

ADDENDUM

to the Final Environmental Impact Report

DOUGLAS PARK REZONE PROJECT

(Formerly the PacifiCenter @ Long Beach)

SCH No. 2001051048

AUGUST 2009

**Lead Agency:
City of Long Beach**



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**Lead Agency:
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Development Services
333 West Ocean Boulevard
Long Beach, California 90802
Contact: Meredith Elguira
(562) 570-5237



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SECTION I
INTRODUCTION



SECTION I

INTRODUCTION

A. Background

This document is an Addendum to the Final Environmental Impact Report (EIR) prepared for the Douglas Park Project (formerly the PacifiCenter @ Long Beach) (SCH No. 2001051048), certified by the City of Long Beach in 2004. In accordance with the California Environmental Quality Act (CEQA), this Addendum addresses the environmental impacts associated with proposed changes to the Douglas Park Project approved by the City of Long Beach in 2004. As discussed below and in more detail in Section II, Project Description, of this Addendum, modifications to the approved Douglas Park Project (referred to as the Douglas Park Rezone Project) are proposed by the Project Applicant, the Boeing Company. These modifications are generally located in the northern portion of the Project site and include replacement of residential uses with commercial, light industrial and retail uses.

The Draft EIR for the PacifiCenter @ Long Beach Project analyzed a mixed-use development program for the approximately 261-acre Project site. Of the 261 acres, approximately 238 acres are located within the City of Long Beach while the remaining 23 acres are located within the City of Lakewood. The PacifiCenter @ Long Beach Project as evaluated in the Draft EIR included approximately 3.3 million square feet of commercial uses (office, research and development, light industrial, retail, and aviation-related uses) as well as 400 hotel rooms. Of the 3.3 million square feet of commercial area, the Draft EIR assumed that up to 360,000 square feet may be located in the City of Lakewood. In addition, the Draft EIR assumed that a maximum of 150,000 square feet of the 3.3 million square feet of commercial/light industrial uses could consist of retail uses. The Draft EIR also evaluated a residential component that included 2,500 single-family and multi-family residential units of various product types.

The Draft EIR was circulated for an extended 60-day review period that commenced on February 11, 2004. Each of the comments received during the Draft EIR were then responded to as part of a Final EIR that was prepared in accordance with CEQA. During

the preparation of the Final EIR, the Project Applicant indicated its preference for a reduced development project. This reduced project, referred to as the Douglas Park Project, was consistent with the Reduced Intensity Alternative described in the Draft EIR. As discussed in Section II, Project Description, of this Addendum, under the Douglas Park Project, the amount of residential units was reduced from 2,500 to 1,400 units. Similar to the Project as originally proposed, the Douglas Park Project included 3.3 million square feet of mixed-commercial and light industrial development as well as 400 hotel rooms. Of the 3.3 million square feet of commercial uses, a maximum of 200,000 square feet of retail uses could be built. In addition, the Douglas Park Project also included 10.5 acres of park space as well as 2.5 acres for view corridors/pedestrian easements and bicycle paths. The Douglas Park Project also included reduced building heights and increased setbacks in some areas of the site. Findings for the Douglas Park Project were made at the Long Beach Planning Commission public hearing on October 7, 2004 (Douglas Park Planned Development [PD-32] Rezoning Findings, Case No. 0404-13). In addition, on December 21, 2004, the City of Long Beach approved the Douglas Park Project (Ordinance No. C-7960 and Ordinance No. C-7958) and also certified the Final EIR. Accordingly, the currently entitled Douglas Park Project is referred to within this Addendum as the Approved Project and the Final EIR is referred to as the Certified EIR.

B. CEQA Authority for the Addendum

As indicated above, this document is an Addendum to the Certified EIR and addresses the proposed changes to the Douglas Park Project set forth in the Certified EIR. The Certified EIR included all statutory sections required by CEQA, comments received on the Draft EIR, responses to comments on the Draft EIR, and supporting technical appendices. CEQA and the CEQA Guidelines establish the type of environmental documentation which is required when changes to a project occur after an EIR is certified. Section 15164(a) states that:

“The lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred”.

Section 15162 of the CEQA Guidelines requires a Subsequent EIR where an EIR has already been prepared under the following circumstances:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2. Substantial changes occur with respect to the circumstances under which the project is undertaken, which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration,
 - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR,
 - c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative, or
 - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The analysis in this Addendum evaluates the environmental impacts associated with the proposed Douglas Park Rezone Project (also referred to as the Revised Project) in order to determine whether any significant environmental impacts, which were not identified in the Certified EIR would result or whether previously identified significant impacts would be substantially more severe.

C. General Format of the Addendum Analysis

The environmental analysis in this Addendum follows the same outline and uses the same thresholds of significance as those used in the Certified EIR. The analyses presented in the Addendum address each of the environmental issues analyzed in the Certified EIR and focus on the potential changes in environmental impacts due to the Revised Project. The analysis of each environmental issue first summarizes the findings of the Certified EIR, and then analyzes the potential physical effects of the Revised Project. These impacts attributable to the Revised Project are then compared with the analysis and findings within the Certified EIR to determine if such impacts are within the envelope of impacts documented in the Certified EIR. In addition, any changes to the mitigation

measures of the Approved Project are also provided where necessary for each of the issue areas addressed in the Certified EIR.

D. Summary of Addendum Conclusion

This document evaluates the environmental consequences of the Douglas Park Rezone Project or Revised Project in order to determine whether any additional significant environmental impacts which were not identified in the Certified EIR would occur or whether any previously identified significant impacts would be substantially more severe. As demonstrated by the analysis herein, the Revised Project would not result in any additional significant impacts nor would it increase the severity of previously anticipated significant impacts. Rather, all of the impacts associated with the Revised Project are within the envelope of impacts addressed in the Certified EIR and/or do not constitute a new or greater significant impact. Based on this determination, an Addendum is the appropriate form of CEQA documentation to address the Revised Project.

SECTION II

PROJECT DESCRIPTION



SECTION II

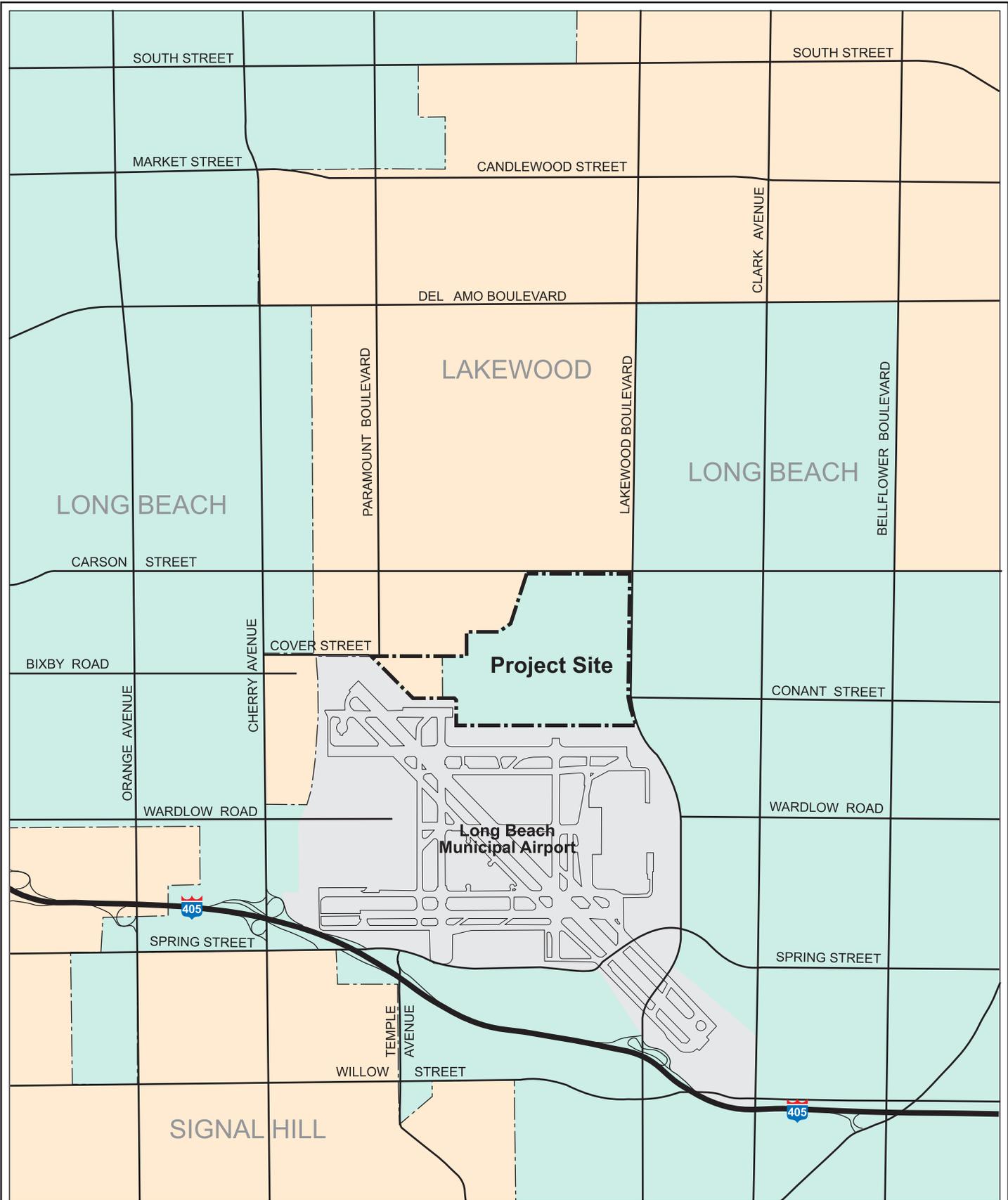
PROJECT DESCRIPTION

A. Project Location and Setting

The Project site is located approximately five miles northeast of downtown Long Beach and immediately north of the Long Beach Municipal Airport (the Airport) as shown in Figure II-1 on page II-2. The Project site encompasses a total of 261 acres, with a majority of the Project site (approximately 238 acres) located within the City of Long Beach and the remaining portion of the site (approximately 23 acres) located within the City of Lakewood. In general, the Project site is bound by Carson Street on the north, the Airport on the south and southwest, Lakewood Boulevard on the east, and the Airport and Lakewood Country Club Golf Course on the west.

Surrounding land uses include two Boeing facilities. The Boeing 717 facility is located east of the Project site along Lakewood Boulevard and the Boeing military C-17 facility is located southwest of the site and west of the Airport. The area immediately north of Carson Street is located within the City of Lakewood and generally includes single-family residences in an area referred to as the Lakewood Country Club Estates and the Lakewood Country Club Golf Course. The closest residences to the Project site within this neighborhood are oriented such that the rear yards face Carson Street and are buffered from Carson Street by a block wall and mature trees and other landscaping. The Lakewood Country Club Golf Course also extends to the south of Carson Street and borders the Project site to the west. Existing commercial development is located near the intersection of Lakewood Boulevard and Carson Street, as well as west of the Lakewood Country Club Golf Course. In addition, the Lakewood Village residential area within the City of Long Beach is located further to the northeast of the intersection of Carson Street and Lakewood Boulevard. Other land uses within the surrounding area include the Sky Links Golf Course to the southeast of the site and Long Beach City College to the north and east of the Boeing 717 facility, both of which are located in the City of Long Beach.

In addition to Lakewood Boulevard, a designated regional corridor, and Carson Street, a major arterial, other major roadways in the area surrounding the Project site include Spring Street to the south and Cherry Avenue to the west, both of which are



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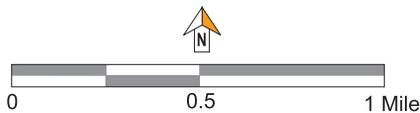


Figure II-1
Project Site Location and Vicinity Map

classified as major arterials. The Project site is also within close proximity to the San Diego Freeway (I-405), the Long Beach Freeway (I-710), the Artesia Freeway (SR-91), and the San Gabriel River Freeway (I-605).

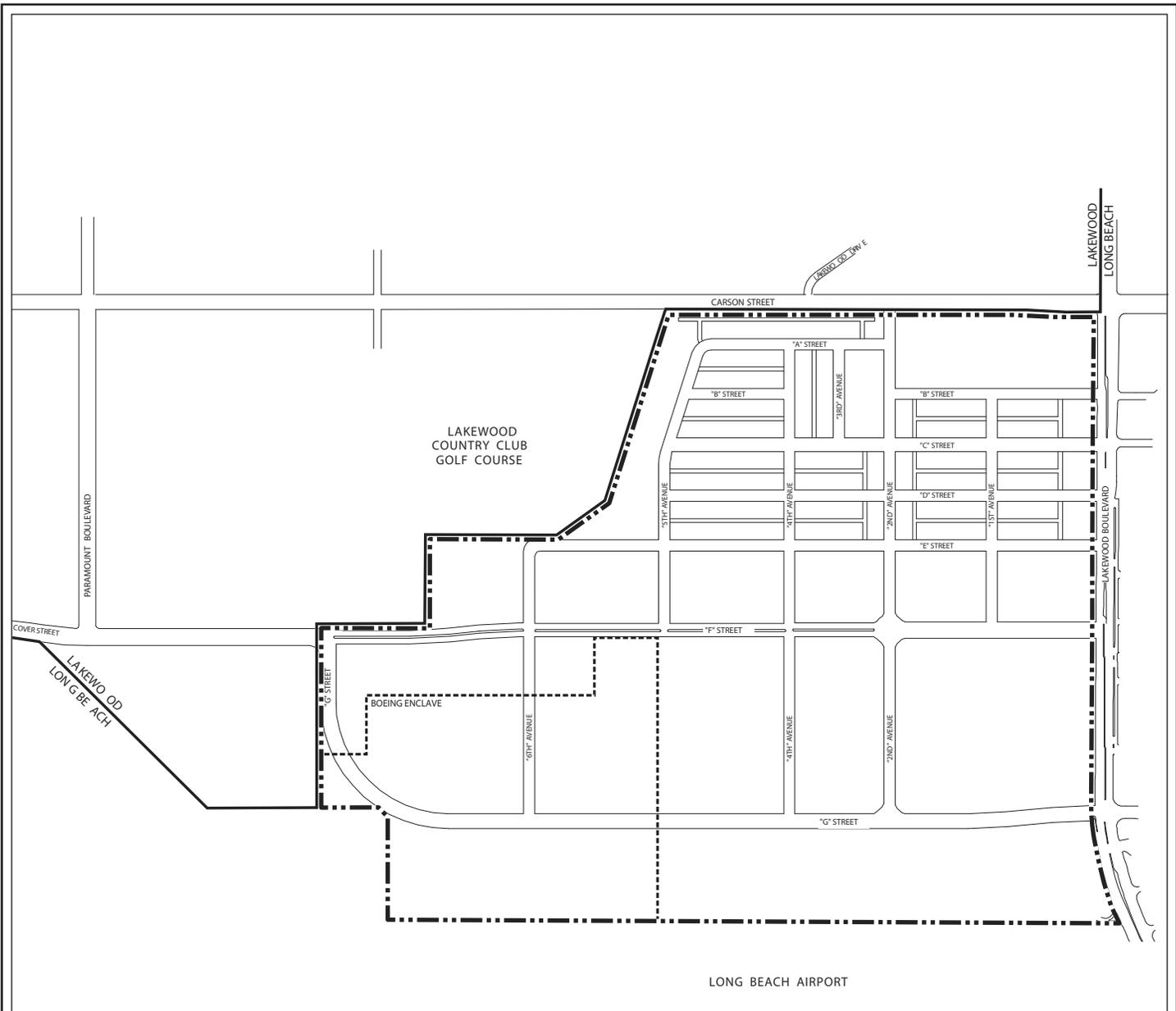
As part of an approved remediation program that has been underway within the site, many of the former structures on-site have been removed and a large portion of the 261-acre Project site is currently vacant. However, the 48-acre Boeing Enclave, which includes a variety of aircraft production-related uses, continues to be operational. In addition, several infrastructure improvements have been completed or are underway as part of the Douglas Park Project approved for the site (described in more detail below).

B. Description of the Approved Project

As discussed in Section I, Introduction, of this Addendum, the Draft EIR for the PacifiCenter @ Long Beach Project analyzed approximately 3.3 million square feet of mixed commercial and light industrial development (which included a maximum of 150,000 square feet of retail uses), 400 hotel rooms, and 2,500 single-family and multi-family residential units. During the preparation of the Final EIR, the Project Applicant indicated its preference for the Douglas Park Project, which reduced the amount of residential units from 2,500 to 1,400 units.¹ The Douglas Park Project was approved by the City of Long Beach in 2004 and thus, is herein referred to as the Approved Project.

Specifically, the Approved Project provided for the development of 1,400 residential units along with 3.3 million square feet of mixed commercial and light industrial development (which included a maximum of 200,000 square feet of retail uses), 400 hotel rooms, and 10.5 acres of park space, with an additional 2.5 acres for view corridors/pedestrian easements and bicycle paths. As described in the Final EIR, the residential development component of the Approved Project was proposed to be located on approximately 101 acres in the northern portion of the site and was proposed to include single-family detached homes, townhomes, townhome/flat combinations, condominiums, and apartments. The commercial/light industrial uses (consisting of office, aviation-related uses, and light industrial uses) as well as the retail and office uses were proposed to be located on approximately 160 acres located within the southern portion of the site, closest to the Long Beach Municipal Airport. Figure II-2 on page II-4 provides a general site plan for the Approved Project.

¹ *Final Environmental Impact Report for Douglas Park Project (formerly PacifiCenter @ Long Beach), September 2004, State Clearinghouse No. 2001051048.*



NOTE : Street names will change in the future

-  PD Boundary
-  City Boundary
-  Boeing Enclave
 (This sub area will allow aircraft-manufacturing uses to continue. Should Boeing declare its intention to abandon current aviation-related uses within this sub area, the area will be developed with uses consistent with sub area 8A)

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Figure II-2
Approved Project - General Site Plan

As part of the Approved Project, Development Standards for Planned Development District 32 (PD-32) were approved and adopted by the City on December 21, 2004.² Per the Development Standards for PD-32, the Approved Project would be subject to maximum height zones and setbacks. The height zones are shown in Figure II-3 on page II-6 and range from 28 feet and two stories to 100 feet and nine stories. All height zones would comply with Federal Aviation Administration (FAA) safety requirements set forth in Federal Aviation Regulations (FAR) Part 77. Setbacks for the Approved Project as set forth under PD-32 are shown in Figure II-4 on page II-7 and range from 2 feet to 55 feet.

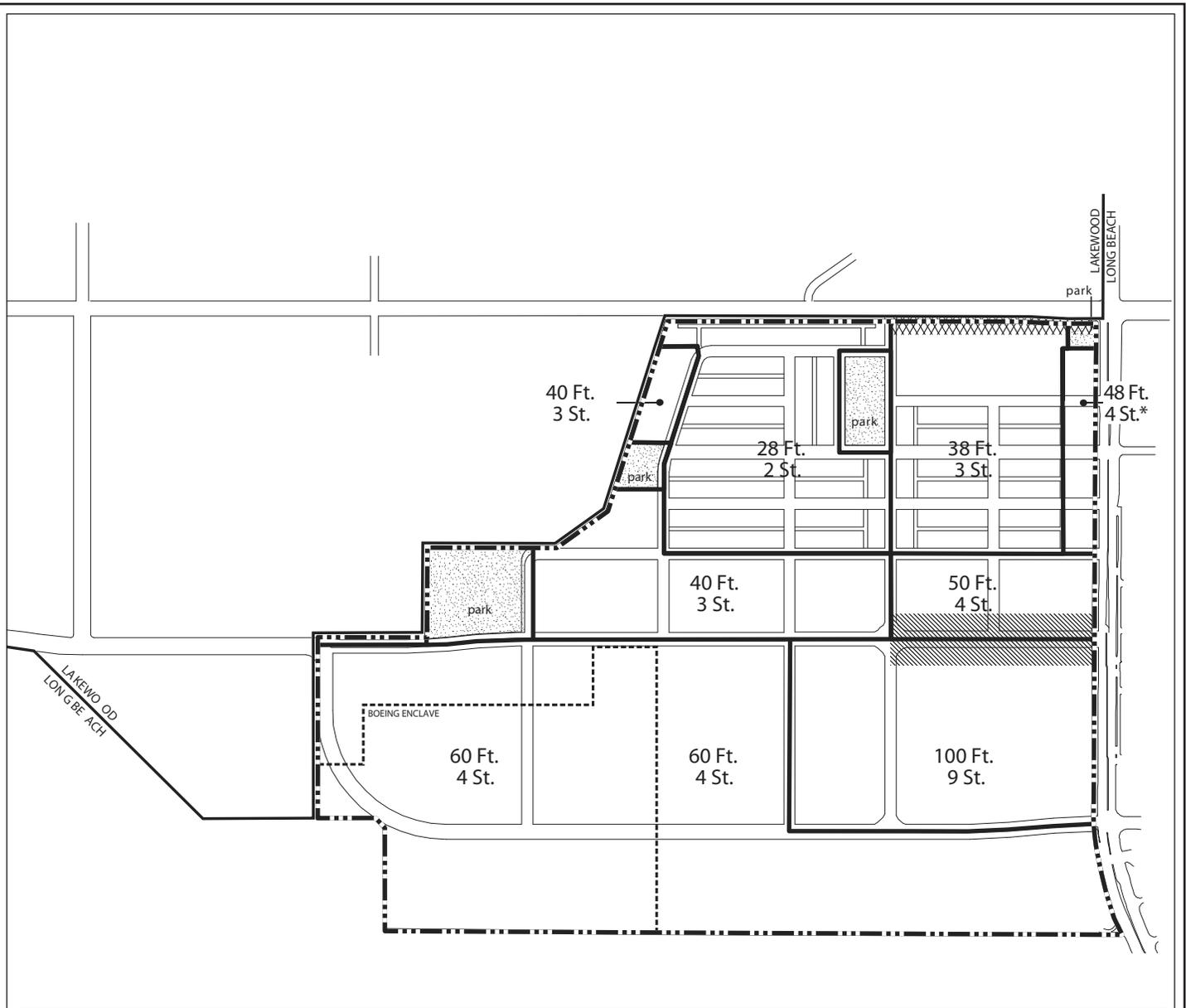
As part of the Approved Project, park space would be provided within park sites, shown in Figure II-4, as well as along bicycle paths/pedestrian easements throughout the site. In addition, PD-32 specified that at least 9.3 acres of public park spaces be provided excluding private park space that would be located along Second Avenue.

The Approved Project would also provide circulation improvements through the site and along the local street network, as shown in Figure II-5 on page II-8. One access point would be provided from Carson Street, and six access points would be provided from Lakewood Boulevard via internal east-west streets. The existing access from Paramount Boulevard and Cover Street would be reconstructed/realigned. Additional streets would be developed to provide internal circulation. The Approved Project would continue the existing Class I bicycle path along Carson Street from Lakewood Boulevard to the western boundary of the site. Additionally, the Carson Street Class I bicycle path would be extended from Carson Street to the south along the western perimeter of the site (adjacent to the Lakewood Country Club Golf Course), and then west to the Paramount Boulevard/Cover Street intersection.

As part of the Approved Project, a 66-kV substation with a maximum footprint of approximately 305 feet by 230 feet would be provided within the site. This substation would serve the Project site and other off-site areas.

On-site parking would be provided for the proposed uses. Under the Approved Project, parking would comply with Long Beach and Lakewood Municipal Code parking requirements and may include surface and/or structured parking. On-street parking within the Project site may be used to accommodate guest parking requirements for some specified residential and retail uses as well as to accommodate parking requirements for the on-site parks.

² *City of Long Beach, Ordinance No. C-7958.*



Story (St.): As defined in LBMC Chapter 21.15.2940

* Maximum 3 Habitable Residential Stories



Proposed Parks
(Maximum Bldg. Height = 30 Ft. with exceptions for band shells, overhead structures and sculptural elements)



Mixed-Use Overlay Zone
(See special development standards for sub areas 1A & 7)

NOTE: The maximum height limits indicated on this map are further detailed in the special development standards. These heights shall be used in conjunction with Part 77 of the FAA Regulations Map dated 6-21-1982 (or as updated).

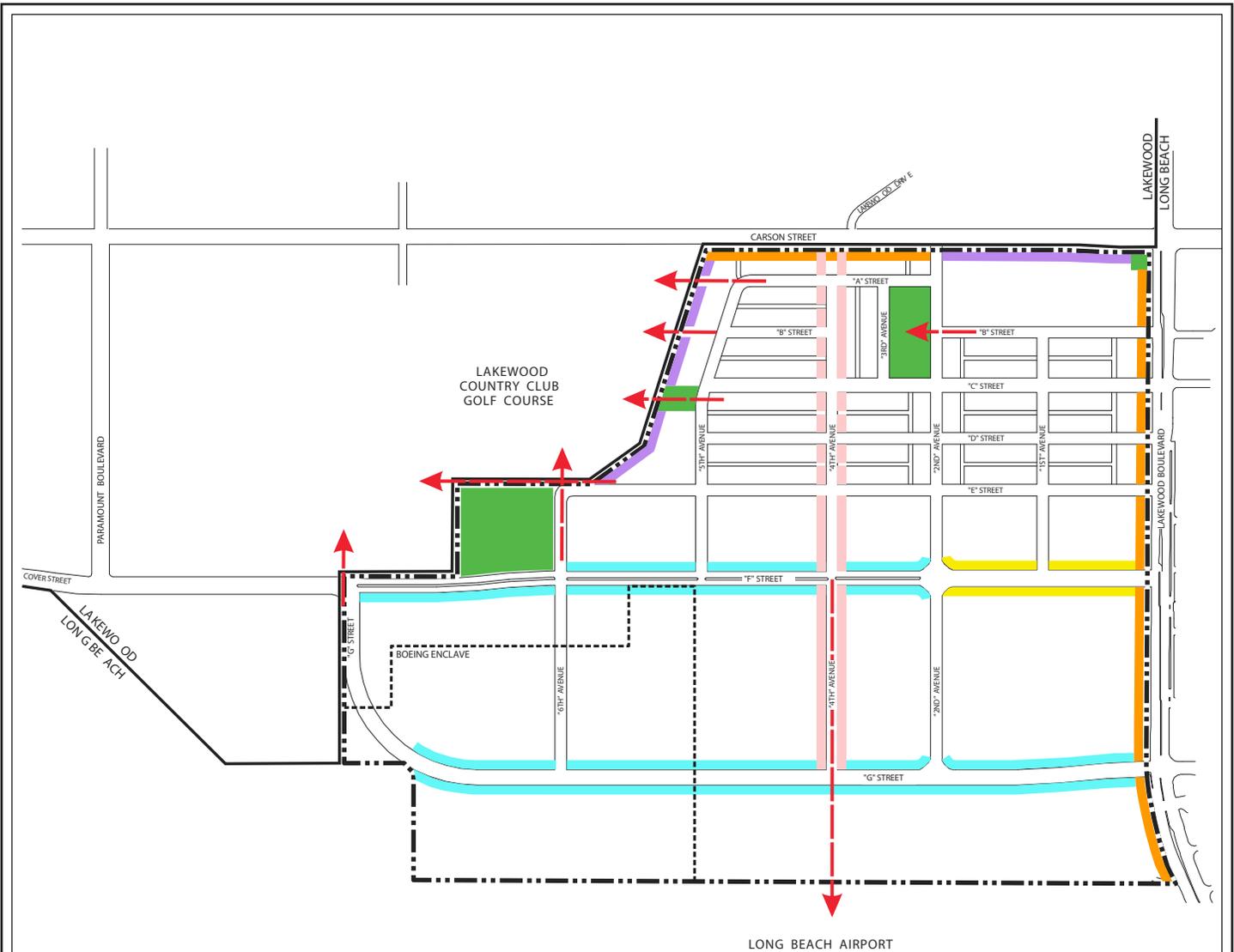


35-foot height limitation
This height zone runs from the curb at Carson Street to a line 100 ft. south of the curb, and from Lakewood Blvd. at the east to 2nd Street along the west. (See special development standards for sub area 3)

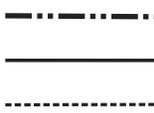
Douglas Park Addendum



Figure II-3
Approved Project - Height Zone Plan



NOTE : Street names will change in the future



PD Boundary
 City Boundary
 Boeing Enclave
 (This sub area will allow aircraft-manufacturing uses to continue. Should Boeing declare its intention to abandon current aviation-related uses within this sub area, the area will be developed with uses consistent with sub area 8A)

- 2 ft min Setback
- 10 ft min Setback
- 18 ft min Setback
- 26 ft min Setback
- 55 ft min Setback
- Park Space

View Corridors
 (Alignments shown on map are general in nature)

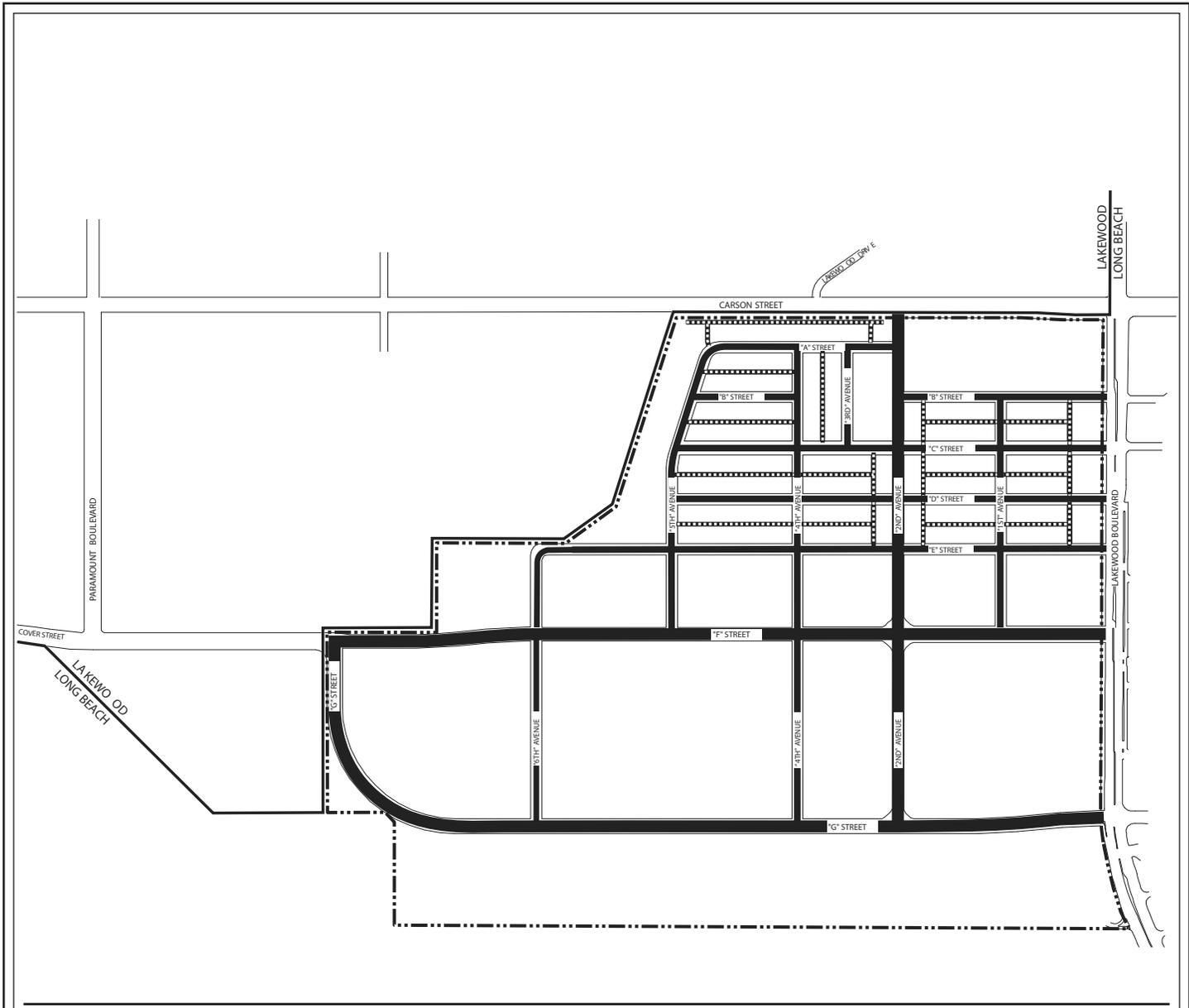
***NOTE:** Setback Plan has been simplified for this Addendum. Not all setbacks and setbacks are shown. Only major setbacks along public streets and adjacent to the golf course are shown. Please refer to the approved PD-32 Development Standards for descriptions of all setbacks and setbacks.

