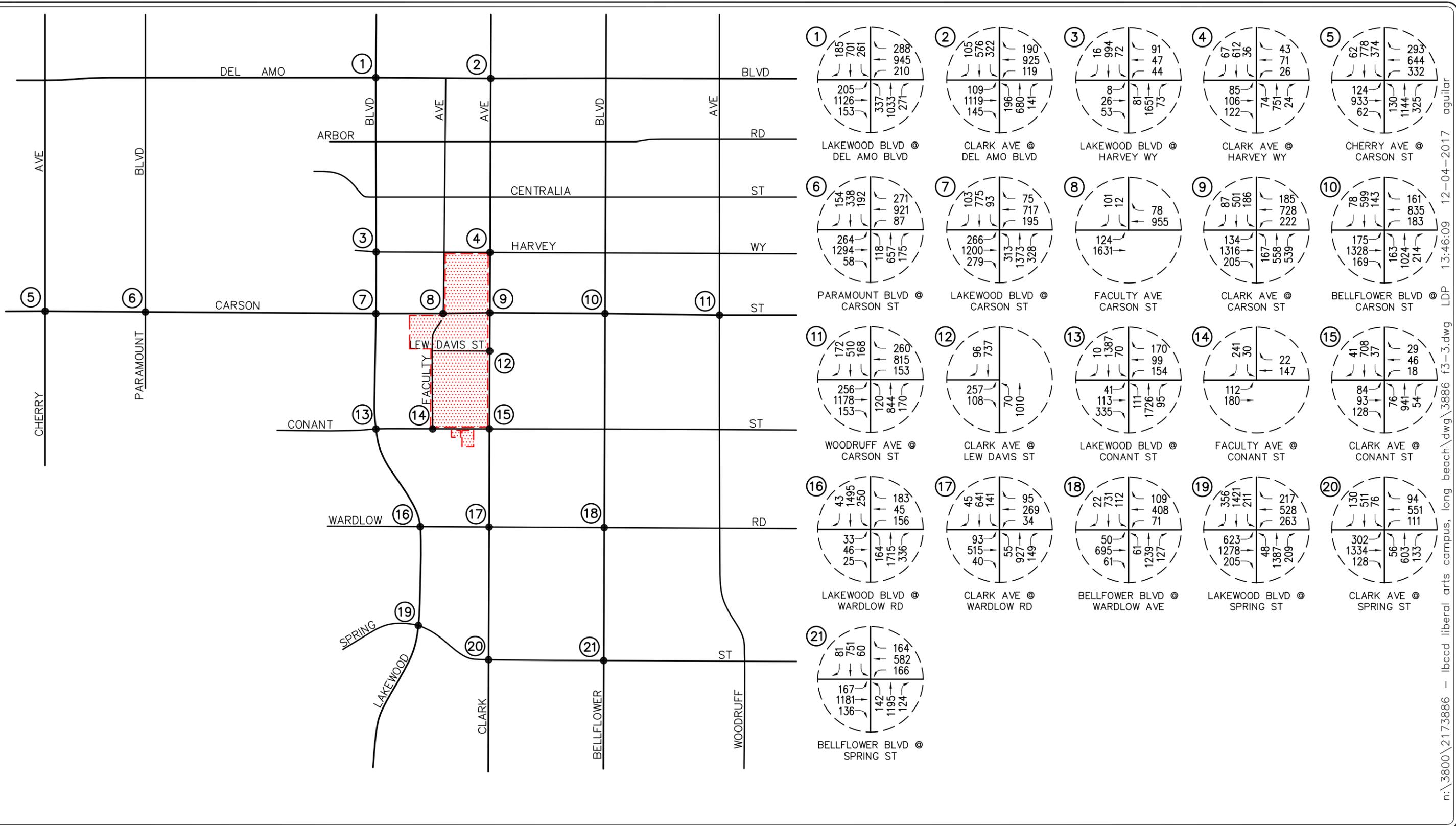
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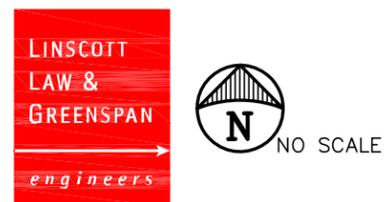
**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 3-2**

**EXISTING AM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



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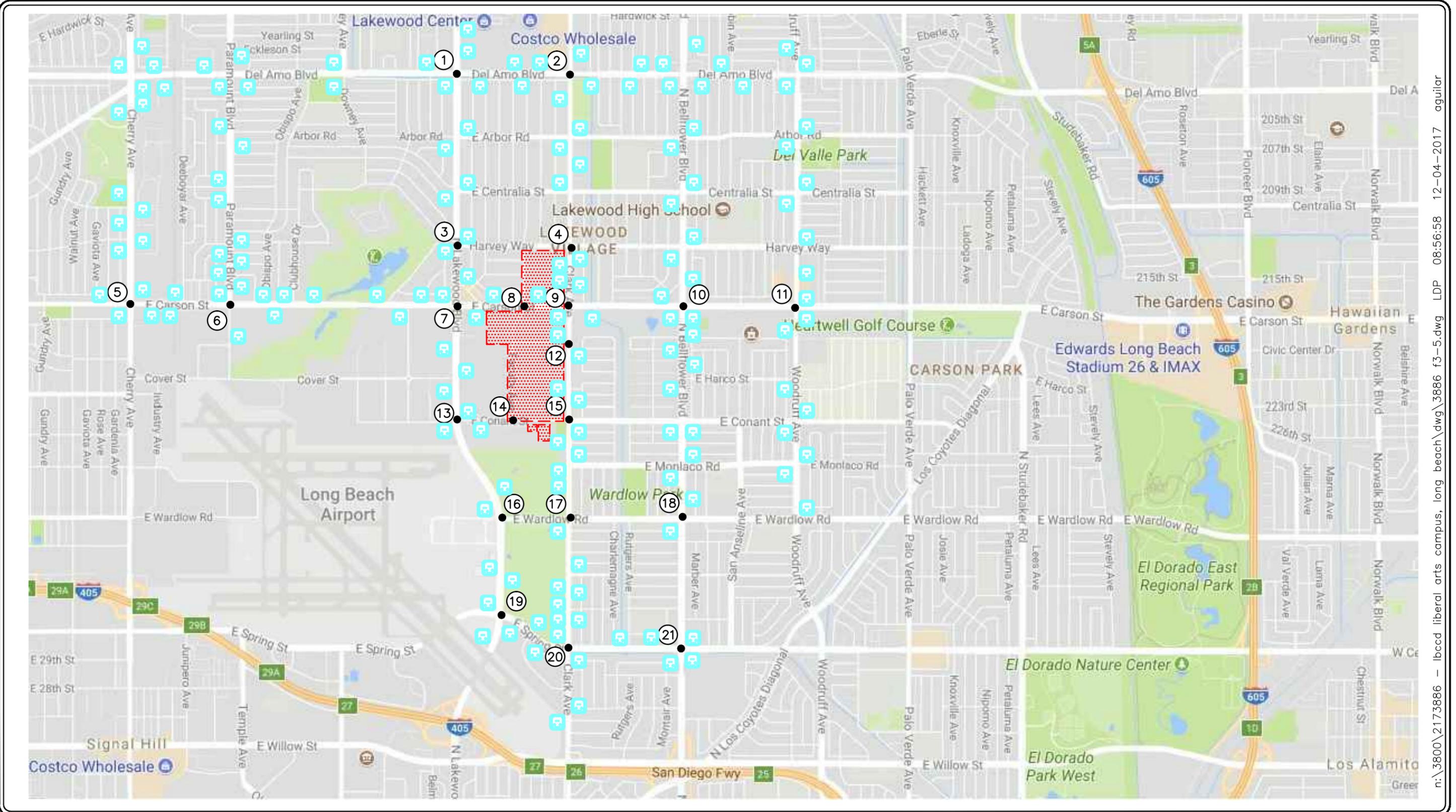


**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 3-3**

**EXISTING PM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH

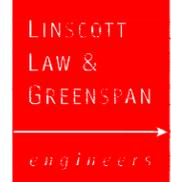




SOURCE: GOOGLE

KEY

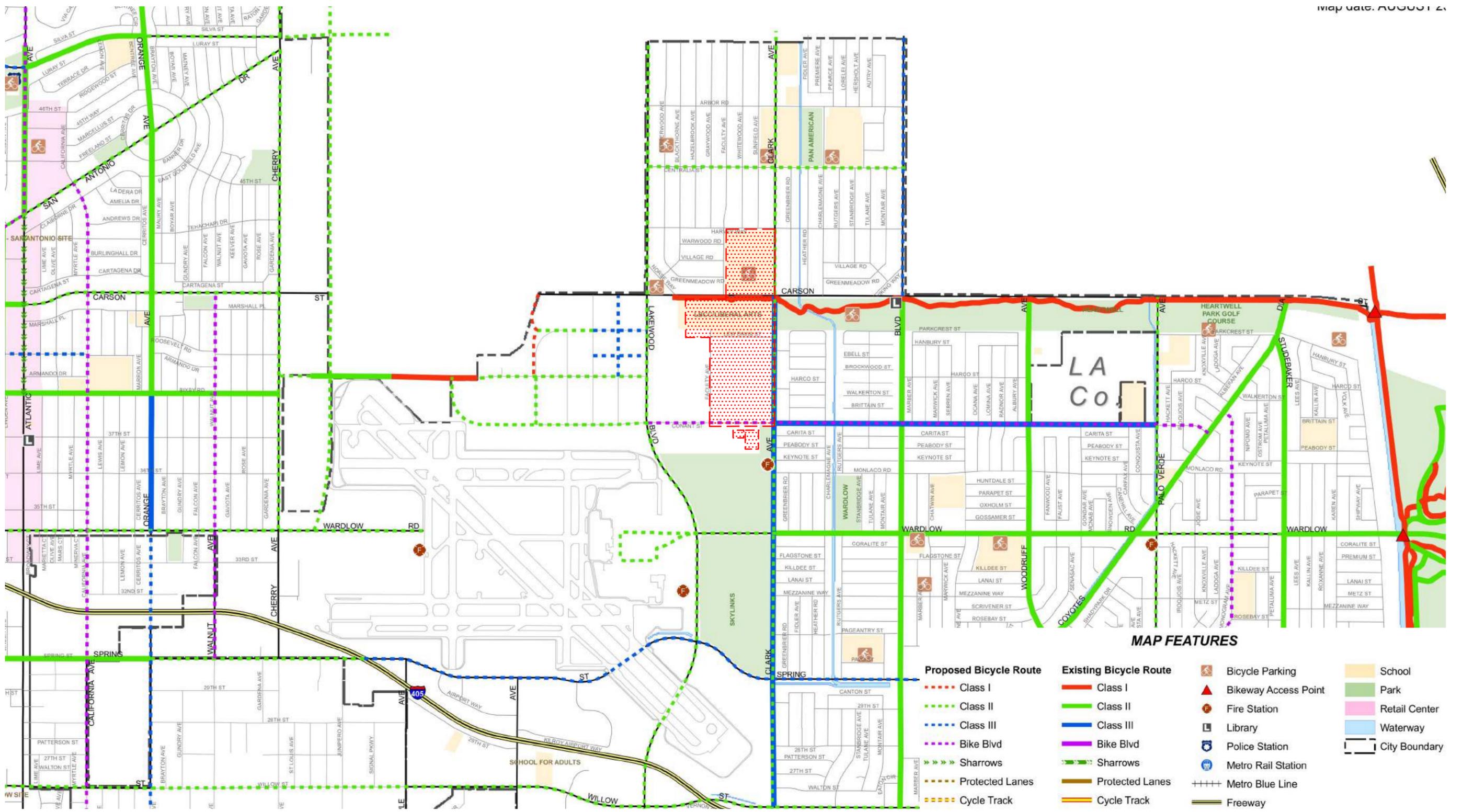
-  = STUDY INTERSECTION
-  = TRANSIT STOP
-  = PROJECT SITE



**FIGURE 3-5**

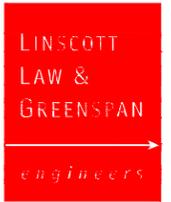
**TRANSIT STOP LOCATIONS**

LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH



**MAP FEATURES**

Proposed Bicycle Route Class I	Existing Bicycle Route Class I	Bicycle Parking	School
Proposed Bicycle Route Class II	Existing Bicycle Route Class II	Bikeway Access Point	Park
Proposed Bicycle Route Class III	Existing Bicycle Route Class III	Fire Station	Retail Center
Proposed Bicycle Route Bike Blvd	Existing Bicycle Route Bike Blvd	Library	Waterway
Proposed Bicycle Route Sharrows	Existing Bicycle Route Sharrows	Police Station	City Boundary
Proposed Bicycle Route Protected Lanes	Existing Bicycle Route Protected Lanes	Metro Rail Station	
Proposed Bicycle Route Cycle Track	Existing Bicycle Route Cycle Track	Metro Blue Line	
		Freeway	



SOURCE: CITY OF LONG BEACH

**KEY**  
 = PROJECT SITE

**FIGURE 3-6**

**LONG BEACH BIKEWAY FACILITIES**  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

The ICU value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements. The six qualitative categories of Level of Service have been defined along with the corresponding ICU value range and are shown in *Table 3-1*.

### 3.5.2 Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)

The HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. For all-way stop controlled intersections, the overall average control delay measured in seconds per vehicle, and level of service is calculated for the entire intersection. For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the level of service for that approach. The HCM control delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in *Table 3-2*.

## 3.6 Level of Service Criteria

According to the City of Long Beach, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours, or the current LOS if the existing LOS is worse than LOS D (i.e. LOS E or F). For the study intersections in the City of Lakewood, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours

## 3.7 Existing Level of Service Results

*Table 3-3* summarizes the existing peak hour service level calculations for the twenty-one (21) key study intersections based on existing traffic volumes and current street geometrics. Review of *Table 3-3* indicates that three (3) of the twenty-one (21) key study intersections currently operate at an unacceptable LOS during the AM and/or PM peak hours. The remaining eighteen (18) key study intersections currently operate at acceptable LOS D or better during the AM and/or PM peak hours. The intersections operating at an adverse level of service are:

<u>Key Intersection</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>ICU/HCM</u>	<u>LOS</u>	<u>ICU/HCM</u>	<u>LOS</u>
1. Lakewood Boulevard at Del Amo Boulevard	0.905	E	0.958	E
8. Faculty Avenue at Carson Street	47.7 s/v	E	40.0 s/v	E
10. Bellflower Boulevard at Carson Street	---	---	0.936	E

*Appendix B* presents the ICU/LOS and HCM/LOS calculation worksheets for the key study intersections for the AM peak hour and PM peak hour.

TABLE 3-1  
LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	Level of Service Description
A	$\leq 0.600$	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	$> 1.000$	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

TABLE 3-2  
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS<sup>1</sup>

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	$\leq 10.0$	Little or no delay
B	$> 10.0$ and $\leq 15.0$	Short traffic delays
C	$> 15.0$ and $\leq 25.0$	Average traffic delays
D	$> 25.0$ and $\leq 35.0$	Long traffic delays
E	$> 35.0$ and $\leq 50.0$	Very long traffic delays
F	$> 50.0$	Severe congestion

<sup>1</sup> Source: *Highway Capacity Manual* (Unsignalized Intersections).

TABLE 3-3  
EXISTING PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY

Key Intersection	Time Period	Jurisdiction	Control Type	(1) Existing Traffic Conditions	
				ICU/HCM	LOS
1. Lakewood Boulevard at Del Amo Boulevard	AM	Lakewood	8Ø Traffic Signal	<b>0.905</b>	<b>E</b>
	PM			<b>0.958</b>	<b>E</b>
2. Clark Avenue at Del Amo Boulevard	AM	Lakewood	8Ø Traffic Signal	0.729	C
	PM			0.896	D
3. Lakewood Boulevard at Harvey Way	AM	Long Beach/ Lakewood	5Ø Traffic Signal	0.728	C
	PM			0.803	D
4. Clark Avenue at Harvey Way	AM	Long Beach	2Ø Traffic Signal	0.749	C
	PM			0.819	D
5. Cherry Avenue at Carson Street	AM	Long Beach	8Ø Traffic Signal	0.643	B
	PM			0.791	C
6. Paramount Boulevard at Carson Street	AM	Lakewood	8Ø Traffic Signal	0.600	B
	PM			0.839	D
7. Lakewood Boulevard at Carson Street	AM	Long Beach/ Lakewood	8Ø Traffic Signal	0.623	B
	PM			0.762	C
8. Faculty Avenue at Carson Street	AM	Long Beach	One-Way Stop	<b>47.7 s/v</b>	<b>E</b>
	PM			<b>40.0 s/v</b>	<b>E</b>
9. Clark Avenue at Carson Street	AM	Long Beach	8Ø Traffic Signal	0.665	B
	PM			0.865	D
10. Bellflower Boulevard at Carson Street	AM	Long Beach/ Lakewood	8Ø Traffic Signal	0.762	C
	PM			<b>0.936</b>	<b>E</b>
11. Woodruff Avenue at Carson Street	AM	Long Beach/ Lakewood	6Ø Traffic Signal	0.705	C
	PM			0.853	D
12. Clark Avenue at Lew Davis Street	AM	Long Beach	2Ø Traffic Signal	0.503	A
	PM			0.576	A
13. Lakewood Boulevard at Conant Street	AM	Long Beach	6Ø Traffic Signal	0.611	B
	PM			0.685	B
14. Faculty Avenue at Conant Street	AM	Long Beach	2Ø Traffic Signal	0.419	A
	PM			0.373	A

Notes:

- s/v = seconds per vehicle
- **Bold ICU/LOS or HCM/LOS** values indicate adverse service levels

**TABLE 3-3 (CONTINUED)**  
**EXISTING PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY**

Key Intersection	Time Period	Jurisdiction	Control Type	(1) Existing Traffic Conditions	
				ICU/HCM	LOS
15. Clark Avenue at Conant Street	AM	Long Beach	2Ø Traffic Signal	0.598	A
	PM			0.545	A
16. Lakewood Boulevard at Wardlow Road	AM	Long Beach	8Ø Traffic Signal	0.608	B
	PM			0.633	B
17. Clark Avenue at Wardlow Road	AM	Long Beach	2Ø Traffic Signal	0.599	A
	PM			0.607	B
18. Bellflower Boulevard at Wardlow Road	AM	Long Beach	2Ø Traffic Signal	0.790	C
	PM			0.853	D
19. Lakewood Boulevard at Spring Street	AM	Long Beach	8Ø Traffic Signal	0.805	D
	PM			0.813	D
20. Clark Avenue at Spring Street	AM	Long Beach	8Ø Traffic Signal	0.659	B
	PM			0.622	B
21. Bellflower Boulevard at Spring Street	AM	Long Beach	8Ø Traffic Signal	0.842	D
	PM			0.765	C

Notes:

- s/v = seconds per vehicle
- **Bold ICU/LOS or HCM/LOS** values indicate adverse service levels

## 4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

## 5.0 PROJECT TRAFFIC CHARACTERISTICS

### 5.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are typically found in the 10<sup>th</sup> Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2017].

**Table 5-1** summarizes the trip generation rates used in forecasting the vehicular trips generated by the proposed Project (i.e. student growth, net increase of 7,458 students) and presents the proposed Project's forecast peak hour and daily traffic volumes. As shown, the trip generation potential of the Project was estimated using ITE Land Use 540: Junior/Community College trip rates. Review of **Table 5-1** shows that the proposed Project (i.e. net increase of 7,458 students) is forecast to generate 8,577 daily trips, with 820 trips (664 inbound, 156 outbound) forecast during the AM peak hour and 820 trips (459 inbound and 361 outbound) forecast during the PM peak hour on a typical weekday.

### 5.2 Project Traffic Distribution and Assignment

**Figure 5-1** presents the traffic distribution pattern for the proposed Project. **Figure 5-1A** presents the detailed traffic distribution pattern focused to around the project site. Project traffic volumes both entering and exiting the project site have been distributed and assigned to the adjacent street system based on the following considerations:

- the site's proximity to major traffic carriers (i.e. Carson Street, Lakewood Boulevard, etc.),
- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals,
- location of existing parking spaces, and
- ingress/egress availability at the project site.

The anticipated AM and PM peak hour project traffic volumes associated with the Project are presented in **Figures 5-2** and **5-3**, respectively. The traffic volume assignments presented in **Figures 5-2** and **5-3** reflect the traffic distribution characteristics shown in **Figure 5-1** and the traffic generation forecast presented in **Table 5-1**.

### 5.3 Existing Plus Project Traffic Conditions

The existing plus project traffic conditions have been generated based upon existing conditions and the estimated project traffic. These forecast traffic conditions have been prepared pursuant to the California Environmental Quality Act (CEQA) guidelines, which require that the potential impacts of a Project be evaluated upon the circulation system as it currently exists. This traffic volume scenario and the related intersection capacity analyses will identify the roadway improvements necessary to mitigate the direct traffic impacts of the Project, if any.

**Figures 5-4** and **5-5** present projected AM and PM peak hour traffic volumes at the twenty-one (21) key study locations with the addition of the trips generated by the proposed Project to existing traffic volumes, respectively.

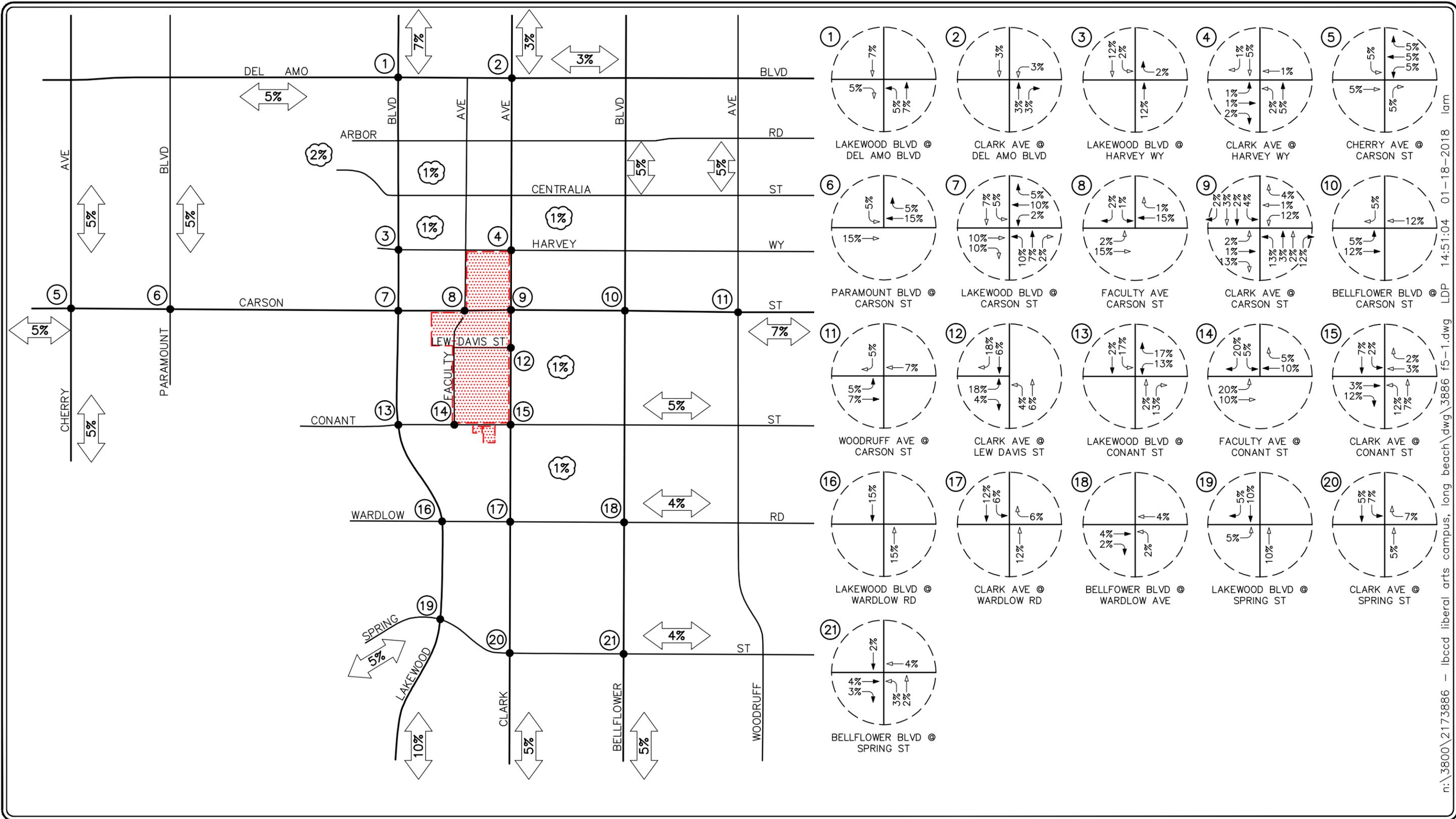
TABLE 5-1  
PROJECT TRAFFIC GENERATION FORECAST<sup>2</sup>

ITE Land Use Code / Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<b><u>Generation Factors:</u></b>							
▪ 540: Junior/Community College (TE/Student)	1.15	81%	19%	0.11	56%	44%	0.11
<b><u>Generation Forecasts:</u></b>							
▪ LBCCD – Liberal Arts Campus (Net Increase 7,458 Students)	8,577	664	156	820	459	361	820

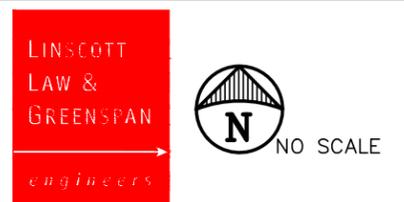
Notes:

- TE/Student = Trip ends per student

<sup>2</sup> Source: *Trip Generation, 10th Edition*, Institute of Transportation Engineers, (ITE) [Washington, D.C. (2017)].

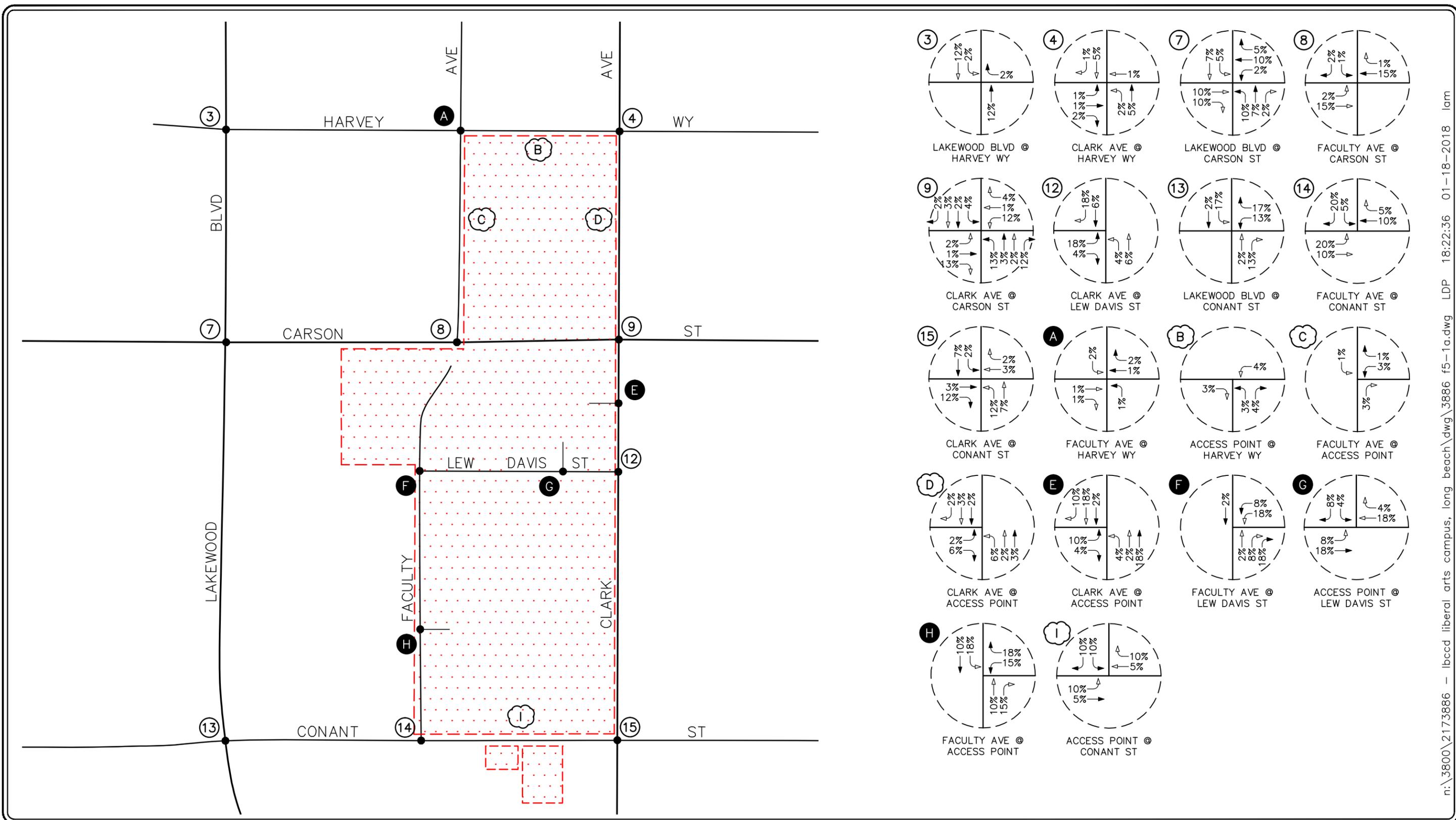


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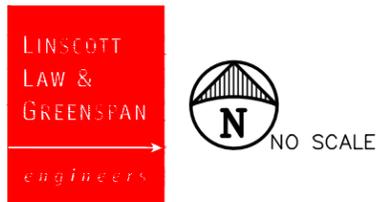


**FIGURE 5-1**

**PROJECT TRAFFIC DISTRIBUTION PATTERN**  
LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH



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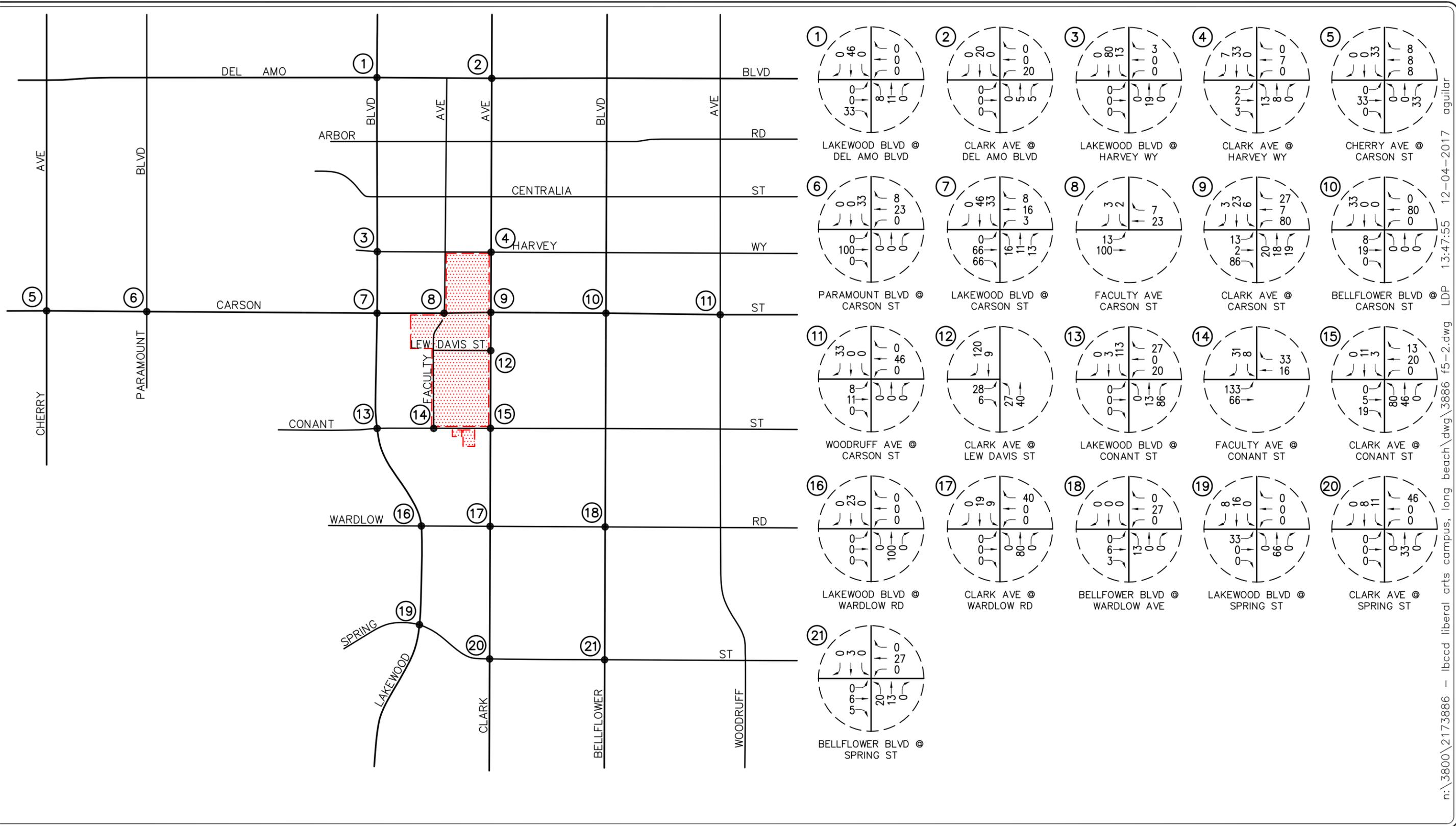
**KEY**

← = INBOUND PERCENTAGE  
 → = OUTBOUND PERCENTAGE  
 [Red Dotted Area] = PROJECT SITE

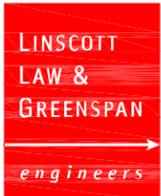
NOTE: TRAFFIC VOLUME PATTERNS FOR LOCATIONS B, C, D AND I REPRESENT THE COMBINED TOTAL OF THE DRIVEWAYS LOCATED ON EACH RESPECTIVE ROADWAY.

**FIGURE 5-1A**

**DETAILED PROJECT SITE TRAFFIC DISTRIBUTION PATTERN**  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH



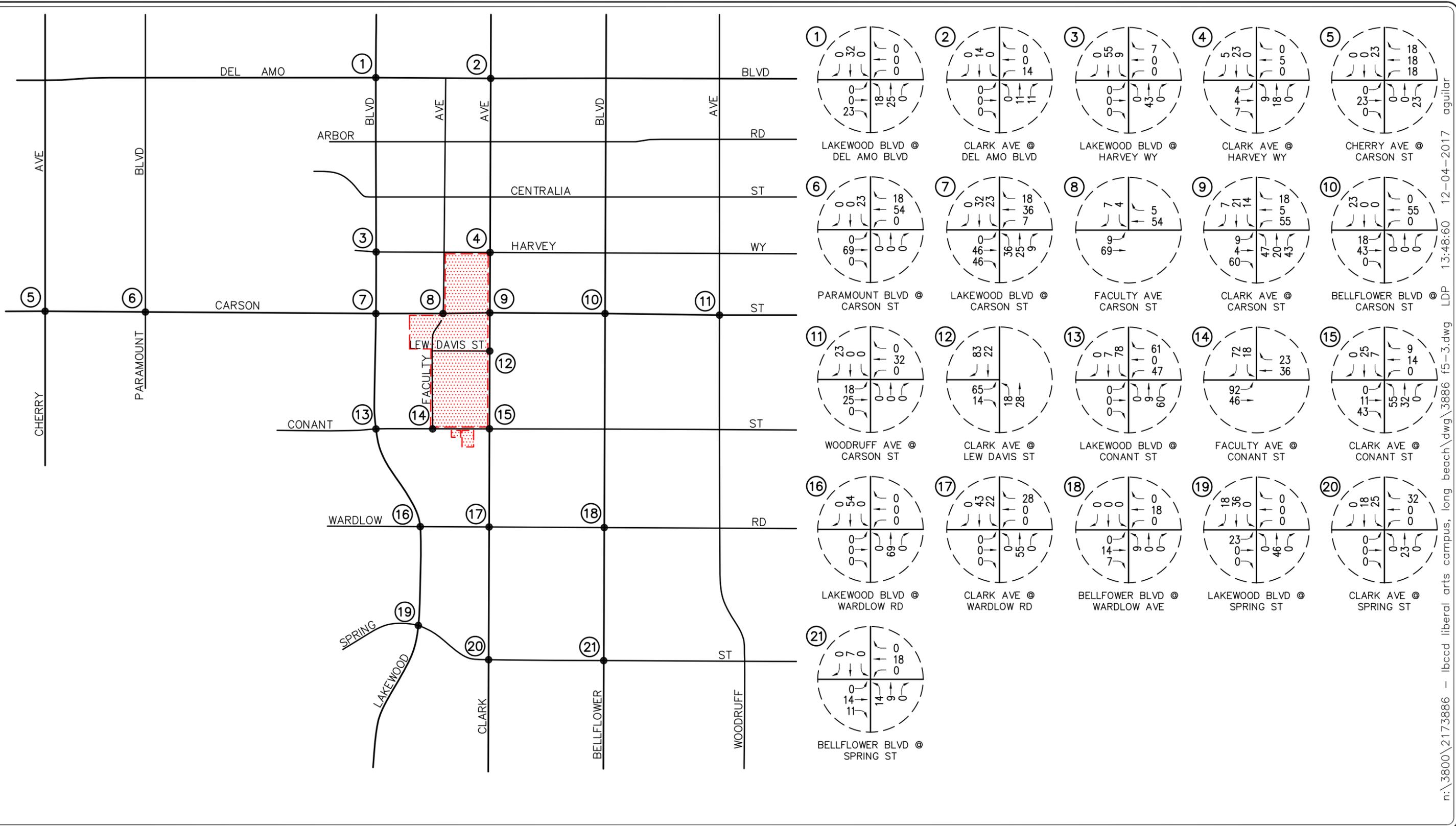
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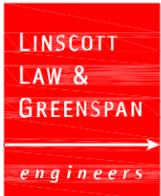
**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 5-2**

**AM PEAK HOUR PROJECT TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



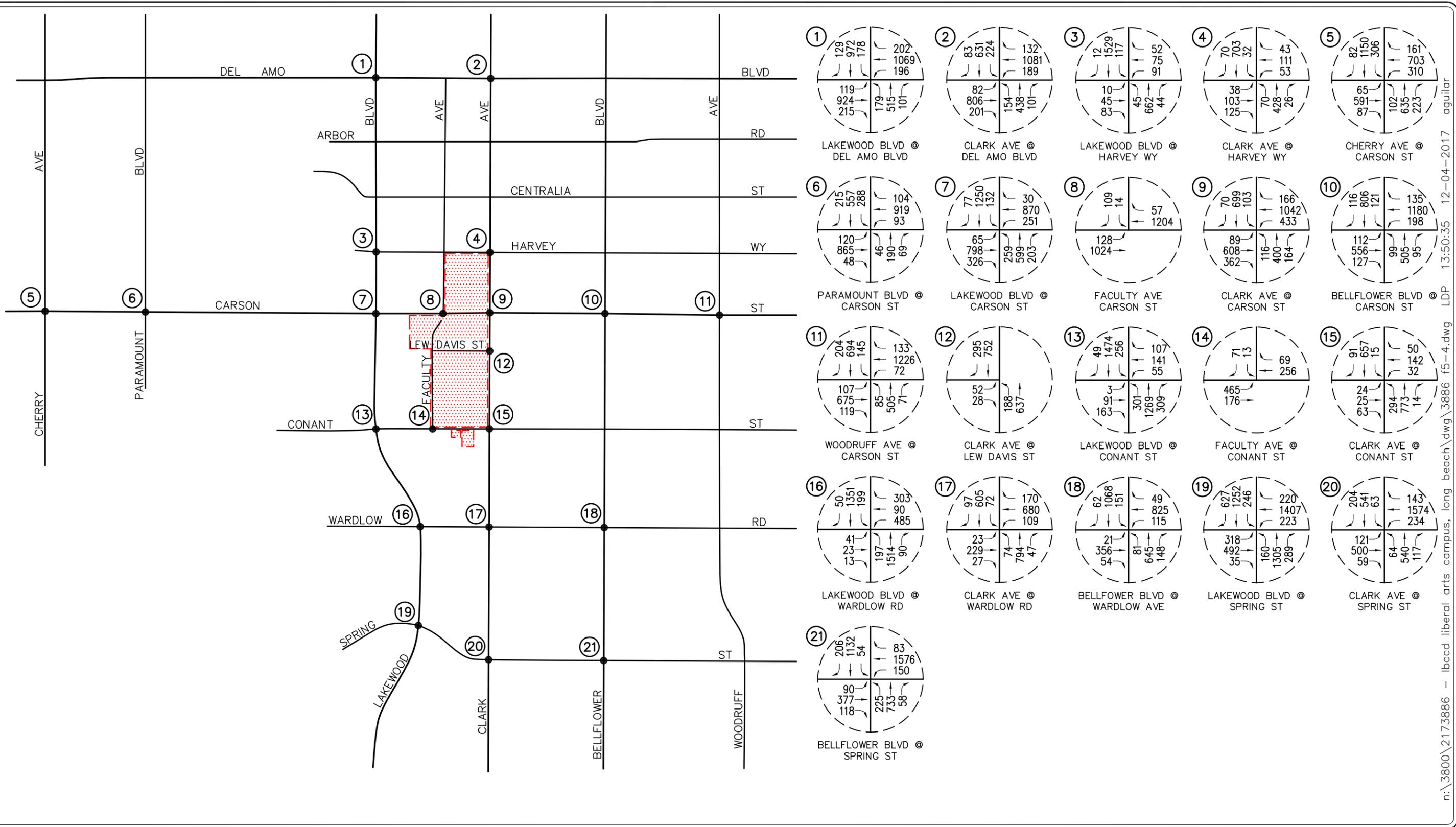
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**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 5-3**

**PM PEAK HOUR PROJECT TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



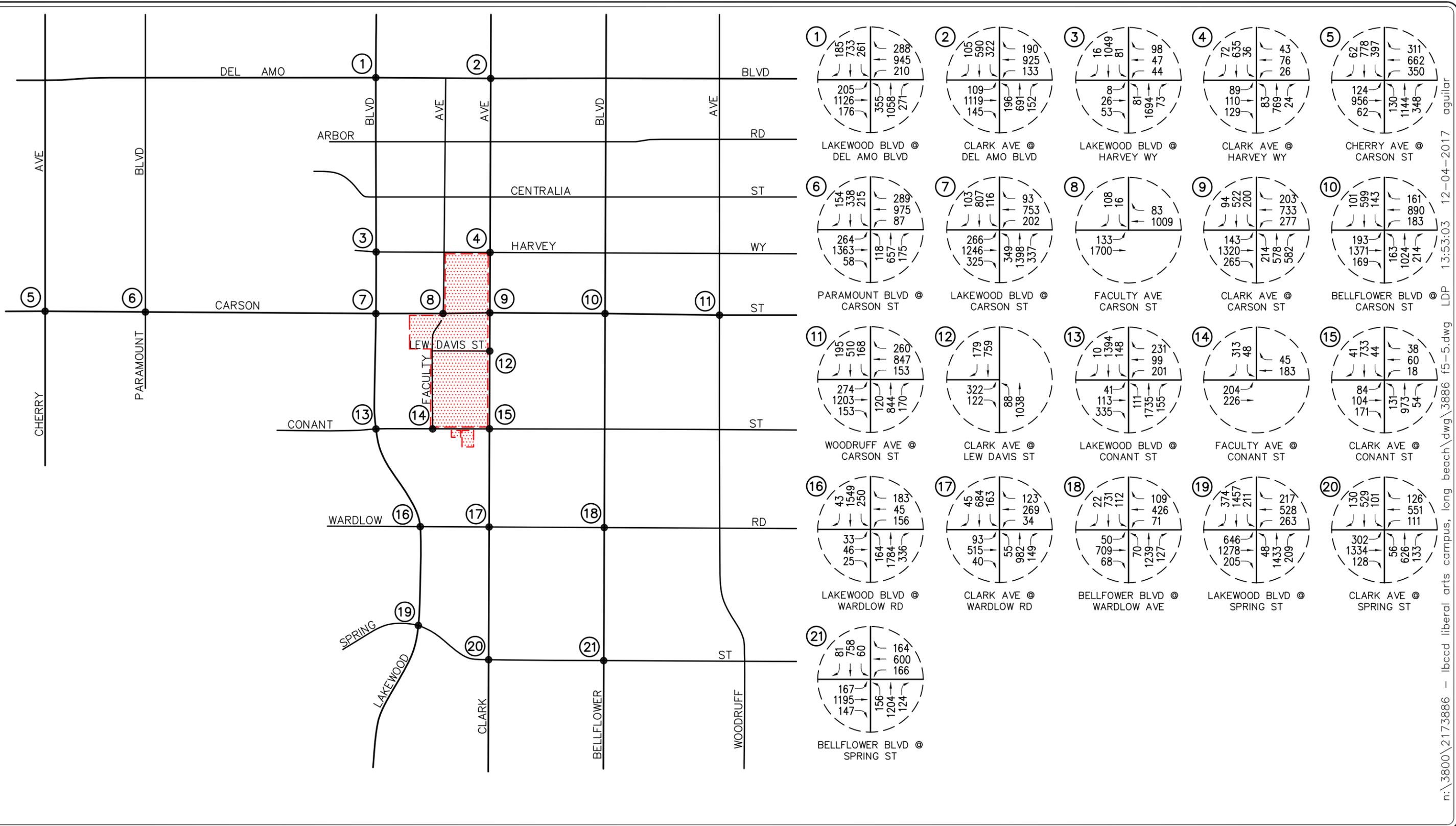
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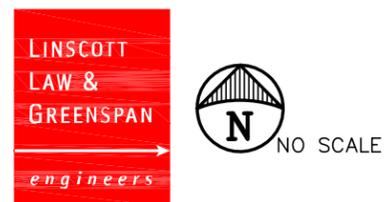
**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 5-4**

**EXISTING PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



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**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 5-5**

**EXISTING PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH

## 6.0 FUTURE TRAFFIC CONDITIONS

### 6.1 Ambient Traffic Growth

Horizon year, background traffic growth estimates have been calculated using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown and future cumulative projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at 0.708 percent per year. Applied to the Year 2017 existing traffic volumes, this factor results in a 16.992 percent growth in existing volumes to the planning horizon Year 2041.

Please note that the recommended ambient growth factor is consistent with the background traffic growth estimates contained in the most current *Congestion Management Program for Los Angeles County*.<sup>3</sup>

### 6.2 Cumulative Projects Traffic Characteristics

In order to make a realistic estimate of future on-street conditions prior to implementation of the proposed Project, the status of other known development projects (cumulative projects) has been researched at the Cities of Long Beach and Lakewood. With this information, the potential impact of the proposed Project can be evaluated within the context of the cumulative impact of all ongoing development. Based on our research, there are four (4) cumulative projects located in the City of Long Beach and twenty-two (22) cumulative projects located in the City of Lakewood that have either been built, but not yet fully occupied, or are being processed for approval. These twenty-six (26) cumulative projects have been included as part of the cumulative background setting.

**Table 6-1** provides the location and a brief description for each of the twenty-six (26) cumulative projects. **Figure 6-1** graphically illustrates the location of the cumulative projects. These cumulative projects are expected to generate vehicular traffic, which may affect the operating conditions of the key study intersections.

**Table 6-2** presents the resultant trip generation for the twenty-six (26) cumulative projects. As shown in **Table 6-2**, the twenty-six (26) cumulative projects are forecast to generate a combined total of 9,088 daily trips, with 586 trips (318 inbound and 268 outbound) forecast during the AM peak hour and 640 trips (327 inbound and 313 outbound) forecast during the PM peak hour.

The AM and PM peak hour traffic volumes associated with the twenty-six (26) cumulative projects in the Year 2041 are presented in **Figures 6-2** and **6-3**, respectively.

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<sup>3</sup> Source: *Congestion Management Program for Los Angeles County*; Appendix D – Guidelines for CMP Transportation Impact Analysis; Exhibit D-1; General Traffic Volume Growth Factors.

### 6.3 Year 2041 Cumulative Traffic Volumes

**Figures 6-4** and **6-5** present the Year 2041 AM and PM peak hour cumulative traffic volumes at the key study intersections, respectively. Please note that the cumulative traffic volumes represent the accumulation of existing traffic, ambient growth traffic and cumulative projects traffic.

**Figures 6-6** and **6-7** illustrate the Year 2041 forecast AM and PM peak hour traffic volumes, with the inclusion of the trips generated by the proposed Project, respectively.

**TABLE 6-1  
LOCATION AND DESCRIPTION OF CUMULATIVE PROJECTS<sup>4</sup>**

<b>No.</b>	<b>Cumulative Project</b>	<b>Location/Address</b>	<b>Description</b>
<i>City of Long Beach</i>			
1.	Staybridge Suites Hotel	2640 North Lakewood Boulevard	Demolition of existing two-story 50 room hotel and construction of a new six-story 125 room hotel
2.	4201 E. Willow Street	4201 East Willow Street	Demolishing an existing 17,231 SF car sales and constructing 9,121 SF retail and a 4,296 SF automated carwash
3.	New Coffee Shop	5861-5865 Spring Street	1,800 SF coffee shop
4.	Northgate Market Expansion	4700 Cherry Avenue	2,000 SF retail, 1,700 SF high-turnover restaurant and 1,600 SF coffee house with drive-through
<i>City of Lakewood</i>			
5.	Law Office of Jeff Jung	4909 Lakewood Boulevard #302	699 SF office
6.	Sparx Logistics	4909 Lakewood Boulevard #303	8,587 SF office
7.	Thrivent	4909 Lakewood Boulevard #305	1,071 SF office
8.	Image 2000	4909 Lakewood Boulevard #540	2,000 SF office
9.	McDonalds	4910 Lakewood Boulevard	1,260 SF fast-food restaurant with drive-thru
10.	Petco	5215 Lakewood Boulevard	12,500 SF retail
11.	Kinecta Federal Credit Union	4055 Hardwick Street	2,188 SF bank
12.	Raising Cane's Chicken Fingers	4634 Candlewood Street	4,014 SF fast-food restaurant with drive-thru
13.	Dickey's Barbeque Pit	5125 Candlewood Street	1,584 SF restaurant
14.	Outback Steakhouse	5305 Clark Avenue	6,392 SF restaurant
15.	Journeys	500 Lakewood Center Mall #20	1,722 SF retail
16.	Miniso	500 Lakewood Center Mall #39	1,321 SF retail
17.	Play Live Nation	500 Lakewood Center Mall #127	2,200 SF gaming lounge
18.	Box Lunch	500 Lakewood Center Mall #307	2,522 SF retail
19.	Burgerim	4131 Woodruff Avenue	1,470 SF high-turnover restaurant
20.	Morey's Music Store	4834 Woodruff Avenue	3,104 SF retail
21.	Piggie's Adobo Taco Bar	2700 Carson Street	1,350 SF restaurant

Notes:

- SF = Square-feet
- DU = Dwelling units

<sup>4</sup> Source: City of Long Beach and City of Lakewood Planning Departments.

TABLE 6-1  
LOCATION AND DESCRIPTION OF CUMULATIVE PROJECTS<sup>5</sup>

No.	Cumulative Project	Location/Address	Description
<i>City of Lakewood (Continued)</i>			
22.	Carwood Carwash	2729-35 Carson Street	270 SF car wash expansion and demolition of 7,320 SF existing office building
23.	Stone Yoga Studio	3219 Carson Street	1,474 SF yoga studio
24.	Bubble Express Car Wash	2711 Del Amo Boulevard	2,496 SF car wash
25.	Starbucks	5906 Del Amo Boulevard	1,342 Sf coffee shop with drive-thru
26.	Laborers Local 1309	3971 Pixie Avenue	5,500 SF labor academy

Notes:

- SF = Square-feet
- DU = Dwelling units

<sup>5</sup> Source: City of Long Beach and City of Lakewood Planning Departments.