Note: In addition to those shown, most internal roadways have 10 or 15-foot setbacks, depending on whether they are front, side, or rear yards, with exceptions made for encroachment by stoops and porches.

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Figure II-4
 Approved Project - Generalized Setback Plan



-  PD Boundary
-  Collector Street
-  Local Street
-  Required Private Alley

Note: All on-site infrastructure will be developed in accordance with the infrastructure phasing plan in the Development Agreement (DA).

This map represents the street infrastructure at full build-out but does not include any additional private roads that might be necessary for access to individual buildings within any development parcels.

— Douglas Park Addendum



Figure II-5
Approved Project - Circulation Plan

Source: PD-32 Development Standards, City of Long Beach, 2004.

Landscaping would also be provided throughout the site along the primary pedestrian walkways, within certain roadway medians, within building setbacks, and at the entrances to the Project site. Landscaping would be installed along the northern and eastern perimeter of the Boeing Enclave as well as around proposed parking structures. PD-32 also included a specific Master Street Tree Plan for the Project site.

The Approved Project would be developed in phased increments and was assumed to be complete by 2020. In addition, the 48-acre Boeing Enclave, which includes a variety of aircraft production-related uses was assumed to be operational during the development period until Boeing no longer has use for the Enclave. Construction activities were assumed to occur in accordance with the permitted hours and days of construction specified in City of Long Beach and Lakewood Municipal Codes.

C. Description of the Revised Project

The proposed Douglas Park Rezone Project (Revised Project) would modify the entitled land uses and design of the Approved Project. The Revised Project would replace the Approved Project's residential uses with additional commercial uses. Specifically, as shown in Table II-1 on page II-10, the Revised Project would include up to approximately 3.75 million square feet of commercial/light industrial uses, up to 250,000 square feet of retail uses, and a hotel uses consisting of a total of up to 400 rooms. Additional retail space could be developed in the expansion areas of Subarea 1 and Subarea 2 of PD-32 North (described below) provided there is a reduction of 1.5 square feet of office or industrial space for every 1.0 square foot of retail space proposed. Figure II-6 on page II-11 provides a site plan for the Revised Project, illustrating the northern portion of the site where residential and other uses were previously approved. As shown therein, retail uses would be located within the northeastern portion of the site, with office uses located to the west and south of this area. Research and development and commercial/light industrial uses would be located within the remaining areas of the Project site. Additionally, approximately 10 acres of community open space are proposed in the form of Donald Douglas Plaza, Jansen Green, bike paths, an enhanced McGowen Street parkway, street gateways, mid-block pedestrian connections, and landscape buffers. As shown in Figure II-6, the primary proposed community open space area would be approximately 2.2 acres (referred to as Jansen Green) and would be located in the western portion of the Project site abutting the Lakewood Country Club Golf Course. Several smaller open space areas would be located throughout the site, with pedestrian connections. In total, approximately 10 acres of community open space would be provided. Figure II-7 on page II-12 illustrates a site plan for the southern portion of the Project site, where office, commercial, hotel, light industrial, and aviation-related uses would be permitted, similar to the Approved Project.

**TABLE II-1
COMPARISON OF APPROVED PROJECT AND REVISED PROJECT**

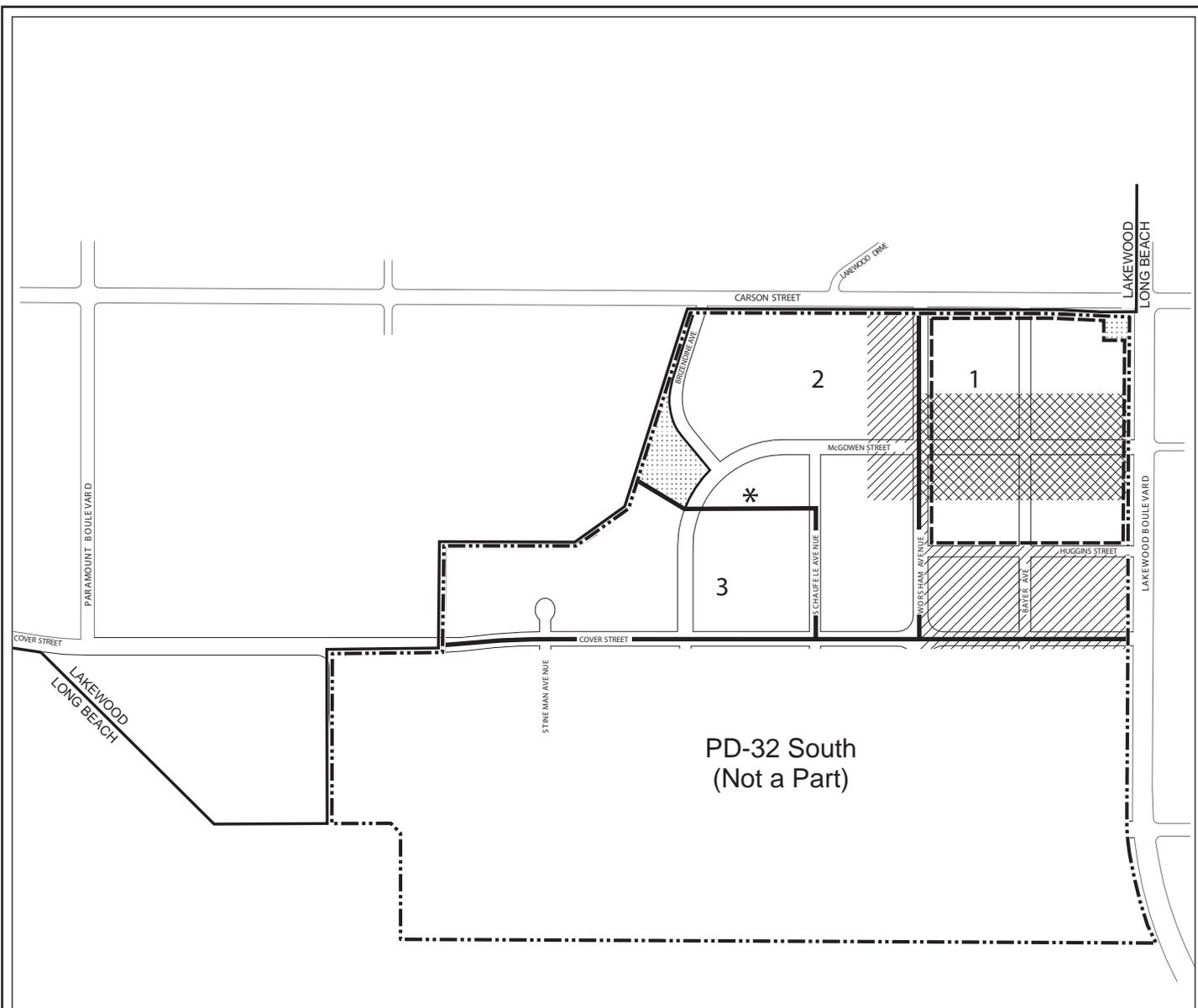
Land Uses	Approved Project	Revised Project	Change
Residential	1,400 du	0 du	-1,400 du
Commercial (Office/R&D/Light Industrial)	3,100,000 sf	3,750,000 sf ^a	+650,000 sf
Retail	200,000 sf	250,000 sf ^a	+50,000 sf
Hotel Rooms	400 rooms	400 rooms	0
Open Space	13.5 acres	10 acres	3.5 acres

^a Additional retail space could be developed in the expansion areas of Subarea 1 and Subarea 2 of PD-32 North provided there is a reduction of 1.5 square feet of office or industrial space for every 1.0 square foot of retail space proposed.

Source: Matrix Environmental, 2009.

To provide for implementation of the Revised Project, the currently adopted Development Standards for Planned Development District 32 (PD-32) would be revised. Specifically, PD-32 North and PD-32 South are proposed. PD-32 North would be applicable to that portion of the Project site located north of Cover Street (i.e., the previously designated Housing areas) and would reflect the Revised Project’s proposed revisions to the land use and design standards for this Project area. PD-32 South would be applicable to that portion of the Project site located south of Cover Street. Since the Revised Project does not propose any land use or design changes to this portion of the Project site, PD-32 South would reflect the adopted PD-32 land use and design standards for this area. The corresponding PD-32 Design Guidelines would also be amended to reflect the north and south areas of the site. Thus, the proposed guidelines are referred to as the PD-32 North Design Guidelines and the PD-32 South Design Guidelines.

Under the new PD-32 North zoning, the northern portion of the site would be generally divided into three subareas, with Subarea 1 designated for mixed uses (i.e., “main street” retail, office, and hotel), Subarea 2 designated for office and retail expansion, and Subarea 3 designated for office and R&D/light industrial uses, with all three subareas located north of Cover Street (previously referred to as A Street). Figure II-6 shows the three subareas of PD-32 North. In order to provide flexibility for modifications to land uses and square footages in response to changing market conditions, an equivalency program is proposed for Subarea 1 and Subarea 2 where 1.5 square feet of office/industrial development could be substituted for 1.0 square feet of retail development. Such land use substitution would only be permitted to occur so long as no additional environmental



Main Street Overlay Zone
(See special development standards for sub area 1)



Primary Retail Zone



Retail Expansion Zone



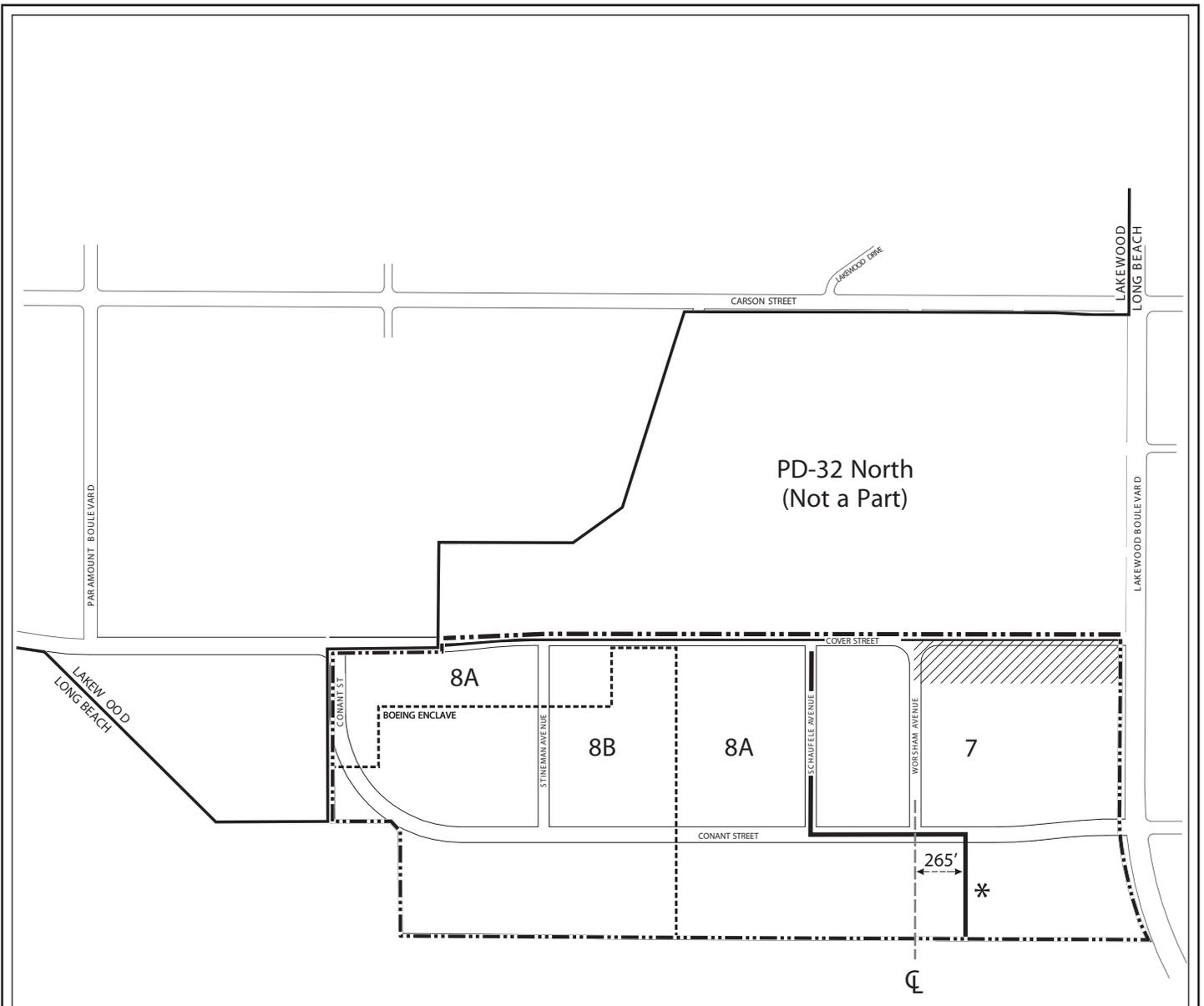
Open Space Amenity : Community Open Space
(Fixed Location)



Approximate Sub Area Boundary +/- 645' North of Cover Street
(Boundaries shown at locations other than at rights-of-way are general, and subject to Final Site Plan approval)

Sub Area	Permitted Uses ^a
Sub Area 1	Mixed-Use: Office; Hotel; "Main Street" Commercial & Retail; Community Open Space
Sub Area 2	Office; Retail (expansion zone); Community Open Space
Sub Area 3	Office; Research & Development; Light Industrial; Community Open Space

^a Please refer to PD-32: North Development Standards for full details regarding permitted uses for each sub area.



----- Boeing Enclave (8B)
 (Aircraft manufacturing will be allowed to continue in this sub area. Should Boeing declare its intention to abandon current aviation-related uses there, the sub area will be developed with uses consistent with sub area 8A)

 Mixed-Use Overlay Zone
 (See special development standards for sub area 7)

* Approximate Sub Area Boundary
 (Boundaries shown at locations other than at rights-of-way are general, and subject to Subdivision Map approval)

Sub Area	Permitted Uses ^a
Sub Area 7	Office & "Main Street" Commercial, Hotel, Light Industrial, Aviation-related Uses, Community Open Space
Sub Area 8A	Office, Commercial, Light Industrial, Aviation-Related Uses, Community Open Space
Sub Area 8B	Continued Aircraft Manufacturing Support, Light Industrial, Community Open Space

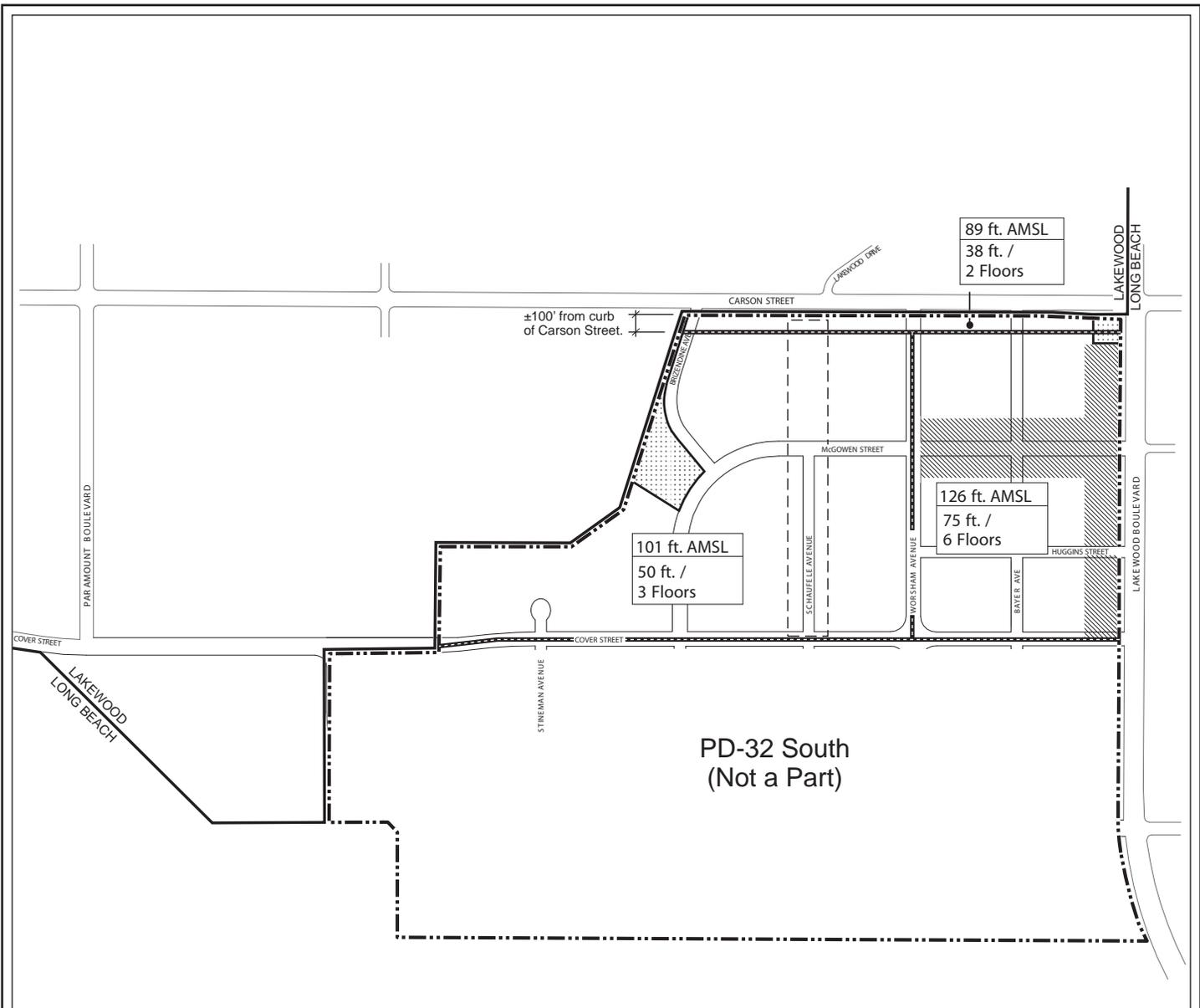
^a Please refer to PD-32: North Development Standards for full details regarding permitted uses for each sub area.

impacts result from such an exchange. PD-32 South zoning would reflect the currently approved land uses for this area, and thus, would remain designated for office, commercial, retail, light industrial, hotel, and aviation-related uses, as shown in Figure II-7.

As part of the revised PD-32 North, the height zones would be modified to provide for heights within the northern portion of the site that range from a maximum of 38 to 75 feet. As shown in Figure II-8 on page II-14, a 38-foot height zone would be located along Carson Street; a 50-foot height zone would be located to the immediate south, west of Worsham Avenue (previously known as 2nd Avenue); and a 75-foot height zone would be located south of the 38-foot height zone and east of Worsham Avenue to Lakewood Boulevard. The maximum building heights under these height zones would generally be similar to or less than those set forth for the Approved Project. The height zones for PD-32 South would reflect the currently approved height zones. Specifically, the 60-foot height zone would remain in the western portion, and the 100 foot height zone would remain in the eastern portion. Figure II-9 on page II-15 shows the height zones for PD-32 South. All height zones would comply with FAR Part 77.

Building setbacks for PD-32 North would also be revised, as shown in Figure II-10 on page II-16, and would range from 0 feet to 26 feet from the right-of-way. The building setback along Carson Street would appear as 40 feet from the street, as a 10-foot setback would be provided in addition to a 30-foot landscaped bike trail, sidewalk and parkway. Within Subareas 2 and 3, most setbacks from internal streets would be 18 feet wide, with the exception that setbacks would not be required adjacent to open space corner elements at many of the street intersections. In addition, an 18-foot setback would be implemented along the northwestern property line adjacent to the Lakewood Country Club Golf Course, and setbacks from interior property lines would be limited to 5 feet. Within Subarea 1, building setbacks from Bayer Avenue and Huggins Street would be 11 feet from the edge of the street. Setbacks would not be required along the eastern edge of Worsham Avenue within the primary retail area. A 26-foot setback would be retained along Lakewood Boulevard, as under the Approved Project. Building setbacks for PD-32 South would remain unchanged and would include setbacks from internal streets ranging from 2 to 55 feet, as shown in Figure II-11 on page II-17.

The circulation improvements of the Approved Project would also be modified under the Revised Project. As shown in Figure II-12 on page II-18, three points of access would be provided from Carson Street at Brizendine, Worsham, and Bayer Avenues. Up to five access points would also be provided along Lakewood Boulevard at McGowen, Cover, and Conant Streets, with optional access at Huggins Street as well as at a private driveway at the southern edge of the Project site. Bicycle access would be provided at Brizendine Avenue, Cover, and Conant Streets, with bike lanes provided throughout portions of the site.



Floors represent stories, as defined in LBMC Chapter 21.15.2940



Community Open Space (Fixed Location)
(Maximum Bldg. Height = 30 Ft.)



Height Zone Boundary



Building Restriction Zone



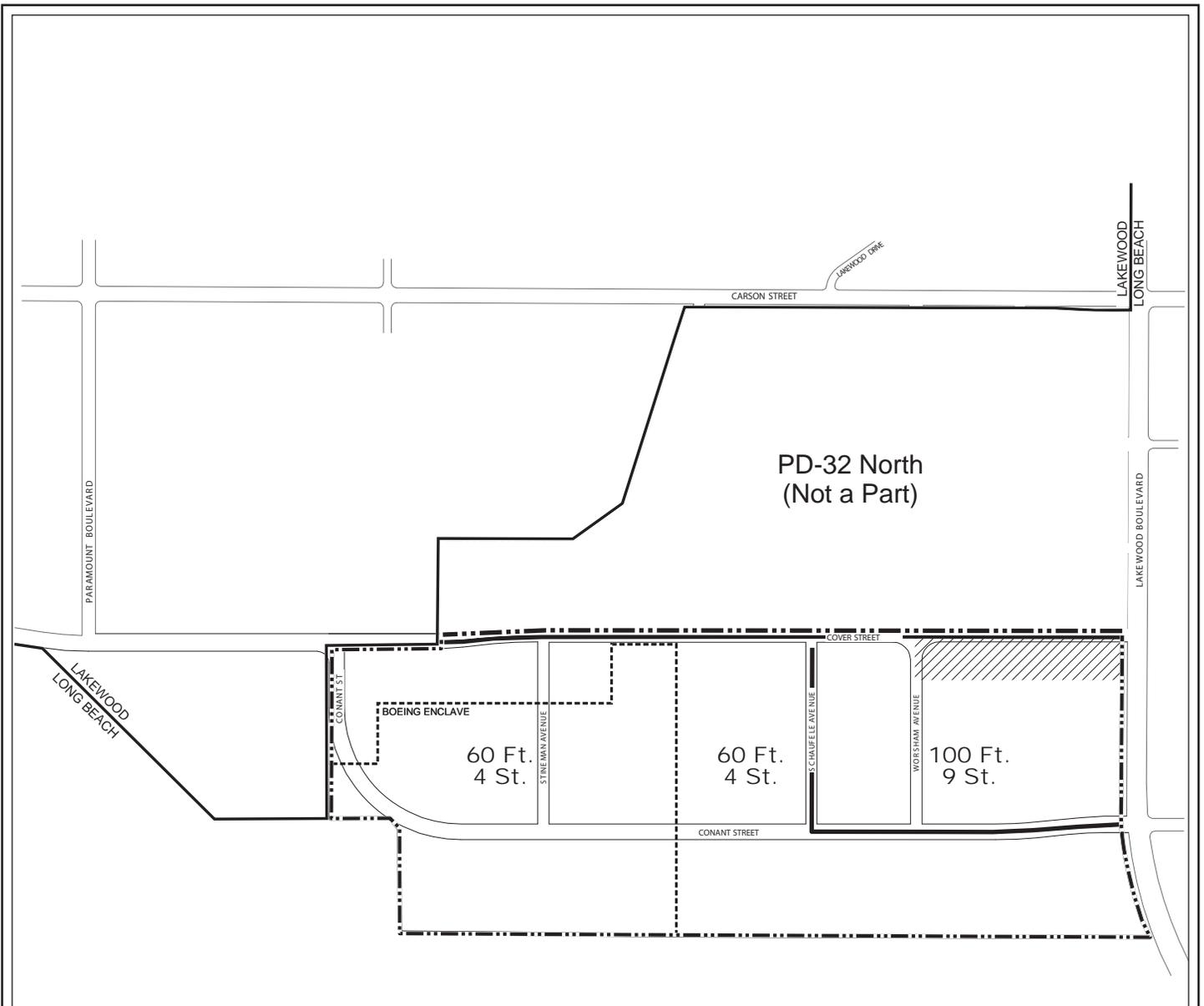
Preferred Tall Building Zone
(See special development standards for sub area 1)

NOTE : These heights shall be used in conjunction with Part 77 of the FAA Regulations Map dated 6-21-1982 (or as updated).

—Douglas Park Addendum



Figure II-8
Revised Project - PD-32 North Height Zone Plan



Story (St.) : As defined in LBMC Chapter 21.15.2940

NOTE : The maximum height limits indicated on this map are further detailed in the special development standards. These heights shall be used in conjunction with Part 77 of the FAA Regulations Map dated 6-21-1982 (or as updated).