**TABLE 6-2  
CUMULATIVE PROJECTS TRAFFIC GENERATION FORECAST<sup>6</sup>**

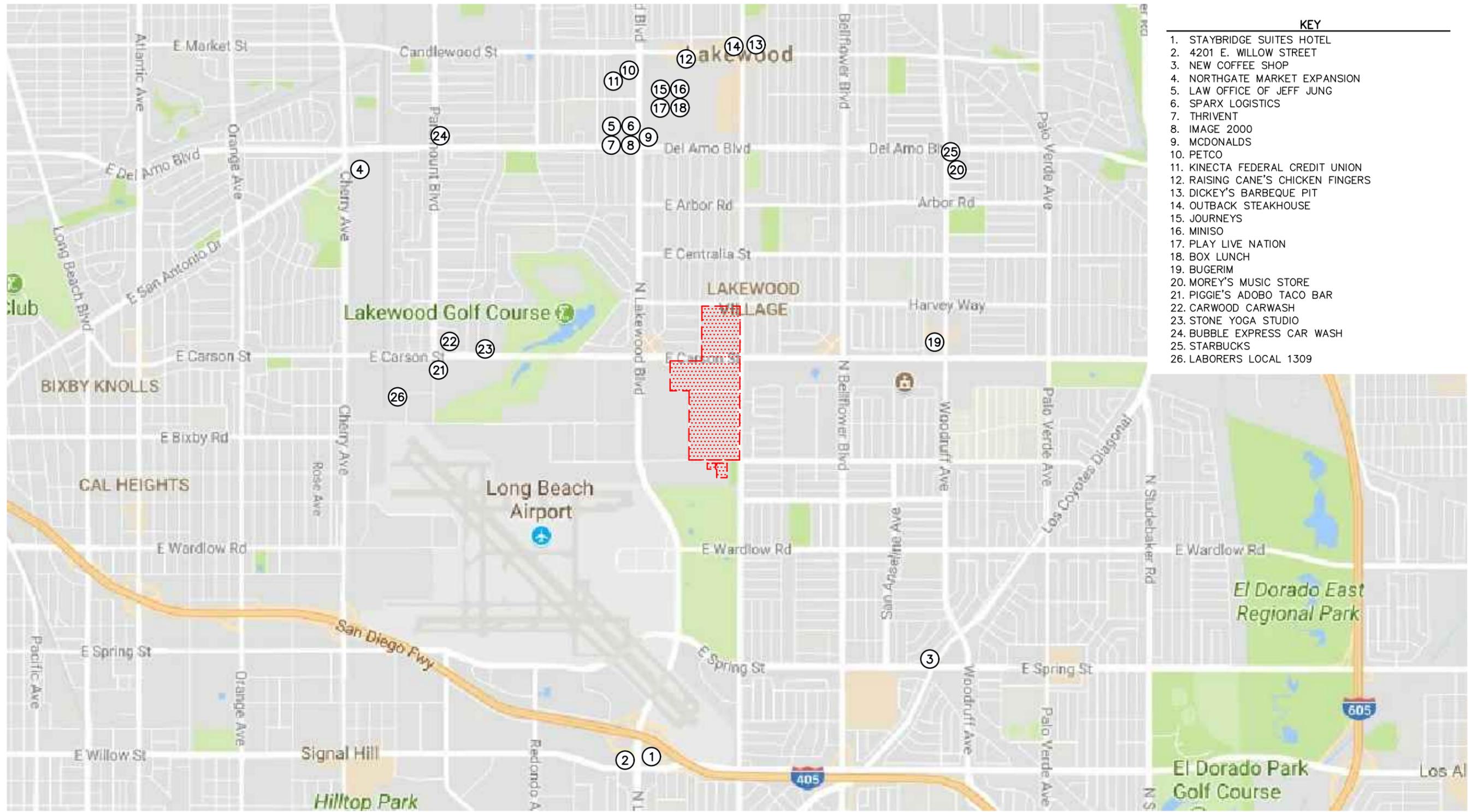
Cumulative Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
1. Staybridge Suites Hotel <sup>7</sup>	490	18	13	31	18	18	36
2. 4201 E. Willow Street <sup>8</sup>	1,388	38	31	69	79	79	158
3. New Coffee Shop	487	46	45	91	25	24	49
4. Northgate Market Expansion <sup>9</sup>	1,252	51	47	98	33	33	66
5. Law Office of Jeff Jung <sup>9</sup>	8	1	0	1	0	1	1
6. Sparx Logistics <sup>9</sup>	95	11	2	13	2	11	13
7. Thrivent <sup>9</sup>	12	2	0	2	0	2	2
8. Image 2000 <sup>9</sup>	22	3	0	3	1	2	3
9. McDonalds <sup>9</sup>	469	15	14	29	10	10	20
10. Petco <sup>9</sup>	481	6	5	11	15	15	30
11. Kinecta Federal Credit Union <sup>9</sup>	162	--	--	--	12	15	27
12. Raising Cane's Chicken Fingers <sup>9</sup>	1,493	47	46	93	34	31	65
13. Dickey's Barbeque Pit	160	8	6	14	5	4	9
14. Outback Steakhouse <sup>9</sup>	517	--	--	--	18	9	27
15. Journeys <sup>9</sup>	67	1	1	2	2	2	4
16. Miniso <sup>9</sup>	50	1	0	1	1	2	3
17. Play Live Nation <sup>9</sup>	94	1	1	2	4	4	8
18. Box Lunch <sup>9</sup>	97	1	1	2	3	3	6
19. Burgerim	148	7	6	13	5	3	8
20. Morey's Music Store	105	2	1	3	4	4	8
21. Piggie's Adobo Taco Bar <sup>9</sup>	155	7	6	13	5	2	7
22. Carwood Carwash <sup>9</sup>	-41	-8	0	-8	0	-7	-7
23. Stone Yoga Studio <sup>9</sup>	50	1	1	2	3	2	5
24. Bubble Express Car Wash <sup>9</sup>	350	17	9	26	18	17	35
25. Starbucks	826	30	29	59	22	21	43
26. Laborers Local 1309 <sup>9</sup>	151	12	4	16	8	6	14
<b>Cumulative Projects Trip Generation Forecast</b>	<b>9,088</b>	<b>318</b>	<b>268</b>	<b>586</b>	<b>327</b>	<b>313</b>	<b>640</b>

<sup>6</sup> Unless otherwise noted, Source: *Trip Generation*, 10<sup>th</sup> Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2017).

<sup>7</sup> Source: *Traffic Impact Study for Proposed Staybridge Suites – Long Beach Airport*, prepared by Crain & Associates, dated September 2016.

<sup>8</sup> Source: *Long Beach Car Wash/Retail Traffic Analysis*, prepared by LSA Associates, dated September 2010.

<sup>9</sup> Source: *Northgate Market Expansion Project Traffic Impact Analysis*, prepared by LLG, dated October 2017.



- KEY**
1. STAYBRIDGE SUITES HOTEL
  2. 4201 E. WILLOW STREET
  3. NEW COFFEE SHOP
  4. NORTHGATE MARKET EXPANSION
  5. LAW OFFICE OF JEFF JUNG
  6. SPARX LOGISTICS
  7. THRIVENT
  8. IMAGE 2000
  9. MCDONALDS
  10. PETCO
  11. KINECTA FEDERAL CREDIT UNION
  12. RAISING CANE'S CHICKEN FINGERS
  13. DICKEY'S BARBEQUE PIT
  14. OUTBACK STEAKHOUSE
  15. JOURNEYS
  16. MINISO
  17. PLAY LIVE NATION
  18. BOX LUNCH
  19. BUGERIM
  20. MOREY'S MUSIC STORE
  21. PIGGIE'S ADOBO TACO BAR
  22. CARWOOD CARWASH
  23. STONE YOGA STUDIO
  24. BUBBLE EXPRESS CAR WASH
  25. STARBUCKS
  26. LABORERS LOCAL 1309

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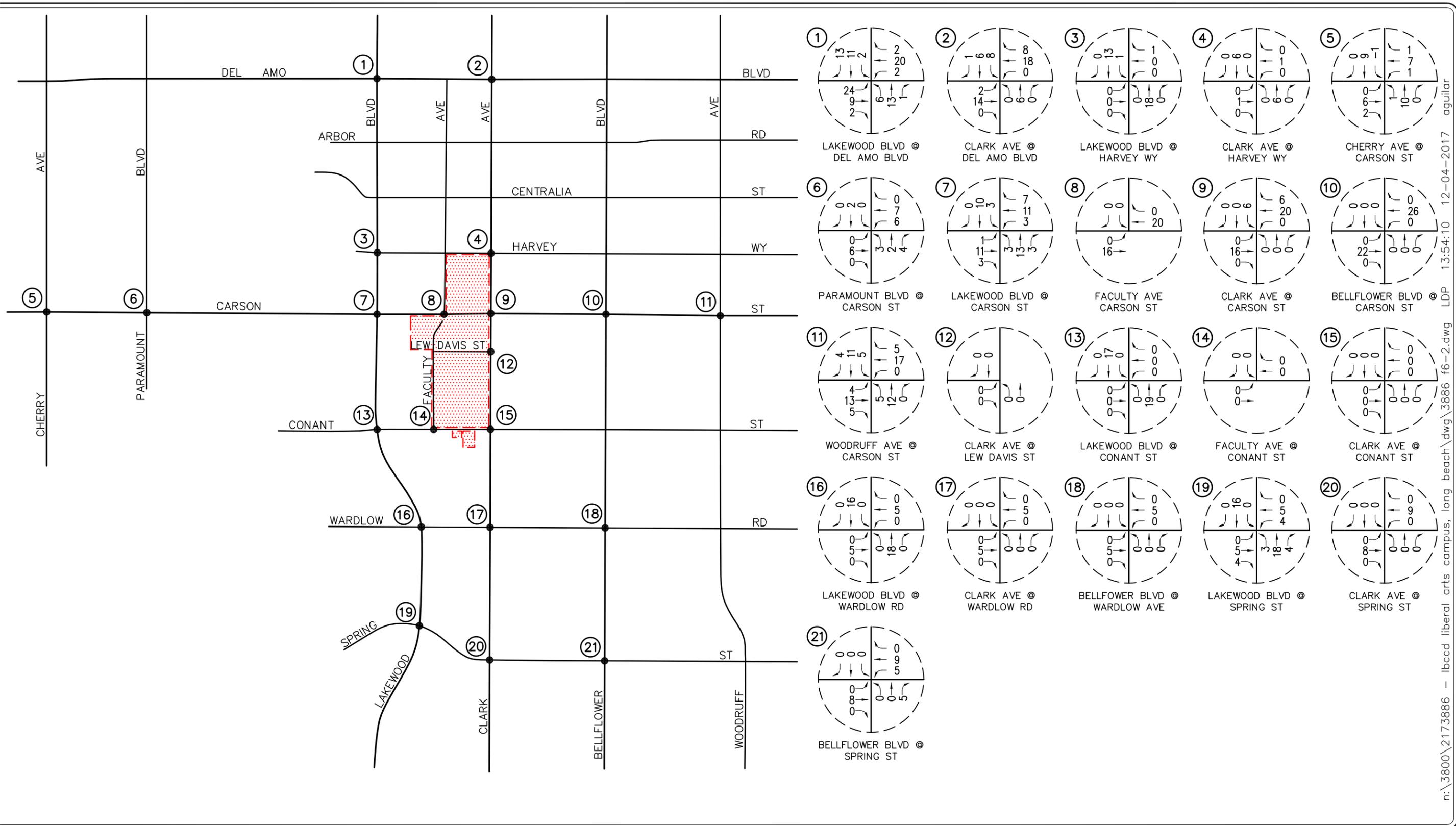
LINSCOTT  
LAW &  
GREENSPAN  
engineers



- KEY**
- # = CUMULATIVE PROJECT LOCATION
  - [Red hatched box] = PROJECT SITE

**FIGURE 6-1**

**LOCATION OF CUMULATIVE PROJECTS**  
LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH



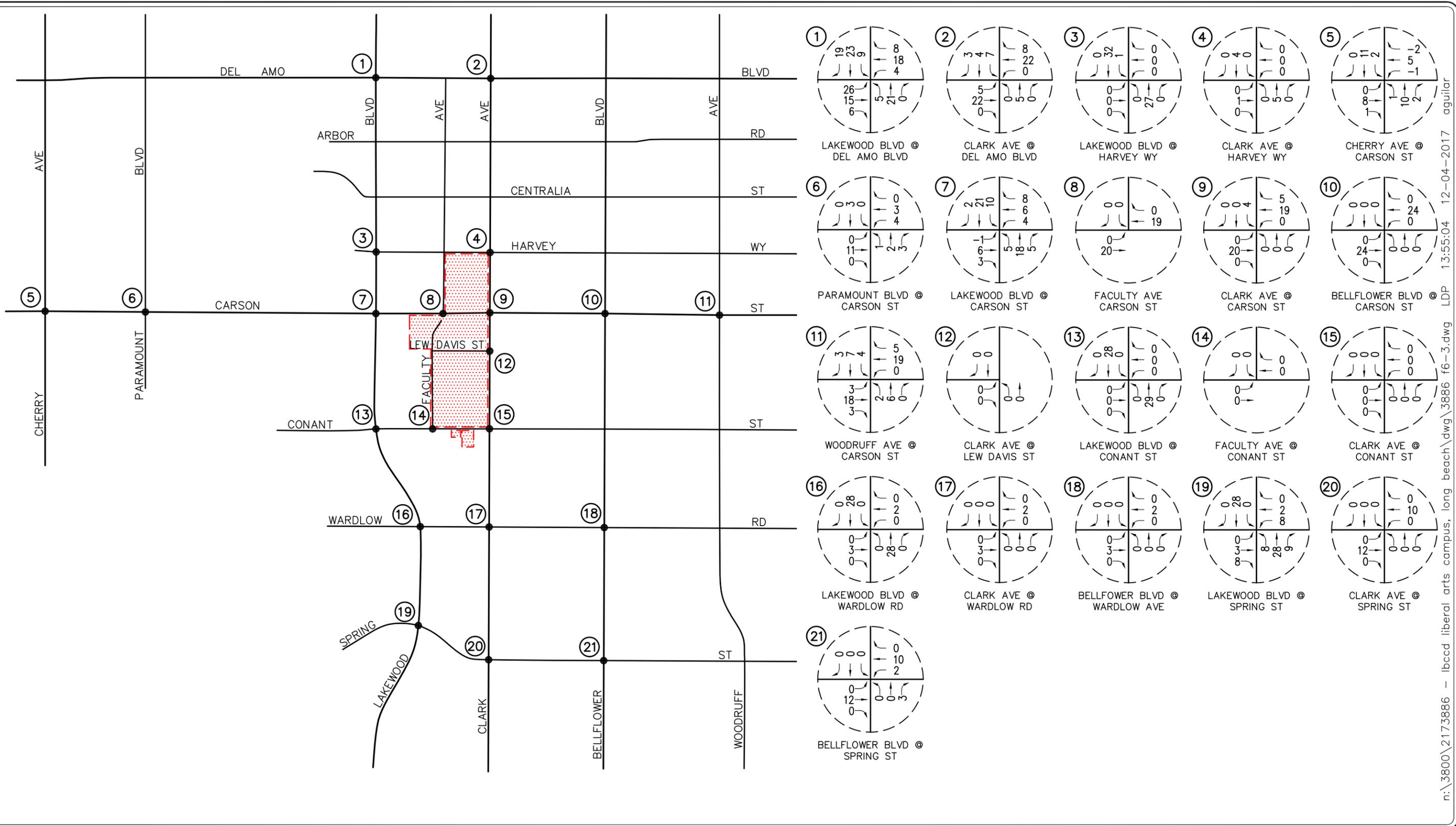
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**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 6-2**

**AM PEAK HOUR CUMULATIVE PROJECT TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



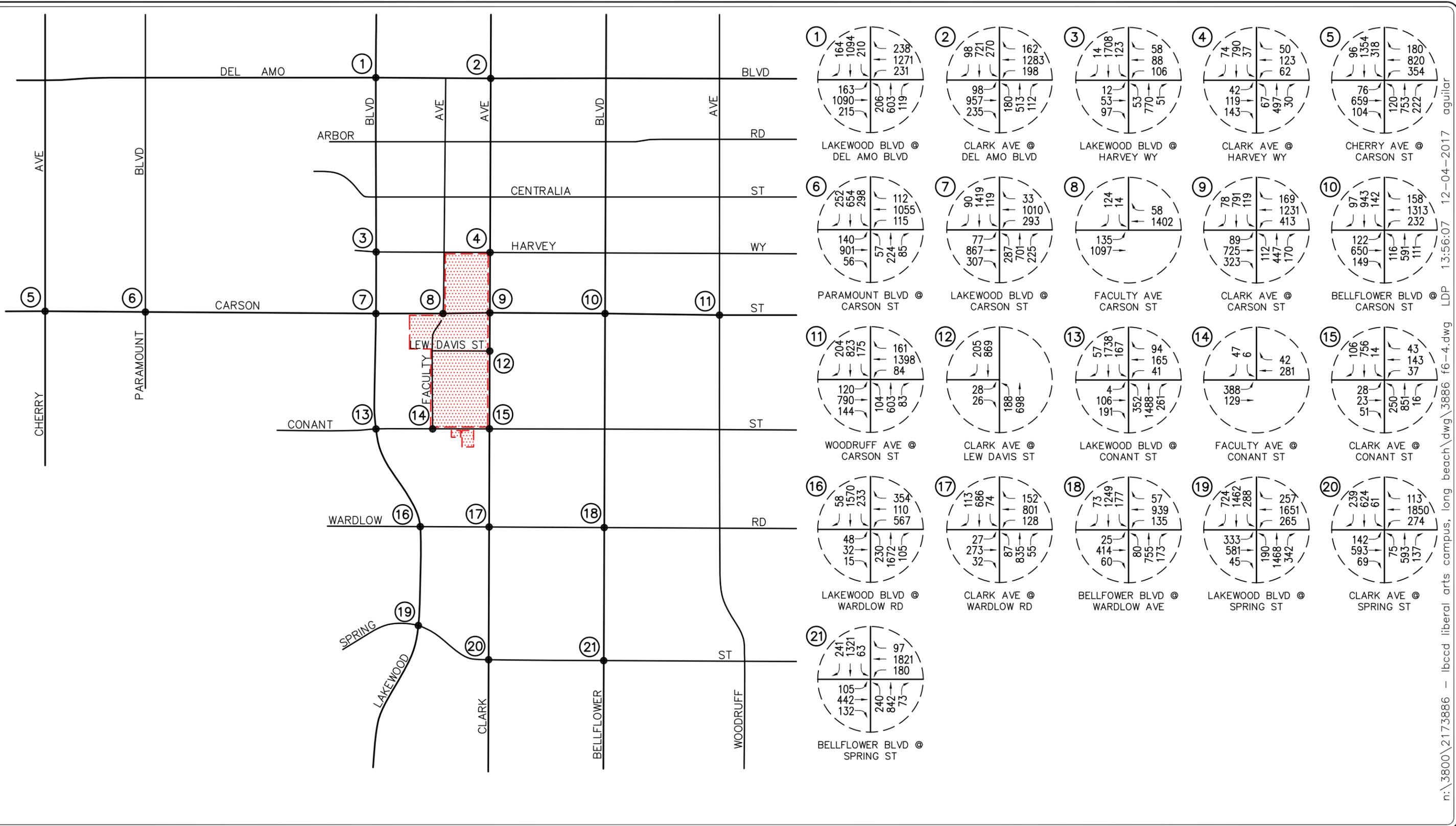
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**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 6-3**

**PM PEAK HOUR CUMULATIVE PROJECT TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



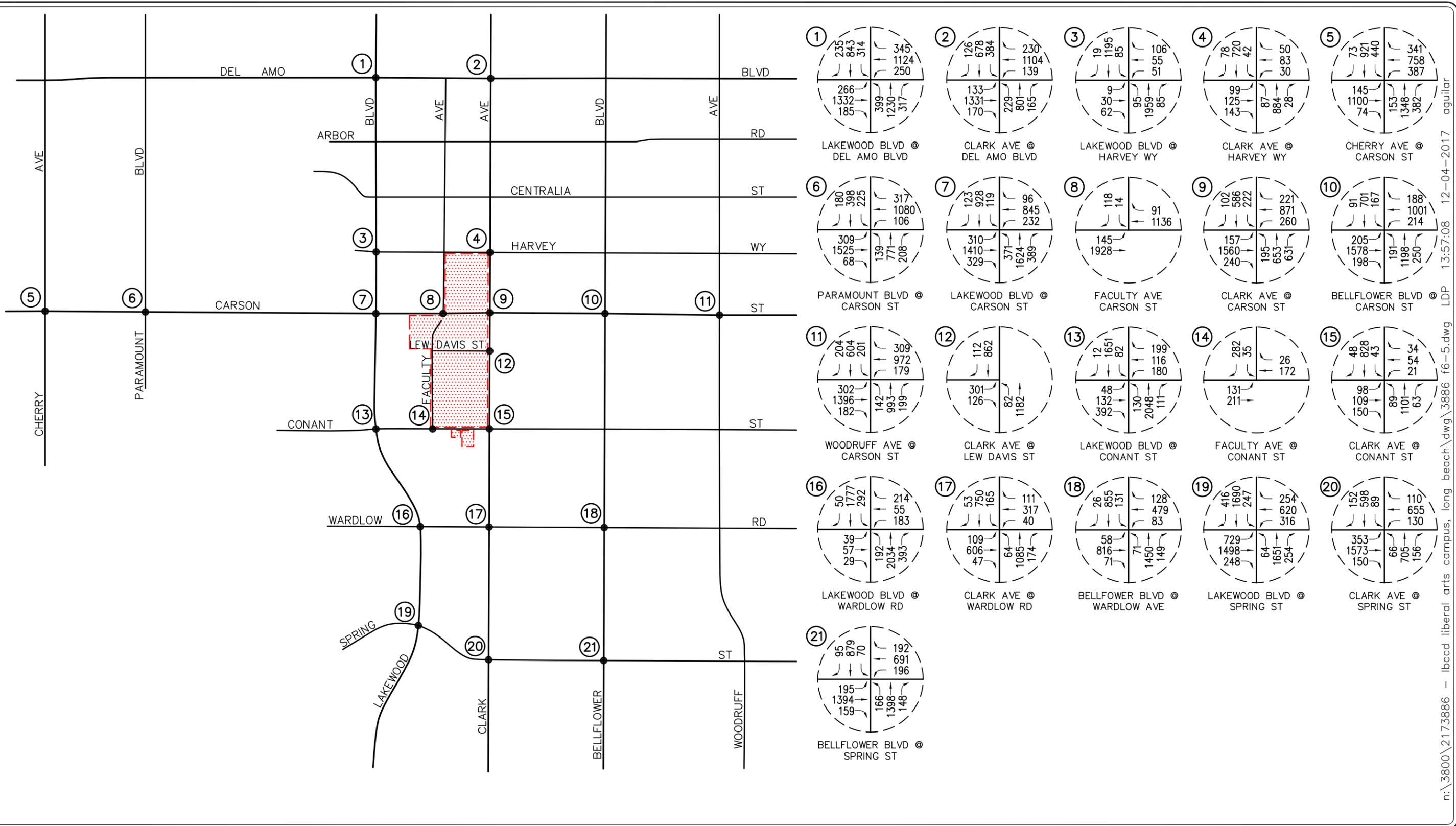
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**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 6-4**

**YEAR 2041 BUILDOUT AM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



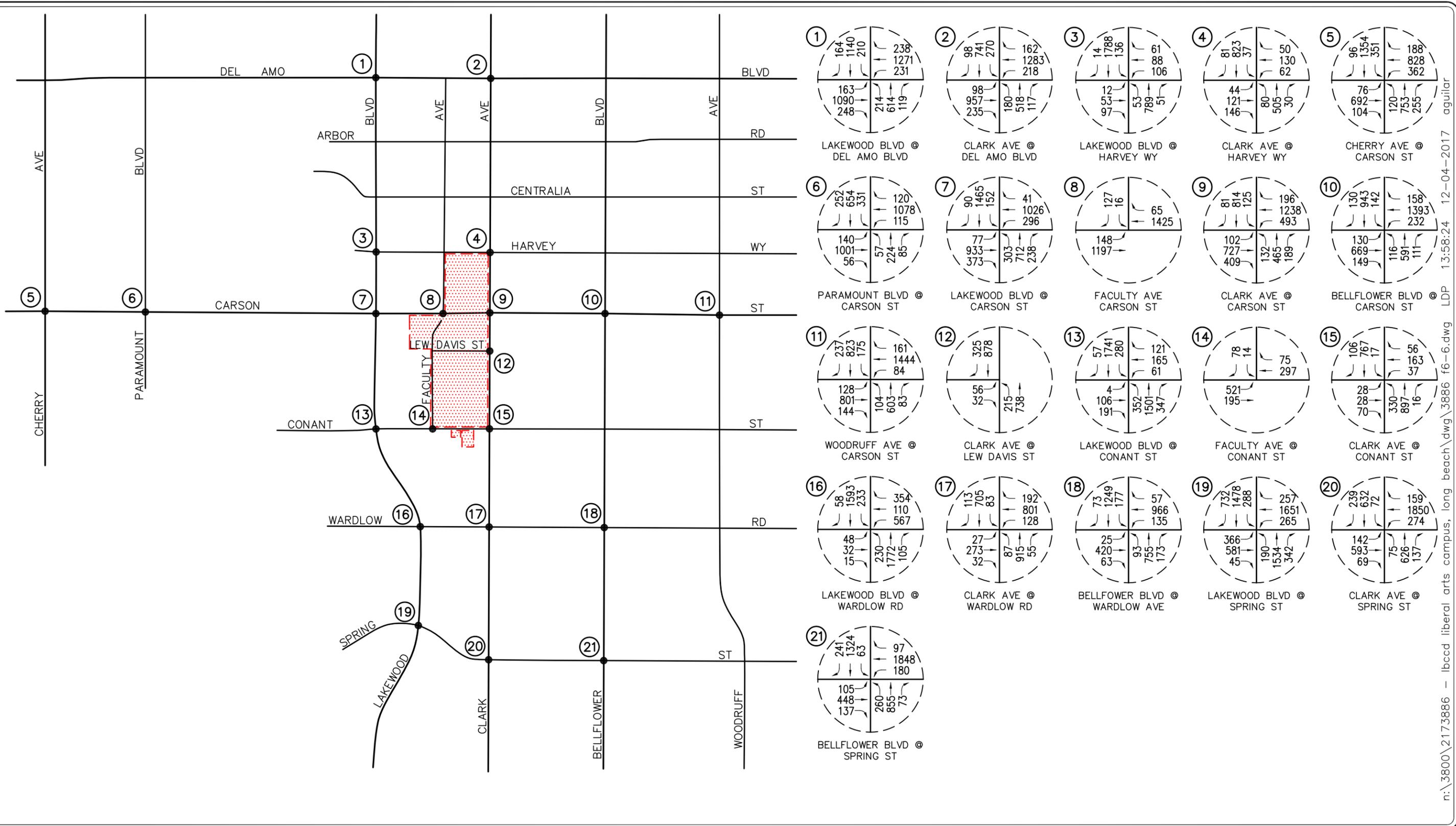
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**KEY**  
 # = STUDY INTERSECTION  
 [Red Hatched Box] = PROJECT SITE

**FIGURE 6-5**

**YEAR 2041 BUILDOUT PM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



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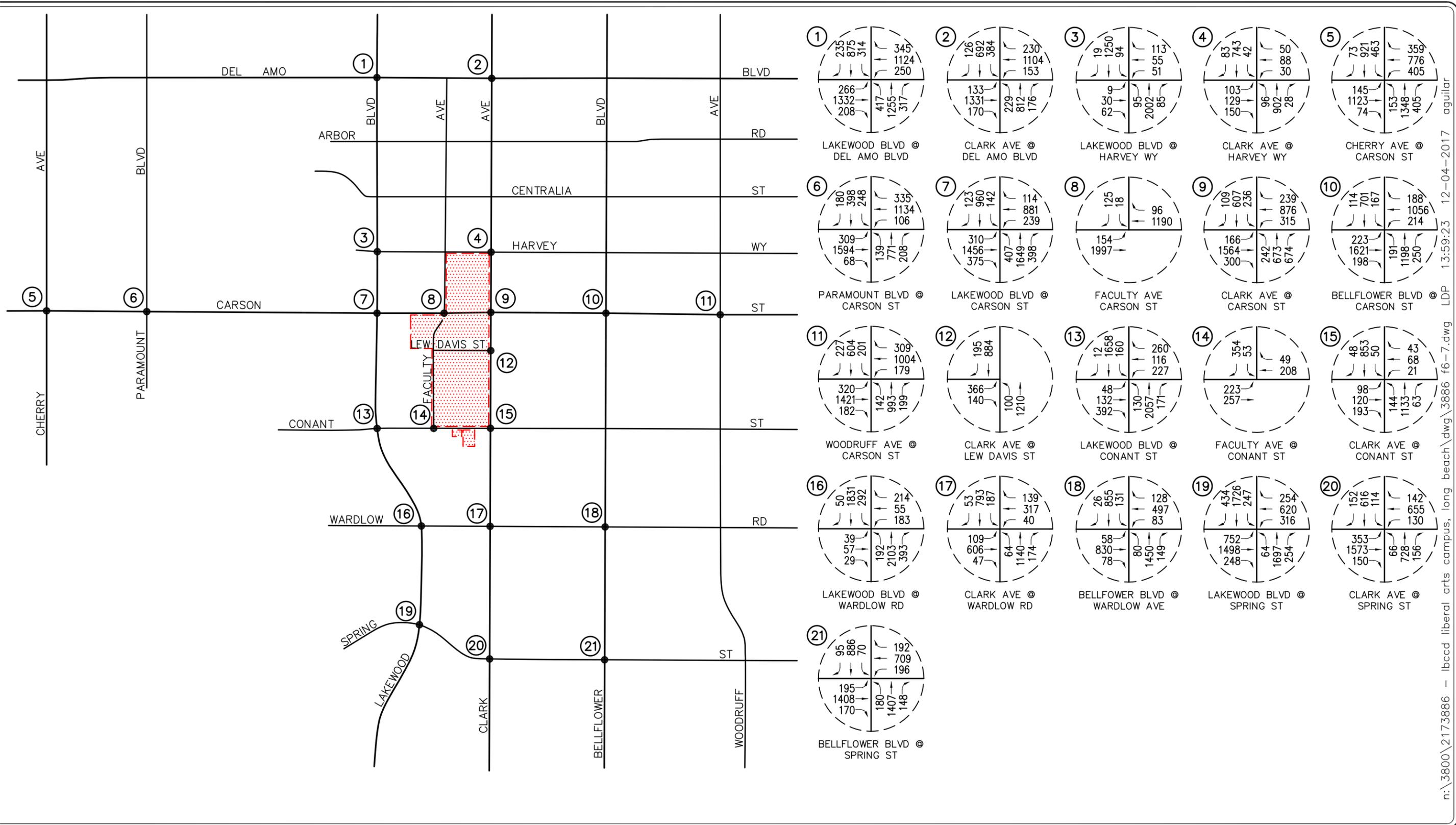


**KEY**

- # = STUDY INTERSECTION
- [Red Hatched Area] = PROJECT SITE

**FIGURE 6-6**

**YEAR 2041 BUILDOUT PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES**  
LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



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**KEY**  
 # = STUDY INTERSECTION  
 [Hatched Box] = PROJECT SITE

**FIGURE 6-7**

**YEAR 2041 BUILDOUT PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES**  
 LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH

## 7.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

The relative impacts of the proposed Project during the AM peak hour and PM peak hour were evaluated based on analysis of future operating conditions at the twenty-one (21) key study intersections, without, then with, the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using the following traffic impact criteria.

### 7.1 Impact Criteria and Thresholds

#### 7.1.1 *City of Long Beach*

Impacts to City of Long Beach intersections are considered significant if:

- An unacceptable peak hour Level of Service (LOS) (i.e. LOS E or F) at any of the key intersections is projected. The City of Long Beach considers LOS D (ICU = 0.801 - 0.900) to be the minimum acceptable LOS for all intersections. For the City of Long Beach, the current LOS, if worse than LOS D (i.e. LOS E or F), should also be maintained; and
- The project increases traffic demand at the study intersection by 2% of capacity (ICU increase  $\geq 0.020$ ), causing or worsening LOS E or F (ICU  $> 0.901$ ).
- At unsignalized intersections, an impact is considered to be significant if the project causes an intersection operating at LOS D or better to degrade to LOS E or F, and the traffic signal warrant analysis determines that a traffic signal is justified.

#### 7.1.2 *City of Lakewood*

Impacts to City of Lakewood intersections are considered significant if:

- An unacceptable peak hour Level of Service (LOS) (i.e. LOS E or F) at any of the key intersections is projected. The City of Lakewood considers LOS D (ICU = 0.801 - 0.900) to be the minimum acceptable LOS for all intersections; and
- The project increases traffic demand at the study intersection by 2% of capacity (ICU increase  $\geq 0.020$ ), causing or worsening LOS E or F (ICU  $> 0.901$ ).
- At unsignalized intersections, an impact is considered to be significant if the project causes an intersection operating at LOS D or better to degrade to LOS E or F, and the traffic signal warrant analysis determines that a traffic signal is justified.

## 7.2 Traffic Impact Analysis Scenarios

The following scenarios are those for which volume/capacity calculations have been performed at the twenty-one (21) key study intersections for existing plus project and Year 2041 traffic conditions:

- A. Existing Traffic Conditions;
- B. Existing Plus Project Traffic Conditions;
- C. Scenario (B) with Improvements, if necessary;
- D. Year 2041 Cumulative Traffic Conditions,
- E. Year 2041 Cumulative Plus Project Traffic Conditions; and
- F. Scenario (E) with Improvements, if necessary.

## 8.0 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

### 8.1 Existing Plus Project Analysis

*Table 8-1* summarizes the peak hour Level of Service results at the twenty-one (21) key study intersections for existing plus project traffic conditions. The first column (1) of ICU/LOS values and HCM/LOS values in *Table 8-1* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-3*). The second column (2) lists existing plus project traffic conditions. The third column (3) shows the increase in ICU value and/or HCM value due to the added peak hour Project trips and indicates whether the traffic associated with the Project will have a significant impact based on the LOS standards and significant impact criteria defined in this report. The fourth column (4) indicates the anticipated level of service with recommended improvements, discussed later in this report.

#### 8.1.1 Existing Plus Project Traffic Conditions

Review of Columns 2 and 3 of *Table 8-1* indicates that traffic associated with the proposed Project, when added to only existing traffic volumes, will significantly impact three (3) of the twenty-one (21) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersections of Lakewood Boulevard/Del Amo Boulevard and Bellflower Boulevard/Carson Street are forecast to operate at unacceptable LOS E during the AM and/or PM peak hours with the addition of project traffic, the proposed Project is expected to add less than 0.020 to the ICU value, which results in a less than significant impact. The remaining sixteen (16) key study intersections currently operate and are forecast to continue to operate at an acceptable service level during the AM and PM peak hours with the addition of Project generated traffic to existing traffic. The intersections operating at an adverse level of service under existing plus project traffic conditions are as follows:

<u>Key Intersection</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>ICU/HCM</u>	<u>LOS</u>	<u>ICU/HCM</u>	<u>LOS</u>
2. Clark Avenue at Del Amo Boulevard	---	---	0.911	E
8. Faculty Avenue at Carson Street	77.0 s/v	F	78.7 s/v	F
9. Clark Avenue at Carson Street	---	---	0.902	E

As shown in column 4, the implementation of improvements (discussed later in this report) at the impacted key study intersection of Faculty Avenue/Carson Street completely offsets the impact of project traffic and the key study intersection is forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining two impacted key study intersections of Clark Avenue/Del Amo Boulevard and Clark Avenue/Carson Street, additional capacity-enhancing improvements at these two key study intersections do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these two locations will remain significant.

*Appendix B* presents the existing plus project ICU/LOS and HCM/LOS calculations for the twenty-one (21) key study intersections. *Appendix B* also presents the existing plus project peak hour traffic signal warrants for key study intersection #8.

## 8.2 Year 2041 Traffic Conditions

**Table 8-2** summarizes the peak hour Level of Service results at the twenty-one (21) key study intersections for the Year 2041 horizon year. The first column (1) of ICU/LOS and HCM/LOS values in *Table 8-2* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-3*). The second column (2) lists projected Year 2041 traffic conditions (existing plus ambient plus cumulative projects traffic) based on existing intersection geometry, but without any traffic generated from the proposed Project. The third column (3) presents forecast Year 2041 traffic conditions with the addition of Project traffic. The fourth column (4) shows the increase in ICU value and/or HCM value due to the added peak hour Project trips and indicates whether the traffic associated with the Project will have a significant impact based on the LOS standards and significant impact criteria defined in this report. The fifth column (5) indicates the anticipated level of service with recommended improvements, discussed later in this report.

### 8.2.1 Year 2041 Buildout Traffic Conditions (Without Project Traffic)

An analysis of future (Year 2041) cumulative traffic conditions indicates that the addition of ambient traffic growth and cumulative projects traffic will adversely impact thirteen (13) of the twenty-one (21) key study intersections. The remaining eight (8) key study intersections are forecast to continue to operate at acceptable levels of service during the AM and PM peak hours with the addition of ambient traffic growth and cumulative projects traffic. The locations projected to operate at an adverse LOS in the Year 2041, even without any project traffic, are as follows:

<u>Key Intersection</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>ICU/HCM</u>	<u>LOS</u>	<u>ICU/HCM</u>	<u>LOS</u>
1. Lakewood Boulevard at Del Amo Boulevard	1.070	F	1.136	F
2. Clark Avenue at Del Amo Boulevard	---	---	1.041	F
3. Lakewood Boulevard at Harvey Way	---	---	0.930	E
4. Clark Avenue at Harvey Way	---	---	0.944	E
5. Cherry Avenue at Carson Street	---	---	0.913	E
6. Paramount Boulevard at Carson Street	---	---	0.966	E
8. Faculty Avenue at Carson Street	192.3 s/v	F	254.9 s/v	F
9. Clark Avenue at Carson Street	---	---	1.000	F
10. Bellflower Boulevard at Carson Street	---	---	1.083	F
11. Woodruff Avenue at Carson Street	---	---	0.992	E
18. Bellflower Boulevard at Wardlow Road	0.909	E	0.982	E
19. Lakewood Boulevard at Spring Street	0.930	E	0.948	E
21. Bellflower Boulevard at Spring Street	0.970	E	---	---

### 8.2.2 Year 2041 Buildout Plus Project Conditions

Review of Columns 3 and 4 of *Table 8-2* indicates that the added traffic associated with the proposed Project will significantly impact seven (7) of the twenty-one (21) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersections of Lakewood Boulevard/Del Amo Boulevard, Clark Avenue/Del Amo Boulevard, Cherry Avenue/Carson Street, Woodruff Avenue/Carson Street, Bellflower Boulevard/Wardlow Road, Lakewood Boulevard/Spring Street and Bellflower Boulevard/Spring Street are forecast to operate at unacceptable LOS E and/or F during the AM and/or PM peak hours with the addition of project traffic, the proposed Project is expected to add less than 0.020 to the ICU value, which results in a less than significant impact. The remaining seven (7) key study intersections are forecast to continue to operate at an acceptable LOS with the addition of project generated traffic in the Year 2041. The seven (7) locations significantly impacted by the proposed Project in the Year 2041 are as follows:

<u>Key Intersection</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>ICU/HCM</u>	<u>LOS</u>	<u>ICU/HCM</u>	<u>LOS</u>
3. Lakewood Boulevard at Harvey Way	---	---	0.953	E
4. Clark Avenue at Harvey Way	---	---	0.965	E
6. Paramount Boulevard at Carson Street	---	---	0.995	E
7. Lakewood Boulevard at Carson Street	---	---	0.919	E
8. Faculty Avenue at Carson Street	346.4 s/v	F	538.3 s/v	F
9. Clark Avenue at Carson Street	---	---	1.038	F
10. Bellflower Boulevard at Carson Street	0.912	E	1.091	F

As shown in column 5, the implementation of improvements (discussed later in this report) at the impacted key study intersection of Lakewood Boulevard/Harvey Way offsets the impact of project traffic; however this location is still forecast to operate at unacceptable LOS E during the PM peak hour. The implementation of improvements at the impacted key study intersections of Clark Avenue/Harvey Way and Faculty Avenue/Carson Street completely offsets the impact of project traffic and the key study intersections are forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining four impacted key study intersections of Paramount Boulevard/Carson Street, Lakewood Boulevard/Carson Street, Clark Avenue/Carson Street and Bellflower Boulevard/Carson Street, additional capacity-enhancing improvements at these four key study intersections do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these four locations will remain significant.

*Appendix B* also presents the Year 2041 plus project ICU/LOS and HCM/LOS calculations for the twenty-one (21) key study intersections. *Appendix B* also presents the Year 2041 plus project peak hour traffic signal warrants for key study intersection #8.

TABLE 8-1  
EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact		(4) Existing Plus Project Traffic Conditions with Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
1. Lakewood Boulevard at Del Amo Boulevard	AM	<b>0.905</b>	<b>E</b>	<b>0.924</b>	<b>E</b>	0.019	No	--	--
	PM	<b>0.958</b>	<b>E</b>	<b>0.974</b>	<b>E</b>	0.016	No	--	--
2. Clark Avenue at Del Amo Boulevard	AM	0.729	C	0.747	C	0.018	No	N.F.	N.F.
	PM	0.896	D	<b>0.911</b>	<b>E</b>	<b>0.015</b>	<b>Yes</b>	N.F.	N.F.
3. Lakewood Boulevard at Harvey Way	AM	0.728	C	0.753	C	0.025	No	--	--
	PM	0.803	D	0.826	D	0.023	No	--	--
4. Clark Avenue at Harvey Way	AM	0.749	C	0.783	C	0.034	No	--	--
	PM	0.819	D	0.839	D	0.020	No	--	--
5. Cherry Avenue at Carson Street	AM	0.643	B	0.652	B	0.009	No	--	--
	PM	0.791	C	0.810	D	0.019	No	--	--
6. Paramount Boulevard at Carson Street	AM	0.600	B	0.628	B	0.028	No	--	--
	PM	0.839	D	0.868	D	0.029	No	--	--
7. Lakewood Boulevard at Carson Street	AM	0.623	B	0.651	B	0.028	No	--	--
	PM	0.762	C	0.793	C	0.031	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- **Bold ICU/LOS and HCM/LOS values** indicate adverse service levels
- N.F. = None Feasible

TABLE 8-1 (CONTINUED)  
EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact		(4) Existing Plus Project Traffic Conditions with Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
8. Faculty Avenue at Carson Street	AM	<b>47.7 s/v</b>	<b>E</b>	<b>77.0 s/v</b>	<b>F</b>	<b>29.3 s/v</b>	<b>Yes</b>	18.5 s/v	C
	PM	<b>40.0 s/v</b>	<b>E</b>	<b>78.7 s/v</b>	<b>F</b>	<b>38.7 s/v</b>	<b>Yes</b>	15.3 s/v	C
9. Clark Avenue at Carson Street	AM	0.665	B	0.726	C	0.061	No	N.F.	N.F.
	PM	0.865	D	<b>0.902</b>	<b>E</b>	<b>0.037</b>	<b>Yes</b>	N.F.	N.F.
10. Bellflower Boulevard at Carson Street	AM	0.762	C	0.794	C	0.032	No	--	--
	PM	<b>0.936</b>	<b>E</b>	<b>0.945</b>	<b>E</b>	0.009	No	--	--
11. Woodruff Avenue at Carson Street	AM	0.705	C	0.720	C	0.015	No	--	--
	PM	0.853	D	0.871	D	0.018	No	--	--
12. Clark Avenue at Lew Davis Street	AM	0.503	A	0.577	A	0.074	No	--	--
	PM	0.576	A	0.649	B	0.073	No	--	--
13. Lakewood Boulevard at Conant Street	AM	0.611	B	0.613	B	0.002	No	--	--
	PM	0.685	B	0.743	C	0.058	No	--	--
14. Faculty Avenue at Conant Street	AM	0.419	A	0.537	A	0.118	No	--	--
	PM	0.373	A	0.494	A	0.121	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- **Bold ICU/LOS and HCM/LOS values** indicate adverse service levels
- N.F. = None Feasible

TABLE 8-1 (CONTINUED)  
EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Significant Impact		(4) Existing Plus Project Traffic Conditions with Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
15. Clark Avenue at Conant Street	AM	0.598	A	0.673	B	0.075	No	--	--
	PM	0.545	A	0.573	A	0.028	No	--	--
16. Lakewood Boulevard at Wardlow Road	AM	0.608	B	0.623	B	0.015	No	--	--
	PM	0.633	B	0.644	B	0.011	No	--	--
17. Clark Avenue at Wardlow Road	AM	0.599	A	0.634	B	0.035	No	--	--
	PM	0.607	B	0.632	B	0.025	No	--	--
18. Bellflower Boulevard at Wardlow Road	AM	0.790	C	0.807	D	0.017	No	--	--
	PM	0.853	D	0.860	D	0.007	No	--	--
19. Lakewood Boulevard at Spring Street	AM	0.805	D	0.820	D	0.015	No	--	--
	PM	0.813	D	0.820	D	0.007	No	--	--
20. Clark Avenue at Spring Street	AM	0.659	B	0.661	B	0.002	No	--	--
	PM	0.622	B	0.636	B	0.014	No	--	--
21. Bellflower Boulevard at Spring Street	AM	0.842	D	0.861	D	0.019	No	--	--
	PM	0.765	C	0.772	C	0.007	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- **ICU/LOS and HCM/LOS values** indicate adverse service levels

TABLE 8-2  
YEAR 2041 PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Year 2041 Buildout Traffic Conditions		(3) Year 2041 Buildout Plus Project Traffic Conditions		(4) Significant Impact		(5) Year 2041 Buildout Plus Project Traffic Conditions with Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
1. Lakewood Boulevard at Del Amo Boulevard	AM	<b>0.905</b>	<b>E</b>	<b>1.070</b>	<b>F</b>	<b>1.089</b>	<b>F</b>	0.019	No	--	--
	PM	<b>0.958</b>	<b>E</b>	<b>1.136</b>	<b>F</b>	<b>1.152</b>	<b>F</b>	0.016	No	--	--
2. Clark Avenue at Del Amo Boulevard	AM	0.729	C	0.841	D	0.859	D	0.018	No	--	--
	PM	0.896	D	<b>1.041</b>	<b>F</b>	<b>1.057</b>	<b>F</b>	0.016	No	--	--
3. Lakewood Boulevard at Harvey Way	AM	0.728	C	0.839	D	0.864	D	0.025	No	0.864	D
	PM	0.803	D	<b>0.930</b>	<b>E</b>	<b>0.953</b>	<b>E</b>	<b>0.023</b>	<b>Yes</b>	<b>0.906</b>	<b>E</b>
4. Clark Avenue at Harvey Way	AM	0.749	C	0.864	D	0.898	D	0.034	No	0.843	D
	PM	0.819	D	<b>0.944</b>	<b>E</b>	<b>0.965</b>	<b>E</b>	<b>0.021</b>	<b>Yes</b>	0.877	D
5. Cherry Avenue at Carson Street	AM	0.643	B	0.739	C	0.749	C	0.010	No	--	--
	PM	0.791	C	<b>0.913</b>	<b>E</b>	<b>0.932</b>	<b>E</b>	0.019	No	--	--
6. Paramount Boulevard at Carson Street	AM	0.600	B	0.687	B	0.714	C	0.027	No	N.F.	N.F.
	PM	0.839	D	<b>0.966</b>	<b>E</b>	<b>0.995</b>	<b>E</b>	<b>0.029</b>	<b>Yes</b>	N.F.	N.F.
7. Lakewood Boulevard at Carson Street	AM	0.623	B	0.718	C	0.745	C	0.027	No	N.F.	N.F.
	PM	0.762	C	0.887	D	<b>0.919</b>	<b>E</b>	<b>0.032</b>	<b>Yes</b>	N.F.	N.F.

Notes:

- s/v = seconds per vehicle (delay)
- **Bold ICU/LOS and HCM/LOS values** indicate adverse service levels
- N.F. = None Feasible

TABLE 8-2 (CONTINUED)  
YEAR 2041 PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Year 2041 Buildout Traffic Conditions		(3) Year 2041 Buildout Plus Project Traffic Conditions		(4) Significant Impact		(5) Year 2041 Buildout Plus Project Traffic Conditions with Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
8. Faculty Avenue at Carson Street	AM	47.7 s/v	E	192.3 s/v	F	346.4 s/v	F	154.1 s/v	Yes	24.2 s/v	C
	PM	40.0 s/v	E	254.9 s/v	F	538.3 s/v	F	283.4 s/v	Yes	19.6 s/v	C
9. Clark Avenue at Carson Street	AM	0.665	B	0.768	C	0.820	D	0.052	No	N.F.	N.F.
	PM	0.865	D	<b>1.000</b>	<b>F</b>	<b>1.038</b>	<b>F</b>	<b>0.038</b>	<b>Yes</b>	N.F.	N.F.
10. Bellflower Boulevard at Carson Street	AM	0.762	C	0.880	D	<b>0.912</b>	<b>E</b>	<b>0.032</b>	<b>Yes</b>	N.F.	N.F.
	PM	<b>0.936</b>	<b>E</b>	<b>1.083</b>	<b>F</b>	<b>1.091</b>	<b>F</b>	0.008	No	N.F.	N.F.
11. Woodruff Avenue at Carson Street	AM	0.705	C	0.822	D	0.837	D	0.015	No	--	--
	PM	0.853	D	<b>0.992</b>	<b>E</b>	<b>1.009</b>	<b>F</b>	0.017	No	--	--
12. Clark Avenue at Lew Davis Street	AM	0.503	A	0.571	A	0.645	B	0.074	No	--	--
	PM	0.576	A	0.658	B	0.728	C	0.070	No	--	--
13. Lakewood Boulevard at Conant Street	AM	0.611	B	0.702	C	0.702	C	0.000	No	--	--
	PM	0.685	B	0.790	C	0.848	D	0.058	No	--	--
14. Faculty Avenue at Conant Street	AM	0.419	A	0.473	A	0.591	A	0.118	No	--	--
	PM	0.373	A	0.420	A	0.541	A	0.121	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- **Bold ICU/LOS and HCM/LOS values** indicate adverse service levels
- N.F. = None Feasible

TABLE 8-2 (CONTINUED)  
YEAR 2041 PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY

Key Intersection	Time Period	(1) Existing Traffic Conditions		(2) Year 2041 Buildout Traffic Conditions		(3) Year 2041 Buildout Plus Project Traffic Conditions		(4) Significant Impact		(5) Year 2041 Buildout Plus Project Traffic Conditions with Improvements	
		ICU/HCM	LOS	ICU/HCM	LOS	ICU/HCM	LOS	Increase	Yes/No	ICU/HCM	LOS
15. Clark Avenue at Conant Street	AM	0.598	A	0.683	B	0.757	C	0.074	No	--	--
	PM	0.545	A	0.620	B	0.649	B	0.029	No	--	--
16. Lakewood Boulevard at Wardlow Road	AM	0.608	B	0.696	B	0.712	C	0.016	No	--	--
	PM	0.633	B	0.728	C	0.739	C	0.011	No	--	--
17. Clark Avenue at Wardlow Road	AM	0.599	A	0.686	B	0.721	C	0.035	No	--	--
	PM	0.607	B	0.694	B	0.720	C	0.026	No	--	--
18. Bellflower Boulevard at Wardlow Road	AM	0.790	C	<b>0.909</b>	<b>E</b>	<b>0.926</b>	<b>E</b>	0.017	No	--	--
	PM	0.853	D	<b>0.982</b>	<b>E</b>	<b>0.989</b>	<b>E</b>	0.007	No	--	--
19. Lakewood Boulevard at Spring Street	AM	0.805	D	<b>0.930</b>	<b>E</b>	<b>0.945</b>	<b>E</b>	0.015	No	--	--
	PM	0.813	D	<b>0.948</b>	<b>E</b>	<b>0.955</b>	<b>E</b>	0.007	No	--	--
20. Clark Avenue at Spring Street	AM	0.659	B	0.756	C	0.758	C	0.002	No	--	--
	PM	0.622	B	0.714	C	0.728	C	0.014	No	--	--
21. Bellflower Boulevard at Spring Street	AM	0.842	D	<b>0.970</b>	<b>E</b>	<b>0.989</b>	<b>E</b>	0.019	No	--	--
	PM	0.765	C	0.881	D	0.888	D	0.007	No	--	--

Notes:

- s/v = seconds per vehicle (delay)
- **Bold ICU/LOS and HCM/LOS values** indicate adverse service levels

## 9.0 RECOMMENDED IMPROVEMENTS

For those intersections where projected Project traffic volumes are expected to result in unacceptable operating conditions (as defined by a City’s significant impact criteria), traffic impact studies of this type typically recommend (identify) improvement measures that change the intersection geometry to increase capacity. These capacity improvements involve roadway widening and/or re-striping to reconfigure (add lanes) to specific approaches of a key intersection. The identified improvements are expected to:

- mitigate the impact of existing traffic, Project traffic and future non-project (ambient traffic growth and cumulative project) traffic and
- improve Levels of Service to an acceptable range and/or to pre-project conditions.