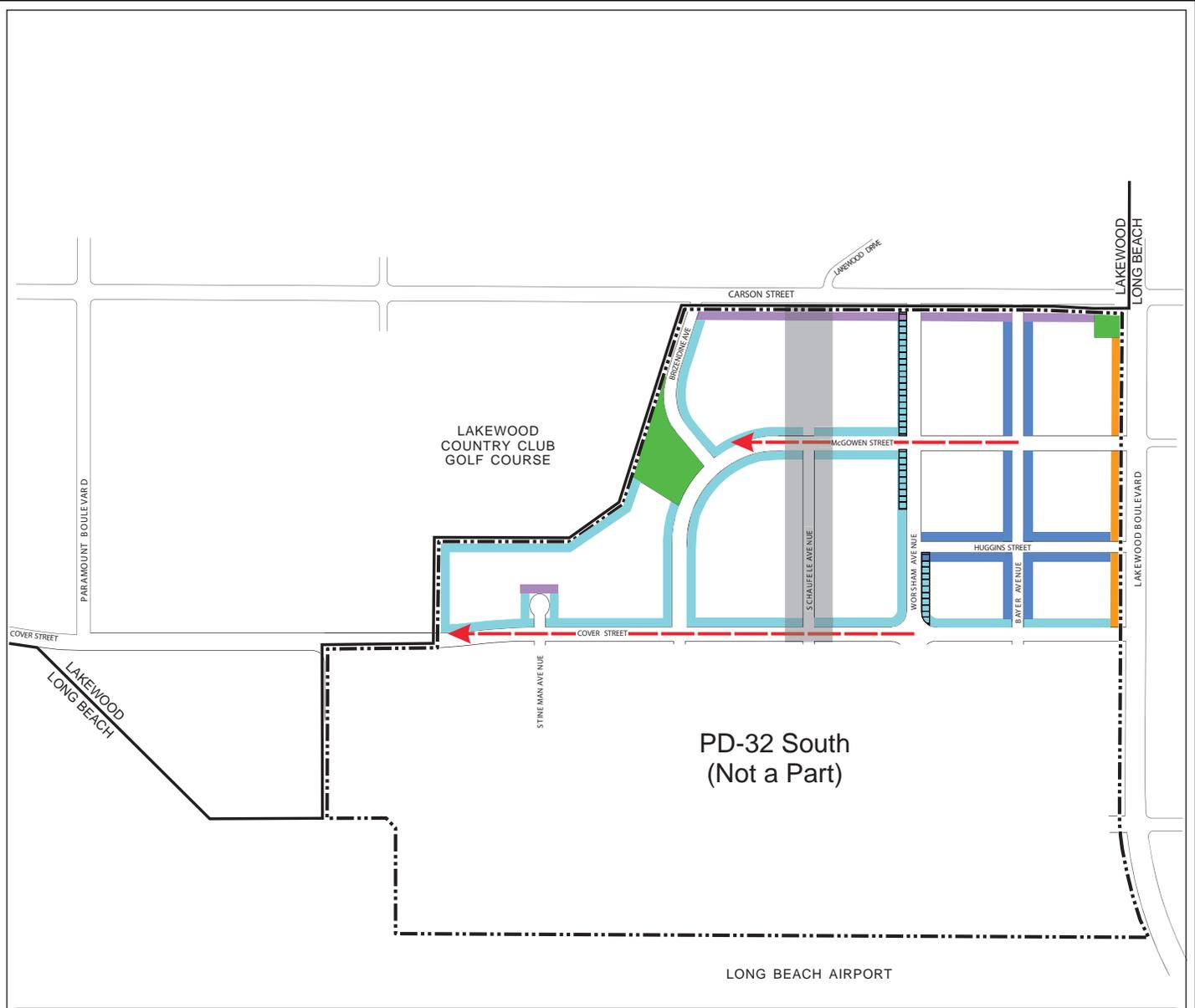


Mixed-Use Overlay Zone
(See special development standards for sub area 7)

— Douglas Park Addendum



Figure II-9
Revised Project - PD-32 South Height Zone Plan



PD-32 South
(Not a Part)

--- PD Boundary

— City Boundary

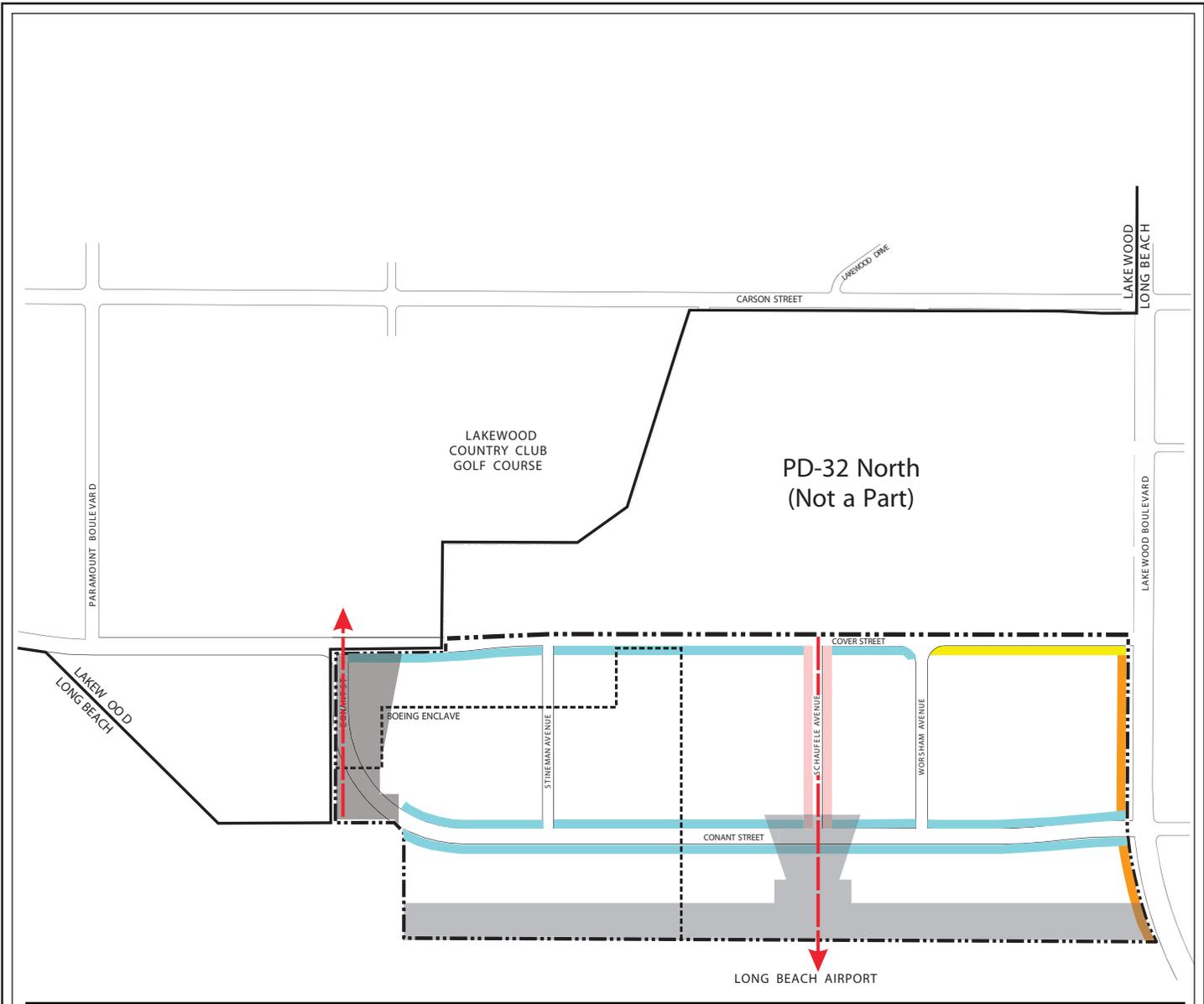
***NOTE:** Setback Plan has been simplified for this Addendum. Not all setbacks and setbacks are shown. Only major setbacks along public streets and adjacent to the golf course are shown. Please refer to the PD-32: North Development Standards Amendment for descriptions of all setbacks and setbacks.

- 10 ft min Setback
- 11 ft min Setback
- 18 ft min Setback
- 26 ft min Setback
- Open Space
- View Corridors
(Alignments shown on map are general in nature)
- 18 ft min Setback;
0 ft Setback if Retail on Ground Floor
- Building Restriction Zone
(55 ft min setback from either side of street right-of-way)

Douglas Park Addendum



Figure II-10
Revised Project - PD-32 North Generalized Setback Plan



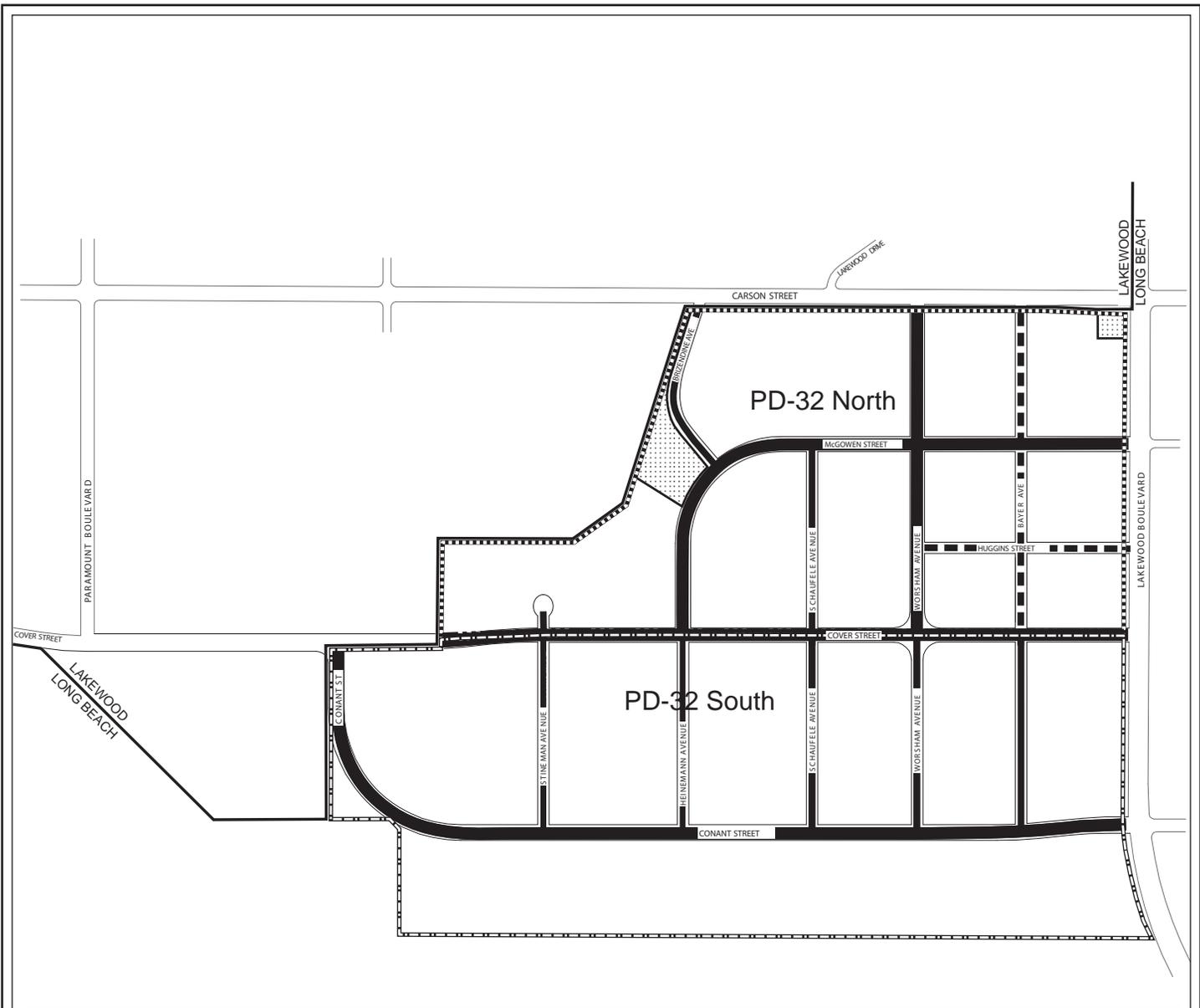
- PD Boundary
- City Boundary
- Boeing Enclave
 (Aircraft manufacturing will be allowed to continue in this sub area. Should Boeing declare its intention to abandon current aviation-related uses there, the sub area will be developed with uses consistent with sub area 8A)
- 2 ft min Setback
- 18 ft min 3rd Story (Stepback)
- 26 ft min Setback
- 55 ft min Setback
- Building Restriction Zone
- View Corridors
 (Alignments shown on map are general in nature)

***NOTE:** Setback Plan has been simplified for this Addendum. Not all setbacks and stepbacks are shown. Only major setbacks along public streets and adjacent to the golf course are shown. Please refer to the PD-32: South Development Standards Amendment for descriptions of all setbacks and stepbacks.



Figure II-11
Revised Project - PD-32 South Generalized Setback Plan

Source: PD-32: South Development Standards Amendment, City of Long Beach, 2009.



-  PD-32 North Boundary
-  PD-32 South Boundary
-  Collector Street
-  Local Street
-  Private Street - Required Right-of-Way
(General alignment location shown;
actual location to be determined at
the time of Final Site Plan approval)

Note: All on-site infrastructure will be developed in accordance with the infrastructure phasing plan in the Development Agreement (DA).

This map represents the street infrastructure at full build-out but does not include any additional private roads that might be necessary for access to individual buildings within any development parcels.



Figure II-12
Revised Project - Circulation Plan

The Revised Project would also provide on-site parking for the proposed commercial uses. Similar to the Approved Project, parking would comply with Long Beach and Lakewood Municipal Code parking requirements and may include surface and/or structured parking. On-street parking within the Project site would be included for some of the retail uses as well as to accommodate parking requirements for the on-site open space areas.

Similar to the Approved Project, a 66-kV substation with a maximum footprint of approximately 305 feet by 230 feet would be provided within the site. This station is anticipated to be located within the western portion of the site at the northern terminus of Stinemann Avenue.

The Revised Project requires the majority of landscaping to consist of very low to low water use plants and requires the use of water conserving automatic irrigation systems. Incorporation of on-site water retention and treatment of stormwater runoff through the use of structural and non-structural management measures have also been included.

No substantial changes to general Approved Project signage and lighting are proposed as part of the Revised Project. Specifically, signage and exterior lighting would be limited in accordance with Design Guidelines and the Master Sign Program, which would address aspects such as sign and fixture type, height, design, spacing and color. Nighttime exterior light sources would be focused onto the surfaces to be lit and shielded as appropriate. Lighting for parking facilities would be directed onto the site and shielded so as to prevent light spillover effects. Lighting within on-site parking structures would be screened through architectural elements and landscaping, or through the use of parking structure lights with cut-off shrouds to eliminate the spill of light from within.

As part of the Revised Project, screening of visually undesirable objects, such as utilities and parking areas, would be implemented, particularly along Carson Street and Lakewood Boulevard. Methods of screening may include masonry walls, overhead trellis, and landscape planting of evergreen material. Specific elements that would be screened if visible from a primary public street would include loading and service areas; mechanical equipment such as air conditioners; equipment such as backflow preventers and controllers; utilities such as transformers and meters; trash receptacle storage; and parking areas and parking garages. In addition, as part of the Revised Project, careful design considerations would be taken into account to prevent hidden areas from encouraging criminal activity.

The Revised Project would also include sustainable development and green building strategies. For example, all development consisting of buildings of 25,000 square feet or

greater would be required, depending on the type and/or mix of use(s), to achieve Leadership in Energy and Environmental Design (LEED) Certification or demonstrate in the plans and specifications that the development meets the intent of LEED at the Certified level. Projects not registered with the Green Building Certification Institute (GBCI) may use a LEED equivalent alternative green building performance rating system to the satisfaction of the City Director of Development Services. Specific sustainability features to be implemented as part of the Revised Project, as detailed in the City's Green Building Development Standards established for PD-32 North, would include but not be limited to: stringent stormwater controls, including capture and treatment of stormwater runoff from 90 percent of the average annual rainfall on-site removing 80 percent of the average annual post development total suspended solids; a waste management plan designed to divert at least 50 percent of the solid waste generated by the project; shading of 50 percent of all parking lots by canopy trees after five years of growth or use of paving with a Solar Reflectance Index (SRI) of at least 29; the use of native and drought tolerant plants with water-conserving automatic irrigation systems and compliance with the State's "Model Water Efficient Landscape Ordinance" (MLO); preferential parking for carpools and vanpools and the provision of bicycle parking; water conservation measures that either reduce indoor water use by 20 percent as compared to the 1992 Energy Policy baseline or include the installation of water-efficient fixtures meeting specified requirements; energy-efficient exterior lighting; and building roofs designed to provide for the future installation of solar photovoltaic systems. In addition, a Transportation Demand Management (TDM) Program would be implemented as part of the Revised Project's mitigation in order to reduce daily and peak-hour vehicular trips.

General hours of operation for the proposed uses within the Revised Project would be as follows:

- *Office:* Monday through Friday 6:00 A.M. to 7:00 P.M.; Saturdays 8:00 A.M. to 1:00 P.M.
- *R&D/Industrial:* Monday through Friday 6:00 A.M. to 7:00 P.M.; Saturdays 8:00 A.M. to 1:00 P.M.
- *Hotel:* 365 days a year/24 hours a day
- *Retail:* 7 days a week (except for key holidays) 10:00 A.M. to 9:00 P.M.; restaurants Sunday through Wednesday 11:00 A.M. to 10:00 P.M. and Thursday through Saturday 11:00 A.M. to 2:00 A.M.

Expansion to the hours of operation would be subject to the approval of the Director of Development Services.

Similar to the Approved Project, the Revised Project would be developed in phased increments and is anticipated to be complete by 2020. In addition, the 48-acre Boeing Enclave, which includes a variety of aircraft production-related uses, may continue to be operational during the development period until Boeing no longer has use for the Enclave. Construction activities would occur in accordance with the permitted hours and days of construction specified in City of Long Beach and Lakewood Municipal Codes.

Similar to the Approved Project, infrastructure improvements would be phased to provide for new development. Grading would be necessary. However, no import or export from the Project site is anticipated to be necessary.

SECTION III

ENVIRONMENTAL IMPACT ANALYSIS



SECTION III

ENVIRONMENTAL IMPACT ANALYSIS

This section provides a comparative analysis of the environmental impacts of the Revised Project with those of the Approved Project set forth in the Certified EIR. Analyses are presented by environmental topic in the same order as in Section V of the Certified EIR. In addition, for each of the environmental topics focused out of the Certified EIR in an Initial Study, this Addendum also provides a comparative analysis of the impacts of the Revised Project with those of the Approved Project.

The comparative analysis commences with a review of the environmental setting to determine whether substantial changes in the environmental setting may have occurred since the EIR was certified in 2004. Following this review of the environmental setting is a summary of the environmental impacts of the Approved Project. The Findings adopted at the Long Beach City Council hearing on December 14, 2004 (Douglas Park EIR Findings, Resolution No. 28493) have been used to assist in summarizing the impact conclusions reached in the Certified EIR. This summary of impacts is followed by a comparison of the environmental impacts of the Revised Project with the Approved Project and a determination of whether those impacts are within the envelope of impacts identified in the Certified EIR.

Environmental Setting

Since the preparation of the Certified EIR, many of the former structures on-site have been removed as part of an approved remediation program that has been underway within the site. Additionally, the majority of the site's rough grading has been completed and major infrastructure improvements including streets and utilities have been constructed. Thus, a large portion of the 261-acre Project site is currently vacant and ready for vertical development. However, the 48-acre Boeing Enclave, which includes a variety of aircraft production-related uses, continues to operate.

In addition, several potential new related projects have been identified in the Project vicinity. However, it should be noted that several of the related projects that were previously identified in the Certified EIR were never developed or are no longer proposed. In addition, it is also important to note that the cumulative impact analyses for traffic set forth in the Certified EIR also provided for growth forecast by the Southern California

Association of Governments (SCAG). The list of additional related projects is presented in Table III-1 on page III-3. As discussed below, these additional related projects are not anticipated to change the conclusions of the Certified EIR.

A. Aesthetics

1. Approved Project Impacts

(a) Aesthetics

The Project site is located in an urbanized area that includes a variety of land uses, including industrial, aviation-related, residential and commercial uses. The Project site has historically had an overall industrial appearance.¹ Implementation of the Approved Project would transform the Project site into a mixed-use, master-planned community. As part of the Approved Project, maximum building height zones that conform to Federal Aviation Administration (FAA) height regulations, minimum setbacks, 10.5 acres of park space and other features would be implemented. Although the height and bulk of the Approved Project may present a contrast relative to past development on the site and in the surrounding vicinity, implementation of the Project would result in overall aesthetic benefits. While the maximum building heights in some areas would increase with implementation of the Approved Project, reduced heights would be established in proximity to surrounding sensitive uses, particularly off-site residences to the north. The site-wide variation in building heights would introduce new architectural and design elements, thereby providing visual interest. The Project would incorporate landscaping within the public rights-of-way and on private property in accordance with ordinance requirements. In addition, landscaped setbacks would create visual buffers between the Approved Project and the adjacent uses on all peripheral edges of the site. The Approved Project would not introduce elements that substantially degrade the existing visual character or qualities of the site and its surroundings, nor would the Approved Project remove or demolish features or elements that contribute positively to the visual character of the vicinity. Development of the Approved Project would also represent a substantial aesthetic improvement relative to the appearance of the site following recent building removal associated with the mandated remediation program. Furthermore, the Project would be consistent with the goals of the City of Long Beach General Plan through implementation of design guidelines

¹ *Since publication of the Final EIR, all development on-site except for a 48-acre portion of the site referred to as the Boeing Enclave and Verizon's Equipment Building (Building 1C) have been removed in conjunction with a mandated soil and groundwater remediation program. The Boeing Enclave is located within the western part of the site, immediately adjacent to the Airport, and is used for aviation-related purposes. Building 1C is located north of Cover Street and west of Bayer Avenue.*

**TABLE III-1
RELATED PROJECTS LIST**

App. Number	Address	Use and Size of Project
New Application		
0809-05 SPRAUP	1598 Long Beach Boulevard	5-story 36-unit condo with 9,000 square feet of commercial
0808-08 CSPR	155 Long Beach Boulevard	191 room hotel
0807-13 CSPR	5801 Atlantic Avenue	104 SF = 25,000 square feet Library 20,000 square feet Grocery 50+/- Dwelling Unit
0807-16 CSPR, TTM	4150 Conant Street	Five buildings consisting of 150, 336 square feet of office and 5,492 square feet of retail and a subdivision of five lots to allow the construction of 21 condominium units (Newcastle Partners)
0712-01 CSPR	11 Goldenshore	<i>Residential Option</i> , 1,370 condominiums, an estimated 373,541 square feet of office/retail space or <i>Hotel Option</i> , development would include 1,110 condominiums, a 400-room hotel, approximately 373,541 square feet of office/retail space (Golden Shore Master Plan)
0612-06	1235 Long Beach Boulevard	3 tower 868,000 SF = West End: 40,000 SF retail 350 DU East End: 150 Senior Housing 167 Condo 41 Rental
Conceptual Review Complete		
0504-16 CSPR	432-440 West Ocean Blvd.	107 residential units
0512-29 CSPR	5116 Anaheim Road	64 attached townhomes
0710-10 CSPR	1601 E. Pacific Coast Hwy.	170,536 square feet sports facility (Kroc Center)
0804-07 CSPR	669 Harbor Plaza Drive	Port of Long Beach Administration building and maintenance facility
In Process for Entitlement		
0510-10 SPR	1628-1724 Ocean Boulevard	51 unit condo complex with 47 room hotel (37 new units)
0511-04 SPR	4000 Via Oro Avenue	575 sq. ft. distribution center
0801-08 SPR	Alamitos Bay	354 AC – On Hold Dredging Repair Parking Lot New Boat Hoist Seawall/RIP Rap Repairs Demo/Rebuild Restrooms

**TABLE III-1 (CONTINUED)
RELATED PROJECTS LIST**

App. Number	Address	Use and Size of Project
0803-05 SPR	3635 Elm Avenue	New five story 65-unit senior assisted living facility (Temple Beth Shalom)
Entitlements Granted		
0410-20 SPR, TM	150 W. Ocean Boulevard	216-unit condo building (OceanAire)
0410-21 SPR, TM	210 W. 3 rd Street	96 residential units, 11,200 sq. ft. of commercial (Cedar Court)
0505-19 SPR, TM	4200 E. Anaheim Street	29-unit condominium development
0507-01 SPR, LLA	2801 Orange Avenue	City of Long Beach Sports Park 55 AC
0510-03 SPR, TM, MOD	604 Pine Avenue	542 residential units, 30,000 sq. ft. of commercial/office. (Press Telegram)
0510-27 SPR, TM	777 W. Ocean Boulevard	358 units, 10,000 sq. ft. of commercial (Shoreline Gateway)
0604-08 SPR, TM, LCDP	2010 Ocean Boulevard	56 residential condominiums units (Studio 111)
0707-24 SPR	4442-4466 Atlantic Avenue	Demo/rebuild department store/retail shops/center (Marshall's) 42,803 SF
0807-11	5119 E. Colorado Street	Colorado Lagoon/Marina Park restoration 29 AC.
EIR 37-03	4100 Donald Douglas Drive	43,000 SF building improvements and 4,000 parking spaces (Long Beach Airport modernization/parking structure)
In Plan Check		
0702-05 SPR, LM	3900 Cover Street	Construction of 9 office buildings at Douglas park 168,000 SF
Under Construction		
0102-023 SPR	2702 Long Beach Boulevard	Long Beach Memorial Hospital 105,800 sq. ft. medical building expansion
0208-18 SPR, TM	2080 Obispo Avenue	106 single family homes (Boneyard)
0307-15 SPR, TM	433 Pine Avenue	Mixed-use development (Newberry's Department Store) of 18 residential units. 15,000 square feet of commercial
0411-17 SPR	285 Bay Street	138-room boutique hotel at The Pike (Avia)
0411-18 SPR	421 West Broadway	291 residential units (including 26 density bonus units) (Lyon West Gateway)
0412-06 SPR, TM	2555 Atlantic Avenue	4-story building with 66 residential units (Menorah Housing)
0510-04 SPR, SV	600 Queensway Drive	11-story, 178 room hotel (Residence Inn)

**TABLE III-1 (CONTINUED)
RELATED PROJECTS LIST**

App. Number	Address	Use and Size of Project
0601-02 SPR, TM	2001 River Avenue	Transitional housing (Villages at Cabrillo) 81 Units 72,509 SF
0605-44 SPR	201 The Promenade	5-story, 165-room hotel (Esterel)
0702-04 SPR	3900 Cover Street	Construction of 16 industrial buildings at Douglas Park
0704-05 SPR, CUP	6750 Cherry Avenue	134,000 sq. ft. department store, Food 4 Less gas station and retail shops 127,246 SF Target 6,000 SF retail 112 SF Gas St. & 4 Pumps (Target)
Operational	340 Lakewood Center Mall (City of Lakewood)	160,000 SF retail (Costco)

Abbreviations:

SPR – Site Plan Review

TM – Tentative Map

SV – Standards Variance

LM – Lot Merger

CSPR – Conceptual Site Plan Review

LLA – Lot Line Adjustment

ZC – Zone Change

LCDP – Local Coastal Development Permit

Source: City of Long Beach, Planning Bureau, November 2008; City of Lakewood, www.lakewoodcity.org, 2009.

that would allow a variety of building types incorporating quality design and landscaping. The City of Lakewood General Plan goals would also be met, as the Approved Project would maintain a human scale and create organization and functional cohesiveness. The Approved Project would also comply with the zoning ordinances of each of these Cities and the applicable FAA regulations. Accordingly, Approved Project impacts associated with aesthetics would be less than significant.

(b) Views

Due to the relatively flat topography in the Project vicinity, there are currently only limited views within and of the Project site from surrounding areas. While development of the Project site may alter such views, the Project would not substantially obstruct or eliminate existing views of valued on- or off-site aesthetic features. In addition, implementation of the Approved Project would not conflict with applicable regulations relating to view resources, since, pursuant to such regulations, the Approved Project would

enhance the overall aesthetic environment while shielding the less aesthetically pleasing elements of development, thereby improving views in the vicinity. As such, impacts associated with views would be less than significant.

(c) Light

Night lighting in the vicinity generally consists of streetlights, aviation-related lighting associated with the Airport, business façade lighting, and illumination from vehicle headlights. Implementation of the Approved Project would increase ambient light levels on the Project site and in the immediate vicinity. However, nighttime exterior light sources would be focused onto the surfaces to be lit (e.g., building details, landscape elements, signs, and pedestrian areas) and shielded as appropriate. Lighting for parking facilities would be directed onto the site and shielded so as to prevent light spillover effects. Aircraft warning lighting would comply with Airport Land Use Plan (ALUP) Safety Policies, as addressed in Section E, Hazards and Hazardous Materials. In addition to the specific design considerations that address exterior lighting, the landscaped setback zones would act as further buffer with regard to light spillover. As such, the Project would not result in substantial illumination of any light-sensitive uses in the surrounding vicinity, nor would it conflict with applicable light regulations. In addition, potential impacts to on-site residences from the flight ramp lighting (within the Boeing Enclave) would be shielded by remaining buildings within the Enclave (e.g., Buildings 41A and 15) and to some extent by proposed screen fencing. Furthermore, as discussed in Section I, Noise, a mitigation measure is proposed that prohibits development of residential uses in close proximity to the Boeing Enclave until such time that run-up activities permanently cease, which would further reduce the potential for new residential units to be affected by lighting from the Boeing Enclave. Thus, overall impacts associated with lighting would be less than significant.

(d) Glare

There are no buildings, structures, or facilities on-site that currently generate substantial levels of glare. The intensity of glare associated with the Approved Project would depend on the building materials used and the ultimate design of new development. Highly reflective glass materials or glazing would not be permitted. Furthermore, landscaping would help screen any potential glare from impacting glare-sensitive uses. As such, the Project would not conflict with applicable glare regulations set forth by the Cities of Long Beach and Lakewood and by the FAA. Accordingly, glare impacts would be less than significant.

Mitigation measures were provided for the Approved Project to ensure that potential impacts associated with aesthetics, views, and light and glare would be less than significant.

2. Revised Project Impacts

As described in Section II, Project Description, of this Addendum, the Revised Project includes revisions to the currently adopted PD-32 in order to provide for the changes in land use and design now contemplated. Specifically, PD-32 North and PD-32 South are proposed. PD-32 North would be applicable to that portion of the Project site located north of Cover Street (i.e., the previously designated Housing areas) and would reflect the Revised Project's proposed revisions to the land use and design standards for this Project area. PD-32 South would be applicable to that portion of the Project site located south of Cover Street. Since the Revised Project does not propose any land use or design changes to this portion of the Project site, PD-32 South would reflect the adopted PD-32 land use and design standards for this area.

The corresponding PD-32 Design Guidelines would also be amended to reflect the north and south areas of the site. Thus, the proposed guidelines are referred to as the PD-32 North Design Guidelines and the PD-32 South Design Guidelines.

Under the new PD-32 North zoning, the northern portion of the site would be generally divided into three subareas, with Subarea 1 designated for mixed uses (i.e., "main street", retail, office, and hotel), Subarea 2 designated for office and retail, and Subarea 3 designated for office and R&D/light industrial uses, and all three areas located north of Cover Street (previously referred to as A Street). Figure II-6 in Section II, Project Description, shows the three subareas of PD-32 North. The PD-32 South zoning would reflect the currently approved land uses for the southern portion of the site, and thus, would remain designated for office, commercial, light industrial, hotel, and aviation-related uses, as shown in Figure II-7 in Section II, Project Description.

As part of the revised PD-32 North, the site's height zones would be modified to provide for maximum building heights ranging from of 38 to 75 feet. As shown in Figure II-8 in Section II, Project Description, a 38-foot height zone would be located along Carson Street; a 50-foot height zone would be located to the immediate south, west of Worsham Avenue (previously known as 2nd Avenue); and a 75-foot height zone would be located south of the 38-foot height zone and east of Worsham Avenue to Lakewood Boulevard. The maximum building heights under these height zones would generally be similar to or less than those set forth for the Approved Project. The height zones for PD-32 South would reflect the currently approved height zones. Specifically, the 60-foot height zone would remain in the western portion, and the 100 foot height zone would remain in the eastern portion. Figure II-9 in Section II, Project Description, shows the height zones for PD-32 South. As with the Approved Project, height zones under the Revised Project would comply with the FAA safety requirements set forth in Federal Aviation Regulations (FAR) Part 77.

Building setbacks would also be revised for PD-32 North, as shown in Figure II-10 in Section II, Project Description, and would range from 0 feet to 26 feet from the street rights-of-way. Along Carson Street, a 10-foot setback would be required in addition to a 30-foot landscaped bike trail, sidewalk and parkway, thus giving the appearance of a 40-foot wide setback. Within Subarea 2 and Subarea 3, most setbacks from internal streets would be 18 feet wide, with the exception that setbacks would not be required adjacent to open space corner elements at many of the street intersections. In addition, an 18-foot setback would be implemented along the northwestern property line adjacent to the Lakewood Country Club Golf Course, and setbacks from interior property lines would be limited to 5 feet. Within Subarea 1, building setbacks from Bayer Avenue and Huggins Street would be 11 feet from the edge of the street. Setbacks would not be required along eastern edge of Worsham Avenue within the primary retail area. A 26-foot setback would be retained along Lakewood Boulevard, as under the Approved Project. Building setbacks for PD-32 South would remain unchanged and would include setbacks from internal streets ranging from 2 to 55 feet, as shown in Figure II-11 in Section II, Project Description.