### 9.1 Existing Plus Project Traffic Conditions

The results of the intersection capacity analysis presented previously in *Table 8-1* shows that the proposed Project will significantly impact three (3) of the twenty-one (21) key study intersections under the “Existing Plus Project” traffic scenario. The following are improvements recommended to mitigate the existing plus project traffic impacts:

- **No. 2 – Clark Avenue at Del Amo Boulevard:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.
- **No. 8 – Faculty Avenue at Carson Street:** Install signage to restrict southbound left-turn movements during the AM peak period (7:00 AM – 9:00 AM) and during the PM peak period (4:00 PM – 6:00 PM). The installation of this improvement is subject to the approval of the City of Long Beach.
- **No. 9 – Clark Avenue at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.

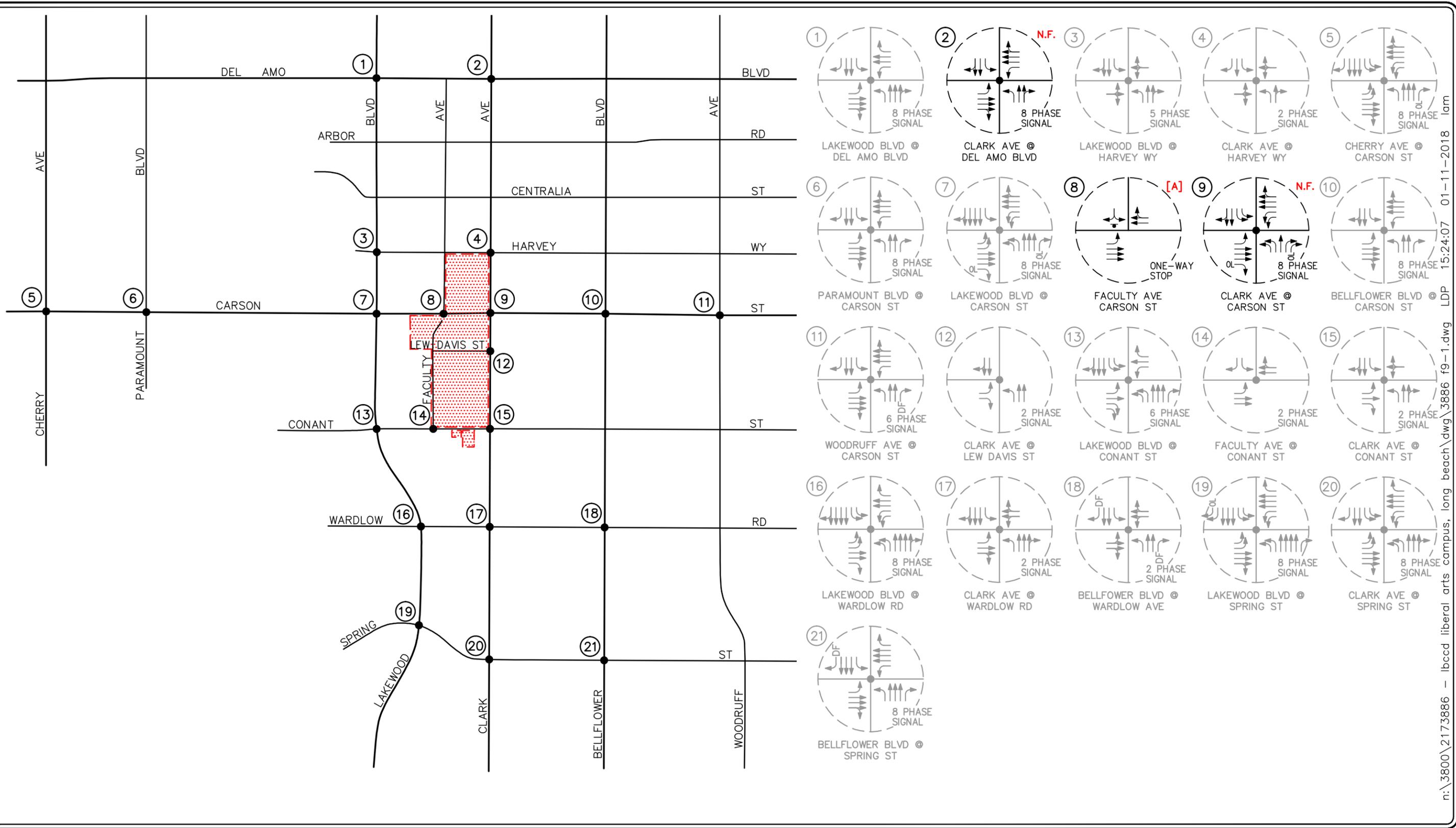
*Figure 9-1* graphically illustrates the existing plus project recommended improvements.

## 9.2 Year 2041 Plus Project Traffic Conditions

The results of the intersection capacity analysis presented previously in *Table 8-2* shows that the proposed Project will significantly impact seven (7) of the twenty-one (21) key study intersections under the “Year 2041 Plus Project” traffic scenario. The following are improvements recommended to mitigate the Year 2041 plus project traffic impacts:

- **No. 3 – Lakewood Boulevard at Harvey Way:** Restripe Harvey Way to provide an exclusive westbound right-turn lane. Given that this key study intersection is located jointly in the Cities of Long Beach and Lakewood, the installation of this improvement is subject to the approval of the City of Long Beach and the City of Lakewood. It should be noted that these improvements cannot be guaranteed by the proposed Project or the City of Long Beach as the improvements would also require approval from the City of Lakewood. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.
- **No. 4 – Clark Avenue at Harvey Way:** Restripe Harvey Way to provide an exclusive eastbound right-turn lane. The installation of this improvement is subject to the approval of the City of Long Beach.
- **No. 6 – Paramount Boulevard at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.
- **No. 7 – Lakewood Boulevard at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.
- **No. 8 – Faculty Avenue at Carson Street:** Install signage to restrict southbound left-turn movements during the AM peak period (7:00 AM – 9:00 AM) and during the PM peak period (4:00 PM – 6:00 PM). The installation of this improvement is subject to the approval of the City of Long Beach.
- **No. 9 – Clark Avenue at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.
- **No. 10 – Bellflower Boulevard at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.

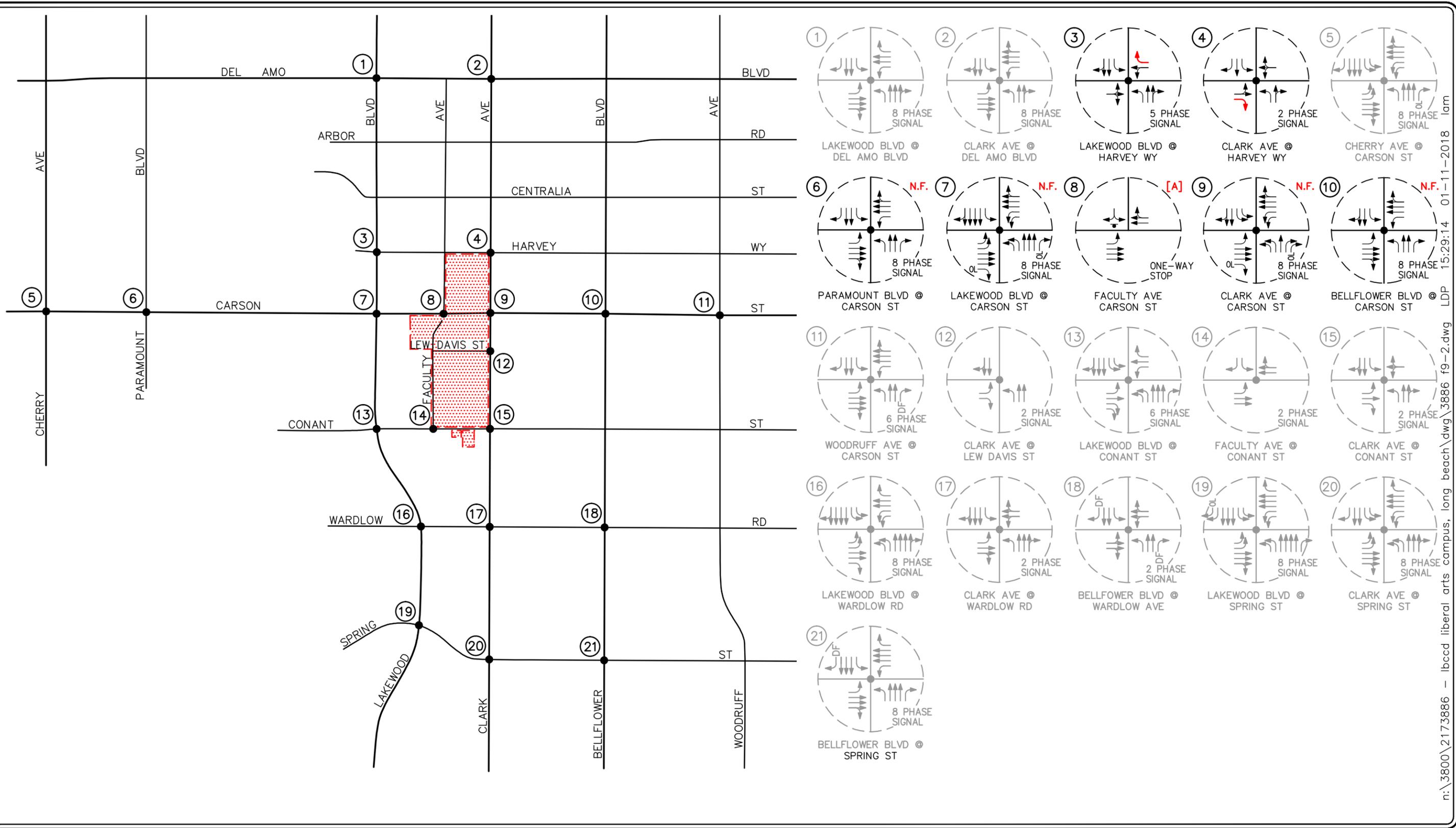
*Figure 9-2* graphically illustrates the Year 2041 plus project recommended improvements.



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- KEY**
- ① = STUDY INTERSECTION
  - ← = APPROACH LANE ASSIGNMENT
  - = RECOMMENDED IMPROVEMENT
  - ▨ = PROJECT SITE
  - [A] = RESTRICT SOUTHBOUND LEFT-TURNS DURING THE AM AND PM PEAK PERIODS
  - N.F. = NONE FEASIBLE

**FIGURE 9-1**  
**EXISTING PLUS PROJECT RECOMMENDED IMPROVEMENTS**  
LBCCD 2041 MASTER PLAN - LIBERAL ARTS CAMPUS, LONG BEACH



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**KEY**

- ⊙ = STUDY INTERSECTION
- = APPROACH LANE ASSIGNMENT
- = RECOMMENDED IMPROVEMENT
- ▨ = PROJECT SITE
- [A] = RESTRICT SOUTHBOUND LEFT-TURNS DURING THE AM AND PM PEAK PERIODS
- N.F. = NONE FEASIBLE



 NO SCALE

**YEAR 2041 BUILDOUT PLUS PROJECT RECOMMENDED IMPROVEMENTS**  
 LBCCD 2041 MASTER PLAN – LIBERAL ARTS CAMPUS, LONG BEACH

## 10.0 SUMMARY OF FINDINGS AND CONCLUSIONS

- **Project Description** – The project site is generally bounded by Harvey Way to the north, Conant Street to the south, Faculty Avenue to the west and Clark Avenue to the east in the City of Long Beach, California. The proposed Project will generally consist of the construction of new campus facilities and the renovation of existing campus facilities to meet the District’s instructional needs and to accommodate growth in the student body over the planning horizon. All project components are expected to be completed by the Year 2041.

The Liberal Arts Campus has a current baseline (Year 2017) student enrollment of 20,642 students. As stated above, the renovation of existing campus facilities and the construction of new campus facilities are required to meet the District’s instructional needs and to accommodate growth in the student body. At completion of the Master Plan in the Year 2041, the Liberal Arts Campus is projected to accommodate a future student enrollment of 28,100 students, resulting in a net increase of 7,458 students over the existing student enrollment.

Vehicular access to the Liberal Arts Campus would continue to be provided via various unsignalized access driveways located along Faculty Avenue, Harvey Way, Clark Avenue, Lew Davis Street and Conant Street.

- **Study Scope** – Twenty-one (21) key study locations were selected for detailed peak hour level of service analyses under Existing Traffic Conditions, Existing Plus Project Traffic Conditions and Year 2041 Traffic Conditions without and with the proposed Project.

### Key Study Locations

1. Lakewood Boulevard at Del Amo Boulevard (City of Lakewood)
2. Clark Avenue at Del Amo Boulevard (City of Lakewood)
3. Lakewood Boulevard at Harvey Way (City of Long Beach/City of Lakewood)
4. Clark Avenue at Harvey Way (City of Long Beach)
5. Cherry Avenue at Carson Street (City of Long Beach)
6. Paramount Boulevard at Carson Street (City of Long Beach)
7. Lakewood Boulevard at Carson Street (City of Long Beach/City of Lakewood)
8. Faculty Avenue at Carson Street (City of Long Beach)
9. Clark Avenue at Carson Street (City of Long Beach)
10. Bellflower Boulevard at Carson Street (City of Long Beach/City of Lakewood)
11. Woodruff Avenue at Carson Street (City of Long Beach/City of Lakewood)
12. Clark Avenue at Lew Davis Street (City of Long Beach)
13. Lakewood Boulevard at Conant Street (City of Long Beach)
14. Faculty Avenue at Conant Street (City of Long Beach)
15. Clark Avenue at Conant Street (City of Long Beach)
16. Lakewood Boulevard at Wardlow Road (City of Long Beach)
17. Clark Avenue at Wardlow Road (City of Long Beach)
18. Bellflower Boulevard at Wardlow Road (City of Long Beach)
19. Lakewood Boulevard at Spring Street (City of Long Beach)

- 20. Clark Avenue at Spring Street (City of Long Beach)
- 21. Bellflower Boulevard at Spring Street (City of Long Beach)

- **Existing Traffic Conditions** – Three (3) of the twenty-one (21) key study intersections currently operate at an unacceptable LOS during the AM and/or PM peak hours. The remaining eighteen (18) key study intersections currently operate at acceptable LOS D or better during the AM and/or PM peak hours. The intersections operating at an adverse level of service are:

<u>Key Intersection</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>ICU/HCM</u>	<u>LOS</u>	<u>ICU/HCM</u>	<u>LOS</u>
1. Lakewood Boulevard at Del Amo Boulevard	0.905	E	0.958	E
8. Faculty Avenue at Carson Street	47.7 s/v	E	40.0 s/v	E
10. Bellflower Boulevard at Carson Street	---	---	0.936	E

- **Project Trip Generation** – The proposed Project (i.e. net increase of 7,458 students) is forecast to generate 8,577 daily trips, with 820 trips (664 inbound, 156 outbound) forecast during the AM peak hour and 820 trips (459 inbound and 361 outbound) forecast during the PM peak hour on a typical weekday.
- **Cumulative Projects Traffic Characteristics** – The twenty-six (26) cumulative projects are forecast to generate a combined total of 9,088 daily trips, with 586 trips (318 inbound and 268 outbound) forecast during the AM peak hour and 640 trips (327 inbound and 313 outbound) forecast during the PM peak hour.
- **Existing Plus Project Traffic Conditions** – The proposed Project, when added to only existing traffic volumes, will significantly impact three (3) of the twenty-one (21) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersections of Lakewood Boulevard/Del Amo Boulevard and Bellflower Boulevard/Carson Street are forecast to operate at unacceptable LOS E during the AM and/or PM peak hours with the addition of project traffic, the proposed Project is expected to add less than 0.020 to the ICU value, which results in a less than significant impact. The remaining sixteen (16) key study intersections currently operate and are forecast to continue to operate at an acceptable service level during the AM and PM peak hours with the addition of Project generated traffic to existing traffic. The intersections operating at an adverse level of service under existing plus project traffic conditions are as follows:

<u>Key Intersection</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>ICU/HCM</u>	<u>LOS</u>	<u>ICU/HCM</u>	<u>LOS</u>
2. Clark Avenue at Del Amo Boulevard	---	---	0.911	E
8. Faculty Avenue at Carson Street	77.0 s/v	F	78.7 s/v	F
9. Clark Avenue at Carson Street	---	---	0.902	E

The implementation of improvements at the impacted key study intersection of Faculty Avenue/Carson Street completely offsets the impact of project traffic and the key study

intersection is forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining two impacted key study intersections of Clark Avenue/Del Amo Boulevard and Clark Avenue/Carson Street, additional capacity-enhancing improvements at these two key study intersections do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these two locations will remain significant.

- Year 2041 Buildout Plus Project Traffic Conditions** – The added traffic associated with the proposed Project will significantly impact seven (7) of the twenty-one (21) key study intersections, when compared to the LOS standards and significant impact criteria specified in this report. Although the intersections of Lakewood Boulevard/Del Amo Boulevard, Clark Avenue/Del Amo Boulevard, Cherry Avenue/Carson Street, Woodruff Avenue/Carson Street, Bellflower Boulevard/Wardlow Road, Lakewood Boulevard/Spring Street and Bellflower Boulevard/Spring Street are forecast to operate at unacceptable LOS E and/or F during the AM and/or PM peak hours with the addition of project traffic, the proposed Project is expected to add less than 0.020 to the ICU value, which results in a less than significant impact. The remaining seven (7) key study intersections are forecast to continue to operate at an acceptable LOS with the addition of project generated traffic in the Year 2041. The seven (7) locations significantly impacted by the proposed Project in the Year 2041 are as follows:

<u>Key Intersection</u>	<u>AM Peak Hour</u>		<u>PM Peak Hour</u>	
	<u>ICU/HCM</u>	<u>LOS</u>	<u>ICU/HCM</u>	<u>LOS</u>
3. Lakewood Boulevard at Harvey Way	---	---	0.953	E
4. Clark Avenue at Harvey Way	---	---	0.965	E
6. Paramount Boulevard at Carson Street	---	---	0.995	E
7. Lakewood Boulevard at Carson Street	---	---	0.919	E
8. Faculty Avenue at Carson Street	346.4 s/v	F	538.3 s/v	F
9. Clark Avenue at Carson Street	---	---	1.038	F
10. Bellflower Boulevard at Carson Street	0.912	E	1.091	F

The implementation of improvements at the impacted key study intersection of Lakewood Boulevard/Harvey Way offsets the impact of project traffic; however this location is still forecast to operate at unacceptable LOS E during the PM peak hour. The implementation of improvements at the impacted key study intersections of Clark Avenue/Harvey Way and Faculty Avenue/Carson Street completely offsets the impact of project traffic and the key study intersections are forecast to operate at an acceptable LOS during the AM and PM peak hours. For the remaining four impacted key study intersections of Paramount Boulevard/Carson Street, Lakewood Boulevard/Carson Street, Clark Avenue/Carson Street and Bellflower Boulevard/Carson Street, additional capacity-enhancing improvements at these four key study intersections do not appear feasible due to physical and right-of-way restrictions that prohibit any additional widening and/or restriping. Therefore, the impacts at these four locations will remain significant.

- **Recommended Existing Plus Project Improvements** – The results of the intersection capacity analysis presented previously in *Table 8-1* shows that the proposed Project will significantly impact three (3) of the twenty-one (21) key study intersections under the “Existing Plus Project” traffic scenario. The following are improvements recommended to mitigate the existing plus project traffic impacts:

  - **No. 2 – Clark Avenue at Del Amo Boulevard:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.
  - **No. 8 – Faculty Avenue at Carson Street:** Install signage to restrict southbound left-turn movements during the AM peak period (7:00 AM – 9:00 AM) and during the PM peak period (4:00 PM – 6:00 PM). The installation of this improvement is subject to the approval of the City of Long Beach.
  - **No. 9 – Clark Avenue at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.
  
- **Recommended Year 2041 Buildout Plus Project Improvements** – The results of the intersection capacity analysis presented previously in *Table 8-2* shows that the proposed Project will significantly impact seven (7) of the twenty-one (21) key study intersections under the “Year 2041 Plus Project” traffic scenario. The following are improvements recommended to mitigate the Year 2041 plus project traffic impacts:

  - **No. 3 – Lakewood Boulevard at Harvey Way:** Restripe Harvey Way to provide an exclusive westbound right-turn lane. Given that this key study intersection is located jointly in the Cities of Long Beach and Lakewood, the installation of this improvement is subject to the approval of the City of Long Beach and the City of Lakewood. It should be noted that these improvements cannot be guaranteed by the proposed Project or the City of Long Beach as the improvements would also require approval from the City of Lakewood. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.
  - **No. 4 – Clark Avenue at Harvey Way:** Restripe Harvey Way to provide an exclusive eastbound right-turn lane. The installation of this improvement is subject to the approval of the City of Long Beach.
  - **No. 6 – Paramount Boulevard at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered *significant and unavoidable* and a statement of overriding considerations will be required for this location.

- **No. 7 – Lakewood Boulevard at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered significant and unavoidable and a statement of overriding considerations will be required for this location.
- **No. 8 – Faculty Avenue at Carson Street:** Install signage to restrict southbound left-turn movements during the AM peak period (7:00 AM – 9:00 AM) and during the PM peak period (4:00 PM – 6:00 PM). The installation of this improvement is subject to the approval of the City of Long Beach.
- **No. 9 – Clark Avenue at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered significant and unavoidable and a statement of overriding considerations will be required for this location.
- **No. 10 – Bellflower Boulevard at Carson Street:** No physical mitigation measures are feasible; any additional turn lanes will require widening and additional right-of-way. As such, the impact at this location is considered significant and unavoidable and a statement of overriding considerations will be required for this location.

**APPENDIX E – 2041 FACILITIES MASTER PLAN**



# LONG BEACH COMMUNITY COLLEGE DISTRICT

2041 FACILITIES MASTER PLAN || MAY 2016



# ACKNOWLEDGEMENTS

Eloy Ortiz Oakley

Superintendent-president

## **FACILITIES ADVISORY COMMITTEE**

Robert Maxell

Co-Chairperson

Ann-Marie Gabel

Co-Chairperson

Richard Estacio

Classified Staff

Kim Hatch

Faculty

Karen Kane

Faculty

Alicia Kruizenga

Management Team

Emmanuel Ndoumna

Adjunct Faculty

Tim Wootton

Facilities

Medhanie Ephrem

Facilities

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01

# EXECUTIVE SUMMARY

## EXECUTIVE SUMMARY

This document was prepared by Facilities Planning & Program Services, Inc. (“FPPS”) to provide the following information for each of the projects proposed to be a part of the LBCCD 2041 Facilities Master Plan:

- Project description for each of the projects
- Definition of activities/tasks that will be performed during each phase of project delivery
- Size and estimated cost of each project
- Funding sources for each project
- Timeframe for delivery of each project
- Estimated funding amounts that will be needed each year through 2041 (Estimated Cash Flow)

FPPS worked with LBCCD and its various representatives and consultants to derive an understanding of the projects envisioned for the Master Plan in order to generate a list of proposed projects. Based on information provided by LBCCD, the type and size of each project was established and a probable cost of each project was estimated. The estimated cost of each project was broken down to define what portion of the total cost should be allocated to construction, contingencies (i.e. construction, design, and project contingencies), soft costs, and escalation.

In addition to the cost analysis described above, six phases of project delivery were defined for each project. The six phases include Planning, Design, DSA Review & Approval, Bid & Award, Construction, and Project Closeout. FPPS then calculated an estimated cost and an appropriate schedule duration for each phase of every project.

Based on all of the preceding, the Master Plan Schedule was generated to graphically display the timeframes in which the six phases of each project are expected to occur for the entire duration of the Master Plan through 2041. This step was followed by the allocation of estimated costs to each of the activities (i.e. each of the six phases) displayed in the Master Plan Schedule.

Knowing the duration of each activity for every project, together with the cost of each such activity, enabled FPPS to then calculate the amount of funds that will be needed during each increment of time throughout the entire duration of the Master Plan through 2041. The amount and timing of funds needed are displayed in the Estimated Cash Flow that is included at the end of this report.

## PROJECT LIST

The Project List spreadsheet that follows is a summary overview of the 2041 Facilities Master Plan projects to be completed over the next 25 years. The projects are listed in order of construction but only if isolated by project site, such as the LAC, PCC or District Wide designations.

The information contained in some of the columns may not be fully evident, therefore, explanations and definitions are provided as follows:

**ASSIGNABLE SQUARE FEET (ASF):** The sum of all areas on all floors of a building that are available for assignment, such as classrooms, labs, offices, etc.

**GROSS SQUARE FEET (GSF):** The sum of all areas on all floors of a building included within the outside faces of the exterior walls.

**CONSTRUCTION COST:** The cost is determined by multiplying the GSF times a unit cost per square foot. The unit costs vary by type of building and are based upon standards from the California Community Colleges or professional cost estimates.

**TOTAL COST:** The cost is determined by multiplying the Construction Cost by a factor of 1.4 to 1.8, depending upon project type. The factor varies due to type of construction, size of the project and complexity of the project. This factor covers such “soft” costs as architectural/engineering services, plan check approval, legal fees, testing/inspection, construction management, furniture, technology and equipment. The Total Cost estimated at this time for all projects is \$785,878,836.

**TOTAL COST INCLUDING ESCALATION:** Due to ongoing increases for both construction and “soft” costs, this column adds a 3% cost-of-living factor which is compounded annually to the year that construction commences. The Total Cost Including Escalation is estimated at \$1,008,451,288.

**POTENTIAL STATE FUNDING:** This column shows potential sources of State revenue due to the fact that the project may qualify for capital outlay funding. The State revenues reduce the dollars noted in the Total Cost Including Escalation column. At this time, the estimated State match for potential projects is \$78,666,290. If State funding does not come to fruition, the Long Term Renovation Contingency will be used in its place.

**MEASURE E 2008 AVAILABLE FUNDS:** Reflects dollars that are available from the District's 2008 bond that will be utilized to reduce the dollars noted in the Total Cost Including Escalation column. The amount available at this time is \$162,578,701.