As with the Approved Project, the PD-32 North Design Guidelines and PD-32 South Design Guidelines for the Revised Project would address landscaping, which would be provided throughout the Project site along the primary parkways, within building setbacks, open spaces, and at the entrances to the site. The landscaped areas along the site periphery would be the most visible areas from off-site and would act as visual buffers between on- and off-site uses. In addition, approximately 10 acres of community open space are proposed in the form of Donald Douglas Plaza, Jansen Green, bike paths, an enhanced McGowen Street parkway, street gateways, mid-block pedestrian connections, and landscape buffers. New internal roadways, described more fully in Section L, Transportation/Circulation and Parking, would include streetscaping, pedestrian amenities, and bike lanes.

Project signage and exterior lighting would be limited in accordance with the Design Guidelines. Nighttime exterior light sources would be directed and shielded so as to prevent light spillover effects and would meet ALUP Safety Policies. In order to minimize glare potential, glass box buildings, mirrored glass with high exterior daylight reflectance, or reflective glazing would not be permitted.

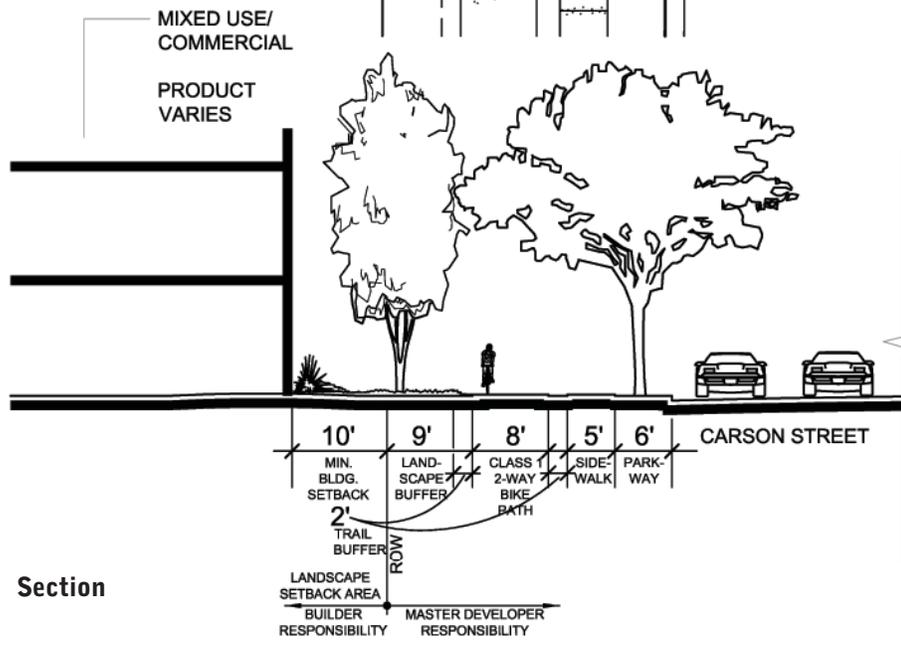
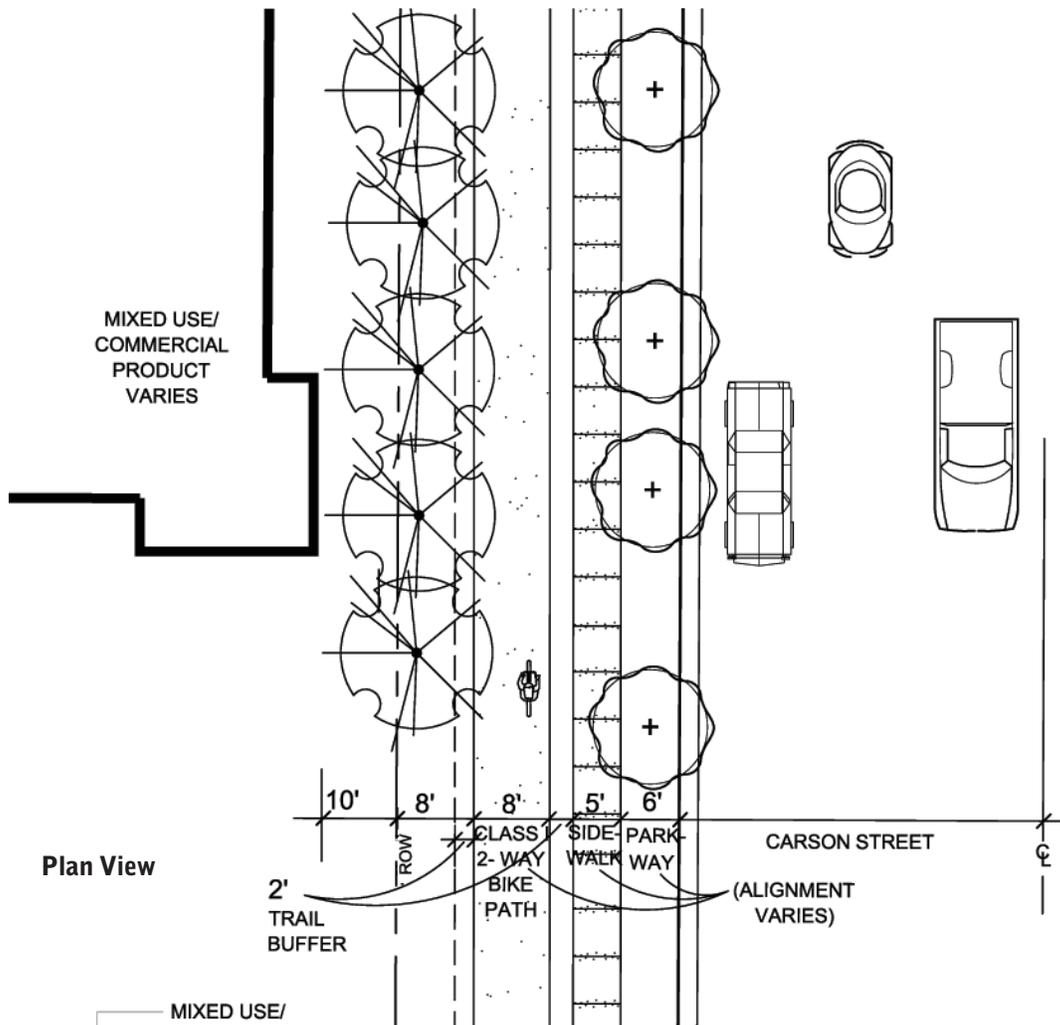
(a) Aesthetics

The site plan provided in Figure II-6 in Section II, Project Description, of this Addendum depicts the general location of the proposed uses within PD-32 North; Figure II-7 therein illustrates a site plan for PD-32 South. While development of the Revised Project would visually alter the character of the site, the Project elements to be introduced would substantially improve the site's overall aesthetic setting. The proposed

architecture, height and location of proposed structures, building setbacks, massing, and landscaping would positively influence the overall aesthetic character of the site. The Project features, described above and guided by the PD-32 North and South Development Standards and Design Guidelines, are designed to create a high quality visual setting.

The site-wide variation in building heights would introduce new architectural and design elements, thereby providing visual interest. While the maximum building heights in some areas of the site would increase with implementation of the Revised Project pursuant to the proposed rezoning, reduced heights would be established in proximity to surrounding sensitive uses, particularly the off-site residences to the north. The aesthetic character of the northernmost portion of the site would change from that of very large industrial buildings (existing at the time the Draft EIR was prepared) to low- to mid-rise office and mixed use commercial buildings. However, the height of new buildings would be lower than the former industrial buildings (e.g., Building No. 5, which was 80 feet in height). In any case, building heights closest to the northern off-site residential uses would be limited to 38 feet. Additionally, as illustrated in Figure III-1 on page III-10, given the 10-foot setback along Carson Street in combination with the 30-foot landscaped parkway, the northernmost façades of Project structures along Carson Street would be located more than 125 feet from the nearest off-site residential property lines to the north, and over 175 feet from the southern façades of most of the 12 single-family residences located directly to the north. This intervening space is occupied by considerable landscaping, including trees in the rear yards of the homes north of Carson Street, as well as street trees bordering the north side of Carson Street (which the Project would not affect), and a busy multi-lane major arterial street. An existing block wall is located in the rear yard of the Lakewood Country Club residences and would provide a visual barrier from the proposed development. The physical separation between the existing off-site single-family residences and the proposed Project structures along Carson Street, in combination with the amount of existing and proposed landscaping, would create a sufficient physical and visual buffer and the character of the existing neighborhood would not be detrimentally affected.

In addition, as part of the Revised Project, screening of visually undesirable objects has been addressed in the PD-32 North and PD-32 South Development Standards and Design Guidelines. Methods of screening may include masonry walls, overhead trellises, and landscape plantings of evergreen material. Specific elements that would be screened if visible from a primary public street would include loading and service areas; mechanical equipment such as air conditioners; equipment such as backflow preventers and controllers; utilities such as transformers and meters; trash receptacle storage; and parking areas and parking garages.



Douglas Park Addendum

Figure III-1
Carson Street Section



Although the height and bulk of some of the Revised Project structures may contrast with recent development on the site or in the surrounding vicinity, implementation of the Project would result in overall aesthetic benefits. The Project would introduce uses that are visually and functionally compatible with the adjacent areas. In addition, the Project would not introduce elements that substantially degrade the existing visual character or quality of the site and its surroundings, nor would the Project remove or demolish features or elements that contribute positively to the visual character of the vicinity. The Project would incorporate landscaping within the public rights-of-way and on private property in accordance with ordinance requirements. Furthermore, the Project would be consistent with the goals of the City of Long Beach General Plan through implementation of design guidelines that would allow a variety of building types incorporating quality design and landscaping. The City of Lakewood General Plan goals would also be met, as the Project would maintain a human scale and create organization and functional cohesiveness. The Project would also comply with the zoning ordinances of each of these Cities and FAR Part 77. Accordingly, Project impacts associated with aesthetics would be less than significant.²

(b) Views

Under the Revised Project, new development would be visible from the surrounding vicinity as well as adjacent roadways. Incorporation of the architectural and design elements described above, including proposed landscaping and establishment of setbacks, would have a beneficial effect on short-range views in the area. Overall, as existing valued views in the area are limited and there are no aesthetic resources visible in the distance, no valued views would be obstructed by Project development and impacts would be less than significant.

Due to the relatively flat topography of the area, the site would not be clearly visible from within the Lakewood Country Club Estates, with the exception of intermittent views of upper stories of the proposed buildings, as occurred under existing conditions (prior to demolition of on-site structures in conjunction with the mandated remediation program). To the extent that Project development would introduce high-quality, sensitively designed, and visually attractive architecture with building heights limited to 38 feet along Carson Street, intermittent views of Project buildings would improve. As described above, while the height of some structures in the northern portion of the site may be taller than buildings that were formerly in that area of the site, the new maximum building heights would be less than the

² *As mentioned in Section V.A, Aesthetics, of the Draft EIR, these impacts would be the same regardless of whether analyzed relative to the previously developed site or the site subsequent to the completion of all permitted demolition activities in association with the remediation program.*

tallest building that had previously existed on the site. Additionally, while the upper floors of buildings near Carson Street may have partial views into the rear yards of residential uses to the north, such views would be largely obscured by existing and proposed landscaping, street trees, and the existing block wall.³ Furthermore, the intervening distance between on-site development and residences to the north (i.e., over 150 feet) would be sufficient to reduce visual acuity to beyond a level capable of interfering with residential privacy.

Views of the Project site from the Lakewood Country Club Golf Course would also be mainly of the upper portions of proposed buildings, with more direct views of the site available from the southern portion of the golf course south of Carson Street. To the extent that Project development would be considered more visually attractive than the former industrial uses, intermittent views of the Project site from the golf course would improve. Furthermore, existing golf course dense and tall landscaping and proposed setbacks along the adjacent Project site boundary would serve to obscure views of Project development. Views across the Airport would continue to be urban in nature and would benefit from the aesthetic improvements that are proposed as part of the Project. Views of the San Gabriel Mountains from areas located at the same elevation as the Project site are currently limited and would not be impacted by the Project. Long-range views of the San Gabriel Mountains, including from Signal Hill, are generally only available from higher elevations and at a sufficient distance from the site such that Project development would not affect such views. Existing views of Signal Hill may be intermittently interrupted or partially obscured by new development, though lower building heights in portions of the site may also open up new views. Regardless, Project development would not entirely or substantially obstruct such views.

View corridors would be created within the site, in particular along Schaufele Avenue (i.e., a north-south building restriction zone) and along McGowen Street looking west towards the proposed park and golf course. In addition, the community open space areas (i.e., Donald Douglas Plaza, Jansen Green, bike paths, an enhanced McGowen Street parkway, street gateways, mid-block pedestrian connections, and landscape buffers) provided throughout the site would create a greenbelt system that would provide visual relief from the urban development.

Overall, while development of the Revised Project site may alter views of the site, the Project would not substantially obstruct or eliminate existing views of valued on- or off-

³ *The landscaping on the north side of Carson Street would continue to be maintained by the City of Long Beach per the Agreement with McDonald Douglas Corporation, which would ensure that the landscaping provides a visual buffer between the existing residences and the proposed structures on the Project site.*

site aesthetic features. In addition, implementation of the Project would not conflict with applicable regulations relating to view resources included in the Long Beach and Lakewood General Plans and Zoning Ordinances, since, pursuant to such regulations, the Project would enhance the overall aesthetic environment while shielding the less aesthetically pleasing elements of development, thereby improving views in the vicinity. Furthermore, the beneficial effects of the Project on the aesthetic character of the area, as discussed above, would similarly improve associated views. Thus, view impacts associated with implementation of the Project would be less than significant.⁴

(c) Light

Similar to the Approved Project, implementation of the Revised Project would increase ambient light levels on the Project site and in the immediately surrounding vicinity. Project-related lighting would consist of point light sources of low to medium brightness that would be focused onto the surfaces to be lit (e.g., building details, landscape elements, signs, and pedestrian areas) and shielded as appropriate to prevent light spillover effects. In addition, lighting would comply with ALUP Safety Policies.

In addition to the specific design considerations that address exterior lighting, the landscaped setback zones would act as further light buffers. For example, the Carson Street landscaped setback would act as an effective shield to block any residual light from reaching the residential neighborhood on the north side of Carson Street. As such, the Project would not result in substantial illumination of any light-sensitive uses in the surrounding vicinity, nor would the Project conflict with applicable light regulations. Thus, impacts associated with lighting would be less than significant.

(d) Glare

The intensity of glare would depend on the building materials used and the ultimate design of new development. As discussed above, highly reflective glass materials or glazing would not be permitted. The indirect reflection of sunlight from parked vehicles and direct glare generated from vehicle headlights within the parking areas and on the internal and peripheral roadways during evening and nighttime hours could potentially occur. However, landscaping would help screen any potential glare, protecting glare-sensitive uses, which generally include the Lakewood Country Club Estates and the surrounding transportation corridors. Furthermore, the Project would not conflict with applicable glare

⁴ As mentioned in Section V.A, Aesthetics, of the Draft EIR, these impacts would be the same regardless of whether analyzed relative to the previously developed site or the site subsequent to the completion of all permitted demolition activities in association with the remediation program.

regulations set forth by the Cities of Long Beach and Lakewood and by the FAA. Accordingly, glare impacts would be less than significant.⁵

In comparison to the Approved Project, the Revised Project would involve a reduction of total floor area, with an associated reduction in overall building footprints throughout the site. The maximum building heights under the Revised Project would generally be similar to or less than those set forth for the Approved Project. Established building setbacks, outdoor lighting, and the amount of community open space on-site would also be similar under the Revised Project. In summary, aesthetic, view, light, and glare impacts associated with the Revised Project would be similar to those of the Approved Project. Such impacts would be within the envelope of impacts identified in the Certified EIR. Nonetheless, mitigation measures are provided to ensure that potential impacts associated with aesthetics, views, and light and glare would be less than significant.

3. Mitigation Measures

A Mitigation Monitoring and Reporting Program (MMRP) was adopted for the Approved Project. Some of the mitigation measures identified in the previously adopted MMRP have been completed, as indicated where appropriate below. In addition, some of the mitigation measures previously adopted are no longer applicable to the Revised Project, for example due to the elimination of residential uses, as also indicated below. However, the balance of the mitigation measures remain applicable, with some revisions as appropriate for the Revised Project, as indicated in redline/strikeout text. The following mitigation measures are set forth in a new MMRP for the Revised Project, included as Exhibit A to the City's CEQA Findings for the Revised Project.

PD-32 North and PD-32 South Design Guidelines will be developed for the Douglas Park Project and will establish standards regarding building and roof design, landscape amenities, streetscaping and pedestrian improvements, including sidewalks and bike lanes, and signage and exterior lighting.

Mitigation Measure V.A-1: Minimum setbacks measured from the property line to the building face shall be provided in accordance with the requirements of PD-32 North and PD-32 South (refer to Figure FEIR III-1-II-10 and Figure II-11 of Section II, Project Description, of this

⁵ As mentioned in Section V.A, Aesthetics, of the Draft EIR, these impacts would be the same regardless of whether analyzed relative to the previously developed site or the site subsequent to the completion of all permitted demolition activities in association with the remediation program.

Final EIR Addendum for an illustration of these setbacks). The setbacks along the periphery include:

- A 10-foot setback from the property line along Carson Street (excluding the 30-foot bikeway/greenway) east of 2nd Avenue. 3
- A 26-foot setback from the property line along Carson Street (excluding the 30-foot bikeway/greenway) west of 2nd Avenue. 3
- A 26-foot setback from the property line along Lakewood Boulevard (excluding the 14-foot right-of-way).
- A 10-foot setback from the property line adjacent to the Lakewood Country Club (excluding the 20-foot bikeway/greenway).⁶
- A minimum 20-foot setback along the limited portions of the Airport edge on the southern and southwestern boundaries of the project site that are not part of the Long Beach Airport Layout Plan Building Restriction Zone. The no-build zone, which is greater than 20 feet in width, extends along most of the southern portion of the project site.

Setbacks have also been established for several of the internal streets, as follows:

- A 2-foot setback from the property (excluding the 10-foot right-of-way) along F Street between Lakewood Boulevard and 1st Avenue for street-oriented retail uses.
- A 10-foot setback from the property line (excluding the 11-foot right-of-way) along 1st Avenue, and a 15-foot setback from the property line (excluding the 11-foot right-of-way) along other internal collector roadways, including 2nd and 3rd Avenues, except for those street segments that abut Building Restriction Zones, where adjacent development is not permitted.³

Mitigation Measure V.A-2: Maximum building heights shall be defined in the PD-32 ordinance North and PD-32 South ordinances in conformance with Figure FEIR III-2, Height Zones II-8 and Figure II-9 in Section II, Project Description, of this Final EIR Addendum. The proposed maximum building heights shall be measured from curb elevation to

⁶ If Cover Street in the western portion of the site is located adjacent to the Golf Course, the minimum building setback would be 5 feet from the property line (excluding the 11 foot right of way).

³ Additional internal streets may be constructed within the project site. Setbacks along these streets will vary and may be less than 30 feet, in accordance with the Design Guidelines to be implemented as part of the project.

~~the top of a parapet or midpoint of a pitched roof within the City of Long Beach. Project buildings located within the City of Lakewood shall be limited to four stories and 55 feet, measured from finished grade to the ceiling of the uppermost story highest point of a building including mechanical equipment and screening.~~

Mitigation Measure V.A-3: ~~Design Guidelines shall be developed for the Douglas Park project and shall establish standards regarding building and roof design, landscape amenities, streetscaping and pedestrian improvements, including sidewalks and bike lanes, and signage and exterior lighting.~~

Mitigation Measure V.A-4: New utility lines for water, gas, sewer, electricity, and communications associated with the ~~project~~ Project shall be installed underground, to the extent feasible. Underground utility installation shall not interfere with the ongoing remediation program and shall comply with the Risk Management Plan (RMP) designed to assure the long-term protection of health and safety of future ~~residents and occupants and employees~~ at the ~~project~~ Project site. Service areas, including loading docks, refuse collection areas and storage areas shall be visually screened from the street and adjacent parcels to the extent feasible.

Mitigation Measure V.A-5: All night lighting installed on private property within the ~~project~~ Project site shall be shielded, directed away from off-site residential uses, and confined to the ~~project~~ Project site. Rooftop lighting shall be limited to security lighting or aviation warning lights in accordance with Airport/FAA requirements. All projects shall meet the submittal requirements of FAR Part 77. The FAA confirmed in 2008 that the Revised Project is consistent with its Part 77 requirements.

Mitigation Measure V.A-6: All lighting shall comply with all applicable ALUP Safety Policies and FAA regulations. All projects shall meet the submittal requirements of FAR Part 77. The FAA confirmed in 2008 that the Revised Project is consistent with its Part 77 requirements.

Mitigation Measure V.A-7: The use of glass with over 25 percent reflectivity shall be prohibited in the exterior of all buildings on the ~~project~~ Project site.

Mitigation Measure V.A-8: If located in the residential portion north of the project site or fronting F along Cover Street in the commercial area, the electrical substation shall be a low profile structure (equipment will be approximately 12 feet in height) whereas if the substation is located

~~in the commercial area south of and not fronting on F Cover Street the equipment may be taller approximately 20 feet in height.~~

Mitigation Measure V.A-9: The electrical substation to be constructed on-site shall include an 8-foot masonry wall located at the building setback line. The area between the right-of-way and the setback shall be landscaped with groundcover, shrubs and trees.

Mitigation Measure V.A-10: Landscaping shall be installed on the eastern side of the Enclave fence from the north end of Building 15 to the southern property line prior to or upon installation of Phase I commercial infrastructure. Landscaping shall be installed on the northern side of the fence surrounding the Enclave ~~or along the proposed street to the north of the Enclave~~ prior to or upon development of the residential units in the northwestern portion of the site as shown in Figure 25 in Section V.B, Aesthetics, of the Draft EIR.

[This mitigation measure, originally set forth in the MMRP included in the Certified EIR and revised herein, has been completed.]

Mitigation Measure V.A-11: All parking structure lighting shall be shielded and directed away from off-site residential uses. Such lighting shall be primarily located and directed so as to provide adequate security. Rooftop lighting shall be limited to security lighting and aircraft warning lights as may be required by FAA.

Mitigation Measure V.A-12: The south side of existing Building 1C shall be screened from views along F Cover Street by an architectural facade. The remaining east, west and north sides of 1C shall also be screened to minimize views of the structure. This shall be accomplished with either an architectural facade similar to the south side of the building, with landscape screening using evergreen trees and shrubs in front of a ~~masonry wall tubular steel fence~~ or with landscape screening using evergreen trees and shrubs. ~~Should the north, east or west side of 1C be located fronting F Street, then the street shall be located so that the building is set back from the right-of-way in a similar manner as if it were a new building in this area.~~

4. Cumulative Impacts

Aesthetic impacts of the Revised Project would have the potential to be cumulatively considerable if development of the Revised Project in conjunction with related project were

to alter the existing visual character of nearby aesthetic resources, significantly obstruct views, or significant increase light/glare impacts such that views would be affected. Table III-1 of this Addendum identifies related projects within the vicinity of the Project site. Due to the relatively flat topography and the urbanized nature of the area, none of the identified related projects would be prominent in views from the Project site or the immediately surrounding area. Additionally, none of the related projects is expected to appreciably alter the urban character of the area. Furthermore, each of the related projects would be subject to the project and permit approval process of the City of Long Beach as well as Long Beach Municipal Code (LBMC) regulations which address building height, size, and lighting. Thus, similar to the Approved Project, the Revised Project would not result in significant cumulative impact to aesthetics, views, and light and glare.

B. Air Quality

1. Approved Project Impacts

(a) Construction

As previously indicated, with the exception of the Boeing Enclave, the Project site has been mass graded. Only fine grading would be needed to develop the Approved Project. Regional construction emissions calculated for the Approved Project would exceed South Coast Air Quality Management District (SCAQMD) daily thresholds established for CO, PM₁₀, VOC and NO_x. Thus, construction emissions would result in significant short-term regional air quality impacts for these pollutants. Daily emissions of SO_x would be considered adverse, but less than significant, since the levels of these emissions would fall below the SCAQMD significance thresholds.

PM₁₀ was used as an indicator in the Certified EIR for potential PM_{2.5} impacts.⁷ Therefore, the maximum daily PM₁₀ construction emissions from each phase of the Certified EIR were used to evaluate potential PM_{2.5} impacts.⁸ As shown in Table III-2 on page III-19 and consistent with PM₁₀ impacts identified in the Certified EIR, maximum PM_{2.5} emissions during construction would exceed the adopted SCAQMD regional significance threshold for PM_{2.5}. However, potential PM_{2.5} impacts would be limited to Phase 4 site grading activities and PM₁₀ emissions in the Certified EIR exceeded the SCAQMD regional significance threshold for construction emissions during all four phases. Therefore, the PM_{2.5} regional impact during construction would occur over a shorter duration and the impact would be within the envelope analyzed in the Final EIR. However, it should be

⁷ Page 237, Section V.B., Air Quality, of the Final EIR.

⁸ Table 9 on page 244, Section V.B, Air Quality, of the Final EIR.

**TABLE III-2
APPROVED PROJECT-RELATED MAXIMUM DAILY REGIONAL PM_{2.5} CONSTRUCTION EMISSIONS**

Maximum Daily Emissions	Estimated Emissions	
	PM ₁₀	PM _{2.5}
Phase 1 ^a	242	54.9
Phase 2 ^b	239	52.3
Phase 3 ^c	186	41.4
Phase 4 ^d	310	67.1
Worst-Case Daily Emissions (lbs/day)	1,082	67.1
SCAQMD Daily Threshold (lbs/day)	150	55
Lbs/Day Over (Under)	160	12.1
Significant?	Yes	Yes

^a Maximum daily emissions during Phase 1 includes Phase 1 Site Preparation.

^b Maximum daily emissions during Phase 2 includes Phase 1 Building Construction and Phase 2 Site Preparation.

^c Maximum daily emissions during Phase 3 includes Phase 2 Building Construction and Phase 3 Site Preparation.

^d Maximum daily emissions during Phase 4 includes Phase 4 Site Preparation.

Source: Matrix Environmental, 2009.

noted that the emissions modeling conducted for the Approved Project incorporated pollutant emissions from the mass grading activities that have already been completed on the site. Thus, the emissions calculated in Table III-2 are substantially overstated.

Fugitive dust is also produced from soil disturbance during the grading/site preparation phase of construction. Dispersion modeling was performed to determine the extent of fugitive dust concentrations at nearby sensitive receptors. Results of the PM₁₀ dispersion modeling indicate that development of the Approved Project could cause an exceedance of the 10.4 µg/m³ (micrograms per cubic meter) PM₁₀ measurable increase significance threshold. Therefore, construction-related fugitive dust concentrations could result in a significant impact to local air quality. No significant impacts related to local air toxics, CO, and NO₂ concentrations from construction are forecasted to occur as a result of the project.

As pollutant concentrations are directly proportional to the emission rate, localized PM_{2.5} impacts were evaluated by applying the ratio of PM_{2.5} to PM₁₀ on-site emissions to PM₁₀ concentrations shown in Table 10 on page 246, Section V.B, Air Quality, of the Certified EIR. As shown in Table III-3 on page III-20, maximum PM_{2.5} concentrations during construction would not exceed the SCAQMD recommended LST during any of the construction phases. The Certified EIR concluded that localized PM₁₀ impacts would result in a significant impact, which leads to the conclusion that localized PM_{2.5} impacts during construction would also result in a significant impact (i.e., PM₁₀ impacts are an indicator of

TABLE III-3
LOCALIZED PM_{2.5} CONSTRUCTION IMPACTS FOR THE APPROVED PROJECT

Pollutant	Maximum Increase in Ambient Concentrations for Off-Site Sensitive Receptors During Project Development ^a			
	Phase 1	Phase 2	Phase 3	Phase 4
PM₁₀ (24-hour)^b				
Maximum Concentration Increase (µg/m ³)	36.8	39.3	7.0	5.0
Threshold (µg/m ³)	10.4	10.4	10.4	10.4
Over/(Under)	26.4	28.9	(3.4)	(5.4)
Adverse Concentration	Yes	Yes	No	No
PM_{2.5} (24-hour)				
Maximum Concentration Increase (µg/m ³)	8.2	8.6	1.5	1.1
Threshold (µg/m ³)	10.4	10.4	10.4	10.4
Over/(Under)	(2.2)	(1.8)	(8.9)	(9.3)
Adverse Concentration	No	No	No	No

^a Maximum impacted off-site receptor occurs at single-family residential uses north of the Project site along Carson Street.

^b Table 10 on page 246, Section V.B, Air Quality, of the Final EIR.

Source: Matrix Environmental, 2009.

PM_{2.5} impacts). However, additional analysis demonstrates that PM_{2.5} impacts will not exceed the SCAQMD recommended LST. Therefore, localized PM_{2.5} impacts would be within the envelope analyzed in the approved Certified EIR and would result in less than significant localized PM_{2.5} impacts during construction. As previously indicated, it should be noted that the emissions modeling conducted for the Approved Project incorporated pollutant emissions from the mass grading activities that have already been completed on the site. Thus, the emissions calculated for PM_{2.5} and PM₁₀ are overstated.

(b) Operation

Air pollutant emissions associated with Approved Project occupancy and operation would be generated by both the consumption of energy and by miscellaneous sources (e.g., landscape equipment, emergency generators, etc.). Project-related operational emissions for on-road mobile sources and stationary sources would exceed all SCAQMD thresholds for operational emissions (e.g., NO_x, CO, PM₁₀, and SO_x) with the exception of SO_x, and would represent a significant impact to regional air quality.

Similar to construction impacts, PM₁₀ was used as an indicator for potential operational PM_{2.5} impacts.⁹ Therefore, the maximum daily PM₁₀ operational emissions presented in the Final EIR were used to evaluate potential PM_{2.5} impacts and SCAQMD recommended PM₁₀/PM_{2.5} conversion factors were applied.¹⁰ As shown in Table III-4 on page III-22, maximum PM_{2.5} emissions during operation of the Revised Project would exceed the adopted SCAQMD regional significance threshold for PM_{2.5}. This conclusion is consistent with the findings of the Final EIR regarding PM₁₀ impacts, in which PM₁₀ impacts were used as an indicator for PM_{2.5} impacts. Therefore, the PM_{2.5} regional impact for Project operations will be within the envelope analyzed in the Certified EIR.

During the operational phase of the Approved Project, Project traffic would have the potential to generate local area CO impacts. An analysis at ten selected intersections was performed to determine the potential for the creation of CO hotspots attributable to the Approved Project. This analysis of ten intersections indicated that Project-related traffic would not result in any exceedances of the State one-hour CO standards at any of the study intersections. Similarly, eight-hour concentrations at the analyzed intersections would remain below the State standards.