## EXECUTIVE SUMMARY

### LBCCD 2041 FACILITIES MASTER PLAN - PROJECT LIST



Purple font is data from IPP / FPP

Green font is data from Facility Inventory

4/7/16

Location	Construction Type	Proposed Bond Projects List	Cost Estimate Details (as of 2/10/16)			Total Cost 25 Year Plan (Constrn Cost x 1.6) Unless Othrs Noted	Construction Dates		Total Cost Including Escalation	Potential State Funding Amounts	Measure E 2008 Available Funds	Amts Required After Deducting State & Measure E Funding
			Assignable Sq. Ft. (ASF)	Gross Sq. Ft. (GSF)	Construction Cost (GSF x Unit Cost)		Start	Finish				
PCC	Reno/New	Buildings QQ/RR - Electrical Program / Dyer Hall / Lifetime Learning	NA	NA	NA	20,302,962	2015/16	2016/17	20,302,962		20,302,962	0
LAC	Renovation	Building D - Science	NA	NA	NA	11,930,197	2016/17	2017/18	12,288,103		12,288,103	0
LAC/PCC	New	District Wide Security Monitoring Systems (Cameras)	-	-	-	10,000,000	2016/17	2016/17	10,000,000		5,691,257	4,308,743
LAC	Renovation	Building P - Language Arts	NA	NA	NA	8,418,168	2016/17	2017/18	8,670,713		8,670,713	0
LAC	Renovation	Building J - Auditorium	NA	NA	NA	23,215,711	2017/18	2018/19	24,629,548		24,629,548	0
LAC	Renovation	Outdoor Kinesiology Labs	NA	NA	9,375,000	15,000,000	2018/19	2019/20	16,390,500		4,206,980	12,183,520
LAC	New	Building W - Aquatic Center	NA	NA	15,625,000	25,000,000	2019/20	2020/21	28,137,500		350,000	27,787,500
PCC	Renovation	Building MM - Construction Trades Ph1	13,033	17,819	9,524,000	15,238,400	2020/21	2021/22	17,665,877	6,858,000	7,798,722	3,009,155
PCC	New	Building P2 - Parking Structure	NA	NA	12,857,143	18,000,000	2021/22	2022/23	21,493,800			21,493,800
PCC	Renovation	Building MM - Construction Trades Ph2	10,514	15,749	7,546,079	12,073,726	2021/22	2022/23	14,417,237	9,706,535	2,367,191	2,343,511
PCC	New	Building OO - Classroom	105,000	150,000	60,000,000	96,000,000	2021/22	2024/25	118,070,400	20,000,000		98,070,400
LAC	Renovation	Building E - College Center	33,858	50,276	18,853,500	30,165,600	2022/23	2023/24	37,100,671		18,168,765	18,931,906
PCC	Demolition	Building FF - Demolish Fine Arts / Senior Center	7,988	10,640	1,250,000	2,000,000	2023/24	2024/25	2,533,600		1,105,190	1,428,410
LAC	New	Building M - Liberal Arts	57,379	81,970	33,576,409	53,722,254	2024/25	2026/27	70,096,798	20,601,755	32,942,452	16,552,591
LAC	Renovation	Building O2 - Economic & Workforce Development / Foundation	37,015	51,302	16,673,150	26,677,040	2024/25	2026/27	34,808,202			34,808,202

# EXECUTIVE SUMMARY

## LBCCD 2041 FACILITIES MASTER PLAN - PROJECT LIST



Purple font is data from IPP / FPP

Green font is data from Facility Inventory

4/7/16

Location	Construction Type	Proposed Bond Projects List	Cost Estimate Details (as of 2/10/16)			Total Cost 25 Year Plan (Constrn Cost x 1.6) Unless Othrs Noted	Construction Dates		Total Cost Including Escalation	Potential State Funding Amounts	Measure E 2008 Available Funds	Amts Required After Deducting State & Measure E Funding
			Assignable Sq. Ft. (ASF)	Gross Sq. Ft. (GSF)	Construction Cost (GSF x Unit Cost)		Start	Finish				
LAC	New	Building G - Performing Arts	30,000	42,857	21,696,429	34,714,286	2026/27	2028/29	49,495,629	15,000,000	12,531,982	21,963,647
LAC	Renovation	Building K - Art	23,419	29,479	10,317,650	16,508,240	2029/30	2030/31	25,719,838		1,691,210	24,028,628
LAC	Renovation	Building R - Primary Gymnasium	51,988	78,024	23,407,200	37,451,520	2030/31	2032/33	60,098,454		165,367	59,933,087
LAC	Renovation	Building Q - Secondary Gymnasium	27,254	30,270	9,081,000	14,529,600	2033/34	2034/35	24,735,191		308,241	24,426,950
LAC	Renovation	Building B - Classroom	29,528	44,357	13,307,100	21,291,360	2034/35	2036/37	37,334,400	6,500,000		30,834,400
LAC	Demolition	Building F - Demolish Family / Consumer Education	10,496	15,387	1,250,000	2,000,000	2037/38	2037/38	3,720,600		1,000,000	2,720,600
LAC	Renovation	Building O1 - IITS / Warehouse	17,370	26,560	8,632,000	13,811,200	2037/38	2038/39	26,463,640			26,463,640
LAC	Renovation	Building S - Stadium	NA	NA	32,142,857	45,000,000	2037/38	2039/40	88,812,000		3,060,341	85,751,659
LAC	New	Building CDC - Child Development Center	12,000	17,143	6,857,143	10,971,429	2038/39	2039/40	21,022,354			21,022,354
PCC	Renovation	PCC Walkways & Wayfinding	NA	NA	1,632,653	2,285,714	2017/18	2040/41	2,572,571		332,958	2,239,613
TBD	New	Joint Use Facility	30,000	42,857	15,625,000	25,000,000	2019/20	2020/21	27,317,500			27,317,500
LAC	Renovation	LAC Walkways & Wayfinding	NA	NA	3,265,306	4,571,429	2018/19	2040/41	4,995,200		1,301,370	3,693,830
LAC/PCC		Technology Refresh / Replacement	-	-	-	60,000,000	2016/17	2040/41	69,558,000			69,558,000
LAC/PCC		Enterprise Wide Computer System	-	-	-	20,000,000	2016/17	2040/41	20,000,000			20,000,000
LAC/PCC		Landscaping	-	-	-	20,000,000	2016/17	2040/41	20,000,000		2,359,166	17,640,834

## EXECUTIVE SUMMARY

### LBCCD 2041 FACILITIES MASTER PLAN - PROJECT LIST



Purple font is data from IPP / FPP

Green font is data from Facility Inventory

4/7/16

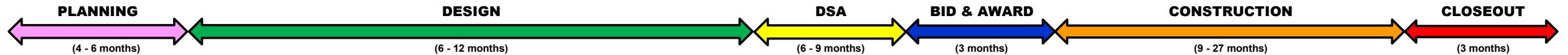
Location	Construction Type	Proposed Bond Projects List	Cost Estimate Details (as of 2/10/16)			Total Cost 25 Year Plan (Constrn Cost x 1.6) Unless Othrs Noted	Construction Dates		Total Cost Including Escalation	Potential State Funding Amounts	Measure E 2008 Available Funds	Amts Required After Deducting State & Measure E Funding
			Assignable Sq. Ft. (ASF)	Gross Sq. Ft. (GSF)	Construction Cost (GSF x Unit Cost)		Start	Finish				
LAC/PCC		Infrastructure Projects	-	-	-	25,000,000	2016/17	2040/41	25,000,000			25,000,000
LAC/PCC		Energy / Water Conservation Projects	-	-	-	25,000,000	2015/16	2040/41	25,000,000			25,000,000
LAC/PCC		Minor Campus Improvements	-	-	-	30,000,000	2016/17	2040/41	30,000,000		760,493	29,239,507
LAC/PCC		Surface Parking Improvements	-	-	-	10,000,000	2016/17	2040/41	10,000,000		545,690	9,454,310
<b>TOTAL:</b>						<b>785,878,836</b>			<b>1,008,451,288</b>	<b>78,666,290</b>	<b>162,578,701</b>	<b>767,206,297</b>
											<b>Long Term Renovation Contingency:</b>	<b>82,793,703</b>
											<b>GRAND TOTAL:</b>	<b>850,000,000</b>

# PROJECT PHASES

The exhibit below documents the various phases associated with the construction of a building from the earliest planning stages through construction and project closeout. Specifically, it indicates the six (6) stages of project development as follows: Planning, Design, DSA Review, Bid and Award, Construction and Closeout.

The purpose of this exhibit is to convey the specific tasks under each phase and provide a better understanding of the construction process and the multitude of procedural steps that are necessary to implement a facility project. It is not uncommon for a project to take 31-60 months from conception (Planning) to move-in (Closeout).

**PROJECT PHASES EXHIBIT (4-7-16)**



PLANNING & PROGRAMMING	SCHEMATIC DESIGN	DESIGN DEVELOPMENT	CONSTRUCTION DOCUMENTS	DSA REVIEW	BID & AWARD	CONSTRUCTION	OCCUPANCY	CLOSEOUT
Establish goals Collect facts Test concepts Determine needs Define the problem Function Form Budget Schedule Describe space requirements Use / type of space Ancillary / support space Adjacency requirements Amount of area Number of people Furnishings & equipment District/College review & approval	Site relationship Bubble or block diagrams (adjacencies) Circulation & access diagrams Preliminary floor plans Building Massing Design concepts / system selections Architectural Civil Structural Mechanical Electrical Budget Update Schedule Update District/College review & approval	Dimensioned Floor plans Building sections Exterior elevations Typical details Selection of finishes Outline specifications Foundation system definition Framing system definition Exterior envelope definition Engineering systems definition Major equipment selections Budget Update Schedule Update District/College review & approval	Drawings Specifications Contract forms and conditions General requirements General conditions Bidding requirements Bid forms Constructability reviews Value engineering reviews Budget Update Schedule Update BIM Studies (if applicable) District/College review & approval	Presubmittal meeting DSA submittal package Bid time DSA review DSA review meetings DSA comments Response to DSA comments DSA Backcheck DSA Stampout	RFQ / RFP RFP response(s) Evaluate RFP response(s) Interview(s) Selection / recommendation Contract negotiations Preparation of Board Docket Recommendation to Board Board approval to award Execution of contract Notice to proceed	Update BIM Doc's (if applicable) A/E Construction Administration Services Submittal Review & Approval RFI's / ASI's Change Orders Pay Application Certification Field Observations Punch List / Final Inspections Commissioning Owner Rep / Project Manager Services IOR Services Material Testing & Engineering Services M & O Training	Move Management Services Moving Company Services User Punchlists	As-Builts M&O Manuals Warranties Final BIM Doc's (if applicable) Reconcile all financial matters Settlement of disputes Final lien releases Consent of Surety Final payments Notice of Completion DSA Certification



B

LONG BEACH  
CITY COLLEGE

LIBERAL ARTS CAMPUS

02

LIBERAL ARTS CAMPUS

## 2041 FACILITIES MASTER PLAN

The 2041 Facilities Master Plan for the Liberal Arts Campus has been developed to support the Long Beach Community College District vision, mission and values.

The graphic plan on the following page highlights a series of recommendations for the long term development of the campus.

The Building Key to the right pertains to the buildings shown on the following page.

### **BUILDING KEY**

#### **EXISTING FACILITIES**

- (A) STUDENT SERVICES
- (C) NURSING
- (I) BOOKSTORE
- (L) LIBRARY / LEARNING RESOURCE CENTER
- (P) PARKING
- (T) MULTI-DISCIPLINARY ACADEMIC / ADMINISTRATION
- (V) MATH / CULINARY ARTS
- (X) CAMPUS POLICE / CENTRAL PLANT
- (Z) FACILITIES

#### **RENOVATIONS**

- (B) CLASSROOM
- (D) SCIENCE
- (E) COLLEGE CENTER
- (J) AUDITORIUM
- (K) ART
- (P) LANGUAGE ARTS
- (Q) SECONDARY GYMNASIUM
- (R) PRIMARY GYMNASIUM
- (S) STADIUM
- (1) IITS / WAREHOUSE
- (2) ECONOMIC & WORKFORCE DEVELOPMENT / FOUNDATION

#### **DEMOLITION**

- (f) FAMILY & CONSUMER STUDY
- (g) MUSIC RADIO / TV
- (h) THEATRE ARTS
- (q2) ATHLETICS
- (u) FACILITIES WAREHOUSE
- (y) FACILITIES WAREHOUSE  
FIELD HOUSE

#### **NEW CONSTRUCTION**

- (G) PERFORMING ARTS
- (M) LIBERAL ARTS
- (W) AQUATIC CENTER
- (CC) CHILD DEVELOPMENT CENTER



LBCCD 2041 FACILITIES MASTER PLAN - PROPOSED LOCAL BUDGET / FUNDING SOURCES / PROJECT DESCRIPTIONS



4/7/16

PROPOSED PROJECTS		Estimated Total Project Cost (includes escalation)	Construction Cost	Contingencies (Construction, Design & Proj Contingencies)	All Other	Proposed Local Budget	Potential State Funding	Measure E 2008 Bond Fund	PROJECT DESCRIPTIONS
LAC	1 Building D - Science	12,288,103	7,680,064	1,626,367	2,981,672	0		12,288,103	Building D was constructed in 1973 and requires a major renovation for improved technology and academic functionality. Work includes improving 16,000 square feet of various science and allied health learning environments with modern technology, relocation of electrical systems for improved maintenance access, and upgrading of elevators for ADA compliance.
LAC	2 Building P - Language Arts	8,670,713	5,419,196	1,147,594	2,103,923	0		8,670,713	Constructed in 1935, Building P requires a comprehensive renovation to upgrade electrical power systems, update HVAC equipment, address plumbing/storm drainage issues, modernize classrooms and enlarge some classrooms.
LAC	3 Building J - Auditorium	24,629,548	15,393,468	3,259,793	5,976,287	0		24,629,548	The college auditorium was constructed in 1956 and requires a renovation of basic building systems, aesthetic improvements, expansion of instructional space, ADA compliance, and installation of a fire suppression system and HVAC for this high occupancy facility.
LAC	4 Outdoor Kinesiology Labs	16,390,500	10,244,063	2,169,331	3,977,106	12,183,520		4,206,980	This project is a renovation of outdoor playing fields and support areas to include the installation of artificial turf on some fields, new scoreboards and bleachers, use of water saving irrigation systems and upgrading of storage facilities.
LAC	5 LAC Walkways & Wayfinding	4,995,200	3,122,000	661,129	1,212,071	3,693,830		1,301,370	In order to improve wayfinding and facility identification, this project provides for a uniform signage program and improved pedestrian walkways for better circulation.
LAC	6 Building W - Aquatic Center	28,137,500	17,585,938	3,724,081	6,827,481	27,787,500		350,000	This project is the construction of a new 50 meter x 25 yard pool as well as a 12,000 sq. ft. (approx.) shower/locker facility in a location near the existing pool. The existing pool has extensive maintenance and repair problems that cannot be cost effectively addressed, thereby requiring this project.
LAC	7 Building E - College Center	37,100,671	23,187,919	4,910,383	9,002,369	18,931,906		18,168,765	Constructed in 1968, the College Center Building is overdue for this major renovation. Scope of work includes updating the operational building systems, correction of deficiencies in the HVAC system, replacement and upgrading of the electrical system, changes for ADA and structural compliance and aesthetic improvements to modernize the facility.
LAC	8 Building M - Liberal Arts	70,096,798	43,810,499	9,277,517	17,008,782	16,552,591	20,601,755	32,942,452	This project involves replacing both of the outdated M & N Buildings (constructed in 1935) with a new 81,970 square foot state-of-the-art facility to meet academic needs and instructional objectives in the liberal arts.
LAC	9 Building O2 - Economic & Workforce Development / Foundation	34,808,202	21,755,126	4,606,968	8,446,108	34,808,202			This building was purchased by the District after it was originally constructed by a private developer. Since the building was not constructed in accordance with Division of State Architect (DSA) requirements, the District wishes to make structural improvements to the facility to ensure compliance with codes related to use of the facility as a California community college building.
LAC	10 Building G - Performing Arts	49,495,629	27,497,572	7,764,020	14,234,037	21,963,647	15,000,000	12,531,982	Construction of this new Performing Arts Building replaces the existing Buildings G and H. These two buildings are outdated and no longer provide adequate instructional support for music and theatre arts. The new building addresses facility needs associated with these programs by providing modern instructional classrooms, private music practice rooms and performance areas.
LAC	11 Building K - Art	25,719,838	16,074,899	3,404,096	6,240,843	24,028,628		1,691,210	The Art Building was constructed in 1952, and except for some minor renovation work, has never undergone a major remodel. This project represents a complete renovation and modernization of the facility, including building systems, ADA compliance and general refurbishment of the existing structure.
LAC	12 Building R - Primary Gymnasium	60,098,454	37,561,534	7,954,207	14,582,713	59,933,087		165,367	The Building R Primary Gymnasium was constructed in 1952 and requires a significant renovation to address structural/seismic code compliance, ADA access, new HVAC systems and a general modernization of the facility.

**LBCCD 2041 FACILITIES MASTER PLAN - PROPOSED LOCAL BUDGET / FUNDING SOURCES / PROJECT DESCRIPTIONS**



4/7/16

PROPOSED PROJECTS		Estimated Total Project Cost (includes escalation)	Construction Cost	Contingencies (Construction, Design & Proj Contingencies)	All Other	Proposed Local Budget	Potential State Funding	Measure E 2008 Bond Fund	PROJECT DESCRIPTIONS
LAC	13 Building Q - Secondary Gymnasium	24,735,191	15,459,494	3,273,775	6,001,922	24,426,950		308,241	The Building Q Secondary Gymnasium was constructed in 1952 and requires a significant renovation to address instructional space and training needs, structural/seismic code compliance, ADA access, fire-life safety improvements, HVAC upgrades and aesthetic improvements to modernize the facility.
LAC	14 Building B - Classroom	37,334,400	23,334,000	4,941,318	9,059,082	30,834,400	6,500,000		This project represents a comprehensive renovation of the existing Building B, which was constructed in 1971. Scope of work includes creation of large lecture halls, electrical power upgrades, improved lighting, conversion of some general classrooms into lab functions and an overall modernization of the facility.
LAC	15 Building F - Demolish Family/Consumer Education	3,720,600	2,325,375	492,432	902,793	2,720,600		1,000,000	Building F was constructed in 1953 and it is not cost effective to renovate this facility to meet today's educational standards. In addition, future construction of the adjacent Performing Arts Building and/or College Center requires removal to meet current fire codes.
LAC	16 Building O1 - IITS / Warehouse	26,463,640	16,539,775	3,502,541	6,421,324	26,463,640			This building was originally constructed by a private developer and subsequently purchased by the District. However, it does not comply with requirements noted in the California Education Code for comprehensive use as a community college facility. As a result, this project shall make structural improvements to obtain DSA certification for seismic safety.
LAC	17 Building S - Stadium	88,812,000	63,437,143	8,955,832	16,419,025	85,751,659		3,060,341	The stadium at LAC is an asset of both the college as well as the community. The overall condition of this aging facility requires a number of improvements to ensure disabled person access, correct mechanical system deficiencies, and an engineering analysis of the structure to evaluate the potential need for structural/seismic upgrades.
LAC	18 Building CDC - Child Development Center	21,022,354	13,138,971	2,782,370	5,101,013	21,022,354			This project is the new construction of a replacement Child Development Center facility for this off-campus program. The new facility is about 25% larger than the existing facility and provides a modern facility to support the college's Child Development Program and meet the needs for training of teachers and child development professionals.
<b>Total:</b>		<b>574,519,341</b>	<b>363,567,036</b>	<b>74,453,754</b>	<b>136,498,551</b>	<b>411,102,514</b>	<b>42,101,755</b>	<b>121,315,072</b>	

## DETAILED PROJECT DESCRIPTIONS BUILDING D - SCIENCE

The LAC Science Building (Bldg. D) is an 81,132 gross square foot, 3 story facility. It was constructed in 1973 and due to age and the need for improved technology and academic functionality, portions of the building require renovation. This project renovates 16,000 square feet of the facility with a scope of work as follows: 1. Improve classroom learning environments for anatomy, allied health, diagnostic medical imaging, medical assisting, and physiology with modern technology and functionality; 2. Relocate electrical systems to the ground floor for improved maintenance abilities; 3. Provide new fiber data backbone into the building; 4. Upgrade both elevators to be ADA compliant; and 5. Enhance interior building signage.

**SIGNIFICANCE:** Renovation of Building D makes major improvements to the facility to better meet the academic needs associated with changes in technology and instructional methodologies of the science curriculum. These changes are imperative to meet educational objectives and better prepare students in the sciences.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$12,288,103

**SCHEDULE:** The approximate construction schedule for this project is noted on item 1 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## BUILDING P – LANGUAGE ARTS

Project involves the comprehensive renovation of this 16,016 gross square foot facility that was constructed in 1935. The primary objective of this project is to upgrade Building P's functional building systems. Scope of work includes upgrading and/or replacement of the electrical power systems, HVAC, plumbing, storm drainage, fire alarm and telecommunication systems.

The renovation will also include changes to enhance and improve the academic teaching spaces to include enlargement and modernization of classrooms as well as updating the interior building finishes.

**SIGNIFICANCE:** Renovation of this building provides a significantly improved learning environment and building functionality to better serve the English and Journalism Departments.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$8,670,713

**SCHEDULE:** The approximate construction schedule for this project is noted on item 2 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS BUILDING J - AUDITORIUM

The scope of work for this project involves the complete renovation of this 37,878 gross square foot auditorium building that was built in 1956. The project will include adding 14,119 gross square feet in the North West corner as a second floor addition to accommodate, dance, theater classes, storage and offices. In addition, the project will include the installation of air conditioning systems as well as general refurbishment of the facility to improve electrical power systems, address plumbing issues, provide enhanced telecommunication capability, upgrade lighting and make aesthetic improvements to this aging facility. ADA compliance items to be updated will include a new elevator for access to the basement area and second floor. In addition, the auditorium and lobby space will have a fire suppression system installed along with a voice annunciated fire alarm system.

**SIGNIFICANCE:** The improvements and renovation of this building shall accommodate the future needs of such programs as dance, music and drama for both instruction as well as performance. Besides facility changes to meet academic programmatic needs, the renovation addresses major building system upgrades and fire, life-safety issues related to such high occupancy areas as the 900 seat auditorium.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$24,629,548

**SCHEDULE:** The approximate construction schedule for this project is noted on item 3 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## OUTDOOR KINESIOLOGY LABS

This project is a renovation of the physical education outdoor playing fields to better accommodate instructional needs as well as intercollegiate athletics. The renovation is also necessary due to age deterioration of the fields. Scope of work may include the installation of artificial turf on some fields, upgrading of storage facilities, improved field lights, ADA compliance, scoreboards, bleachers and installation of water saving irrigation systems.

**SIGNIFICANCE:** Renovation and upgrading of the outdoor fields will provide enhanced and modernized labs to meet the long terms needs of the physical education programs.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$16,390,500

**SCHEDULE:** The approximate construction schedule for this project is noted on item 4 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS WALKWAYS AND WAYFINDING

The scope of work associated with this project includes a number of elements associated with improvements to the LAC campus as follows: 1. New and revised walkways throughout the campus to allow for better pedestrian access and circulation; and 2. Development and installation of a uniform signage program to allow for more efficient wayfinding and facility identification.

**SIGNIFICANCE:** This project represents an effort to allow students, staff and visitors to circulate freely and efficiently throughout the campus and provides for easy identification of buildings and services. The walkway and wayfinding program will comply with ADA requirements.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (including escalation): \$4,995,200

**SCHEDULE:** The approximate construction schedule for this project is noted on item 5 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** The specific location of this project is not depicted on the 2041 Facilities Master Plan site map since the work will occur throughout the campus.

## BUILDING W- AQUATIC CENTER

Due to its age, the existing swimming pool has significant and extensive repair issues that cannot be cost effectively addressed. The Aquatic Center project involves construction of a new 50 meter x 25 yd. pool. Scope of work also includes construction of a support building of approximately 12,000 square feet to provide showers, locker rooms, storage, pool equipment and office space. The new pool will be constructed along Carson Street to better accommodate its increased space needs.

**SIGNIFICANCE:** The Aquatic Center project addresses the major and costly repair problems associated with the existing pool and shall provide a modern, state-of-the-art complex to meet the needs of the instructional Kinesiology program as well as intercollegiate athletics. This project also provides much needed shower and locker room facilities when the existing gyms are closed for renovation at a later phase of the 2041 Master Plan Schedule.

**PROJECT TYPE:** New Construction.

**ESTIMATED COST** (includes escalation): \$28,137,500

**SCHEDULE:** The approximate construction schedule for this project is noted on item 6 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS BUILDING E - COLLEGE CENTER

The College Center is a two story, 50,276 gross square foot building that was constructed in 1968. The facility houses the campus food service, kitchen, dining area, and offices. The offices house several support programs such as student government offices, veteran's center, international students and a reading/writing success center. Other than a minor cosmetic renovation in 1991, the building is overdue for a major renovation. This project represents a comprehensive effort to update the operational building systems and make minor interior improvements for more efficient use of the facility.

More specific scope of work includes a comprehensive renovation, replacement or upgrade of building operational systems including: electrical distribution along with replacement of the original oil control switch, plumbing and fixtures, HVAC system, fire alarm and overhead sprinkler system, and lighting. Any upgrades related to ADA compliance and structural safety shall also be addressed as well as aesthetic improvements to modernize the facility.

**SIGNIFICANCE:** The significance of this project is that it completely renovates a primary campus building thereby bringing it up to date in terms of applicable safety codes and building systems. The renovated building allows the diverse functions that utilize this facility to more efficiently serve students in a modernized up-to-date environment.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$37,100,671

**SCHEDULE:** The approximate construction schedule for this project is noted on item 7 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## BUILDING M- LIBERAL ARTS

This project will replace two buildings (Buildings M & N) constructed in 1935. The current facilities are aging and in need of significant repair. The heating and cooling systems are outdated and the electrical systems are insufficient to meet current demands for technology and those teaching methodologies supported by these new technologies. ADA compliant access has also been a problem with Building M that requires attention.

The proposed project is construction of an 81,970 gross square foot building to provide new classrooms, laboratory facilities, a modern technology center for the Computer Information Systems and Business Technology Departments, faculty offices, and support areas for general education instruction. Included within the new building will be meeting/conference areas as well as some larger classrooms to support educational objectives.

A Final Project Proposal (FPP) has been submitted and approved by the California Community Colleges Board of Governors, for this project. Assuming a statewide higher education bond is approved by California voters, State funding of nearly \$21 million may be provided to help offset the construction cost of this project.

**SIGNIFICANCE:** This project replaces the existing M & N Buildings at LAC, which were constructed in 1935 and can no longer meet the college's educational and facility master plans. The new Liberal Arts Building provides for a state-of-the-art educational facility that will address instructional plans and objectives well into the 21st century for such academic disciplines as Language Arts, Foreign Languages, Speech Communications, Consumer Education, Computer Information Systems and Business Technology.

**PROJECT TYPE:** New Construction.

**ESTIMATED COST** (includes escalation): \$70,096,798

**SCHEDULE:** The approximate construction schedule for this project is noted on item 8 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS

### BUILDING O2- ECONOMIC & WORK FORCE DEVELOPMENT/FOUNDATION

The O2 Building at the LAC was constructed in 2001 by a private developer under the California Uniform Building Code. In 2010, the District purchased the building as well as the property upon which it was constructed. As a result, the 51,302 gross square foot building became part of the LAC site. Since the acquisition, the facility has been utilized for non-instructional support services such as Economic & Work Force Development and the Foundation.

In order to meet requirements of the California Field Act and the State Education Code, it is necessary for the District to obtain certification of this building by the Division of State Architect. This process will require structural enhancements to obtain DSA approval.

In addition to the DSA certification, the scope of work for this project shall include the conversion of existing warehouse space into offices and related support space.

**SIGNIFICANCE:** The significance of this project is that it brings the facility into full DSA structural code compliance for California community colleges and allows the building to be utilized for any function, including instructional uses.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$34,808,202

**SCHEDULE:** The approximate construction schedule for this project is noted on item 9 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## BUILDING G- PERFORMING ARTS

The new Performing Arts Building is a 42,857 gross square foot facility that replaces the existing and outmoded Music (Bldg. G) and Theatre Arts (Bldg. H) at the LAC. The scope of work for this project includes a building with instructional classrooms, specialized labs, private music practice rooms, faculty/staff offices, storage and support spaces. It also provides for smaller scale performance areas and the campus radio station.

**SIGNIFICANCE:** This project replaces older buildings that are unable to meet current educational needs. The new Performing Arts Building provides for a larger state-of-the-art facility that will meet the long term curricular requirements of the music and theatre departments.

**PROJECT TYPE:** New Construction.

**ESTIMATED COST** (includes escalation): \$49,495,629

**SCHEDULE:** The approximate construction schedule for this project is noted on item 10 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS BUILDING K- ART

The Art building was constructed in 1952 and is a 29,479 gross square foot, one story building. Except for some minor renovation work in 1995, the building has never undergone a major remodel. This project represents a complete renovation and modernization of the facility to include replacement of the HVAC systems, electrical power upgrades, improved data communication wiring, roof replacement, painting, ADA compliance and general refurbishment of the existing structure.

**SIGNIFICANCE:** In order to continue use of this facility and meet the needs of modern technologies and curriculum, the building requires a comprehensive renovation. Through the renovation process, the life of this building will be extended for many years and continue to serve the instructional needs of the campus and the students it serves.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$25,719,838

**SCHEDULE:** The approximate construction schedule for this project is noted on item 11 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## BUILDING R - PRIMARY GYMNASIUM

Building R was constructed in 1952 and is a two story building consisting of 78,053 gross square feet. There was a relatively minor renovation of the facility in 1963 but it has never undergone a comprehensive remodel or major renovation. The building consists of a large gym, offices, and shower/locker facilities.

The renovation of this facility shall include structural/seismic code enhancements, changes to provide for ADA access, new HVAC systems, and various improvements to modernize the aesthetics of the building.

**SIGNIFICANCE:** Due to the age of this facility and the type of construction, the structural enhancements are essential to ensure the safety of persons utilizing the gymnasium as well as to ensure the buildings long term use in the event of potential seismic activity. In addition, by addressing the issues of access, the building will serve the needs of disabled persons and allow for full compliance with the Americans with Disabilities Act (ADA).

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$60,098,454

**SCHEDULE:** The approximate construction schedule for this project is noted on item 12 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS BUILDING Q - SECONDARY GYMNASIUM

Building Q is a one story building constructed in 1952 and consists of 30,270 gross square feet. Since construction, except for minor repairs and ongoing or scheduled maintenance, the building has never undergone a major renovation.

This project is very similar in scope to the proposed work for the primary Gymnasium (Building R). The work will include addressing issues related to instructional space needs, training areas, structural/seismic upgrades, ADA compliance, fire life-safety improvements, lighting, HVAC system upgrades and aesthetic improvements.

**SIGNIFICANCE:** This renovation project is essential in order to insure seismic safety of the facility as well as the safety of all persons utilizing the building. In addition, by completing various physical changes to the facility, full accessibility compliance will be realized.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$24,735,191

**SCHEDULE:** The approximate construction schedule for this project is noted on item 13 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## BUILDING B- CLASSROOM

This project is a comprehensive renovation of the existing Building B. The building is a three story, 44,357 gross square foot facility that was constructed in 1971. Except for the usual scheduled maintenance projects including an HVAC upgrade in 2010, there has been no major upgrade of this facility. Because of the nature of the programs housed in this facility as well as its age, the building is definitely due for a significant renovation.

Scope of work shall include electrical power upgrades, data and communication improvements, conversion of some general classrooms to lab functions, creation of large lecture halls, better lighting and general modernization of the facility in terms of utility and aesthetics.

**SIGNIFICANCE:** The renovated building will better meet the educational objectives of programs planned for this facility including Anthropology, Family and Consumer Education as well as several others. In addition, master planned facilities such as the QQ and MM Buildings at PCC will allow the Electrical and Drafting/Auto Cad programs to be relocated from Building B to these new facilities.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$37,334,400

**SCHEDULE:** The approximate construction schedule for this project is noted on item 14 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS BUILDING F- FAMILY/CONSUMER EDUCATION

This project will demolish the existing one story 15,387 gross square foot Family/ Consumer Education Building that was constructed in 1952. Because of the age of this facility it is outmoded in terms of meeting the long term program objectives of the Family and Consumer Education Department. It is simply not cost effective to renovate this facility to meet modern standards. In addition, future construction of the adjacent Performing Arts Building and/or the College Center will require removal of this building to meet current fire codes.

The Family and Consumer Education programs will be relocated to the newly renovated Building B- Classroom.

**SIGNIFICANCE:** This project not only eliminates an older building that has a very limited lifespan in terms of meeting educational objectives but it also provides a construction site for a new building that is scheduled in the District's 2041 Facilities Master Plan.

**PROJECT TYPE:** Demolition.

**ESTIMATED COST** (includes escalation): \$3,720,600

**SCHEDULE:** The approximate construction schedule for this project is noted on item 15 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## BUILDING O1 – IITS/WAREHOUSE

The O1 Building at the LAC was constructed in 2001 by a private developer under the California Uniform Building Code. In 2010, the District purchased the building as well as the property upon which it was constructed. As a result, the 26,560 gross square foot building became part of the LAC site. Since acquisition, the facility has been utilized for the Instructional and Information Technology Services (IITS) Department and the warehouse.

In order to meet requirements of the California Field Act and the State Education Code, it is necessary for the District to obtain certification of this building by the Division of State Architect (DSA). This process shall require structural enhancements in order to obtain DSA approval.

The scope of work shall also include minor construction work within the facility to improve space utilization.

**SIGNIFICANCE:** The significance of this project is that it brings the facility into full DSA structural compliance for California community colleges and allows the building to be utilized for any function, including instructional uses.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$26,463,640

**SCHEDULE:** The approximate construction schedule for this project is noted on item 16 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS BUILDING S - STADIUM

This important community sports facility, which was constructed in 1949, requires major renovation to address issues related to ADA access, water intrusion and structural upgrading of the facility to meet Division of State Architect (DSA) seismic requirements.

Prior to commencement of the project, a comprehensive engineering analysis of the structure and mechanical systems shall be required.

**SIGNIFICANCE:** Due to the nature of this facility as a stadium it is often occupied by hundreds of spectators and participants. As the facility approaches 70 years of age it is imperative for life-safety that improvements be made to this aging stadium in order to address potential structural issues as well as disabled person access required under the ADA.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$88,812,000

**SCHEDULE:** The approximate construction schedule for this project is noted on item 17 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## BUILDING CDC- CHILD DEVELOPMENT CENTER

The existing Child Development Center is located off-site but is part of the LAC. It consists of two (2) one story building of approximately 9,042 gross square feet. The facility was constructed in two phases, with the vast majority of the construction taking place in 1971.

This project is the new construction of a replacement for the existing Child Development Center. The new facility will not be constructed until approximately 2037, as noted in the 2041 Facilities Master Plan. New construction will be necessary at that time because the existing structures will be over 65 years old when construction commences.

The proposed new project is approximately 12,000 gross square feet, or roughly 25% larger than the existing facility. Elements of the new building will include children's classrooms, food preparation and service, staff and children's restrooms, offices and support/storage spaces. In addition, construction will include a comprehensive outdoor area for exercise and creative play.

**SIGNIFICANCE:** This project is an essential educational program because it is the “laboratory” setting for the college's Child Development Program. Construction of the new facility will ensure that future teachers and child development professionals are provided with an appropriate and modern learning environment.

**PROJECT TYPE:** Construction.

**ESTIMATED COST** (includes escalation): \$21,022,354

**SCHEDULE:** The approximate construction schedule for this project is noted on item 18 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.





**LBCCD 2041 FACILITIES MASTER PLAN SCHEDULE**  
(WITH ESTIMATED \$ VALUES INDICATED FOR EACH PROJECT)



4/7/16

LAC	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
<b>10. Performing Arts (continued)</b> Construct Building H Closeout Construct Swing Space for Bldg G Construct Building G Closeout 49,495,629												
<b>11. Building K - Art</b> Planning Design DSA Review & Approval Bid & Award Construct Swing Space for Bldg K Construct Building K Closeout 25,719,838												
<b>12. Building R - Primary Gymnasium</b> Planning Design DSA Review & Approval Bid & Award Construction Closeout 60,098,454												
<b>13. Building Q - Secondary Gymnasium</b> Planning Design DSA Review & Approval Bid & Award Construction Closeout 24,735,191												
<b>14. Building B - Classroom</b> Planning Design DSA Review & Approval Bid & Award Construction Closeout 37,334,400												
<b>15. Building F - Demolish Family / Consumer Education</b> Planning Design DSA Review & Approval Bid & Award Relocate Occupants Demo Bldg F / Construct Courtyd Demo & Courtyard cont'd (2038) Closeout (2038) 3,720,600												
LAC	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037

**LBCCD 2041 FACILITIES MASTER PLAN SCHEDULE**  
(WITH ESTIMATED \$ VALUES INDICATED FOR EACH PROJECT)



4/7/16

LAC	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
<b>16. Building O1 - IITS / Warehouse</b> Planning Design DSA Review & Approval Bid & Award Construction Closeout 26,463,640												
<b>17. Building S - Stadium</b> Planning Design Building DSA Review & Approval Bid & Award Construction Closeout 88,812,000												
<b>18. Bldg CDC - Child Development Ctr</b> Planning Design DSA Review & Approval Bid & Award Construction Closeout 21,022,354												
LAC	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D
	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046



03

PACIFIC COAST CAMPUS

## 2041 FACILITIES MASTER PLAN

The 2041 Facilities Master Plan for the Pacific Coast Campus has been developed to support the Long Beach Community College District vision, mission and values.

The graphic plan on the following page highlights a series of recommendations for the long term development of the campus.

The Building Key to the right pertains to the buildings shown on the following page.

### **BUILDING KEY**

#### **EXISTING FACILITIES**

- Ⓐ MULTIDISCIPLINARY / ADMINISTRATION
- Ⓑ MULTIDISCIPLINARY
- Ⓒ KINESIOLOGY
- Ⓓ MULTIDISCIPLINARY
- Ⓔ STUDENT CENTER / MULTIDISCIPLINARY
- Ⓕ STUDENT SUPPORT SERVICES / CAFETERIA
- Ⓖ CHILD DEVELOPMENT CENTER
- Ⓗ SHEET METAL / WELDING
- Ⓙ ADVANCED TRANSPORTATION / AUTOMOTIVE TECHNOLOGY
- Ⓚ GREENHOUSE
- Ⓛ LIBRARY / LEARNING RESOURCE CENTER
- Ⓝ HORTICULTURE
- Ⓨ FACILITIES / CENTRAL PLANT

#### **RENOVATIONS**

- Ⓜ CONSTRUCTION TRADES
- Ⓡ ELECTRICAL

#### **DEMOLITION**

- Ⓣ CLASSROOM / DYER HALL / SENIOR CENTER
- Ⓤ FOSTER KINSHIP CARE

#### **NEW CONSTRUCTION**

- Ⓠ ELECTRICAL / DYER HALL / LIFETIME LEARNING
- Ⓞ CLASSROOM
- Ⓟ PARKING STRUCTURE



**LBCCD 2041 FACILITIES MASTER PLAN - PROPOSED LOCAL BUDGET / FUNDING SOURCES / PROJECT DESCRIPTIONS**



4/7/16

PROPOSED PROJECTS		Estimated Total Project Cost (includes escalation)	Construction Cost	Contingencies (Construction, Design & Proj Contingencies)	All Other	Proposed Local Budget	Potential State Funding	Measure E 2008 Bond Fund	PROJECT DESCRIPTIONS
PCC	19 Buildings QQ/RR - Electrical / Dyer Hall / Lifetime Learning	20,302,962	12,689,351	2,687,157	4,926,454	0		20,302,962	This project involves a comprehensive renovation of the existing RR Building as well as construction of a new 24,839 square foot Building QQ. The new Building QQ will house the Lifetime Learning Center, Electrical Department and Dyer Hall. In addition, there is extensive site work development for utilization as a parking lot and work yard for solar panels.
PCC	20 Building MM - Construction Trades Phase 1	17,665,877	11,041,173	2,338,131	4,286,573	3,009,155	6,858,000	7,798,722	The scope of work associated with this project involves a major renovation of the existing 13,288 gross square foot facility (Bldg. MM), as well as construction of a new 4,531 gross square foot building addition. The California Community College Chancellor's Office has approved a Final Project Proposal for this project, providing approximately \$6.8 million in State funding.
PCC	21 Building P2 - Parking Structure	21,493,800	15,352,714	2,167,442	3,973,644	21,493,800			Due to very limited surface parking options, this project constructs a new multi-story parking structure at PCC to meet student/staff parking demands. It is planned to accommodate 500-600 vehicles and have solar panels on top.
PCC	22 Building MM - Construction Trades Phase 2	14,417,237	9,010,773	1,908,164	3,498,300	2,343,511	9,706,535	2,367,191	The Construction Trades Phase 2 project is construction of a new 15,749 gross square foot addition to the MM Building. An Initial Project Proposal (IPP) has been submitted and approved by California Community College Chancellor's Office. However, the project is being reviewed by the District to determine the next step in the planned development of this project. This review is necessitated by educational programmatic needs as well as overall facility condition.
PCC	23 Building OO - Classroom	118,070,400	73,794,000	15,626,965	28,649,435	98,070,400	20,000,000		The Classroom Building project is a major instructional facility that involves the construction of a new 150,000 gross square foot building. The facility shall be multi-disciplinary in nature and will include a very large state-of-the-art computer lab, classroom facilities, lecture rooms, meeting areas as well as faculty offices and support space.
PCC	24 Building FF - Demolish Fine Arts / Senior Center	2,533,600	1,583,500	335,329	614,771	1,428,410		1,105,190	Building FF was constructed in 1936 and due to its age and overall condition, requires that it be demolished. The programs housed in this facility shall be relocated to the QQ Building which is being constructed earlier in the 2041 Facilities Master Plan. The site will be utilized for a revamped vehicle entry and drop-off point.
PCC	25 PCC Walkways & Wayfinding	2,572,571	1,607,857	340,487	624,227	2,239,613		332,958	The scope of work for this project provides for the construction and/or renovation of pedestrian walkways throughout the campus and development of a uniform signage program to allow for more efficient wayfinding, easier access and improved building identification.
<b>Total:</b>		<b>197,056,447</b>	<b>125,079,368</b>	<b>25,403,675</b>	<b>46,573,404</b>	<b>128,584,889</b>	<b>36,564,535</b>	<b>31,907,023</b>	

## DETAILED PROJECT DESCRIPTIONS BUILDINGS QQ/RR – ELECTRICAL/ DYER HALL/ LIFETIME LEARNING

The scope of work for this project consists of the following: 1. Construction of a new two story building of approximately 24,839 square feet that will house the Lifetime Learning Center, the Electrical Department and Dyer Hall (Building QQ); 2. Renovation of existing one story building of approximately 6,104 square feet (Building RR); and 3. Approximately 98,000 square feet of site work including new landscape and hardscape, a new parking lot, a new work yard and installation of new utilities.

**SIGNIFICANCE:** This project provides for an improved facility to house the Electrical Department, Lifetime Learning Center and Dyer Hall, thereby meeting the long term needs of these programs. More specifically, the project promotes collaboration between such fields as alternate fuels, electrical department and horticulture. It also provides dedicated space for robotics and automation equipment as well as a work yard for solar panels.

**PROJECT TYPE:** New Construction and Renovation.

**ESTIMATED COST** (includes escalation): \$20,302,962

**SCHEDULE:** The approximate construction schedule for this project is noted on item 19 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS BUILDING MM - CONSTRUCTION TRADES (PHASE 1)

This project involves a major renovation of the existing 13,288 gross square foot facility, which was constructed in 1957, as well as construction of a new 4,531 gross square foot addition to the building. A California Chancellor's Office Final Project Proposal (FPP) has been approved for this project. However, State funding is contingent upon voter approval of a Community College Construction Bond. Renovation includes upgrading of the facility including electrical systems, data communication systems, ADA access compliance, HVAC system replacement, lighting, plumbing, and aesthetic improvements.

**SIGNIFICANCE:** Renovation of the Construction Trades Building upgrades the facility and its operating systems. It adds significant life to this facility and corrects a number of deficiencies that will improve its use in the training of students in the areas of air conditioning, refrigeration and the construction trades.

**PROJECT TYPE:** Renovation and New Construction.

**ESTIMATED COST** (includes escalation): \$17,665,877

**SCHEDULE:** The approximate construction schedule for this project is noted on item 20 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## BUILDING P2- PARKING STRUCTURE

The intent of this project is to construct a new multi-story parking structure at PCC to serve approximately 500-600 vehicles. This is the only viable alternative to meeting vehicular parking demands due to limited land availability.

**SIGNIFICANCE:** The new parking structure shall address the long term student and staff parking needs associated with the construction of a number of new instructional buildings at PCC, and make progress towards better sustainability by installing solar panels on top of the structure.

**PROJECT TYPE:** New Construction.

**ESTIMATED COST** (includes escalation): \$21,493,800

**SCHEDULE:** The approximate construction schedule for this project is noted on item 21 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS BUILDING MM - CONSTRUCTION TRADES (PHASE 2)

This project involves the construction of a 15,749 gross square feet addition to the existing structure. The new construction will provide space for the Drafting and Architecture Programs.

An Initial Project Proposal (IPP) has been approved by the California Community College Chancellor's Office. The next step will be to submit a Final Project Proposal (FPP) for this project which, if approved, would make the project eligible for State capital outlay funding. However, the project is undergoing a review to determine eligibility for new construction. If it does not qualify, the facility will be renovated.

**SIGNIFICANCE:** Whether this project constructs a new facility or renovates the existing space, the result will be a modern up-to-date facility to meet the instructional requirements for drafting and Architectural Programs.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$14,417,237

**SCHEDULE:** The approximate construction schedule for this project is noted on item 22 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## BUILDING OO - CLASSROOM

The Classroom Building project involves the new construction of a large 150,000 gross square foot instructional building. The building shall be multi-disciplinary in nature and will include classroom facilities, large lecture rooms, meeting areas, extensive state-of-the-art computer labs, as well as faculty offices and support space.

**SIGNIFICANCE:** This project represents an important academic component to the campus and provides long term instructional space and educational opportunities for the students at the Pacific Coast Campus. It also allows for a more comprehensive curriculum so that students at PCC can take the majority of their required classes at this single location.

**PROJECT TYPE:** New Construction.

**ESTIMATED COST** (includes escalation): \$118,070,400

**SCHEDULE:** The approximate construction schedule for this project is noted on item 23 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## DETAILED PROJECT DESCRIPTIONS BUILDING FF - DEMO FINE ARTS/SENIOR CENTER

Building FF was constructed in 1936 and is 10,640 gross square feet in size. Due to the age of this facility and overall condition, it is not cost effective to renovate the building to meet future educational standards and program needs. Therefore, this project is demolition of the existing Building FF.

**SIGNIFICANCE:** The existing programs housed in this facility (Lifetime Learning Center and Dyer Hall) shall be relocated to the QQ Building which is being constructed earlier in the 2041 Facilities Master Plan. The former Building FF site shall be utilized for a new campus entry including a student drop-off area and vehicular turnabout.

**PROJECT TYPE:** Demolition.

**ESTIMATED COST** (includes escalation): \$2,533,600

**SCHEDULE:** The approximate construction schedule for this project is noted on item 24 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location is indicated on the 2041 Facilities Master Plan site map.

## WALKWAYS AND WAYFINDING

The scope of work associated with this project includes a number of elements associated with improvements to the PCC campus as follows: 1. New and revised walkways throughout the campus to allow for better pedestrian access and circulation; and 2. Development and installation of a uniform signage program to allow for more efficient wayfinding and facility identification.

**SIGNIFICANCE:** This project represents an effort to allow students, staff and visitors to circulate freely and efficiently throughout the campus and provides for easy identification of buildings and services. The walkway and wayfinding program will comply with ADA requirements to insure access by disabled persons.

**PROJECT TYPE:** Renovation.

**ESTIMATED COST** (includes escalation): \$2,572,571

**SCHEDULE:** The approximate construction schedule for this project is noted on item 25 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** The specific location of this project is not depicted on the 2041 Facilities Master Plan site map since the work shall occur throughout the campus.

**LBCCD 2041 FACILITIES MASTER PLAN SCHEDULE**  
(WITH ESTIMATED \$ VALUES INDICATED FOR EACH PROJECT)



4/7/16

PCC	2015				2016				2017				2018				2019				2020				2021				2022				2023				2024				2025				2026														
	J	F	M	J	J	A	S	O	N	D	J	F	M	J	J	A	S	O	N	D	J	F	M	J	J	A	S	O	N	D	J	F	M	J	J	A	S	O	N	D	J	F	M	J	J	A	S	O	N	D	J	F	M	J	J	A	S	O	N
<b>19. Buildings QQ/RR - Electrical Program / Dyer Hall / Lifetime Learning</b>																																																											
Planning	Completed																																																										
Design	Completed																																																										
DSA Review Building QQ/RR	A [Yellow bar from Jan 2015 to Feb 2015]																																																										
Bid & Award	A [Blue bar from Feb 2015 to Mar 2015]																																																										
Construction	[Orange bar from Mar 2015 to Dec 2016]																																																										
Closeout	[Red bar from Dec 2016 to Jan 2017]																																																										
20,302,962																																																											
<b>20. Building MM - Construction Trades Phase 1</b>																																																											
Planning	[Pink bar from Oct 2018 to Nov 2018]																																																										
Design Building	[Green bar from Nov 2018 to Feb 2019]																																																										
DSA Review & Approval	[Yellow bar from Feb 2019 to May 2019]																																																										
Bid & Award Bldg MM	[Blue bar from May 2019 to Jun 2019]																																																										
Construct Bldg MM	[Orange bar from Jun 2019 to Dec 2020]																																																										
Closeout	[Red bar from Dec 2020 to Jan 2021]																																																										
17,665,877																																																											
<b>21. Building P2 - PCC Parking Structure</b>																																																											
Planning	[Pink bar from Oct 2020 to Nov 2020]																																																										
Design	[Green bar from Nov 2020 to Feb 2021]																																																										
DSA Review & Approval	[Yellow bar from Feb 2021 to May 2021]																																																										
Bid & Award	[Blue bar from May 2021 to Jun 2021]																																																										
Construction	[Orange bar from Jun 2021 to Dec 2022]																																																										
Closeout	[Red bar from Dec 2022 to Jan 2023]																																																										
21,493,800																																																											
<b>22. Building MM - Construction Trades Phase 2</b>																																																											
Planning	[Pink bar from Oct 2019 to Nov 2019]																																																										
Design Building	[Green bar from Nov 2019 to Feb 2020]																																																										
DSA Review & Approval	[Yellow bar from Feb 2020 to May 2020]																																																										
Bid & Award Bldg MM	[Blue bar from May 2020 to Jun 2020]																																																										
Construct Swing Space	[Orange bar from Jun 2020 to Dec 2021]																																																										
Construct Bldg MM	[Orange bar from Dec 2021 to Dec 2022]																																																										
Closeout	[Red bar from Dec 2022 to Jan 2023]																																																										
14,417,237																																																											
<b>23. Building OO - Classroom</b>																																																											
Planning	[Pink bar from Oct 2020 to Nov 2020]																																																										
Design	[Green bar from Nov 2020 to Feb 2021]																																																										
DSA Review & Approval	[Yellow bar from Feb 2021 to May 2021]																																																										
Bid & Award	[Blue bar from May 2021 to Jun 2021]																																																										
Construction	[Orange bar from Jun 2021 to Dec 2024]																																																										
Closeout	[Red bar from Dec 2024 to Jan 2025]																																																										
118,070,400																																																											
PCC																																																											





04

# DISTRICT WIDE SERVICES

LBCCD 2041 FACILITIES MASTER PLAN - PROPOSED LOCAL BUDGET / FUNDING SOURCES / PROJECT DESCRIPTIONS



4/7/16

PROPOSED PROJECTS		Estimated Total Project Cost (includes escalation)	Construction Cost	Contingencies (Construction, Design & Proj Contingencies)	All Other	Proposed Local Budget	Potential State Funding	Measure E 2008 Bond Fund	PROJECT DESCRIPTIONS
LAC PCC	26 District Wide Security Monitoring Systems	10,000,000	7,500,000	1,000,000	1,500,000	4,308,743		5,691,257	The Security Systems project installs surveillance cameras at all District facilities in order to improve safety and security for faculty, students, staff and the public. The cameras shall be located to provide coverage in such areas as parking lots, building entries/exits, and other locations for crime prevention and public safety.
LAC PCC	27 Joint Use Facility	27,317,500	17,073,438	3,615,551	6,628,511	27,317,500			This project provides for the construction of a new educational facility for collaborative programs with Long Beach Unified School District and Long Beach State University. The facility shall include classrooms, labs, large lecture spaces, meeting rooms, offices, flexible multi-purpose areas and support spaces. The specific location for this project has not been determined.
LAC PCC	28 Technology Refresh/Replacement	69,558,000	52,168,500	6,955,800	10,433,700	69,558,000			This project involves the long-term improvement, acquisition and replacement of technology driven hardware and equipment, throughout the District. It is essential in order to keep pace with ever changing technology and allow District students to be educated and trained on the most up-to-date equipment.
LAC PCC	29 Enterprise Wide Computer Systems	20,000,000	15,000,000	2,000,000	3,000,000	20,000,000			This project provides for the acquisition of new integrated software for the management of the District's financial resources, human resources and student records.
LAC PCC	30 Landscaping	20,000,000	14,286,000	2,016,000	3,698,000	17,640,834		2,359,166	This project is for the design and installation of landscaping elements at both the LAC and PCC campuses. The scope of work includes landscaping of new areas as well as the renovation of existing areas in order to refresh the plant palette and provide drought resistant plant material for conservation of irrigation water.
LAC PCC	31 Infrastructure Projects	25,000,000	15,625,000	3,310,000	6,065,000	25,000,000			A long term need exists for constantly updating the physical plant's infrastructure. This project shall provide funding during the life of the 2041 Facilities Master Plan for purposes of upgrading and/or replacing various infrastructure elements such as natural gas lines, chilled water lines, hot water lines, electrical distribution systems, and data/communication systems.
LAC PCC	32 Energy / Water Conservation Projects	25,000,000	17,857,500	2,520,000	4,622,500	25,000,000			Due to ever increasing energy rates as well as requirements to reduce water consumption, this project allows the District to take proactive steps to reduce the utilization of these utilities. Various projects shall be funded including such examples as the comprehensive use of reclaimed water, solar power, lighting retrofits, water saving sprinklers/timers and installation of new and developing technologies to conserve energy.
LAC PCC	33 Minor Campus Improvements	30,000,000	21,429,000	3,024,000	5,547,000	29,239,507		760,493	During the implementation of the 2041 Facilities Master Plan, the District will be faced with the need for completing a wide array of smaller projects that do not fall into the categories of capital outlay funding or do not meet the State funded parameters for scheduled maintenance. This project provides the funding vehicle for these smaller projects that may be needed to meet educational and program objectives during the life of the Master Plan.
LAC PCC	34 Surface Parking Improvements	10,000,000	7,143,000	1,008,000	1,849,000	9,454,310		545,690	The scope of work for this project is an ongoing program to maintain or improve the District's surface parking lots at all locations during implementation of the 2041 Facilities Master Plan. Over the next 25 years, all the District's parking lots shall require regular and ongoing maintenance ranging from slurry sealing to replacement. This project protects and also extends the life of the multitude of surface parking lots.
<b>Total:</b>		<b>236,875,500</b>	<b>168,082,438</b>	<b>25,449,351</b>	<b>43,343,711</b>	<b>227,518,894</b>		<b>9,356,606</b>	

## DETAILED PROJECT DESCRIPTIONS SECURITY SYSTEMS (CAMERAS)

In the interest of student and staff security and safety, this project installs surveillance cameras in parking lots, building entries and exits, and other locations necessary for crime prevention and public safety. The project includes installations at both the LAC and PCC campuses.