The air quality analysis examined the consistency of the Approved Project with AQMD's Air Quality Management Plan (AQMP). No significant impacts would occur as a result of the Approved Project with respect to consistency with applicable air quality management policies.

(c) Health Risk

Using data provided by the AQMD and the Long Beach Airport, an assessment of the potential for nearby uses to generate hazardous and acutely hazardous air emissions to impact proposed on-site residential uses was performed. For carcinogenic exposures, the summation of risk totaled 8.3×10^{-6} (8.3 in a million) for the maximum exposed individual (MEI) within the proposed residential land use. In comparison to the established threshold of ten in one million (1.0×10^{-5}), carcinogenic risks fall within acceptable limits. For noncarcinogenic chronic exposures, the maximum summation of risks was 0.02 for the MEI within the proposed residential land use. In comparison to the established threshold of 1.0, chronic risks are below the threshold. For noncarcinogenic acute exposures, the maximum summation of risks was 0.03 for the MEI within the proposed residential land use. In comparison to the established threshold of 1.0, acute risks are below the threshold.

⁹ Page 237, Section V.B., Air Quality, of the Final EIR.

¹⁰ Table 89 on page 852, Section VI.B.3, Alternatives, of the Final EIR.

**TABLE III-4
APPROVED PROJECT-RELATED OPERATIONAL PM_{2.5} EMISSIONS
(POUNDS PER DAY)**

Emission Source	PM ₁₀	PM _{2.5}
Future No Project Conditions		
Mobile Sources ^a	15	4
Stationary Sources ^b	<1	<1
Area Sources ^c	2	2
Aviation-related Sources	0	0
Miscellaneous Sources ^d	3	3
Total	20	9
Future With Project Conditions		
Mobile Sources ^a	551	136
Stationary Sources ^b	6	6
Area Sources ^c	3	3
Aviation-related Sources ^d	<1	<1
Miscellaneous Sources ^e	112	111
Total	672	256
Difference (Net) Emissions	652	247
SCAQMD Significance Threshold	55	55
Over (Under)	597	192

^a Mobile source emissions were calculated using the ADT provided in the Traffic Study completed by Crain and Associates. The ADT used to calculate mobile emissions included reductions for internal trips, existing driveway volumes, and transportation/mitigation measures.

^b Stationary sources include electricity and natural gas usage.

^c Area sources include emissions from emergency generators and charbroilers.

^d Potential aviation-related uses will employ several tugs, several service carts and auxiliary power units. These pieces of equipment will only be operated intermittently in support of aircraft operations.

^e Miscellaneous sources include among other things, consumer/commercial solvent usage (e.g., detergents, cleaning compounds, glues, polishes, and floor finishes), delivery and landscaping equipment.

Source: Matrix Environmental, 2009.

(d) Greenhouse Gas (GHG) Emissions

When the Final EIR was prepared in 2004, there were no regulatory requirements to analyze impacts to global climate. However, regulations have evolved in recent years. In response to growing scientific and political concern regarding global climate change, California has recently adopted a series of laws to reduce both the level of GHGs in the atmosphere and to reduce emissions of GHGs from commercial and private activities within the State. At this time there is no formal guidance under CEQA and no available

quantitative standards by which the approval of a project can be judged to support or hinder attainment of the State's goals relating to GHG abatement.

The Office of Planning and Research (OPR) issued a guidance document on June 19, 2008 which suggests three components for CEQA disclosure: quantification of GHG emissions from a project, determination of significance of the project's impact to climate change, and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

Recognizing the overlap between land use and GHG emissions, the City of Long Beach has adopted Green Building Standards for Public and Private Development¹¹ that are designed to reduce GHG emissions; conserve water, energy, and natural resources; divert waste from landfills; minimize impacts to existing infrastructure; and promote a healthier environment. City Ordinance No. ORD-09-0013 establishes a Green Building Program based on the U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Green Building Rating System. All development projects with 50 or more housing units or 50,000 square feet of commercial/industrial building area are required to attain LEED Certification or meet the intent of LEED at the Certified level. Projects not registered with the Green Building Certification Institute (GBCI) may use a LEED equivalent alternative green building performance rating system to the satisfaction of the City Director of Development Services.

(1) Methodology

Although protocols are available for calculating and reporting GHG emissions, it is important to note that there is no clear guidance defining the extent to which direct or indirect GHG emissions resulting from a project should be addressed and analyzed as part of the CEQA assessment process. To date, no state agency has promulgated significance criteria for such emissions. Nevertheless, this Addendum endeavors to characterize the majority of the GHG emissions that would be associated with the Project by considering likely increases in use of on-road motor vehicles (mobile sources), electricity, water and natural gas.

¹¹ *The Long Beach City Council adopted Green Building Standards for Public and Private Development, Ordinance No. ORD-09-0013, on May 5, 2009.*

The California Climate Action Registry (CCAR)¹² prepared a protocol for calculating and reporting GHG emissions from a number of general and industry-specific activities.¹³ This guidance was used to address GHG emissions from the Approved Project. To be consistent with guidance from the SCAQMD for calculating criteria pollutants only the GHG emissions resulting from the incremental increase in usage of on-road mobile vehicles, electricity, and natural gas upon implementation of the Project were considered as Project-related. In addition, since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions were calculated on an annual basis.

With regard to mobile sources, the analysis used estimates from the traffic study of vehicle miles traveled (VMT) that would be generated by the Approved Project. In order to calculate annual GHG emissions, daily vehicle miles were converted to annual vehicle miles traveled (annualized) using the URBEMIS 2007 software. These values account for variations in trip frequency and length associated with travel to and from the Project location. Mobile source calculations also utilized EMFAC2007 to derive emission factors for CO₂ and methane (CH₄). These emission factors were then applied to the annual VMT from the traffic study. Future mobile source GHG emission reductions from regulations required by AB 1493 were not incorporated in EMFAC2007. Therefore, the analysis may have produced an overestimate of future mobile source GHG emissions.

The consumption of fossil fuels to generate electricity and to provide heating and water creates GHG emissions. Future fuel consumption rates were estimated based on land use-specific square footage of the Project, and natural gas and electricity usage factors derived from the SCAQMD *CEQA Air Quality Handbook*.¹⁴ GHG emission factors from the most recent CCAR General Reporting Protocol¹⁵ were then applied to the fuel consumption rates to calculate annual greenhouse gas emissions.

¹² CCAR was "a public/private partnership created by the State of California to encourage ... government agencies and ... organizations that do business in California to voluntarily measure and report their [GHG] emissions." State of California. *California Climate Action Registry*. (http://www.climatechange.ca.gov/publications/factsheets/2005-06_CLIMATE_ACTION_REGISTRY_FS.PDF, accessed Aug. 2008.) The law establishing CCAR (Health and Safety Code §§ 42820 et seq.) sunset as of Jan. 1, 2008, but CCAR continues as "a private non-profit organization originally formed by the State of California," serving as "a voluntary ... registry to protect and promote early actions to reduce GHG emissions by organizations." (<http://www.climateregistry.org/about.html>, accessed Aug. 2008.)

¹³ CCAR, *General Reporting Protocol Version 3.0 (April 2008)*, http://www.climateregistry.org/resources/docs/protocols/grp/GRP_V3_April2008_FINAL.pdf.

¹⁴ See SCAQMD, *CEQA Air Quality Handbook (April 1993; portions "Changed November 1993")*, Chapter 9 and Appendix 9.

¹⁵ CCAR, *General Reporting Protocol Version 3.0 (April 2008)*, http://www.climateregistry.org/resources/docs/protocols/grp/GRP_V3_April2008_FINAL.pdf.

Embodied energy usage rates associated with the Project's future water supply needs were estimated using energy intensity factors provided by the CEC.¹⁶ GHG emission factors from the CCAR protocol were then applied to the energy usage rates to calculate water use-related annual greenhouse gas emissions in metric tons.

Not all GHGs exhibit the same ability to induce climate change. As a result, GHG contributions are commonly quantified in terms of what would be, in global warming potential (GWP), an equivalent mass of CO₂, denoted as CO₂e. Mass emissions are calculated by converting pollutant specific emissions to CO₂e emissions by applying the proper global warming potential (GWP) value.¹⁷ These GWP ratios are available from the USEPA and published in the CCAR protocol. By applying the GWP ratios, Project-related CO₂e emissions can be tabulated in metric tons per year. The CO₂ values were calculated for existing and Project build-out conditions in order to estimate the net change in GHG emissions.

(2) GHG Impacts

Construction of the Approved Project would result in GHG emissions, and would be reduced through the construction mitigation measures and regulatory requirements described in Section 3 below. Specific measures that would serve to reduce GHG emissions during construction activities include Mitigation Measures V.B-7, V.B-8, V.B-10, V.B-11, and V.B-13. These measures include requiring construction vehicles to be maintained in accordance with manufacturer's specifications, limit construction vehicle idling, and utilize to the extent feasible electricity from power poles rather than temporary diesel power generators. Maintaining construction equipment in accordance with manufacturer's specifications could result in a five percent reduction in GHG construction emissions. While these mitigation measures would serve to reduce GHG emissions by reducing energy consumption, the percent reduction of GHG emissions from most of these measures is not readily quantifiable. The implementation of these construction mitigation measures would represent an improvement above "business as usual." Accordingly, the Approved Project is consistent with the State's strategy to reduce GHG emissions. The Approved Project would result in a less than significant impact with mitigation.

¹⁶ CEC, *California's Water-Energy Relationship* (Nov. 2005), <http://www.energy.ca.gov/2005publications/CEC-700-2005-011/CEC-700-2005-011-SF.PDF> (accessed Aug. 2008), p. 11. In the analysis here, the energy required for wastewater treatment is considered separately from the energy intensity of the other parts of the water use cycle (water supply and conveyance, water treatment and water distribution). Recycling wastewater reduces energy demand and hence GHG emissions as well.

¹⁷ CO₂e was developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its *Second Assessment Report (SAR)* 1996.

Emissions of GHGs were calculated for the existing uses at the site as well as projected future uses upon implementation of the Approved Project. Results are presented on Table III-5 on page III-27. Also included in Table III-5 is the California Energy Commission's estimated 2004 State-wide inventory, the latest year for which data are available. As shown, the net increase in GHG emissions from vehicle, electrical, and natural gas usage associated with the Project is approximately 0.0271 percent of the 2004 emission level. As described above, this GHG analysis was performed in accordance with existing non-GHG specific SCAQMD and CARB guidance. There are many uncertainties involved in the quantification of GHGs from any individual project. Newer construction materials and practices, current energy efficiency requirements, and newer appliances tend to emit lower levels of air pollutant emissions, including GHGs, as compared to those built years ago, but the net effect is difficult to quantify. The above estimates do not account for the emissions reduction requirements associated with AB 1493, SB 1368, AB 32, Executive Order S-3-5, and regulations that have yet to be created. According to the CEC, the reductions in emissions anticipated under AB 1493 (if the federal waiver is granted) will be equivalent to reducing gasoline consumption to a rate of 31 percent of 1990 gasoline consumption (and associated GHG emissions) by 2020. Similarly, emission standards on the State's power plants under SB 1368 have not been used to predict emissions shown in Table III-5, and will likely result in actual emissions below the levels presented.

It is difficult to estimate what portion of the direct and indirect GHG emissions presented above represent new GHG emissions versus existing displaced emissions. Displaced emissions are those that prior to the project, are created and emitted elsewhere; whereas new GHG emissions are those that do not and would not exist without implementation of the project, creating an incremental increase in emissions. The Approved Project would provide employment and housing to accommodate the projected increase in demand for housing and employment within the region. Those who would occupy the new residential units or would be employed within the Approved Project site already generate GHG emissions through their current activities. Whether an actual increase in GHG emissions occurs depends on the nature of their current activities, such as the distance of their commute, the energy demand associated with their current employment or residences, and other factors. Nevertheless, the net increase in GHG emissions is assumed to be new.

As discussed above, the calculation of GHG emissions does not take into account implementation of planned lower GHG emission standards from passenger vehicles and power plants within the State of California, as these rules are yet to be finalized and promulgated. The Project is designed with a number of features and mitigation measures that are consistent with the City's Green Building Requirements for Public and Private Development and the goals of AB 32. As shown in Table III-5, the largest source of GHG emissions is from mobile sources. Mobile source GHG emissions are directly dependent

**TABLE III-5
OPERATIONAL GREENHOUSE GAS EMISSIONS
(APPROVED PROJECT)**

Emission Source	CO ₂ E ^e (Metric Tons)
Existing	
On Road Mobile Sources ^a	2,743
Electricity ^b	2,775
Natural Gas ^c	317
Total	5,835
Approved Project	
On Road Mobile Sources ^a	110,621
Electricity ^b	21,179
Natural Gas ^c	3,881
Total	135,680
Total Net Increase	129,846
2004 Statewide Total ^d	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	0.0271%

^a Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007.

^b Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

^c Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

^d Statewide totals were derived from the California Energy Commission: <http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF>.

^e All CO₂E factors were derived using the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007.

Source: Matrix Environmental, 2009.

on the number of vehicle trips. Thus, a decrease in the number of project generated trips as a result of implementation of project features and mitigation measures would provide a proportional reduction in mobile source GHG emissions. The SCAQMD recommended URBEMIS model provides for vehicular trip reducing measures and includes a range of reduction for different measures (e.g., sidewalks, bike paths, etc.).

The Approved Project will promote reductions in vehicle trips and the consequent generation of GHG emissions in the following ways: (a) by providing a mix of uses including commercial office, research and development, retail, hotel and residential uses; (b) by providing employment opportunities near residences and public transit; (c) by encouraging pedestrian and bicycle circulation through the site by establishing a system of walkways and jogging and biking paths, including a bike path that links to a more regional bicycle system through Long Beach; (d) by providing development in proximity to regional corridors and within an area that is well-served by public transportation, including local

buses and more distantly the Metro Rail Blue Line system; and (e) by providing on-site recreation and community open space amenities.

The following design features and mitigation measures were proposed as part of the Approved Project (as discussed more fully in the Certified EIR) and would serve to reduce GHG emissions:

- a. The Approved Project will integrate a variety of mutually supportive land uses, such as employment, housing, and life style amenities as well as restaurant, retail, and hotels uses, that will make efficient use of land and infrastructure, and reduce employee, resident, and visitor trips and trip distance. As an example, the average trip distance for retail would be substantially reduced as approximately 30 percent of the trips would be considered pass-by trips.¹⁸
- b. The Approved Project mix of land uses (commercial office, research and development, retail, hotel and residential uses) could help achieve an ideal housing/employment balance within the project area which could result in a daily trip reduction of up to nine percent.
- c. The Approved Project is located within a transit oriented development (TOD) area with close access to nearby bus lines.¹⁹ Upon buildout of the Approved Project, the project will be located in close proximity to local transit with over 900 daily weekday buses stopping within ½ mile of the center of the Project site. The Project site will include 26 bus stops within or in close proximity to the Project site.²⁰ The close proximity to local transit could result in a daily trip reduction of up to 15 percent.
- d. The Approved Project includes local serving retail uses; in addition, there are existing retail uses within ½ mile of the center of the Project site, all of which could result in a daily trip reduction of up to two percent.
- e. Bike and Pedestrian (non-motorized access to transit) —The Approved Project will include a series of pedestrian and bicycle routes that will be incorporated into the internal circulation system. Pedestrian routes (i.e., sidewalks and crosswalks) will be provided along all of the proposed on-site roadways as well

¹⁸ LADOT, *Traffic Study Policies and Procedures, Attachment G, LADOT Policy on Pass-By Trips, August 2003.*

¹⁹ *The term transit oriented development refers to urban areas characterized by commercial and mixed land use that are designed to maximize access to public transportation.*

²⁰ *Long Beach Transit, Memorandum regarding Douglas Park Infrastructure Segment 6, Submittal #1, dated April 13, 2009.*

as on Lakewood Boulevard and Carson Street. Pedestrian walkways will also be provided adjacent to all local streets within the residential and commercial areas. In addition, Mitigation Measure V.L-20, discussed below in Section III.L, requires the Approved Project to include an extensive bike trail system. Arterial and collector streets within the Approved Project site would include bike lanes via direct or parallel routes. In addition, a Class I bike trail would be built along the entire site frontage on Carson Street. The extensive non-motorized access to transit could result in a daily trip reduction of up to nine percent.

- f. Mitigation Measure V.L-16, discussed below in Section L, Transportation/Circulation, requires a project Transportation Demand Management (TDM) Program. The TDM program would reduce peak-hour trips for commercial uses by 20 percent and also reduce daily trips. The TDM program may include but not be limited to the following measures: (1) on-site employee transportation coordinator; (2) on-site transportation management office; (3) preferential parking management for employee carpool/vanpool parking; carpool/vanpool matching; (4) vanpool start-up assistance; (5) vanpool staging areas; (6) on-site transit pass sales; (7) centralized information board on alternative transportation modes; (8) new business/employee commuter benefits/flier packets; (9) guaranteed ride home program; and (10) shuttle system implemented through a joint arrangement with the City of Long Beach and/or Long Beach Transit. A TDM program that implements five of these elements could result in a daily trip reduction of up to five percent depending on the level of transit and pedestrian/bike friendliness in the area.

Specific air quality measures that would also reduce operational GHG emissions include Mitigation Measures V.B-18, V.B-19, and V.B-21 through V.B-26. These measures would reduce the use of fossil fuels by restricting idling of on-site trucks and the consumption of energy by complying with California Title 24 Energy Efficiency standards for non-residential and residential buildings. Also, all fixtures used for lighting of exterior common areas would be regulated by automatic devices to turn off lights when they are not needed.

The Approved Project would also include sustainable development and green building strategies consistent with the City's Green Building Requirements for Public and Private Development. For example, all development consisting of buildings of 50,000 square feet or greater would be required, depending on the type and/or mix of use(s), to achieve LEED Certification or demonstrate in the plans and specifications that the development meets the intent of LEED at the Certified level, in accordance with the City's Green Building Development Standards.

In June 2005, Governor Schwarzenegger signed Executive Order S-3-05, which established GHG emissions targets for the State, as well as a process to ensure the targets are met. As a result of this executive order, the California Climate Action Team (CAT), led by the Secretary of the California EPA, was formed. The CAT published its report in March 2006, in which it laid out several recommendations and strategies for reducing GHG emissions and reaching the targets established in the executive order.²¹ Table III-6 on page III-31 illustrates the project's consistency with those recommendations and strategies presented in the CAT report and provides project features or mitigation measures that apply directly to CAT strategies for reducing GHG emissions.

Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the Project's very small theoretical emissions increase could actually cause a measurable increase in global GHG emissions necessary to force global climate change. The GHG emissions of the Project alone cannot cause a direct physical change in the environment. It is global emissions in their aggregate that contribute to climate change, not any one source of emissions alone.

While it is difficult to predict the specific impact of one project's incremental contribution to the global effects of GHG emissions, it is possible to determine whether a project is implementing design strategies consistent with the guidance that is available. The Approved Project, by implementing the project features and GHG reducing measures described above and complying with the City of Long Beach Green Building Requirements for Public and Private Development, would result in a GHG emission profile that is better (lower) than business as usual. Therefore, due to the incremental amount of GHG emissions estimated for the Approved Project, the fact that estimated operational emissions are likely overstated, the lack of any evidence for concluding that the project's GHG emissions could cause any measurable increase in global GHG emissions necessary to force global climate change, and the fact that the project incorporates design features to reduce potential GHG emissions that are consistent with the goals of AB 32, the CAT strategies, and the City of Long Beach's Green Building Requirements for Public and Private Development, the Approved Project is not considered to have a significant impact with respect to global climate change, either on a project-specific basis or with respect to its contribution to a cumulative impact.

²¹ *California Climate Action Team. Climate Action Team Report to Governor Schwarzenegger and the Legislature, 2006.*

TABLE III-6
CONSISTENCY WITH APPLICABLE CALIFORNIA CLIMATE ACTION TEAM REPORT STRATEGIES
(APPROVED PROJECT)

Strategies for Reducing GHG Emissions	Project Consistency
<p>Diesel Anti-Idling Reduce diesel-fueled commercial motor vehicle idling.</p>	MM V.B-8 requires general contractors to maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues will have their engines turned off after ten minutes when not in use, to reduce vehicle emissions.
<p>Achieve 50% Statewide Recycling Goal Achieve California's 50 percent waste diversion mandate (Integrated Waste Management Act of 1989) to reduce GHG emissions associated with virgin material extraction.</p>	The Sustainability Features established for PD-32 South require recycling of materials from the demolition of existing structures and infrastructure, such as concrete, and asphalt and reusable or recyclable metals.
<p>Urban Forestry Plant five million trees in urban areas by 2020 to effect climate change emission reductions.</p>	The Sustainability Features established for PD-32 South require streets to be tree-lined to create shade and reduce energy consumption and to use trees to shade dark parking lot area surfaces to reduce heat island effect.
<p>Water Use Efficiency Implement efficient water management practices and incentives, as saving water saves energy and GHG emissions.</p>	As described in Section III, Project Description, of the Certified EIR, implementation of the Approved Project would include landscaped parkways and roadway medians, passive recreational areas, and other open space areas. Landscaping within the approximately 51 acres of open space to be provided throughout the site would be watered using reclaimed water. The use of reclaimed water will reduce the demand for potable water.
<p>Building Energy Efficiency Standards in Place and in Progress The California Energy Commission updates building energy efficiency standards that apply to newly constructed buildings and additions to and alterations to existing buildings. Both the Energy Action Plan and the Integrated Energy Policy Report call for ongoing updating of the standards.</p>	MM V.B-18 requires all residential and non-residential buildings to meet the California Title 24 Energy Efficiency standards for water heating, space heating and cooling, to the extent feasible.
<p>Appliance Energy Efficiency Standards in Place and in Progress Reduce GHG emissions from electricity by reducing energy demand. The California Energy Commission updates appliance energy efficiency standards that apply to electrical devices or equipment sold in California. Recent policies have established specific goals for updating the standards; new standards are currently in development.</p>	The Sustainability Features established for PD-32 South require commercial project to provide Energy Star appliances.

TABLE III-6 (CONTINUED)
CONSISTENCY WITH APPLICABLE CALIFORNIA CLIMATE ACTION TEAM REPORT STRATEGIES
(APPROVED PROJECT)

Strategies for Reducing GHG Emissions	Project Consistency
<p>Smart Land Use and Intelligent Transportation Apply strategies that integrate transportation and land use decisions, including but not limited to promoting jobs/housing proximity, high-density residential/commercial development along transit corridors, and implementing intelligent transportation systems.</p>	<p>The Approved Project will integrate a variety of mutually supportive land uses that will make efficient use of land and infrastructure, and reduce employee, resident, and visitor trip distances. In addition, the Approved Project provides employment opportunities near residences and public transit; encourages pedestrian and bicycle circulation through the site by establishing a system of walkways and jogging and biking paths; provides development in proximity to regional corridors and within an area that is well-served by public transportation.</p>
<p>Green Buildings Initiative Reduce energy use in private buildings.</p>	<p>The Approved Project would comply with the City's Green Building Requirements for Public and Private Development.</p>
<p><i>CAT strategies not listed are not applicable to this project.</i></p> <p><i>Source: Matrix Environmental, 2009.</i></p>	

2. Revised Project Impacts

(a) Construction

As previously indicated, with the exception of the Boeing Enclave and Verizon's Equipment Building (Building 1C), the Project site has been mass graded. Only fine grading would be needed to develop the Revised Project. Thus, pollutant emissions and fugitive dust from grading activities would be reduced on a daily basis because the intensity of these activities would decrease compared to the Approved Project. In addition, the total square footage of development under the Revised Project is within the envelope analyzed for the Approved Project in the Final EIR. Therefore, the overall level of construction activities would be reduced when compared with the Approved Project. It is expected that the equipment mix, schedule, and number of worker and haul truck trips assumed for the Approved Project would be overstated when compared with the equipment mix necessary to construct the Revised Project since mass grading has already occurred. Therefore, pollutant emissions from construction activities would be reduced when compared with the Approved Project. Impacts during maximum conditions, which are used for measuring significance, would be less than those of the Approved Project. In addition, the Revised Project would comply with the mandatory requirements of SCAQMD Rule 403 for fugitive dust emissions which includes, but is not limited to, using best available control measures to minimize fugitive dust emissions from various fugitive dust sources such as disturbed surfaces. As with the Approved Project, regional (CO, PM₁₀, PM_{2.5}, VOC, and NO_x) and

local construction emissions (PM_{10}) would be significant, although the duration and intensity of these impacts during site preparation would be less than the Approved Project. After implementation of all feasible mitigation measures and incorporation of Project features, construction of the Revised Project would still exceed the SCAQMD daily emission thresholds for regional NO_x , CO, PM_{10} , and VOC. Therefore, construction of the Revised Project would have a significant and unavoidable impact on regional air quality, although such impacts would be reduced when compared with the Approved Project. Maximum construction $PM_{2.5}$ would be reduced with incorporation of mitigation measures and would be reduced below the 55 pound per day SCAQMD daily significance threshold. Construction emissions would also not exceed the SCAQMD significance threshold for SO_x , and, thus, impacts are concluded to be less than significant for $PM_{2.5}$ and SO_x . In addition, such impacts would be reduced when compared with the Approved Project.

No significant impacts related to local air toxics, $PM_{2.5}$, CO, and NO_2 concentrations from construction are forecasted to occur for the Revised Project. However, based on conservative assumptions, with mitigation, local PM_{10} construction concentrations would result in a significant net increase in emissions to areas north of the Project site. These offsite impacts would decrease as site preparation activities move from the northern portion of the Project site towards the more central and southern portions of the Project site. In addition, as much of the mass grading has already occurred, impacts under the Revised Project would be reduced when compared with those indicated for the Approved Project.

(b) Operation

Similar to the Approved Project, air pollutant emissions associated with occupancy and operation of the Revised Project would be generated by both consumption of electricity and natural gas, aviation-related sources, and by the operation of on-road vehicles. While the number of trips is anticipated to be similar to the Approved Project, the trip length, natural gas, and energy usage are dependent on the type of land use. With the change in land use, regional emissions were re-evaluated and the results are shown in Table III-7 on page III-34. In comparison to the Approved Project, operational emissions for the Revised Project would decrease by 25 lbs/day of CO, 15 lbs/day of NO_x , 7 lbs/day of PM_{10} , 3 lbs/day of $PM_{2.5}$, 3 lbs/day of VOC, and results in similar amounts of SO_x . However, similar to the Approved Project operation of the Revised Project would exceed the SCAQMD regional thresholds for CO, NO_x , PM_{10} , $PM_{2.5}$, and VOC. Mitigation measures and Project features would reduce the potential air quality impacts of the Revised Project to the degree technically feasible, but emissions would remain above SCAQMD significance thresholds. Therefore, similar to the Approved Project, operation of the Revised Project would have a significant and unavoidable impact on regional air quality. Operational emissions would not exceed the SCAQMD significance threshold for SO_x , and, thus, impacts are concluded to be less than significant for SO_x .

TABLE III-7
OPERATION EMISSIONS—COMPARISON OF APPROVED PROJECT AND REVISED PROJECT
(POUNDS PER DAY)

Emission Source	CO	NO _x	PM ₁₀	PM _{2.5}	VOC	SO _x
Approved Project^a						
Mobile Sources	1,824	205	551	136	178	3
Stationary Sources ^b	40	227	6	6	4	18
Area Sources ^c	56	46	3	3	7	0
Aviation-Related Sources	9	3	<1	<1	<1	<1
Miscellaneous Sources ^d	384	96	112	111	38	4
Total	2,314	577	672	256	226	25
Revised Project						
Mobile Sources	1,806	203	546	135	176	3
Stationary Sources ^b	37	217	6	6	3	18
Area Sources ^c	56	46	3	3	7	0
Aviation-Related Sources	9	3	<1	<1	<1	<1
Miscellaneous Sources ^d	380	93	111	110	37	4
Total	2,289	562	665	253	223	25
Difference (Net) Emissions						
Over (Under)	(25)	(15)	(7)	(3)	(3)	(0)
Comparison to SCAQMD Threshold						
Revised Project Emissions	2,289	562	665	253	223	25
Existing Emissions	106	63	200	9	13	2
Revised Project (less Existing)	2,182	498	645	244	510	23
SCAQMD Significance Threshold	550	55	150	55	55	150
Over (Under)	1,632	443	495	189	155	(127)

^a Table 89 on page 852, Section VI.B.3, Alternatives, of the Final EIR.

^b Stationary sources include electricity and natural gas usage.

^c Area sources include emissions from emergency generators and charbroilers.

^d Miscellaneous sources include among other things, consumer/commercial solvent usage (e.g., detergents, cleaning compounds, glues, polishes, and floor finishes), delivery and landscaping equipment.

Source: Matrix Environmental, 2009 (see Appendix A of this Addendum).

With regard to traffic-related localized air quality impacts, the Revised Project would result in the same number of trips as the Approved Project. In addition, the trip distribution pattern under the Revised Project would be similar to that of the Approved Project. Therefore, traffic-related localized air quality impacts would be the same for the Revised Project as for the Approved Project. Since the localized CO hotspot analysis for the Approved Project did not result in any significant impacts, the Revised Project would likewise not have any localized impacts.

With regard to consistency of the Revised Project with AQMD's AQMP, the Revised Project would still serve to implement a number of City of Long Beach, City of Lakewood, and SCAG land use policies. The Revised Project would promote reductions in vehicle trips and the consequent generation of pollutant emissions in the following ways: (a) by providing a mix of uses including commercial office, research and development, retail, and hotel uses; (b) by providing employment opportunities near residences and public transit; (c) by encouraging pedestrian and bicycle circulation through the site by establishing a system of bikeways and walkways, including a bike path that links to a more regional bicycle system through Long Beach; (d) by providing development in proximity to regional corridors and within an area that is well-served by public transportation, including Long Beach Transit buses and more distantly the Metro Rail Blue Line system; and (e) by providing on-site community open space amenities. In addition, the Revised Project includes energy conservation features in new construction that would reduce stationary source emissions, transportation demand management features to reduce vehicle trips and associated emissions, as well as transportation system improvements that are intended to reduce bottlenecks and associated emissions. Furthermore, the Revised Project would be required to comply with air quality regulations set forth by the AQMD and would include mitigation measures to reduce air quality emissions. These attributes of the Revised Project are also consistent with various policies set forth in the Air Quality Elements of the City of Long Beach and the City of Lakewood General Plans.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of the Project on air quality in the Basin. Although the Revised Project may cause an exceedance of the localized PM_{10} significance criteria, this exceedance would be short-term in nature. This impact would only occur during construction Phases 1 and 2, and would not have a long-term impact on the regions ability to meet State and Federal air quality standards. In addition, the Revised Project would comply with SCAQMD Rule 403 and would implement mitigation measures for control of PM_{10} . Also, the Revised Project would be consistent with the goals and policies of the AQMP for control of fugitive dust. Therefore, given that the Revised Project would be consistent with AQMP strategies to bring the Basin into PM_{10} attainment, the Revised Project would be consistent with local air quality plans and policies. This conclusion is consistent with the findings of the Final EIR for the Approved Project.

(c) Health Risk

The health risk assessment (HRA) prepared in the Final EIR for the Approved Project demonstrated that the health risk to proposed residential uses from off-site sources of air toxics was less than significant. As the Revised Project would not include sensitive receptors (e.g., residential uses), this less than significant impact would not occur.

(d) GHG Emissions

Emissions of GHGs were calculated for the existing uses at the site as well as projected future uses upon implementation of the Revised Project. Results are presented on Table III-8 on page III-37 is the California Energy Commission's estimated 2004 State-wide inventory, the latest year for which data are available. As shown, the net increase in GHG emissions from vehicle, electrical, and natural gas usage associated with the Revised Project is approximately 0.0269 percent of the 2004 emission level. In comparison to the Approved Project, the Revised Project results in a slight reduction in the increase of GHG emissions (0.0003 percent).

Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that the Revised Project's very small theoretical emissions increase could actually cause a measurable increase in global GHG emissions necessary to force global climate change. The GHG emissions of the Project alone cannot cause a direct physical change in the environment. It is global emissions in their aggregate that contribute to climate change, not any one source of emissions alone. While it is difficult to predict the specific impact of one project's incremental contribution to the global effects of GHG emissions, it is possible to determine whether a project is implementing design strategies consistent with the guidance that is available.

The Revised Project would implement measures similar to those provided above and in the Final EIR for the Approved Project. Also like the Approved Project, the portion of the Revised Project located south of Cover Street would comply with the City of Long Beach's Green Building Requirements for Public and Private Development. The portion of the Revised Project located north of Cover Street would be subject to the City's Green Building Development Standards established for PD-32 North, which would reduce energy and water usage in addition to VMT, and thus reduce GHG emissions. For example, the Revised Project would at a minimum provide 50 percent shade coverage of parking lots (with 40 percent minimum coverage of parking stalls and associated vehicular circulation areas) and 40 percent shade coverage of street rights-of-way with canopy trees. Trees can reduce the heat island effect by reducing the heat reflected from paved areas, as well as sequester CO₂. The amount of CO₂ that can be sequestered depends on tree type and tree age, but is typically 300 to 600 pounds of CO₂ per year per tree. By implementing the project features and GHG reducing measures described above and complying with the applicable Green Development Standards, the Revised Project would result in a GHG emission profile that is better (lower) than business as usual. Therefore, due to the incremental amount of GHG emissions estimated for the Revised Project, the fact that estimated operational emissions are likely overstated, the lack of any evidence for concluding that the project's GHG emissions could cause any measurable increase in global GHG emissions necessary to force global climate change, and the fact that the project incorporates design features to reduce potential GHG emissions that are consistent

**TABLE III-8
OPERATIONAL GREENHOUSE GAS EMISSIONS
(REVISED PROJECT)**

Emission Source	CO ₂ E ^e (Metric Tons)
Existing	
On Road Mobile Sources ^a	2,743
Electricity ^b	2,775
Natural gas ^c	317
Total	5,835
Revised Project	
On Road Mobile Sources ^a	109,538
Electricity ^b	22,325
Natural gas ^c	2,989
Total	134,852
Total Net Increase	129,017
2004 Statewide Total ^d	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	0.0269%

^a Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007.

^b Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

^c Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

^d Statewide totals were derived from the California Energy Commission: <http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF>.

^e All CO₂E factors were derived using the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007.

Source: Matrix Environmental, 2009 (see Appendix A of this Addendum).

with the goals of AB 32, the CAT strategies, and the applicable Green Building Standards, the Revised Project is not considered to have a significant impact with respect to global climate change, either on a project-specific basis or with respect to its contribution to a cumulative impact. Since the GHG analysis for the Approved Project did not result in any significant impacts, the Revised Project would likewise have less than significant GHG impacts.

3. Mitigation Measures

A MMRP was adopted for the Approved Project. The mitigation measures set forth in the MMRP included in the Certified EIR remain applicable to the Revised Project with

some revisions as appropriate for the Revised Project, as indicated below in redline/strikeout text. Mitigation Measures V.B-1 through V.B-15 address construction activities, and Mitigation Measures V.B-16 through V.B-27 address operational activities.

(a) Construction

Mitigation Measures provided below implement recommended mitigation measures provided in SCAQMD's *CEQA Air Quality Handbook*, Chapter 11, and are in addition to the requirements of SCAQMD Rule 403 (Fugitive Dust).

Mitigation Measure V.B-1: All land clearing/earth-moving activity areas shall be watered to control dust as necessary to remain visibly moist during active operations.

Mitigation Measure V.B-1a: Excavating and grading operations shall be suspended when wind gusts (as instantaneous gusts) exceed 25 mph.

Mitigation Measure V.B-1b: Non-toxic soil stabilizers shall be applied according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive ten days or more).

Mitigation Measure V.B-2: All construction roads internal to the construction site that have a traffic volume of more than 50 daily trips by construction equipment, or 150 total daily trips for all vehicles, shall be surfaced with base material or decomposed granite.

Mitigation Measure V.B-3: Streets shall be swept as needed during construction, but not more frequently than hourly, if visible soil material has been carried onto adjacent public paved roads. Street sweepers shall be SCAQMD Rule 1186 certified and water sweepers shall use reclaimed water where feasible.

Mitigation Measure V.B-4: Construction equipment shall be visually inspected prior to leaving the site and loose dirt shall be washed off with wheel washers as necessary.

Mitigation Measure V.B-5: Water three times daily or non-toxic soil stabilizers shall be applied, according to manufacturers' specifications, as needed to reduce off-site transport of fugitive dust from all unpaved staging areas and unpaved road surfaces.

Mitigation Measure V.B-6: Traffic speeds on all unpaved roads shall not exceed 45-20 mph.

Mitigation Measure V.B-7: All equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.

Mitigation Measure V.B-8: General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues will have their engines turned off after ten minutes when not in use, to reduce vehicle emissions. Construction activities should be phased and scheduled to avoid emissions peaks and discontinued during second-stage smog alerts.

Mitigation Measure V.B-9: On-site construction equipment staging areas and construction worker parking lots shall be located on either paved surfaces or unpaved surfaces subject to soil stabilization.

Mitigation Measure V.B-10: To the extent possible, petroleum powered construction activity shall utilize electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.

Mitigation Measure V.B-11: On-site mobile equipment shall be powered by alternative fuel sources (i.e., methanol, natural gas, propane or butane) as feasible.

Mitigation Measure V.B-12: All construction equipment used in the ~~project~~ Project construction shall be stored within the ~~project~~ Project site (away from adjacent residential areas) to reduce the impact on the street system.

Mitigation Measure V.B-13: Deliveries related to construction activities that affect traffic flow shall be scheduled during off-peak hours (e.g., between 10:00 A.M. and 3:00 P.M.) and coordinated to achieve consolidated truck trips. When traffic flow is impacted by the movement of construction materials and/or equipment, temporary traffic controls shall be provided to improve traffic flow (e.g., flag person).

Mitigation Measure V.B-14: All on-site heavy-duty construction equipment shall be equipped with diesel particulate traps as feasible.

Mitigation Measure V.B-15: In compliance with Long Beach Municipal Code and Lakewood Municipal Code requirements, construction activities shall be limited to the following operation schedule: weekdays and federal holidays, 7 A.M. to 7 P.M.; Saturday, 9 A.M. to 6 P.M.; no activities on Sundays within the City of Long Beach; and Sunday, 9 A.M. to 7 P.M. within the City of Lakewood.

(b) Operation

Emission control measures are specified for three sources of operational emissions: (1) service and support facilities; (2) natural gas consumption and electricity production; (3) building materials, architectural coatings, and cleaning solvents; and (4) warehouse/distribution centers.

(1) Service and Support Facilities (point sources)

Mitigation Measure V.B-16: All point source facilities shall obtain all required permits from the SCAQMD. The issuance of these permits by the SCAQMD will require the operators of these facilities to implement Best Available Control Technology and other required measures that reduce emissions of criteria air pollutants.

Mitigation Measure V.B-17: Land uses on the ~~project~~ Project site shall be limited to those that do not emit high levels of potentially toxic contaminants or odors.

(2) Natural Gas Consumption and Electricity Production

Mitigation Measure V.B-18: All ~~residential and non-residential~~ buildings shall meet the California Title 24 Energy Efficiency standards for water heating, space heating and cooling, to the extent feasible.

Mitigation Measure V.B-19: All fixtures used for lighting of exterior common areas shall be regulated by automatic devices to turn off lights when they are not needed.

(3) Building Materials and Architectural Coatings

Mitigation Measure V.B-20: Building materials, architectural coatings and cleaning solvents shall comply with all applicable SCAQMD rules and regulations.

(4) Warehouse Uses

The following mitigation measures shall be considered during operation of any accessory warehouse/distribution uses at the Project site to ensure that health risk impacts are less than significant.

Mitigation Measure V.B-21: Re-route truck traffic by restricting truck traffic on certain sensitive routes;

Mitigation Measure V.B-22: Enforce truck parking restrictions;

Mitigation Measure V.B-23: Restrict truck idling;

Mitigation Measure V.B-24: Electrify service equipment at the warehouse;

Mitigation Measure V.B-25: Provide electrical hook-ups for trucks that need to cool their load;

Mitigation Measure V.B-26: Electrify auxiliary power units; and

Mitigation Measure V.B-27: Use low-sulfur diesel fuel with particulate traps, where feasible.

4. Cumulative Impacts

The SCAQMD evaluates a project's cumulative impacts in terms of the project's relationship with regional emissions. Based on the SCAQMD's recommended methodology, a project would have a significant cumulative impact on air quality if the daily project vehicle miles traveled (VMT) to daily county-wide VMT exceeds the ratio of daily project employees to daily countywide employees or if it exceeds the ratio of project population to countywide population. The Revised Project's daily VMT to daily county-wide VMT ratio would not exceed the ratio of daily project employees to daily countywide employees. Nevertheless, implementation of the Revised Project would result in an increase in emissions which would contribute to region-wide emissions on a cumulative basis. As such, as with the Approved Project, the Revised Project's cumulative air quality impact is conservatively concluded to be significant.

C. Cultural Resources

1. Archaeological Resources

(a) Approved Project Impacts

The archaeological assessment conducted for the Approved Project did not determine the existence of any previously identified archaeological resources within the Project site. The records search conducted at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton did not identify archeological resources within the study area. Additionally, two archaeological surveys conducted within a one-mile radius of the Project site did not identify archaeological resources. However, there is a potential of encountering unknown, buried archaeological resources during construction activities within the Project site. With implementation of mitigation measures, impacts on archaeological resources would be less than significant.

(b) Revised Project Impacts

Similar to the Approved Project, during construction activities for the Revised Project, there is a potential of encountering unknown, buried archaeological resources and thus without mitigation, potential impacts related to the disturbance of previously unknown archaeological resources would be considered significant. As such, the mitigation measures that were adopted for the Approved Project would also be required for the Revised Project. However, it is important to note that mass grading has already occurred as part of the Approved Project and thus, the potential for uncovering archeological resources is further reduced. Similar to the Approved Project, with implementation of the mitigation measures, impacts on archaeological resources would be less than significant for the Revised Project. Thus, the Revised Project's impacts on archaeological resources would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. As indicated below, several of the mitigation measures identified in the MMRP included in the Certified EIR have already been completed. The balance of the mitigation measures remain applicable to the Revised Project, with revisions as appropriate, as follows:

Pedestrian Survey and Refinement to the ARS Map

Mitigation Measure V.C-1: The permitted demolition activities associated with the remediation program cover approximately 80 percent of the Boeing

C-1 Facility. Once this area has been cleared of buildings and asphalt, an opportunity exists to refine the ARS map. Many of the assumptions regarding modern impacts will either be validated or dismissed. The geology of the facility will also become more clear. Recording this new data is paramount to discovery efforts.

A pedestrian survey shall be conducted across surfaces exposed during the remediation program. The survey team would include a geoarchaeologist and several archaeologists. Documentation of disturbances and geology would be made when relevant. If remediation of soil occurred, there is the potential to evaluate stratigraphic data. All data gathered during the survey would be incorporated into the refined ARS map. If areas within the remediation program can be determined to have less potential to contain archaeological resources, then testing efforts can be focused elsewhere.

[This mitigation measure as set forth in the MMRP included in the Certified EIR has already been completed for the site areas graded and recompactd.]

Testing Program

Mitigation Measure V.C-2: The recommended testing program involves the systematic placement of mechanical probes across the ~~project~~ Project site prior to any new construction. Backhoe trenches will be used as the primary method of probing. Trenches will be placed in areas that are clear of utility lines and where the probability of relatively shallow (less than 5 feet) archaeological deposits is indicated by the Archaeological Resources Sensitivity (ARS) Map. Alternate means of mechanical probing will be initiated only if backhoe trenching is deemed ineffective for a particular area. In these instances, continuous cores and/or auger cores will be used.

~~Table 20 of Section V.C, Cultural Resources, of the Draft EIR~~ Table III-9 below contains the percentage of area covered by each Sensitivity Class on the ARS map and the maximum number of probes proposed in the testing program. Only a handful of mechanical probes shall be placed in Sensitivity Class I areas, where the probability of encountering an intact archaeological deposit is quite low. These areas are highly disturbed and the presence of utility lines and other infrastructure dictate a cautious approach. This class accounts for roughly 11 percent of the entire ~~project~~ Project site. The majority of the ~~project~~ Project site, 74 percent, is classified as either Sensitivity Class II or III. Subsurface probes placed in these areas will assess the actual impacts from past construction activities

**TABLE III-9
PROPOSED TESTING PROGRAM**

Sensitivity Class	Percentage of Project Site	Maximum Number of Probes
I	10.9	5
II and III	74.1	40
IV	11.6	10
V	3.5	10

and could result in their reclassification into a lower sensitivity class. Placement of the trenches will depend on particular stratigraphic data encountered, but it is expected that no less than one trench for every five acres will be required. This results in a total of roughly 40 trenches. The highest density of subsurface test probes will be placed in Sensitivity Class IV or V areas, where ten trenches will be placed in each class respectively.

[This mitigation measure as set forth in the MMRP included in the Certified EIR has already been completed for the site areas demolished.]

Data Recovery Program

Mitigation Measure V.C-3: If an archaeological resource is found during the mechanical probing program, a determination will be made regarding whether the resource can be avoided by the proposed development. If not, data recovery measures will commence. In this section, data recovery measures are specified for various types of archaeological resources to account for variability in site size, density and character. Should an archaeological resource be discovered, it will go through a three-phase data recovery program of fieldwork followed by laboratory analysis and reporting. The first phase of fieldwork will involve the definition of the archaeological site boundary and an evaluation of site integrity.

The objective of this phase is the characterization of the archaeological deposit, which will be accomplished through the hand excavation of a small number of test units. The second phase involves the mechanical excavation of the entire deposit area that will be impacted by construction activities. The careful removal of the site will allow archaeologists to recover important scientific information on formation processes and site function and to detect cultural features. The third phase of fieldwork will ensue if features are identified. All features will be hand excavated in their entirety.

Fieldwork will be followed by analysis of the recovered materials, the preparation of a technical report, and curation of all project-related materials.

Phase 1: Site Characterization

Should an archaeological resource be encountered, it will be subjected to site boundary definition. This measure entails an assessment of the resource at the time of discovery. Site boundary definition may require the excavation of backhoe trenches to trace out the subsurface extent of the discovered resource. A backhoe will be used to remove fill and to excavate a series of trenches through the site area. The purpose of the trenches is to define the horizontal and vertical extent of the site and to identify any potential subsurface features. A geoarchaeologist will also inspect the resource and the surrounding sediments to determine whether or not it is in situ. If the discovery is determined to be an archaeological resource, then data recovery measures will be enacted.

Archaeological resources can be divided into two broad categories; prehistoric and historic. Examples of archaeological resources are presented along with the projected Phase 1 level of mitigation effort. All examples assume that ~~project~~ Project-related activities would not allow the resource to be preserved in place and that damage to the entire resource may be expected.

Prehistoric Sites

Prehistoric archaeological resources common to the Los Angeles Basin include habitations, special activity sites, artifact scatters, and isolated features.

Habitations. In the Long Beach area, habitation sites consist of accretional midden deposits. These deposits are often composed of organic remains including vertebrate and invertebrate fauna as well as stone and shell artifacts. Features found in these middens may include hearths, storage pits, piles of fire-affected rock, and burials.

During Phase 1 data recovery of habitation sites, hand excavation of a sample of test units shall occur. In all cases, at least four test units will be excavated, with the maximum number of units not to exceed 10 percent of the area within the archaeological site boundaries. Excavation units will be placed according to trench profiles created during site boundary definition. Test units will be 1- by-1-m in size and excavated stratigraphically where possible. If natural or cultural strata are not evident, units will be excavated in arbitrary 10-cm levels. All materials will be screened through 1/8-inch mesh hardware

cloth and collected separately. Photographs will be taken of selected units, and profiles will be drawn of each unit. Appropriate paperwork will be filled out during the excavation to accurately track all artifacts, samples, and soil removed from the site. Geoarchaeological documentation will include description of soils and stratigraphy.

Special Activity Sites. Special-activity middens are typically food-processing locales that are rich with marine shell and lithic materials. These sites are less likely to contain features and rarely contain burials. Because of the homogenous nature of these sites, less excavation effort will be necessary to characterize the deposit.

At least two test units at each special-activity site shall be excavated, with the maximum number of test units not to exceed 5 percent of the site's defined area. These units will provide sufficient data to address regional research issues. Excavation will proceed as outlined above.

Artifact Scatters and Isolated Features. Artifact scatters is a category of site that includes numerous functions and manifestations. A flaked stone chipping station or a closely associated set of manos and metates would qualify as an artifact scatter. Artifact scatters are often difficult to identify during trenching or grading activities because their archaeological signature does not necessarily contain a discoloration of the soil. Isolated features are also difficult to identify during trenching and grading. Small hearths and roasting pits, for example, often go undetected because of their small size.

For artifact scatters, a sample of two test units at each site shall be hand excavated, with the maximum number of test units not to exceed 5 percent of the total site area. All isolated features encountered will be excavated in their entirety. Excavation will proceed as outlined above.

Historical-Period Sites

Types of historical-period archaeological resources include trash scatters, wells, privies, foundations, and water control features. Based on early 20th century photos, the ~~project~~ Project vicinity was used as pasture or grazing land. As such, the remnants of wells, fence lines, watering troughs, and the like that may have been associated with such agrarian activities may be encountered.

In the event that a historical-period feature is encountered, intact portions shall be defined and a sample of associated artifacts from undisturbed contexts shall be excavated. In the event that features such as privies or wells are encountered, at least half of the

undisturbed deposit will be hand excavated according to the methods outlined below (see Phase 3: Feature Excavation). For features that have no associated artifacts, such as fence posts, wall remnants, and water troughs, the feature shall be documented through photographs, notes, and drawings.

Historical-period trash scatters may also occur on the ~~project~~ Project site. After the area of any encountered trash scatter has been defined, at least two test pits will be manually excavated, with the hand-excavated sample not to exceed 5 percent of the site area.

Phase 2: Mechanical Excavation

Once an archaeological site has been adequately characterized through the hand excavation of test pits, that portion of the site that will be destroyed by construction activities will be mechanically excavated. Using a tracked backhoe or similar equipment fitted with a flat blade, the archaeological deposit will be removed in 10-cm levels. The operation will be monitored by a professional archaeologist. Selected portions of the removed fill will be screened through ~~?~~ 1/8-inch mesh hardware cloth; provenience of the screen material will be set to the site grid and elevation. Features, occupational surfaces, and activity areas will be flagged. Mechanical operations will cease at this point, and hand excavation will ensue (see below). Upon completion of feature excavation, mechanical excavation will resume in an attempt to discover additional features. Mechanical excavations will cease at the base of the archaeological deposit.

Phase 3: Feature Excavation

In the event that archaeological features, such as hearths, roasting pits, or house floors, are discovered, archaeologists will excavate them in their entirety. Smaller features may be bisected and excavated in two halves; larger features may be quartered. Additionally, areas surrounding features will be excavated to ensure that data from related activity areas are collected. In the event that occupational surfaces are identified, the surface will be gridded and excavated in its entirety.

Excavated fill will be screened through ~~?~~ 1/8-inch mesh hardware cloth. Paleobotanical and chronometric samples will be collected from appropriate contexts. All excavated features will be documented thoroughly with photographs, profiles, plan maps, and field notes. Provisions for the treatment of human remains in the event that they are discovered are detailed below.

Lab Sorting and Analysis

After completion of excavations of an archaeological resource, materials collected will be transported to a qualified archaeological laboratory. Maintaining data integrity and information retrieval are primary goals of laboratory analysis. Toward this end, computerized inventories of artifacts and samples, provenience information, and storage boxes are maintained. Artifacts are generally cleaned and processed to the extent that attributes can be observed and recorded, without damaging the artifacts. Archival-quality storage materials are used for artifacts, photographs, and slides. Following processing and cataloging, materials are rebagged and checked out to the analysts for study.

Analysts will carry out intensive analysis of artifacts and samples recovered during the excavation. This includes lithic, faunal, pollen, phytolith, macrofossil, historical-period artifact, and chronometric analyses.

Report Preparation

A professional report will be issued detailing the findings of archaeological data recovery. The report will consist of a ~~project~~ Project background, description of field methods, results of archaeological investigations, a geomorphological evaluation, and management recommendations. All artifacts recovered from testing will be identified and analyzed, and appropriate chapters containing this information will also appear in the report. All project-related materials will be curated at a repository meeting the state standards.

[This mitigation measure as set forth in the MMRP included in the Certified EIR has already been completed for the site areas demolished.]

Discovery of Native American Remains and Funerary Items

Mitigation Measure V.C-4: In the event that human bone and associated funerary items are uncovered during the course of the field investigations, the following protocol will be followed per State CEQA Guidelines §15064.5(e):

1. All work in the area will be halted.
2. The Los Angeles County Coroner will be contacted in accordance with Section 7050.5(b) of the California Health and Safety Code.

3. A representative from the coroner's office will come to the site and determine whether the remains are subject to the provisions of Section 27491 of the California Government Code or other related provisions of law concerning investigation of the circumstances, manner, and cause of death, as required by Section 7050.5(b) of the California Health and Safety Code. The coroner will make this determination within two working days of notification.
4. If the coroner determines that the remains are those of a Native American, Section 7050.5(b) of the California Health and Safety Code requires that the coroner contact the Native American Heritage Commission by telephone, at (916) 653-4082, within 24 hours.
5. The Native American Heritage Commission will proceed to contact the most likely descendant (MLD) and will coordinate the final disposition of the remains with the most appropriate local Native American representative, according to the provisions of Section 5097.98 of the California Public Resources Code.
6. Copies of all correspondence regarding the discovery of human remains will be included as a confidential appendix of the data recovery excavation report, to be provided to all parties but not circulated for public review.

[This mitigation measure as set forth in the MMRP included in the Certified EIR was not required to be implemented for the site areas demolished as no Native American remains were found. Although not anticipated to be necessary, this mitigation measure will apply to the Revised Project if native remains are found.]

Accidental Discovery

Mitigation Measure V.C-5: If archeological resources of any nature should be accidentally encountered during construction activity on the ~~project~~ Project site, work shall be temporarily suspended in the immediate area of the discovery. In such case, a qualified archaeologist shall be called in to evaluate the find and to determine if it is unique as defined in Public Resources Code Section 21083.2(g). Should the find be determined to be unique, a mitigation plan specifying data recovery shall be defined and implemented. Construction may be reconvened in any area determined by the archaeologist not to adversely affect the unique archeological resources accidentally discovered.

[This mitigation measure as set forth in the MMRP included in the Certified EIR was not required to be implemented for the site areas demolished as no archeological resources were found. Although not anticipated to be necessary, this mitigation measure will apply to the Revised Project if archeological resources are encountered.]

2. Paleontological Resources

(a) Approved Project Impacts

The Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County records search identified surficial deposits composed of terrestrial Quaternary Alluvium in the uppermost layers of soils within a one-mile radius of the Project site. Since the Project site and surrounding vicinity has been previously graded and developed, these deposits do not likely contain significant fossils in the uppermost layers. However, at greater depths, older terrestrial Quaternary deposits that contain significant vertebrate fossils and Plio-Pleistocene marine sediments and fossil vertebrate remains have been identified within a one-mile radius of the Project site. Therefore, shallow excavations on the Project site would not likely encounter significant vertebrate fossils. Deeper excavations, however, could enter terrestrial vertebrate fossils Late Pleistocene age. With implementation of mitigation measures, potential impacts to paleontological resources would be less than significant.

(b) Revised Project Impacts

Similar to the Approved Project, shallow excavations occurring on the Project site during construction of the Revised Project would not likely encounter significant vertebrate fossils. However, deeper excavations could encounter fossils. As such, the mitigation measures that were approved for the Approved Project would also be required for the Revised Project. Similar to the Approved Project, with implementation of the mitigation measures, impacts on paleontological resources would be less than significant for the Revised Project. Thus, the Revised Project's impacts on paleontological resources would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. The mitigation measures for the Revised Project are as follows:

Mitigation Measure V.C-6: If unknown paleontological resources are discovered during any grading or construction activity, work will stop in the immediate area. Upon such discoveries a qualified paleontologist shall be consulted to determine the discovery's significance and, if necessary, formulate a mitigation plan, including avoidance alternatives, if feasible, to mitigate impacts. Work can only resume in that area with the approval of the project paleontologist. The paleontologist shall be selected from a list of qualified paleontologists maintained by the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County.

[This mitigation measure as set forth in the MMRP included in the Certified EIR was not required to be implemented for the site areas demolished as no paleontological resources were discovered. Although not anticipated to be necessary, this mitigation measure will apply to the Revised Project if paleontological resources are encountered.]

(d) Cumulative Impacts

Although not anticipated as no archaeological or paleontological resources have been found on-site to date, implementation of the Revised Project, together with the identified related projects has the potential to contribute to the loss of, and irretrievable loss of access to, potential archaeological resources and paleontological resources. However, implementation of relevant preservation laws regarding the protection of archaeological resources and paleontological resources would reduce the cumulative impact to a less than significant level. Furthermore as with the Revised Project, related projects are anticipated to undertake precautionary measures, including site surveys and records searches, to verify the occurrence of archaeological resources and paleontological resources prior to construction. Therefore, similar to the Approved Project, the Revised Project would not result in significant cumulative impacts to archaeological resources and paleontological resources.

3. Historic Resources

(a) Approved Project Impacts

A survey of the site conducted for the Draft EIR identified a grouping of 18 buildings and two other features on the site as a potential historic district eligible for the National Register of Historic Places, the California Register of Historical Resources, and as a City of Long Beach local landmark. Activities associated with the potential district significantly contributed to the history of aviation industry in southern California, the war (World War II)

effort, and the movement to use women workers on the Home Front, and to the development and growth of Long Beach and Lakewood. With the exception of the Boeing Enclave, these buildings have been demolished as part of the mandated remediation program for the Project site. In accordance with the MMRP adopted for the Approved Project, prior to the demolition of structures and features contributing to the potential historic district in compliance with the mandated remediation program, a Historic American Building Survey (HABS) Level II recordation document was prepared. This report documented the history of each building within the historic district and their physical conditions, both historic and current, through site plans, historic maps and photographs, current photographs, written data, and text. Building 15 of the Boeing Enclave may be demolished as part of the Approved Project. As identified in the Certified EIR, demolition of Building 15 would not be a significant impact because this structure does not appear individually eligible for the National Register, California Register or local landmark designation.

(b) Revised Project Impacts

As discussed above, the buildings on the site, with the exception of the Boeing Enclave, have been demolished on the site as part of the remediation program on the site. Similar to the Approved Project, the Revised Project may include the demolition of Building 15. As identified in the Certified EIR, demolition of Building 15 would not be a significant impact because this structure does not appear individually eligible for the National Register, California Register or local landmark designation. Thus, the Revised Project's impacts on historic resources would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. One of the two mitigation measures identified in the MMRP has been completed, as indicated where appropriate below. The mitigation measures set forth in the MMRP are as follows:

Recordation

Mitigation Measure V.C-7: Prior to the demolition of structures and features contributing to the potential historic district in compliance with the mandated remediation program, a Historic American Building Survey (HABS) Level II recordation document shall be prepared. This report shall document the history of each building within the historic district and their physical conditions, both historic and current, through site plans, historic maps and photographs, current photographs, written data, and text. The document shall include:

- a. Written text documenting the history and architectural and engineering features of the property. This text should include a contextual history of Douglas Aircraft and its significant role in American aviation and World War II, as well as its history in Long Beach and southern California. Biographical information regarding Donald Douglas and the Taylor Brothers (Edward Cray and Ellis Wing), the principal architects of the facility, should also be included. Published references related to the construction of the facility, the activities of the Douglas Aircraft Company, Long Beach Plant during the district's period of significance, and other bibliographic sources should be included as well.
- b. Photographic documentation noting all exterior elevations and primary interior features. Photographs should be large format, black and white, archivally processed, taken by a professional photographer familiar with the recordation of historic buildings, and prepared in a format consistent with HABS guidelines and standards. Views shall include several contextual views, all exterior elevations, detailed views of significant exterior architectural/historical features, and interior views of significant historical/architectural features or spaces (if any).
- c. Photographic copies or original prints (per HABS guidelines) of historical photographs should also be included in the HABS document.
- d. A sketch floor plan on 8½" x 11" paper shall accompany each building documented.
- e. Archival originals of the recordation document shall be submitted to the National Park Service for submission to the Library of Congress.
- f. Archival copies of the recordation document shall be submitted to the California Office of Historic Preservation, the City of Long Beach Planning Division (the City's Neighborhood Preservation Officer), City of Long Beach Main Public Library, the Long Beach Heritage, the Historical Society of Long Beach, and the Boeing Company Historical Archives-Cerritos location.

[This mitigation measure as set forth in the MMRP included in the Certified EIR has already been completed.]