**SIGNIFICANCE:** This project represents a significant commitment to the safety and security of all students, staff, faculty and the public when utilizing District facilities.

**PROJECT TYPE:** New Equipment and Installation.

**ESTIMATED COST** (includes escalation): \$10,000,000

**SCHEDULE:** The approximate construction schedule for this project is noted on item 26 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** The specific locations required for this project are not noted on the 2041 Facilities Master Plan site maps since the work is performed throughout each campus.

## DETAILED PROJECT DESCRIPTIONS JOINT USE FACILITY

This project is the construction of an educational facility to provide opportunities for collaborative programs with Long Beach Unified School District and Long Beach State University. The facility shall include classrooms, labs, large lecture spaces, meeting rooms, offices, flexible multi-purpose areas and support spaces. The facility will be designed to address the needs of the District as well as the two collaborative partners.

**SIGNIFICANCE:** This unique facility will provide important educational opportunities for the students of the Long Beach area as the District creates a model partnership of collaboration between the Long Beach Unified School District (K-12) and Long Beach State University. These opportunities are endless and far reaching as lock step barriers of age and grade levels are replaced with program innovation, educational reform, and learning designed for the future.

**PROJECT TYPE:** New Construction.

**ESTIMATED COST** (includes escalation): \$27,317,500

**SCHEDULE:** The approximate construction schedule for this project is noted on item 27 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Project location to be determined.

## TECHNOLOGY REFRESH/REPLACEMENT

This project provides for the long term improvement, acquisition, and replacement of technology driven hardware and equipment throughout the District.

**SIGNIFICANCE:** The importance of this project is that it allows the District to keep pace with the growth, changes and replacement of technology driven products so that it remains on the cutting edge of student instruction and management efficiency. Only in so doing can the District be educating and training its students to be prepared for the workplace of tomorrow.

**PROJECT TYPE:** Not Applicable.

**ESTIMATED COST** (includes escalation): \$69,558,000

**SCHEDULE:** Expenditures shall occur annually in order to maintain the needed refresh cycle for existing classrooms, labs and administrative technology. The approximate construction schedule for this project is noted on item 28 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** The project shall be implemented throughout the District. Therefore, it is not indicated on the 2014 Facilities Master Plan site maps.

## DETAILED PROJECT DESCRIPTIONS ENTERPRISE WIDE COMPUTER SYSTEM

This project provides financial resources for the acquisition of new integrated software for the management of the District's financial, human resources and student records. The system would meet the District's needs with web enabled capabilities such as on-line registration, electronic paystubs, enrollment analytics, and enhanced communication tools that increase operational efficiency while minimizing costs.

**SIGNIFICANCE:** This project allows the District to not only manage its data better and more efficiently but it also provides a systems approach that will grow with the District to provide seamless sharing of core person data for students, faculty, staff and alumni. Such information is a critical requirement of institutions of higher learning and essential to the long term needs of Long Beach Community College District.

**PROJECT TYPE:** Not Applicable.

**ESTIMATED COST** (includes escalation): \$20,000,000

**SCHEDULE:** The approximate construction schedule for this project is noted on item 29 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** This project will be implemented District wide to serve the needs of all locations, facilities and functions. Therefore, it is not shown on the 2041 Facilities Master Plan site maps.

## LANDSCAPING

This project provides for the design and installation of landscaping elements at both the LAC and PCC campuses. Scope of work includes new areas to be landscaped as well as the renovation of certain existing areas due to plant material that requires replacement or is inappropriate for the application. One emphasis of the landscaping project will be the utilization of drought tolerant planting material to conserve the use of irrigation water.

**SIGNIFICANCE:** This project provides for the installation of landscape materials which are visually pleasing, provide aesthetic improvements to the site, and assist the District in accomplishing its goal of water use reduction.

**PROJECT TYPE:** Not Applicable.

**ESTIMATED COST** (including escalation): \$20,000,000

**SCHEDULE:** The approximate construction schedule for this project is noted on item 30 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** This project shall be implemented in various locations at both the LAC and PCC. Therefore, it is not specifically depicted on the 2041 Facilities Master Plan site plans.

## DETAILED PROJECT DESCRIPTIONS    INFRASTRUCTURE PROJECTS

This project shall provide funding for various infrastructure projects at both of the District's campuses to support the 2041 Facilities Master Plan. There is no specific schedule or timeframe for implementation of this project but the work will occur as needed to support any changes, alterations, replacements or installations of the various infrastructure systems. Typically, this work may include gas lines, chilled water lines for building cooling, hot water lines, electrical distribution and wiring, and data/communication systems.

**SIGNIFICANCE:** The importance of this project is that it will provide a budget to meet the replacement and upgrading of various infrastructure systems to improve and maintain the operational backbone necessary to support the physical plant.

**PROJECT TYPE:** Not Applicable.

**ESTIMATED COST** (includes escalation): \$25,000,000

**SCHEDULE:** The approximate construction schedule for this project is noted on item 31 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** No specific location has been determined for this project but the infrastructure work will be accomplished throughout the District's facilities. Therefore, it is not shown on the 2041 Facilities Master Plan site maps.

## ENERGY/WATER CONSERVATION PROJECT(S)

Due to ever increasing energy rates as well as requirements to curtail water consumption, it is imperative that the District take proactive steps to reduce use of these utilities. This project utilizes technology and equipment to accomplish that objective via the use of lighting upgrades/retrofits, reclaimed water, solar power, water saving sprinklers/timers, artificial turf, specialized plant material that requires very little irrigation, and other energy saving measures.

**SIGNIFICANCE:** As noted above, this project assists the District to save energy and reduce the utilization of water. It represents a commitment that will provide dividends of budgetary savings as well as a reduction in the use of ever decreasing natural resources.

**PROJECT TYPE:** Not Applicable.

**ESTIMATED COST** (including escalation): \$25,000,000

**SCHEDULE:** The approximate construction schedule for this project is noted on item 32 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** This project will occur at both the LAC and PCC campuses. Because of its wide ranging scope and locations throughout the campuses, it is not shown on the 2041 Facilities Master Plan site maps.

## DETAILED PROJECT DESCRIPTIONS MINOR CAMPUS IMPROVEMENTS

This project is actually a myriad of smaller projects that may be required during implementation of the 2041 Facilities Master Plan. These projects are wide ranging and involve improvements to facilities that may be required to meet educational and program objectives. Just a few examples would be the renovation of a laboratory to serve the needs of a new program in that room or, rewiring a machine shop to accommodate a specialized milling tool. These are just a few examples, of the many projects that would be funded by this resource.

**SIGNIFICANCE:** The importance of this project is that it provides financial resources that can be utilized to make minor improvements to facilities that are not large enough for capital outlay funding or do not fall into the State funded parameters for scheduled maintenance.

**PROJECT TYPE:** Not Applicable.

**ESTIMATED COST** (including escalation): \$30,000,000

**SCHEDULE:** The approximate construction schedule for this project is noted on item 33 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** Because this project will occur in different facilities on both campuses, it is not specifically shown on the 2041 Facilities Master Plan site maps.

## SURFACE PARKING IMPROVEMENTS

The scope of work for this project is an ongoing program to improve the District's parking lots at both the LAC and PCC. In some cases it might involve only a new seal coat on the existing asphalt surfaces or in other cases it might require the demolition of the parking lot and installation of new base material and asphalt. Each surface parking lot will be evaluated to determine the required improvements.

**SIGNIFICANCE:** The District's parking lots are an important physical asset of the college campuses since students and staff utilize these lots heavily. This project will protect that asset and ensure commuter students have a safe and available area in which to park their vehicles and pursue their educational objectives.

**PROJECT TYPE:** Not Applicable.

**ESTIMATED COST** (including escalation): \$10,000,000

**SCHEDULE:** The approximate construction schedule for this project is noted on item 34 of the spreadsheet entitled LBCCD 2041 Facilities Master Plan Schedule.

**LOCATION:** The parking lot improvements project shall occur at all vehicular parking lots throughout the District's campuses. Therefore, it is not depicted on the 2041 Facilities Master Plan site maps.



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05

# FUNDING PROJECTIONS

LBCCD 2041 FACILITIES MASTER PLAN - ESTIMATED CASH FLOW



4/7/16 REV

LAC	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
	%	\$																												
<b>1. Building D - Science</b>	62.50%	C 7,680,064																												
	37.50%	NC 4,608,039																												
			609,887																											
			948,714																											
			60,236		481,886																									
			406,592		406,592																									
			6,826,724		853,340	6,826,724																								
		474,357		474,357																										
12,288,103		1,626,367	232,338	350,443	1,043,585																									
<b>2. Building P - Language Arts</b>	62.50%	C 5,419,196																												
	37.50%	NC 3,251,517																												
			430,348																											
			669,430																											
			382,531		382,531																									
			286,899		191,266	95,633																								
			5,419,196		5,419,196																									
		334,715		111,572	223,143																									
8,670,713		1,147,594	165,254	165,254	693,500																									
<b>3. Building J - Auditorium</b>	62.50%	C 15,393,468																												
	37.50%	NC 9,236,081																												
			1,222,422																											
			633,849		1,267,697																									
			724,398		362,199																									
			814,948		814,948																									
			10,583,009		4,810,459	10,583,009																								
		316,924		633,849																										
24,629,548		3,259,793	314,337	419,116	844,973	1,441,172	240,195																							
<b>4. Outdoor Kinesiology Labs</b>	62.50%	C 10,244,063																												
	37.50%	NC 6,146,438																												
			650,799		162,700																									
			1,265,443		80,346																									
			642,765		542,333																									
			9,219,656		1,024,406	9,219,656																								
			632,722		632,722																									
16,390,500		2,169,331	96,415	289,244	381,951	1,401,721																								
<b>5. LAC Walkways &amp; Wayfinding</b>	62.50%	C 3,122,000																												
	37.50%	NC 1,873,200																												
			247,924		247,924																									
			385,659		385,659																									
			220,376		122,431																									
			165,282		165,282																									
			3,122,000		46,597	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	139,791	
		192,829		119,003	86,166	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	20,493	192,829	
4,995,200		661,129																											5,123	
<b>6. Building W - Aquatic Center</b>	62.50%	C 17,585,938																												
	37.50%	NC 10,551,563																												
			1,396,530		1,163,775																									
			2,172,381		232,755	2,172,381																								
			1,241,360		137,929	1,103,431																								
			931,020		925,576	931,020																								
			17,585,938		11,106,908	5,553,454																								
		1,086,190		1,086,190																										
28,137,500		3,724,081		199,504	478,810	557,403	1,421,922	1,066,441																						
LAC																														
	%	\$																												
	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	

LBCCD 2041 FACILITIES MASTER PLAN - ESTIMATED CASH FLOW



4/7/16 REV

LAC	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
	%	\$																												
<b>7. Building E - College Center</b> Planning Design Building E DSA Rvw & Apprvl - Building E Bid & Award Building E Construct Building E Closeout 37,100,671	62.50%	C 23,187,919																												
	37.50%	NC 13,912,752																												
	4.96%	1,841,394						1,841,394																						
	7.72%	2,864,390						1,273,062	1,591,328																					
	4.41%	1,636,794							1,273,062	363,732																				
	3.31%	1,227,596								1,227,596																				
	62.50%	23,187,919								6,956,376	13,912,752	2,318,792																		
<b>8. Building M - Liberal Arts</b> Planning Design Building M/N DSA Review Building Design Bid & Award Building M/N Construct Building M/N Closeout (2037) 70,096,798	62.50%	C 43,810,499																												
	37.50%	NC 26,286,299																												
	4.96%	3,479,069								3,479,069																				
	7.72%	5,411,885								1,803,962	3,607,923																			
	4.41%	3,092,506									1,374,447	1,718,059																		
	3.31%	2,319,379										2,319,379																		
	62.50%	43,810,499										4,867,833	19,471,333	19,471,333																
<b>9. Building O2 - Economic &amp; Workforce Development/Foundat'n</b> Planning Design Building O2 DSA Review Building O2 Bid & Award Building O2 Construct Swing Space Construct Building O2 Closeout 34,808,202	62.50%	C 21,755,126																												
	37.50%	NC 13,053,076																												
	4.96%	1,727,613								1,727,613																				
	7.72%	2,687,398								1,492,999	1,194,399																			
	4.41%	1,535,656									1,365,028	170,628																		
	3.31%	1,151,742										1,151,742																		
	62.50%	21,755,126										2,175,513	13,053,076	6,526,538																
<b>10. Building G - Performing Arts</b> Planning Bldg H Design Building H DSA Review Building H Bid & Award Building H Planning Bldg G Design Building G DSA Review Building G Bid & Award Building G Construct Building H Closeout Construct Swing Space for Bldg G Construct Building G Closeout 49,495,629	62.50%	C 27,497,572																												
	44.44%	NC 21,998,057																												
	2.94%	1,455,754										1,213,128	242,626																	
	4.58%	2,264,506											2,264,506																	
	2.61%	1,294,003											287,556	1,006,447																
	1.96%	970,503												970,503																
	2.94%	1,455,754										1,213,128	242,626																	
	4.58%	2,264,506											2,264,506																	
	2.61%	1,294,003												287,556	1,006,447															
	1.96%	970,503													970,503															
	27.78%	13,748,786														5,728,661	6,874,393	1,145,732												
	2.29%	1,132,253																1,132,253												
	27.78%	13,748,786														5,728,661	6,874,393	1,145,732												
2.29%	1,132,253																1,132,253													
15.69%	7,764,020										375,678	901,628	901,628	2,163,165	2,415,473	1,006,447														
<b>11. Building K - Art</b> Planning Design DSA Review & Approval Bid & Award Construct Swing Space for Bldg K Construct Building K Closeout 25,719,838	62.50%	C 16,074,899																												
	37.50%	NC 9,644,939																												
	4.96%	1,276,536		1,276,536																										
	7.72%	1,985,723		1,241,077	744,646																									
	4.41%	1,134,699			1,134,699																									
	3.31%	851,024				851,024																								
	62.50%	16,074,899				3,214,980	12,859,919																							
3.86%	992,861						992,861																							
13.24%	3,404,096		351,047	382,961	684,365	1,588,578	397,145																							
LAC	%	\$																												
	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	



LBCCD 2041 FACILITIES MASTER PLAN - ESTIMATED CASH FLOW



4/7/16 REV

LAC		Project Value	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
18. Building CDC - Child Development Center	62.50%	C 13,138,971																											
	37.50%	NC 7,883,383																											
	4.96%	1,043,389																						1,043,389					
	7.72%	1,623,049																							1,623,049	515,254			
	4.41%	927,457																							412,203	695,593			
	3.31%	695,593																								4,379,657	8,759,314		
	62.50%	13,138,971																								4,379,657	811,525		
	3.86%	811,525																								811,525	1,428,283		
21,022,354	13.24%	2,782,370																						166,942	400,661	786,483	1,428,283		
Sub Total:		574,519,341	5,286,815	8,858,399	27,770,994	29,973,141	35,413,045	33,345,236	35,967,178	40,546,669	40,145,274	41,346,760	56,660,244	38,042,536	17,136,139	16,324,542	5,722,701	160,284	160,284	160,284	160,284	160,284	5,895,342	11,299,832	16,226,067	54,982,769	49,107,320	3,468,966	197,953
LAC	%	\$																											
	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041

LBCCD 2041 FACILITIES MASTER PLAN - ESTIMATED CASH FLOW



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PCC	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	
	%	\$																												
<b>19. Building QQ/RR - Electrical Program / Dyer Hall / Lifetime Learning</b>	62.50%	C 12,689,351																												
	37.50%	NC 7,613,611																												
Planning	4.96%	1,007,684	1,007,684																											
Design	7.72%	1,567,508	1,567,508																											
DSA Review Building QQ/RR	4.41%	895,719	895,719																											
Bid & Award	3.31%	671,789	335,895																											
Construction	62.50%	12,689,351		10,574,459	2,114,892																									
Closeout	3.86%	783,754			783,754																									
<b>20,302,962</b>	13.24%	2,687,157	690,983	1,369,170	627,003																									
<b>20. Building MM - Construction Trades Phase 1</b>	62.50%	C 11,041,173																												
	37.50%	NC 6,624,704																												
Planning	4.96%	876,799			876,799																									
Design Building	7.72%	1,363,910			340,977	1,022,932																								
DSA Review & Approval	4.41%	779,377				519,585	259,792																							
Bid & Award Bldg MM	3.31%	584,533					584,533																							
Construct Bldg MM	62.50%	11,041,173						4,731,931	6,309,242																					
Closeout	3.86%	681,955							681,955																					
<b>17,665,877</b>	13.24%	2,338,131			196,403	336,691	746,001	1,059,036																						
<b>21. Building P2 - Parking Structure</b>	71.43%	C 15,352,714																												
	28.57%	NC 6,141,086																												
Planning	3.78%	812,791						812,791																						
Design	5.88%	1,264,341						1,264,341																						
DSA Review & Approval	3.36%	722,481							722,481																					
Bid & Award	2.52%	541,861							541,861																					
Construction	71.43%	15,352,714								15,352,714																				
Closeout	2.94%	632,171									632,171																			
<b>21,493,800</b>	10.08%	2,167,442						325,116	325,116	1,213,768	303,442																			
<b>22. Building MM - Construction Trades Phase 2</b>	62.50%	C 9,010,773																												
	37.50%	NC 5,406,464																												
Planning	4.96%	715,561					357,781	357,781																						
Design Building	7.72%	1,113,096						1,113,096																						
DSA Review & Approval	4.41%	636,055						282,691	353,364																					
Bid & Award Bldg MM	3.31%	477,041							477,041																					
Construct Swing Space	incl below	incl below																												
Construct Bldg MM	62.50%	9,010,773								9,010,773																				
Closeout	3.86%	556,548									556,548																			
<b>14,417,237</b>	13.24%	1,908,164					44,035	264,207	264,207	1,068,572	267,143																			
<b>23. Building OO - Classroom</b>	62.50%	C 73,794,000																												
	37.50%	NC 44,276,400																												
Planning	4.96%	5,860,112					976,685	4,883,426																						
Design	7.72%	9,115,729						5,317,509	3,798,221																					
DSA Review & Approval	4.41%	5,208,988							4,051,435	1,157,553																				
Bid & Award	3.31%	3,906,741								3,906,741																				
Construction	62.50%	73,794,000								19,131,778	32,797,333	21,864,889																		
Closeout	3.86%	4,557,865									4,557,865																			
<b>118,070,400</b>	13.24%	15,626,965					156,270	1,875,236	1,875,236	3,333,752	4,375,550	4,010,921																		
<b>24. Building FF - Demolish Fine Arts / Senior Center</b>	62.50%	C 1,583,500																												
	37.50%	NC 950,100																												
Planning	4.96%	125,749								125,749																				
Design	7.72%	195,609								78,244	117,365																			
DSA Review & Approval	4.41%	111,776									111,776																			
Bid & Award	3.31%	83,832										83,832																		
Construction	62.50%	1,583,500										1,583,500																		
Closeout	3.86%	97,804										97,804																		
<b>2,533,600</b>	13.24%	335,329								28,743	57,485	249,102																		
<b>PCC</b>	%	\$																												
	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	

LBCCD 2041 FACILITIES MASTER PLAN - ESTIMATED CASH FLOW



4/7/16 REV

PCC	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
	62.50% C	37.50% NC																											
<b>25. PCC Walkways &amp; Wayfinding</b>																													
Planning	4.96%	127,683		127,683																									
Design	7.72%	198,618			198,618																								
DSA Review & Approval	4.41%	113,496			88,274	25,221																							
Bid & Award	3.31%	85,122				85,122																							
Construction	62.50%	1,607,857				41,531	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197	71,197
Closeout	3.86%	99,309																										99,309	
<b>2,572,571</b>	<b>13.24%</b>	<b>340,487</b>		15,322	61,288	31,626	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	10,438	2,610
<b>Sub Total:</b>		<b>197,056,447</b>	<b>4,497,789</b>	<b>12,422,529</b>	<b>3,873,829</b>	<b>1,597,679</b>	<b>3,495,613</b>	<b>22,900,086</b>	<b>20,540,828</b>	<b>54,490,020</b>	<b>39,300,448</b>	<b>32,529,548</b>	<b>81,635</b>	<b>101,918</b>															
PCC	%	\$																											
	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041

LBCCD 2041 FACILITIES MASTER PLAN - ESTIMATED CASH FLOW



4/7/16 REV

DISTRICT WIDE	Project Value		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041		
	%	\$																													
26. District Wide Security Monitoring Systems (Cameras)	75.00%	C 7,500,000																													
	25.00%	NC 2,500,000																													
Planning	3.00%	300,000	300,000																												
Design	5.50%	550,000	330,000	220,000																											
DSA Review & Approval	2.50%	250,000		250,000																											
Bid & Award	2.00%	200,000		200,000																											
Construction	75.00%	7,500,000		4,687,500	2,812,500																										
Closeout	2.00%	200,000			200,000																										
10,000,000	10.00%	1,000,000	150,000	468,182	381,818																										
27. Joint Use Facility	62.50%	C 17,073,438																													
	37.50%	NC 10,244,063																													
Planning	4.96%	1,355,832			1,355,832																										
Design	7.72%	2,109,072			527,268	1,581,804																									
DSA Review & Approval	4.41%	1,205,184				803,456	401,728																								
Bid & Award	3.31%	903,888					903,888																								
Construction	62.50%	17,073,438					6,402,539	10,670,898																							
Closeout	3.86%	1,054,536						703,024	351,512																						
27,317,500	13.24%	3,615,551			333,743	500,615	1,049,535	1,598,454	133,205																						
28. Technology Refresh/Replacement																															
2016/17 - 2040/41 (approx 294 mos)		69,558,000			2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	2,839,102	1,419,551	
69,558,000																															
29. Enterprise Wide Computer System																															
2016/17 - 2040/41 (approx 294 mos)		20,000,000			816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	408,163	
20,000,000																															
30. Landscaping																															
2016/17 - 2040/41 (approx 294 mos)		20,000,000			816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	816,327	408,163	
20,000,000																															
31. Infrastructure Project(s)																															
2016/17 - 2040/41 (approx 294 mos)		25,000,000			1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	1,020,408	510,204	
25,000,000																															
32. Energy/Water Conservation Proj(s)																															
2015/16 - 2040/41 (approx 309 mos)		25,000,000	242,718	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	970,874	485,437	
25,000,000																															
33. Minor Campus Improvements																															
2016/17 - 2040/41 (approx 294 mos)		30,000,000			1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	1,224,490	612,245	
34. Surface Parking Improvements																															
2016/17 - 2040/41 (approx 294 mos)		10,000,000			408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	408,163	204,082	
10,000,000																															
Sub Total:		236,875,500	1,022,718	6,796,556	13,706,851	10,981,565	16,853,380	21,068,067	8,580,407	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	4,047,845		
DISTRICT WIDE	%	\$																													
		Project Value	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041		

SUMMARY

LAC:	574,519,341	5,286,815	8,858,399	27,770,994	29,973,141	35,413,045	33,345,236	35,967,178	40,546,669	40,145,274	41,346,760	56,660,244	38,042,536	17,136,139	16,324,542	5,722,701	160,284	160,284	160,284	160,284	160,284	160,284	5,895,342	11,299,832	16,226,067	54,982,769	49,107,320	3,468,966	197,953	
PCC:	197,056,447	4,497,789	12,422,529	3,873,829	1,597,679	3,495,613	22,900,086	20,540,828	54,490,020	39,300,448	32,529,548	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	81,635	101,918
DISTRICT WIDE:	236,875,500	1,022,718	6,796,556	13,706,851	10,981,565	16,853,380	21,068,067	8,580,407	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	8,095,690	4,047,845	
GRAND TOTAL:	1,008,451,288	10,807,322	28,077,483	45,351,674	42,552,385	55,762,037	77,313,389	65,088,413	103,132,380	87,541,413	81,971,998	64,837,569	46,219,861	25,313,464	24,501,867	13,900,026	8,337,609	8,337,609	8,337,609	8,337,609	8,337,609	8,337,609	14,072,667	19,477,157	24,403,392	63,160,094	57,284,645	11,646,291	4,347,716	

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