Educational and Interpretative Programs

Mitigation Measure V.C-8: To assist the public in understanding the history of the Long Beach facility, an on-site interpretive program display or other photographic and textual representation shall be created and shall be available to the general public. This educational program should include information specific to the facility's contribution to the history of the aviation industry in southern California, the war (World War II) effort and the movement to use women workers on the Home Front (Rosie the Riveter), and in the development and substantial growth of the Long Beach and Lakewood areas. Such interpretive programs may be in the form of commemorative signage and/or plaques; historical photographs; models; and/or published information such as brochures, videos, electronic media, etc. Materials such as those in the interpretive exhibit currently displayed at the Boeing Long Beach facility in the Boeing Realty Company Visitor's Center (Building 1) could be used to satisfy this mitigation measure, incorporated on-site into the overall design of the proposed project, and maintained regularly.

(d) Cumulative Impacts

Cumulative impacts to historic resources could occur if the Revised Project and related project development contributed to the progressive and significant loss of such resources. To the extent that Building 15 is removed as part of the Revised Project, the Revised Project would contribute to a significant cumulative impact on historic resources. As with the Approved Project, even with the recommended mitigation measures, the Revised Project would result in significant cumulative impacts on historic resources.

D. Geology and Soils

1. Approved Project Impacts

The Project site is relatively flat and future grading and construction activities would occur entirely in areas previously graded and/or developed. Thus, implementation of the Approved Project would not result in landslides or unstable soil conditions that would expose people, property, or structures to an increased risk of hazard or damage. With implementation of appropriate construction techniques, implementation of the Approved Project would result in less than significant impacts associated with erosion. The Approved Project would be constructed in accordance with State and local regulations governing grading and site design. Furthermore, detailed geotechnical studies would be prepared for each building to be constructed to minimize geological impacts. Thus, Approved Project impacts related to grading and site design implications would be less than significant.

No known active or potentially active faults pass directly beneath the Project site, and the site is not located in a known fault hazard zone. However, known regional active faults could produce significant ground shaking at the Project site. Therefore, similar to development throughout southern California, implementation of the Approved Project would result in exposure of the employees to a degree of seismic hazard risk. Other potential impacts associated with seismic activities that could occur on the site include liquefaction. However, the Approved Project would be constructed in accordance with California Building Code and Municipal Code requirements, and would be required to prepare geotechnical studies for each building on the Project site in accordance with the California Geological Survey's (CGS) *Special Bulletin 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California*. With implementation of these regulatory requirements, Approved Project impacts associated with the exposure of on-site populations, property, or structures to seismic hazards would be less than significant. Mitigation measures are recommended to ensure that potential seismic-related impacts would be less than significant.

2. Revised Project Impacts

Geological conditions of the Project site have remained substantially the same. Therefore, given the relatively flat topography and disturbed nature of the site, implementation of the Revised Project would also not result in landslides or unstable soil conditions that would expose people, property, or structures to an increased risk of hazard or damage. Similar to the Approved Project, with implementation of appropriate construction techniques, implementation of the Revised Project would also result in less than significant impacts associated with erosion. The Revised Project would also be constructed in accordance with State and local regulations governing grading and site design. Furthermore, detailed geotechnical studies would be prepared for each building to be constructed on the Project site to minimize geological impacts. Thus, the Revised Project's impacts related to grading and site design implications would be less than significant.

As with the Approved Project, implementation of the Revised Project would result in exposure of the employees to a degree of seismic hazard risk. Other potential impacts associated with seismic activities that could occur on the site include liquefaction. However, the Revised Project would be constructed in accordance with California Building Code and Municipal Code requirements, and would be required to prepare geotechnical studies for each building on the Project site in accordance with the CGS' *Special Bulletin 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California*. With implementation of these regulatory requirements, the Revised Project's impacts associated with the exposure of on-site populations, property, or structures to seismic hazards would

be less than significant. Mitigation measures are also recommended for the Revised Project to ensure that potential seismic-related impacts would be less than significant.

Similar to the Approved Project, the Revised Project would be constructed in accordance with State and local regulations, would be required to prepare geotechnical studies for each building on the Project site, result in the exposure of on-site employees to a degree of seismic hazard risk, but with adherence to regulatory requirements and implementation of appropriate construction techniques, would result in less than significant impacts. Thus, the geological impacts of the Revised Project would be within the envelope of impacts identified in the Certified EIR.

3. Mitigation Measures

A MMRP was adopted for the Approved Project. The mitigation measures set forth in the MMRP included in the Certified EIR remain applicable to the Revised Project, with revisions as appropriate, as follows:

Mitigation Measure V.D-1: In accordance with the City of Long Beach Municipal Code and the Lakewood Municipal Code, the Applicant shall prepare a geotechnical study specific to each building to be constructed as part of the ~~project~~ Project as well as to the specific site within the ~~project~~ Project site proposed to be developed. The geotechnical study shall evaluate seismic hazards, including the potential for liquefaction, to a level of detail sufficient to satisfy the California Department of Conservation, California Geological Survey, the California Building Code, and the ~~UBC~~ Uniform Building Code.

Mitigation Measure V.D-2: Grading plans shall be designed such that the final grades on-site are compatible with the grades of the adjacent streetscape to prevent soil erosion from flowing off-site.

4. Cumulative Impacts

As with the Revised Project, each related project would comply with the California Building Code, UBC, and Municipal Code requirements for grading and local building regulations and project-specific geotechnical recommendations by certified geologists and geotechnical engineers. Therefore, similar to the Approved Project, the Revised Project would not result in significant cumulative geotechnical impacts.

E. Hazards and Hazardous Materials

1. Approved Project Impacts

At the time of and subsequent to preparation of the Certified EIR, the pre-existing buildings on the Project site were being demolished as part of the ongoing remediation of the Project site. Thus, a large portion of the 261-acre Project site is currently vacant. However, the 48-acre Boeing Enclave, which includes a variety of aircraft production-related uses, continues to be operational.

Demolition of the former buildings occurred in accordance with SCAQMD Rule 1403 and federal regulations applicable to asbestos demolition activities. This included pre-demolition building surveys and the removal of asbestos by certified asbestos containment contractors. Compliance with legal requirements for future demolition work within the Boeing Enclave would continue to assure that impacts associated with asbestos would be less than significant.

Lead-based paint were treated in accordance with California Code of Regulations (CCR) Title 8, Section 1532.1, which provides for exposure limits, exposure monitoring, and respiratory protection and mandates good working practices by workers exposed to lead. Lead-contaminated debris and other wastes were managed and disposed of in accordance with applicable provisions of the California Health and Safety Code. Compliance with these legal requirements for future demolition work within the Boeing Enclave would continue to assure that impacts of the Approved Project associated with lead-based paint debris and materials would be less than significant.

Approximately 50 underground storage tanks (USTs) have been located on the Project site over the years. All of the known USTs on the Project site have been removed with the exception of two, which are inactive and are located within the portion of the Project site that is located in the City of Long Beach and registered with the City of Long Beach. Currently, they are both empty and not in service. Both of the USTs would be removed in accordance with applicable Federal, State, Los Angeles County Department of Public Works (LACDPW) Environmental Programs Division, and the Long Beach Fire Department regulatory requirements, as appropriate. Therefore, no significant impacts associated with USTs would occur as a result of the Approved Project.

During construction and operation of the Approved Project, hazardous materials would be used, handled, stored, and disposed of in accordance with applicable government regulations and standards. In addition, a Risk Management Plan (RMP) would be developed by the Applicant to assure that such measures are fully protective of the health and safety of new residents, employees, and visitors at the Project site.

The closest oil field to the Project site is the Long Beach Airport Oil Field located approximately 0.2 mile southwest of the site and the nearest oil well is located over 0.3 mile southwest of the site. Due to this distance, the Long Beach Airport Oil Field and oil wells in the vicinity of the Project site would not pose a hazard to the Project site. Also due to this distance, the potential for migration of methane from the Long Beach Airport Oil Field to the Project site in quantities sufficient to present a potential hazard at the site is considered minimal.

In coordination with the Los Angeles Regional Water Quality Control Board (LARWQCB), Boeing is implementing an ongoing comprehensive environmental assessment and remediation program to clean up historic chemical releases to soil and groundwater from former industrial activities on the Project site. This remediation program is mandated by LARWQCB Order and must be completed independent of the ultimate redevelopment of the Project site. As discussed previously, since preparation of the Certified EIR, former industrial buildings and ancillary structures that were on the site (with the exception of the Boeing Enclave) have been demolished as part of the remediation program. Based on an August 2008 Environmental Assessment and Remediation Program Summary Report, 2008 Update prepared by Hargis & Associates (see Appendix A therein), shallow soil clean up has been substantially completed in accordance with the LARWQCB requirements. This component of site remediation program was completed in phases that have been identified in the Assessment Confirmation and Expedited Remediation (ACER) program approved as part of the ongoing remediation work required under the LARWQCB Order. Deep soil and groundwater remediation efforts are currently underway at different areas of the site, and may require longer time frames to clean up than shallow soil impacts. LARWQCB verification of the completion of the required components of remediation work is required before the Applicant obtains permits to construct new buildings as part of the Approved Project. Ongoing cleanup activity would necessitate the installation of subsurface and limited surface cleanup equipment and structures. This cleanup related equipment would not affect or be accessible to new residents or employees at the Project site.

With regard to Airport safety, the Approved Project was specifically designed in conformance with FAA safety requirements set forth in FAR Part 77, and with the Los Angeles County Comprehensive Airport Land Use Plan (ALUP) safety policies. Most of the uses proposed as part of the Approved Project would be compatible with the safety zone guidelines identified within the Caltrans Handbook. In addition, when accounting for several factors including the current and future operations of the Airport, and with implementation of the mitigation measures provided herein, the Approved Project would not result in a significant impact associated with the risk exposure to aircraft operations that would cause a safety hazard for people residing or working in the Project area.

Mitigation measures were included for the Approved Project in the Certified EIR to ensure that impacts related to hazards and hazardous materials would be less than significant.

2. Revised Project Impacts

As stated above, a large portion of the 261-acre Project site is currently vacant as structures were removed in accordance with an ongoing comprehensive environmental assessment and remediation program. However, the 48-acre Boeing Enclave, which includes a variety of aircraft production-related uses, continues to be operational.

Compliance with legal requirements for future demolition work within the Boeing Enclave would continue to assure that impacts associated with asbestos and lead-based paint debris/materials would be less than significant. Additionally, the two USTs which still remain on the site would be removed in accordance with applicable Federal, State, Los Angeles County Department of Public Works (LACDPW) Environmental Programs Division, and the Long Beach Fire Department regulatory requirements, as appropriate. Therefore, no significant impacts associated with USTs would occur as a result of the Revised Project.

During construction and operation of the Revised Project, hazardous materials would be used, handled, stored, and disposed of in accordance with applicable government regulations and standards. In addition, a RMP would be developed by the Applicant to assure that such measures are fully protective of the health and safety of new employees and visitors at the Project site.

As discussed previously, in coordination with LARWQCB, Boeing is implementing an ongoing comprehensive environmental assessment and remediation program to clean up historic chemical releases to soil and groundwater from former industrial activities on the Project site. This remediation program is mandated by LARWQCB Order and must be completed independent of the ultimate redevelopment of the Project site. As with the Approved Project, LARWQCB verification of the shallow soil cleanup is required before the Applicant obtains permits to construct new buildings as part of the Revised Project. Deep soil and groundwater remediation efforts are currently underway at different areas of the site, and may require longer time frames to clean than shallow soil impacts. This ongoing activity may necessitate the installation of subsurface and limited surface cleanup equipment and structures. This cleanup related equipment would not affect or be accessible to new employees or visitors at the Project site.

The Revised Project would comply with the FAA safety requirements set forth in FAR Part 77 and with the Los Angeles County Comprehensive ALUP safety policies. The FAA conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718

and Title 14 of the Code of Federal Aviation Regulations, Part 77, and determined that the Revised Project would not result in hazards relative to air navigation.²² Therefore, no significant impacts related to airport safety would occur.

Similar to the Approved Project, the Revised Project will comply with all relevant regulatory requirements and standards relative to the removal of asbestos, lead-based paint, and underground storage tanks (USTs), as well as the use, handling, storage, and disposal of hazardous materials. In addition, the Revised Project will include a Risk Management Plan (RMP) similar to that of the Approved Project and will continue to implement the ongoing comprehensive environmental assessment and remediation program on-site in coordination with the LARWQCB. Mitigation measures are also proposed for the Revised Project to ensure that impacts related to hazards and hazardous materials would be less than significant. Based on the above, the Revised Project's impacts related to hazards and hazardous materials would be within the envelope of impacts identified in the Certified EIR.

3. Mitigation Measures

A MMRP was adopted for the Approved Project. The mitigation measures provided below remain applicable to the Revised Project, with some necessary revisions as indicated in redline/strikeout text. It should be noted that Mitigation Measure V.E-2 adopted for the Approved Project has been partially implemented. Specifically, an LARWQCB-approved Risk Management Plan has been prepared for the southern portion of the Project site. Additionally, as mentioned above, the FAA conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and Title 14 of the Code of Federal Aviation Regulations, Part 77, and determined that the Revised Project would not result in hazards relative to air navigation.

Mitigation Measure V.E-1: Prior to constructing new buildings in an Environmental Investigation Area (EIA), obtain LARWQCB confirmation that the required demolition and soil remediation work has been completed as required by the ACER program, and that the EIA is suitable for redevelopment (LARWQCB Completion Notice).

²² *Federal Aviation Administration, Determinations of No Hazard to Air Navigation, 12/02/2008, to Boeing Realty Corporation (see Appendix G of this Addendum).*

Mitigation Measure V.E-2: Complete a Risk Management Plan (RMP), to remain in place and effective during the construction of new buildings and after ~~project~~ Project development, until the site has been remediated as required by the CAO, that includes the following:

- Develop and record all required environmental disclosures, covenants and restrictions relating to historical impacts to soil and groundwater, including residual conditions or restrictions that may remain in place in some areas during or after full implementation of the LARWQCB Order.
- Develop and implement a consolidated Health and Safety Plan (HSP) for redevelopment construction workers that includes all required elements to assure worker protection in relation to soil and groundwater conditions on the ~~project~~ Project site. Provide the RMP, including this HSP, to construction contractors and sub-contractors and require compliance with the HSP in all construction contracts that include work scopes likely to require contact with subsurface soils or groundwater.
- On EIAs for which there has been no LARWQCB Completion Notice as of the commencement of redevelopment construction activities, limit access with adequate fencing or other barriers to protect ~~new residents and employees~~ at Douglas Park. Identify and implement risk management measures within EIAs that are adjacent to or may otherwise affect completed redevelopment areas, including a routine inspection program to assure that such measures are being implemented.
- On EIAs for which groundwater or deeper-soil remediation work is planned or ongoing as of the commencement of constructing new buildings, identify and implement risk management measures for the management of impacted soils and groundwater, and for the installation and operation of remediation equipment and processes, that are fully protective of the health and safety of the public and Douglas Park ~~new residents and employees~~, including a routine inspection program to assure that such measures are being implemented. At minimum, such measures shall include compliance with all applicable federal, state and local laws and regulations.

- Identify and implement risk management measures for managing demolition debris, including debris containing asbestos materials or lead-based paints, to assure are fully protective of the health and safety of the public and Douglas Park ~~new residents and~~ employees, including a routine inspection program to assure that such measures are being implemented. At minimum, such measures shall include compliance with all applicable federal, state and local laws and regulations.
- Identify and implement accident prevention and control measures for demolition and remediation activities, and for ongoing operations within the Boeing Enclave, that are protective of the health and safety of the public and Douglas Park ~~new residents and~~ employees, including a routine inspection program to assure that such measures are being implemented. At minimum, such measures shall include compliance with all applicable federal, state and local laws and regulations.
- Identify and implement standards for imported soils and compaction materials to assure that such fill materials are fully protective of human health and the environment, and require contractors responsible for imported fill to meet these standards.
- Identify and implement ~~project~~ Project design features that may be used to minimize impacts to ongoing or planned remediation work in ~~project~~ Project area groundwater or soils, including, for example: (a) landscaping features that will not require excessive quantities of water thereby avoiding interference with groundwater areas requiring remediation; (b) building features that may minimize the potential for migration of soil vapors into occupied indoor areas; and (c) land plan elements that are consistent with planned longer-term remediation efforts.

[This mitigation measure as set forth in the MMRP included in the Certified EIR has been partially implemented. Specifically, an LARWQCB-approved Risk Management Plan has been prepared for the southern portion of the Project site.]

Mitigation Measure V.E-3: In accordance with FAA requirements, prior to commencement of construction of any building, the construction sponsor shall file Form 7460-1, Notice of Proposed Construction or Alteration, with the appropriate regional FAA office for airspace review.

Mitigation Measure V.E-4: Prior to execution of a “through-the-fence” agreement for a proposed aviation-related use, the proposal shall be submitted to the Airport for review and approval and the Airport will consult with the FAA.

Mitigation Measure V.E-5: No building(s) shall be constructed in the Runway Protection Zones (RPZs) designated by the Airport Layout Plan.

Mitigation Measure V.E-6: The following measures shall be implemented to reduce the risk of exposure to airport-related hazards associated with aircraft operations on Runway 16L/34R:

- Provide street alignment and landscaping along the extended runway centerline;
- Locate automobile parking, in the commercial areas, adjacent to the extended runway centerline so as to reduce the building coverage in that area;
- Utilize construction that would limit small aircraft penetration in the Inner Safety Zone and Inner Turning Zones;
- Avoid concentrations of people near the extended runway centerline and runway end by locating elements such as streets, setbacks, parking, and landscaping, near the extended runway centerline and runway end;
- Avoid concentrations of people that are not shielded by a structure from aircraft penetration in the Inner Safety and Inner Turning zones by locating primarily buildings within the Inner Safety and Inner Turning zones rather than developing areas where people would congregate (i.e., amphitheaters, band stands); and
- Comply with the Federal Aviation Regulations, Part 77 height limits.

Mitigation Measure V.E-7: The following measures shall be implemented to reduce the risk of exposure to airport-related hazards associated with aircraft operations on Runway 25R/7L:

- Provide street alignment and automobile parking to reduce land coverage in areas nearest the runway operating areas;

- Utilize construction that would limit small aircraft penetration in the Inner Safety Zone and Inner Turning Zone;
- Avoid concentrations of people that are not shielded by a structure from aircraft penetration in the Inner Safety Zone and Inner Turning Zones, by locating primarily buildings within the Inner Safety and Inner Turning zones rather than developing areas where people would congregate (i.e., amphitheaters, band stands); and
- Comply with the Federal Aviation Regulations, Part 77 height limits.

4. Cumulative Impacts

Impacts associated with hazards and hazardous materials are typically site-specific and do not cumulatively affect off-site areas. In addition, the ongoing remediation program within the Project site will ameliorate potential hazardous conditions. Furthermore, all related development located within the vicinity of the Project site would be subject to the same local, State, and Federal regulations pertaining to hazards and hazardous materials. Specific related projects located within proximity of the Long Beach Airport would be subject to FAA safety regulations, the Los Angeles County ALUP, and Caltrans Handbook guidance. Therefore, with adherence to such regulations, the concurrent development of the Revised Project and related projects would not result in cumulatively significant impacts with regard to hazards and hazardous materials.

F. Hydrology

1. Approved Project Impacts

As a result of the remediation program occurring at the Project site, the majority of the site is currently graded with the exception of the 48-acre Boeing Enclave. The Approved Project would introduce new impervious areas as well as landscaped areas consisting of parks and open space. On-site flows for the Approved Project were estimated to be approximately 403 cfs during a 10-year storm event, 457 cfs during a 25-year storm event, and 529 cfs during a 50 year storm. Within the larger 531-acre hydrologic basin during 10-, 25-, and 50-year storm events, flows would be approximately 454 cfs during a 10-year storm event, 535 cfs during a 25-year storm event, and 626 cfs during a 50 year storm-event.

The existing double 9.25 foot by 8 foot reinforced concrete box (RCB) culverts located under Lakewood Boulevard have a hydraulic capacity of 900 cfs. However, the Los

Angeles County Flood Control District (LACFCD) has specified that discharges to these facilities from the proposed RCB line along the southern site boundary should be restricted to 237 cfs. With estimated 10-year runoff flows of 454 cfs associated with the 531-acre hydrologic basin, approximately 217 cfs of flows cannot be accommodated by the double RCB culverts. Thus, the generation of surface water flows during a 10-year storm event is considered a significant impact, and mitigation measures would be required. However, even with mitigation, the Approved Project would still have a significant impact on the existing double RCB culverts.

2. Revised Project Impacts

The Revised Project would also introduce new impervious areas as well as landscaped areas consisting of community open spaces, pedestrian connections, landscape buffers, and other open space amenities. The overall on-site peak flow for the Revised Project during a 50-year storm event is estimated to be approximately 412.27 cfs, which would be decreased relative to the Approved Project.²³ Within the rezone area for the Revised Project, several additional storm drain structures would be required to adequately service the site.

As mentioned previously, the LACFCD has specified that discharges to the double RCB culverts be restricted to 237 cfs. Thus, the Revised Project's decrease in flows to 412.27 cfs would not be sufficient enough to eliminate the significant impact on the double RCB culverts. Therefore, impacts of the Revised Project would also be significant, and therefore, mitigation measures would also be required. However, even with mitigation, the Revised Project would still have a significant impact on the existing double RCB culverts. Based on the above, the Revised Project's impacts related to hydrology would be within the envelope of impacts identified in the Certified EIR.

3. Mitigation Measures

A MMRP was adopted for the Approved Project. The following Mitigation Measures V.F-1 and V.F-2 remain applicable to the Revised Project, with revisions as appropriate:

Mitigation Measure V.F-1: On-site drainage system improvements shall be completed in accordance with the requirements of the Los Angeles County-City of Long Beach Department of Public Works and the City

²³ Updated Drainage Study, January 2009; Kimley-Horn and Associates, Inc. (see Appendix B of this Addendum).

of Lakewood Department of Public Works and shall be coordinated with Douglas Park development and on-site street improvements.

Mitigation Measure V.F-2: All new on-site storm drains shall be sized to convey a 25-year storm event with the combined capacity of each storm drain and street right-of-way accommodating a 50-year storm event.²⁴ as shown in the Updated Drainage Study (January 2009) prepared by Kimley-Horn and Associates, Inc., or subsequent drainage studies approved by the City of Long Beach, based on the applicable requirements of the January 2006 edition of the Hydrology Manual of the County of Los Angeles. The City may require on-site storm drain systems for successor maps to be based on the latest edition of County's Hydrology Manual.

These mitigation measures have been implemented for improvements that have been completed on the Project site. Continued implementation of these mitigation measures for future improvements would reduce potential hydrology impacts of the Revised Project, though such impacts would remain significant due to the capacity of the existing double RCB culverts.

4. Cumulative Impacts

The Revised Project and the related projects identified could potentially increase the volume of storm water runoff and contribute to pollutant loading in storm water runoff, resulting in cumulative impacts to hydrology. Site-generated runoff from the Revised Project would exceed the capacity of the double RCB culverts under Lakewood Boulevard, and a significant Project-level impact may occur. However, as indicated above, the Revised Project would reduce flows. Any related projects located within the 1,521-acre watershed of the Revised Project could also generate stormwater flows that contribute to the capacity shortage of the double RCB culverts. As such, similar to the Approved Project, implementation of the Revised Project in combination with the related projects may result in a significant cumulative impact relative to hydrology.

²⁴ ~~Except in a sump condition, in which drain(s) will be designed to convey a 50-year storm event.~~

G. Water Quality

1. Construction

(a) Approved Project Impacts

In accordance with federal and state requirements, National Pollution Discharge Elimination System (NPDES) permits were obtained and a Stormwater Pollution Prevention Plan (SWPPP) was prepared by Hunsaker and Associates, Inc. (dated October 2005) to cover the demolition and grading activities that occurred on the Project site. The SWPPP includes Best Management Practices (BMPs) and erosion control measures. With continued compliance with NPDES requirements including the SWPPP and local regulations, construction activities of the Approved Project would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the Los Angeles Regional Water Quality Control Board or other regulatory agencies or impair the beneficial uses of the receiving waters. In addition, construction of the Approved Project would not result in a violation of any water quality standards or waste discharge requirements and would not otherwise substantially degrade water quality. Therefore, construction-related impacts to surface water quality would be less than significant.

Construction activities could require excavation of up to 20 feet below ground surface during removal of existing foundations and during pile driving activities. Implementation of these construction activities could involve dewatering. Short-term NPDES permits for discharge of groundwater to the storm drain would be obtained for construction dewatering, if necessary. The Approved Project would comply with all permit requirements during these activities. As such, implementation of construction activities as a result of the Approved Project would not degrade groundwater quality, and impacts would be less than significant.

Water quality impacts during construction of the Approved Project would be less than significant. Nonetheless, mitigation measures for the Approved Project were included in the Certified EIR to ensure that construction of the Approved Project would comply with applicable water quality regulations.

(b) Revised Project Impacts

As indicated above, in accordance with federal and state requirements, NPDES permits were obtained and a SWPPP was prepared by Hunsaker and Associates, Inc. (dated October 2005) to cover the demolition and grading activities for the Project site. The SWPPP includes BMPs and erosion control measures. As with the Approved Project, continued compliance with NPDES requirements (including preparation of separate site-

specific SWPPPs) and local regulations would ensure that construction activities associated with the Revised Project would not degrade the surface water quality of receiving waters to levels below standards considered acceptable by the LARWQB or other regulatory agencies or impair the beneficial uses of the receiving waters. In addition, construction of the Revised Project would not result in a violation of any water quality standards or waste discharge requirements and would not otherwise substantially degrade water quality. Therefore, construction-related impacts to surface water quality would be less than significant.

Construction activities could require excavation of up to 20 feet below ground surface during removal of existing foundations and during pile driving activities. Implementation of these construction activities could involve dewatering. Short-term NPDES permits for discharge of groundwater to the storm drain would be obtained for construction dewatering, if necessary. The Revised Project would comply with all permit requirements during these activities. As such, implementation of construction activities as a result of the Revised Project would not degrade groundwater quality, and impacts would be less than significant. Nonetheless, mitigation measures are also proposed to ensure that operation of the Revised Project would comply with applicable water quality regulations. Thus, the Revised Project's impacts on water quality would be within the envelope of impacts identified in the Certified EIR.

2. Operation

(a) Approved Project Impacts

Operation of the Approved Project would produce pollutants typically associated with urban uses, such as oil and grease, metals, fertilizers, pesticides, dirt from landscaped areas, and litter. However, the Applicant and subsequent property owners would be required to comply with the Standard Urban Stormwater Mitigation Plan (SUSMP) requirements during the operational life of the Project. Such requirements would include source control BMPs, treatment control BMPs, requirements regarding erosion control, and BMP maintenance. Additionally, post-construction structural or treatment control BMPs designed to infiltrate or treat the volume of runoff produced from a 0.75-inch storm event prior to its discharge to a storm water conveyance system would be implemented. Since preparation of the Certified EIR, BMPs have been implemented and include three Continuous Deflection Separation (CDS) hydrodynamic separators that were installed at the Project site. These CDS units will capture 90 percent of Total Suspended Solids and will remove 100 percent of floatable and neutrally buoyant material. Therefore, runoff contaminants generated by the operation of the Approved Project would not violate any water quality standards or waste discharge requirements, impair the quality of receiving surface waters, impair the beneficial uses of the receiving waters, or otherwise substantially

degrade water quality. The Boeing Enclave facility on the site may continue to operate for a number of years as the Approved Project is developed and would continue to generate fuel, solvents, coatings, hydraulic fluids and oils. This facility would continue to operate under the storm water monitoring program developed for its current NPDES wastewater discharge permit number 6116. The operation of the Approved Project would not interfere with those requirements. Thus, impacts to surface water quality associated with operation of the Approved Project would be less than significant. Nonetheless, mitigation measures were included in the Certified EIR to ensure that operation of the Approved Project would comply with applicable water quality regulations.

(b) Revised Project Impacts

Operational surface water quality impacts of the Revised Project would be similar to those of the Approved Project. As with the Approved Project, pollutants typically associated with urban uses, such as oil and grease, metals, fertilizers, pesticides, dirt from landscaped areas, and litter, would be produced during the operation life of the Revised Project. However, the Applicant and subsequent property owners would be required to comply with the revised SUSMP requirements during the operational life of the Project. Such requirements would include source control BMPs, treatment control BMPs, requirements regarding erosion control, and BMP maintenance in accordance with the PD-32 North Green Building Standards. As discussed above, three CDS units have been installed on the Project site since preparation of the Certified EIR. In addition, the following measure not previously contemplated for the Approved Project is proposed for the Revised Project:²⁵

- The Project site shall include stormwater management practices that treat stormwater runoff from 90 percent of the average annual rainfall on the site using structural and non-structural management measures. The Best Management Practices (BMPs) used to treat the runoff must be capable of removing 80 percent of the average annual post development total suspended solids (TSS) load.

Additional permanent BMPs would be selected for individual lot development and shall be addressed in future SUSMPs to be submitted at the time of lot development. Use of these BMPs would minimize surface water quality impacts. Therefore, runoff contaminants generated by the operation of the Revised Project would not violate any water quality standards or waste discharge requirements, impair the quality of receiving

²⁵ *Standard Urban Storm Water Mitigation Update, July 24, 2009; Kimley-Horn and Associates, Inc. (see Appendix C of this Addendum).*

surface waters, impair the beneficial uses of the receiving waters, or otherwise substantially degrade water quality. The Boeing Enclave would continue to operate under the storm water monitoring program developed for its current NPDES wastewater discharge permit number 6116. As such, implementation of the Revised Project would not degrade surface water quality, and impacts would be less than significant. Nonetheless, a mitigation measures are proposed to ensure that operation of the Revised Project would comply with applicable water quality regulations.

As with the Approved Project, the Revised Project will comply with NPDES requirements and local regulations during construction to ensure that surface water quality will not be significantly degraded. Urban pollutants associated with Revised Project operations will also be similar in nature to those under the Approved Project, and such operations will comply with comparable SUSMP requirements. Thus, the Revised Project's impacts on water quality would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. The following mitigation measures remain applicable, with some revisions as appropriate for the Revised Project, as indicated in redline/strikeout text.

Mitigation Measure V.G-1: In accordance with the federal NPDES program, construction of the Douglas Park ~~project~~ Project shall comply with NPDES permit requirements for water discharged during mass grading and backbone infrastructure construction activities. As part of these requirements, a SWPPP and monitoring plan ~~shall be~~ have been developed and implemented that shall identify appropriate BMPs to reduce and/or to eliminate pollutant loadings to storm water runoff ~~operate under the construction permit 419C315915.~~

Mitigation Measure V.G-2: The various separate development sites within the Douglas Park property shall be required to secure a separate NPDES construction permit and prepare a site-specific SWPPP as they are developed if they are greater than one acre. Each individual development shall provide storm water controls prior to issuance of a building permit by the appropriate department of the Cities of Long Beach and Lakewood. Development on sites that are greater than one acre shall file an approved SWPPP plan with the respective City and the LARWQCB.

Mitigation Measure V.G-3: In accordance with LARWQCB requirements and local regulations, a Standard Urban Storm Water Mitigation Plan (SUSMP) (or separate SUSMPs) shall be developed and implemented during the operational life of the project. The SUSMP requirements shall include post construction structural or treatment control BMPs designed to mitigate ~~(infiltrate or treat) the volume of runoff produced from a 0.75-inch storm event prior to its discharge to a storm water conveyance system~~ 90 percent of the average annual rainfall on-site to remove 80 percent of the average annual post development total suspended solid load. Part of the SUSMP requirements to be implemented shall include provisions for storm drain stenciling and signage,²⁶ the proper designation of outdoor material storage areas, and provisions for proof of ongoing BMP maintenance. For facilities located within the public right-of-way, a maintenance agreement between the applicant and the appropriate City shall be developed, and Covenants, Conditions, and Restrictions (CC&Rs) shall be developed for private water quality controls.

(d) Cumulative Impacts

The Revised Project and the related projects identified in Table III-1 of this Addendum could potentially increase the volume of storm water runoff and contribute to pollutant loading in storm water runoff. However, as with the Revised Project, related projects would also be subject to State NPDES permit requirements and LARWQCB regulations for both construction and operation. Related projects would be required to develop SUSMPs and would be evaluated individually to determine appropriate BMPs and treatment measures to minimize pollutant loading and stormwater runoff. Thus, as with the Approved Project, the Revised Project would not result in cumulative impacts to surface water quality or groundwater quality.

H. Land Use and Planning

1. Approved Project Impacts

The Project site is located within the jurisdiction of the Cities of Long Beach and Lakewood. The site is situated in an urban area and is surrounded by a variety of land uses, including aviation, office, industrial, recreation, residential, and educational uses. The only remaining occupied area of the site is located within the western 48-acre portion

²⁶ *With regard to stenciling, the City of Long Beach requires that the contractor/developer use the City's Standard Plan No. 636, "Catch Basin Stencil."*

of the site, immediately adjacent to the Airport, which is referred to as the Boeing Enclave. (Since publication of the Final EIR, all other development on-site has been removed in conjunction with a mandated soil and groundwater remediation program.)

Under the Approved Project, the proposed uses would not all be fully consistent with the General Plan land use designations for the site. Text amendments were proposed to Land Use District (LUD) No. 7 (Mixed-Use) to clarify that residential uses may be appropriate in combination with industrial development under certain circumstances. Amendments were also proposed to the General Plan Land Use Map to change the LUD No. 12 (Harbor/Airport) designation in the southern portion of the site to LUD No. 7. In addition, graphics and text amendments regarding the Long Beach Airport Activity Center were proposed to more accurately reflect existing conditions and allow a greater mix of uses. A Development Agreement was also proposed for the Project.

The Approved Project, including the mix and intensity of uses, would be consistent with the applicable goals and objectives set forth in the amended Land Use Element of the City of Long Beach General Plan as well as the goals and action steps in the City's Strategic Plan 2010. The Project would create an activity center on the site through the proposed mix and intensity of uses and would create a place where a concentration of urban activity would exist in support of the City's goals. The proposed R&D, light industrial, residential, retail, hotel, office, and aviation-related and ancillary uses would result in a unique character and interest on the Project site consistent with the objectives for creating a major activity center.

The adopted Planned Development (PD) 32 ordinance established development standards for the use and development of the Approved Project on the Project site. With the adoption of the existing PD-32 ordinance and the rezoning of the site from PD-19 to PD-32 Zone, the Approved Project would be consistent with the City of Long Beach Zoning Ordinance.

With regard to the portion of the site within the City of Lakewood, the Approved Project would comply with the City's General Plan and Redevelopment Project Area III Plan since the Approved Project would result in the redevelopment of the 23 acres within the City of Lakewood. Such redevelopment would eliminate conditions of blight and deterioration, encourage new private sector investment, create new job opportunities, and facilitate the installation and expansion of required public infrastructure, utilities, streets, and landscaping, in accordance with the goals of the Redevelopment Plan. The Approved Project would comply with the City's Zoning Ordinance with regard to uses and development standards. A Conditional Use Permit may be required if a park is located within the City of Lakewood. As such, the Approved Project would comply with the City of Lakewood policies and ordinances.

The Approved Project would be consistent with the Airport layout plan and the County Comprehensive Land Use Plan. Specifically, the Approved Project would comply with the County's Land Use Compatibility Table, the runway protection zones (RPZs) and the Federal Aviation Administration (FAA) regulations regarding height limits. Refer to Appendix G of this Addendum for the FAA Determinations of No Hazard.

The Approved Project would also be consistent with the Metropolitan Transportation Authority Congestion Management Plan for Los Angeles County based on implementation of a proposed Transportation Demand Management (TDM) program that would serve to reduce Project trips affecting the regional circulation system. In addition, the Approved Project is supportive of the concepts and policies contained within the Southern California Association of Governments (SCAG) Regional Comprehensive Plan and Guide by transforming the Project site into an activity center and sustainable community.²⁷ As discussed in Section B, Air Quality, the Approved Project would also be consistent with the South Coast Air Quality Management District Air Quality Management Plan. Therefore, the Approved Project would be consistent with regional land use policies.

The Approved Project would be compatible with the surrounding land uses due to the proposed placement and orientation of the proposed uses. The location of housing along Carson Street would be compatible with the residential and recreational uses to the north and northwest. The location of commercial uses adjacent to Lakewood Boulevard would be compatible with the existing commercial and industrial uses to the east across Lakewood Boulevard. The proposed commercial land use area which abuts the Lakewood Country Club Golf Course to the west would be compatible with this open space use in light of the proposed setbacks, maximum building heights, and the building restriction zone which encompasses much of this area. Similarly, the commercial land uses along the southern portion of the site would be compatible with the adjacent Airport based on the uses, building height limitations, and densities proposed within this area, as well as compliance with building restriction zones. Therefore, the Approved Project would not create an incompatible interface between the surrounding area and the physical and/or operational characteristics of the proposed uses.

The uses of the Approved Project would also be distributed within the site to provide internal compatibility via the orientation and placement of buildings, the distances between structures, and the buffers created by streets and landscaping. Residential uses would be buffered from non-residential uses on-site both physically and with setbacks. The Approved Project, therefore, would not result in land uses that are internally incompatible.

²⁷ *Since publication of the Final EIR, SCAG has replaced its Regional Comprehensive Plan and Guide with the 2008 Regional Comprehensive Plan, which serves as an advisory document.*

Nonetheless, mitigation measures were provided for the Approved Project to ensure that potential impacts associated with land use would be less than significant.

2. Revised Project Impacts

As described in Section II, Project Description, of this Addendum, the Revised Project includes revisions to the currently adopted PD-32 in order to provide for the changes in land use and design now contemplated. Specifically, PD-32 North and PD-32 South are proposed. PD-32 North would be applicable to that portion of the Project site located north of Cover Street (i.e., the previously designated Housing areas) and would reflect the Revised Project's proposed revisions to the land use and design standards for this Project area. PD-32 South would be applicable to that portion of the Project site located south of Cover Street. Since the Revised Project does not propose any land use or design changes to this portion of the Project site, PD-32 South would reflect the adopted PD-32 land use and design standards for this area. The corresponding PD-32 Design Guidelines would also be amended to reflect the north and south areas of the site. Thus, the proposed guidelines are referred to as the PD-32 North Design Guidelines and the PD-32 South Design Guidelines.

Under the new PD-32 North zoning, the site would be generally divided into Subareas 1, 2, and 3 located north of Cover Street (previously known as F Street), as shown in Figure II-6 in Section II, Project Description. More specifically, Subarea 1 would be located in the northeast portion of the site, north of Cover Street and east of Worsham Avenue.²⁸ Subarea 2 and Subarea 3 would be located in the northwestern portion of the site, north of Cover Street and west of Worsham Avenue (previously known as 2nd Avenue).²⁹ Together, these three subareas would comprise approximately 101 acres.

Permitted land uses for PD-32 North would vary by Subareas, as also illustrated in the conceptual land use map provided in Figure II-6 in Section II, Project Description. Subarea 1 would contain mixed uses, including retail, office, and hotel uses. The retail overlay district previously sited as part of the Approved Project along the north side of Cover Street between Lakewood Boulevard and Worsham Avenue would be removed from Subarea 1. In order to provide flexibility for modifications to land uses and square footages in response to changing market conditions, an equivalency program is proposed for the Subarea 1 and Subarea 2 expansion areas where 1.5 square feet of office/industrial development could be substituted for 1.0 square feet of retail development. Such land use

²⁸ *Quadrant 2 generally corresponds to the Medium-High Density Housing area for the Approved Project.*

²⁹ *Quadrant 1 generally corresponds to the Low-Medium Density Housing area for the Approved Project.*

substitution would only be permitted to occur so long as no additional environmental impacts result from such an exchange. Within Subarea 2 and Subarea 3, office and R&D/light industrial uses would be allowed, with specific sub-areas defined for such uses. Subarea 3 would include an optional location for the proposed 66-kV substation. In addition, an optional retail district could be located within Subarea 2 along Worsham Avenue, extending south from Carson Street. A narrow building restriction zone would bisect Subarea 2, extending north from a Long Beach Airport runway and aligned with Schaufele Avenue. PD-32 South zoning would reflect the currently approved land uses for this area, as shown in Figure II-7 in Section II, Project Description, and thus, would remain designated for office, commercial, light industrial, hotel, and aviation-related uses.

Figure II-1 on page II-2 in Section II, Project Description, illustrates the network of internal roadways to be introduced throughout the site, which generally corresponds to and expands upon that contemplated for the Approved Project. In addition, optional streets may be added throughout Subarea 1.

As part of the revised PD-32 North, the site's height zones would be modified to provide for maximum building heights ranging from of 38 to 75 feet. As shown in Figure II-8 in Section II, Project Description, a 38-foot height zone would be located along Carson Street; a 50-foot height zone would be located to the immediate south, west of Worsham Avenue; and a 75-foot height zone would be located south of the 38-foot height zone and east of Worsham Avenue to Lakewood Boulevard. Relative to the height zones previously approved as part of the Approved Project, these zones represent a 3-foot increase for the 38-foot height zone and a five-foot increase for the 50-foot height zone. The height zones for PD-32 South would reflect the currently approved height zones. Specifically, the 60-foot height zone would remain in the western portion and the 100-foot height zone would remain in the eastern portion. Further, the new height zones would continue to comply with FAR Part 77.

Building setbacks would also be revised for PD-32 North, as shown in Figure II-10 in Section II, Project Description, and would range from 0 feet to 26 feet from the street rights-of-way. Along Carson Street, a 10-foot setback would be required in addition to a 30-foot landscaped bike trail, sidewalk and parkway, thus giving the appearance of a 40-foot wide setback. Within Subarea 2 and Subarea 3, most setbacks from internal streets would be 18 feet wide, with the exception that setbacks would not be required adjacent to open space corner elements at many of the street intersections. In addition, an 18-foot setback would be implemented along the northwestern property line adjacent to the Lakewood Country Club Golf Course, and setbacks from interior property lines would be limited to 5 feet. Within Subarea 1, building setbacks from Bayer Avenue and Huggins Street would be 11 feet from the edge of the street. Setbacks would not be required along eastern edge

of Worsham Avenue within the primary retail area. A 26-foot setback would be retained along Lakewood Boulevard, as under the Approved Project.

As described above, the proposed revisions to the existing PD-32 ordinance would establish development standards for the use and development of the site and would become part of the City of Long Beach Zoning Ordinance upon adoption. Project development located north of Cover Street would adhere to the proposed PD-32 North standards, as well as the associated PD-32 North Design Guidelines. Project development located south of Cover Street would adhere to the PD-32 South standards, as well as the associated PD-32 South Design Guidelines. Thus, the Revised Project would be consistent with the City's Zoning Ordinance.

In general, the Revised Project would be consistent with applicable goals and objectives set forth in the City's General Plan Land Use Element, as amended, as well as the goals and action steps in the City's Strategic Plan 2010. Similar to the Approved Project, the Revised Project would support of the City's goals by creating an activity center with a synergistic mix and intensity of uses and a concentration of urban activity. In combination with the uses proposed for the southern portion of the Project site (which remain unchanged from the Approved Project), the proposed mix of office, R&D, light industrial, retail, hotel, aviation-related and ancillary uses would result in a vibrant site with a unique character, consistent with the objectives for creating a major activity center.

The Revised Project would also be consistent with all applicable Airport- and aviation-related standards and plans. In particular, the Project would incorporate a building restriction zone and would comply with FAA regulations regarding height limits. All development will meet the submittal requirements of FAR Part 77. The FAA confirmed in 2008 that the Revised Project is consistent with Part 77 requirements.

Like the Approved Project, the Revised Project would be consistent with the Metropolitan Transportation Authority Congestion Management Plan for Los Angeles County through implementation of a proposed TDM program. The Revised Project would also support SCAG's Regional Comprehensive Plan and Guide by creating an activity center and sustainable community.³⁰ As discussed in Section B, Air Quality, the Project would also be consistent with the South Coast Air Quality Management District Air Quality

³⁰ *Since publication of the Final EIR, SCAG has replaced its Regional Comprehensive Plan and Guide with the 2008 Regional Comprehensive Plan, which serves as an advisory document.*

Management Plan. In summary, the Revised Project would be consistent with regional land use policies.

The Revised Project would be compatible with the surrounding land uses given type, distribution, and orientation of new uses. While the residential uses contemplated under the Approved Project would be replaced with office, R&D/light industrial, and mixed commercial uses, the proposed R&D/Light Industrial uses would be located furthest from the residential area north of Carson Street, and building heights would be limited along Carson Street. Further, the Carson Street border or “edge” would be designed to accommodate and mediate the relationship between the proposed office and commercial uses within Subarea 1 and Subarea 2 and the existing adjacent off-site residential uses. Introduction of a 30-foot landscaped bike trail, sidewalk and parkway in combination with 10-foot setbacks and 38-foot maximum building heights would provide a gentle transition from the low-density residential uses north of the site to the higher density commercial and light industrial uses within the Project site. In addition, as under the Approved Project, the location of commercial uses adjacent to Lakewood Boulevard would be compatible with existing commercial and industrial uses to the east across Lakewood Boulevard. As such, the Revised Project would not create an incompatible interface between the physical and operational characteristics of the proposed uses and those of the surrounding area.

In summary, land use impacts associated with the Revised Project would be similar to those of the Approved Project. The Revised Project would replace the Approved Project’s 1,400 residential units with additional commercial uses in the northern portion of the Project site, which would be governed by PD-32 North, while zoning for PD-32 South would reflect the currently approved land uses for this area. The development standards and design guidelines for each of these areas would be comparable to those previously contemplated for PD-32. Additionally, similar to the Approved Project, the Revised Project would be compatible with surrounding land uses and support many of the City’s relevant goals and objectives. Thus, the Revised Project would be within the envelope of impacts identified in the Final EIR. Nonetheless, mitigation measures are provided for the Revised Project to ensure that potential impacts associated with land use would be less than significant.

3. Mitigation Measures

A MMRP was adopted for the Approved Project. Some of the mitigation measures identified in the MMRP included in the Certified EIR are no longer applicable, as indicated where appropriate below. However, the balance of the mitigation measures remain

applicable, with some revisions as appropriate for the Revised Project, as indicated in redline/strikeout text.

Mitigation Measure V.H-1: Uses within the ~~project~~Project site shall be limited to those set forth by the Planned Development-32 (PD-32) North and South Districts for the City of Long Beach portion of the site and by the M-2 Zone for the City of Lakewood portion of the site.

Mitigation Measure V.H-2: Warehouse and distribution uses shall ~~not~~not ~~abut~~abut ~~residential uses and shall be limited to the Zones Subareas 3, 7, 8A and 8B Commercial/Industrial Subareas~~ as an accessory use within the City of Long Beach. Such uses shall be dependent upon the principal use for the majority of its use or activity.

Mitigation Measure V.H-3: Amendments to the City of Long Beach Land Use Element and Map, Transportation Element, ~~Noise Element and Noise Ordinance,~~ and Bicycle Master Plan, as well as the zoning for the site shall be approved ~~prior to or concurrent with project~~Revised Project approval.

Mitigation measures in Section A, Aesthetics are also proposed to mitigate potential land use impacts. These measures include Mitigation Measures V.A-1 through V.A-5, and V.A-8 through V.A-11. In addition, Mitigation Measures V.I-14 and V.I-17, listed in Section I, Noise, are proposed to mitigate potential impacts related to land use.

4. Cumulative Impacts

Table III-1 of this Addendum identifies related projects located within the Project vicinity. The related projects generally consist of infill development and redevelopment of existing uses. As with the Revised Project, related projects would be required to comply with relevant land use policies and regulations, including the LBMC. In addition, the related projects that involve some form of discretionary action by the applicable local agency would be subject to the project and permit approval process and would incorporate any mitigation measures necessary to reduce potential land use impacts. Consequently, significant cumulative impacts relative to land use regulations and policies would not occur. Furthermore, the related projects identified in Table III-1 consist of a variety of commercial, residential, and recreational uses. Given the existing urban nature and land uses of the Project area, these types of land uses are not anticipated to significantly alter existing land use relationships. Therefore, as with the Approved Project, the Revised Project would not result in significant cumulative land use impacts.

I. Noise

1. Approved Project Impacts

Implementation of the Approved Project would result in increased noise levels on a short-term and intermittent basis relative to existing conditions as a result of construction. More specifically, construction impacts would occur in the vicinity of adjacent residential uses and proposed on-site residential uses in the northern portion of the Project site. Therefore, the Approved Project would result in significant and unavoidable noise impacts during construction even with the incorporation of mitigation measures.

With regard to operation of the Approved Project, the increase in future traffic noise associated with the Approved Project and all traffic mitigation would be less than significant for all roadway segments, with the exception of Conant Street east of Lakewood Boulevard, which would exceed the 5 dBA significance threshold. This roadway segment is bordered by parking facilities and the former Boeing 717 Assembly Facility. While noise levels associated with traffic from the Approved Project at this roadway segment would result in a significant and unavoidable impact, no sensitive receptors would be impacted.

Residential uses and associated outdoor recreational areas proposed as part of the Approved Project would be located outside of the 65 CNEL contour produced by landing and takeoff activities at the Airport, which are based upon the future maximum expected operating scenario allowed by LBMC Chapter 16.43. In addition, with incorporation of Mitigation Measure V.I-14, the SENEL exposure for the proposed residential uses within the Approved Project site located closest to the Airport from the louder typical MD-80 departure of 90 SENEL, would be reduced to 60 SENEL with an outside-to-inside noise insulation of 30 dBA. Therefore, with incorporation of Project features to reduce noise levels at the on-site residential uses, noise impacts from Airport operations or the on-site engine run-up tests upon such land uses would be less than significant.

Noise from mechanical equipment would result in a less than significant impact with the incorporation of physical shielding and proper engineering during the detailed design phases. Noise from mechanical equipment would meet both LBMC and LMC noise standards.

Delivery trucks and trash pick-up trucks at the Project site would be a potential source of noise at the site. As these operations would be intermittent and would occur for short durations, impacts would be less than significant at both on-site receptors and the receptors nearest to the Project site.

With incorporation of the Project features associated with parking structures and surface parking areas, noise increases associated with operation of future parking facilities in the Approved Project would be less than significant.

The worst-case noise level generated by the electrical substation would be less than 45 dBA at the substation property line, which would comply with the LBMC and LMC nighttime noise standards. Therefore, noise generated from the operation of the electrical substation would result in a less than significant noise impact due to distance attenuation.

With regard to vibration, future ground-borne vibration in the Project vicinity would continue to be generated by heavy trucks traveling on the local roadways. Operation of the Project with incorporation of Project features and mitigation measures would not result in additional sources of vibration that would exceed the City's vibration violation threshold of 0.01 inch/sec at adjacent properties.

Despite implementation of the proposed mitigation measures, construction of the Approved Project would result in a significant and unavoidable impact to proposed on-site as well as off-site sensitive receptors. However, significant noise levels would be experienced for short-durations as only portions of the Project site would be under construction at any one time. Noise levels associated with Project traffic at the roadway segment of Conant Street east of Lakewood Boulevard would also result in a significant and unavoidable impact, although no sensitive receptors would be impacted. In addition, if A Street is reconfigured in the western portion of the Project site to be adjacent to the Lakewood Country Golf Course, traffic noise on this roadway segment would be significant and unavoidable.

With incorporation of Project features to reduce noise levels at residential uses, noise impacts from Airport operations upon such land uses would be less than significant. Additionally, no significant impact would occur from Boeing engine run-up tests. Similarly, with incorporation of the Project features associated with parking structures and surface parking areas, noise increases associated with operation of future parking facilities would be less than significant. Operational impacts associated with vibration would also be less than significant.

2. Revised Project Impacts

(a) Construction

With regard to construction noise, the amount of site preparation associated with the Revised Project would be reduced when compared with the Approved Project as the overexcavation and compaction requirements are not as stringent for non-residential

development at the site. However, noise levels during site preparation activities would be similar on a daily basis because the duration (not the intensity) of these activities would decrease compared to the Approved Project. Although the Revised Project would result in more commercial uses and no residential uses, the total square footage of development under the Revised Project would be less than under the Approved Project described in the Final EIR. Therefore, the level of construction activities would also be lower. It is expected that the equipment mix, schedule, and number of worker and haul truck trips assumed for the Approved Project would be sufficient to construct the Revised Project. As indicated in the Certified EIR, the worst-case hourly L_{eq} during construction would exceed ambient noise levels by more than the 5 dBA, which is the incremental significance threshold. Therefore, as with the Approved Project construction of the Revised Project would result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity and a significant impact to off-site sensitive receptors even with the incorporation of mitigation measures, but they would be less than the Approved Project.

(b) Operation

With regard to traffic noise, the Revised Project would result in the same number of trips as the Approved Project. In addition, the trip distribution pattern under the Revised Project would be similar to that of the Approved Project. Therefore, traffic noise would be the same for the Revised Project as for the Approved Project. The increase in future predicted CNEL with ambient growth plus Project development and all traffic mitigation would be less than significant for all off-site roadway segments as the increase would be less than the 5 dBA significance threshold, with the exception of Conant Street east of Lakewood Boulevard (Roadway Segment No. 8). While noise levels associated with Project traffic at this roadway segment would result in a significant and unavoidable impact, they would be no worse than the Approved Project, and no sensitive receptors would be impacted.

With regard to the operation of the Boeing Enclave, the Revised Project would not locate sensitive receptors (i.e., residential uses) within close proximity of the Enclave or the Airport as residential uses would no longer be located on-site. As indicated in the Certified EIR, no significant noise impact would occur from the Airport or the Boeing engine run-up tests. However, mitigation measures regarding the operation of the Enclave were included in the Certified EIR and adopted in the Mitigation Monitoring and Reporting Program. While commercial uses are not sensitive receptors and the use of the Enclave would be intermittent and would not result in a significant noise impact, Mitigation Measure V.I-18 from the Certified EIR, which requires Boeing to preferentially use the testing positions along the southern side of the Boeing Enclave (Numbers 1-6) so that the engines are facing away from proposed uses to the north and towards the Airport, has been retained to limit noise levels at the adjacent commercial uses.

As with the Approved Project, the Revised Project would include mechanical equipment, which could generate noise levels that are audible at both on- and off-site noise sensitive locations. Given the increase in commercial uses, there would likely be more mechanical equipment under the Revised Project than under the Approved Project. However, the mechanical equipment would be expected to be located within enclosures or behind new buildings or otherwise shielded from the nearby sensitive land uses. In addition to this physical shielding, proper engineering during the detailed design phases, including noise control engineering of the mechanical equipment, should ensure that the noise generated by mechanical equipment operations would meet both LBMC and LMC noise standards. Therefore, as with the Approved Project, noise impacts from mechanical equipment under the Revised Project would be less than significant.

The noise produced by delivery and trash pick-up trucks at the Project site would also be a potential source of noise. With the increase in commercial uses proposed in the Revised Project, there would likely be an increase in truck deliveries. However, the Revised Project would eliminate truck traffic from residential trash pickup. However, as indicated in the Certified EIR, the noise level within 50 feet of a delivery and trash truck would be approximately 86 dBA during the heaviest periods of activity. As these operations would be intermittent and would occur for short durations, impacts would be less than significant at the off-site receptors nearest to the Project site.

As with the Approved Project, parking would be surface parking and some parking structures. Various sounds, including automobile movement, car alarms, car horns, door slams, and tire squeals, could occur at these parking facilities. The activation of car alarms, sounding of car horns, slamming of car doors, and tire squeals would occur periodically and may occasionally be audible. Project features, such as a broom finish on the floors of parking structures, walls or barriers that block the line-of-site from sensitive receptors to parking stalls, and landscaping would serve to buffer noise. Therefore, noise levels associated with operation of the parking facilities would be less than significant.

Operation of the substation would result in the production of long-term noise from transformers. With distance attenuation, the worst-case noise level would be less than 45 dBA at the substation property line, which would comply with the more strict LBMC and LMC nighttime noise standards. Therefore, as with the Approved Project, noise impacts resulting from operation of the substation under the Revised Project would be less than significant, and due to relocation would be further away from sensitive receptors (off-site residential uses).

With regard to vibration, the Revised Project would result in future ground-borne vibration in the Project vicinity generated by heavy trucks traveling on the local roadways.

Operation of the Project would not result in additional sources of vibration beyond those anticipated for the Approved Project.

Thus, the Revised Project would not result in a significant noise impact not identified in the Certified EIR. In addition, the Revised Project would not result in a significant noise impact that would be substantially more severe than a noise impact identified in the Certified EIR. Additionally, since, as noted below, mitigation measures proposed for the Approved Project would be implemented under the Revised Project, as applicable, the impacts of the Revised Project after mitigation would be similar to those anticipated for the Approved Project. Specifically, construction noise and traffic noise along limited roadway segments would be significant and unavoidable. Noise increases associated with parking facilities and vibration impacts would be less than significant.

3. Mitigation Measures

A MMRP was adopted for the Approved Project. The mitigation measures remain applicable, with some revisions as appropriate for the Revised Project, as indicated in redline/strikeout text below. Mitigation Measures V.I-1 through V.I-13 address construction activities, and Mitigation Measures V.I-14 through V.I-20 address Project operations. Mitigation Measure V.I-10 for the Approved Project required screening of active construction sites within 400 feet of on-site occupied residential uses. As the Revised Project would not include on-site residential uses, Mitigation Measure V.I-10 has been deleted. Mitigation Measures V.I-14, V.I-17, and V.I-19 have also been deleted as they pertain to residential uses which are no longer contemplated as part of the Revised Project.

(a) Construction

Mitigation Measure V.I-1: In compliance with Section 8.80.202 of the LBMC, site preparation, grading, and construction within the City of Long Beach shall be limited to the hours of 7 A.M. and 7 P.M., Monday through Friday, 9 A.M. and 6 P.M. on Saturdays, and prohibited on Sundays.

Mitigation Measure V.I-2: In compliance with Section 8020 of the LMC, site preparation, grading, and construction within the City of Lakewood shall be limited to the hours of 7 A.M. and 7 P.M., Monday through Saturday, and 9 A.M. and 7 P.M. on Sundays within 500 feet of a residential zone.

Mitigation Measure V.I-3: All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained muffler exhaust systems.

Mitigation Measure V.I-4: The project applicant shall provide a construction relations officer to serve as a liaison with surrounding communities ~~and future on-site residents.~~

Mitigation Measure V.I-5: Construction activities shall be scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels.

Mitigation Measure V.I-6: Engine idling from construction equipment such as dozers and haul trucks shall be limited, to the extent feasible.

Mitigation Measure V.I-7: Equipment and materials staging shall be located as far from noise-sensitive uses as practical.

Mitigation Measure V.I-8: Semi-stationary heavy equipment shall be located as far from noise-sensitive uses as practical.

Mitigation Measure V.I-9: Electrically powered equipment shall be used instead of equipment driven by internal combustion engines where feasible.

~~**Mitigation Measure V.I-10:** Active construction sites within 400 feet of on-site occupied residential uses shall be acoustically screened with a temporary ten-foot, ½-inch thick plywood fence around the construction zone, to the extent feasible. The plywood fence will have an approximate sound transmission classification level of 18.~~

Mitigation Measure V.I-11: An on-site area shall be designated for delivery of materials and equipment. No construction deliveries shall be permitted outside the hours of 7 A.M. and 10 P.M. on weekdays.

Mitigation Measure V.I-12: Pile shields (i.e., sound blankets) shall be used where pile driving activities occur within 200 feet from the northern property boundary along Carson Street ~~or within 400 feet of on-site residential uses on the project site.~~

Mitigation Measure V.I-13: Construction routes will be established to avoid residential streets in order to prevent noise and vibration impacts in residential areas. Generally, construction delivery and haul trucks will access the Project site from I-405 along Lakewood Boulevard and Cherry Boulevard.

(b) Operation

~~**Mitigation Measure-V.I-14:** The residential developer shall provide insulation for all residential buildings on the project site to reduce interior noise levels below 45 dBA CNEL with doors and windows closed and shall provide confirmation of this noise level through an acoustical consultant. In addition, any residential development within the delineated residential area (i.e., hatched area) provided in Figure 54 of Section V.I, Noise, of the Draft EIR shall require a minimum outside to inside noise insulation of 30 dBA and shall appoint an acoustical consultant to confirm that the proposed residential buildings will achieve this design standard before submitting an application for a building permit.³⁴~~

Mitigation Measure-V.I-15: All persons purchasing, leasing, or renting residential land or property within the Douglas Park development shall be required to sign an Acknowledgement of Notice of Airspace And Avigation Easement as provided in the Development Agreement for the project. The Acknowledgement of Notice of Airspace And Avigation Easement shall specify the portion of the property being purchased, or leased, or rented; shall disclose that an Airspace and Avigation Easement has been recorded against the property and is binding upon all persons owning, leasing or using the portion of the property being sold, leased, or rented; and disclose the fact that the subject property is in the immediate vicinity of the Airport; that there may be noise and other related impacts because of proximity to the Airport; that the proximity to the Airport may affect normal activities on, and the comfortable use and enjoyment of property; and that market value may be adversely affected. In addition, the Acknowledgment will contain an express acknowledgment by the purchaser, renter, or lessee that it is purchasing or leasing the specified portion of the property subject to a recorded Airspace And Avigation Easement and that, in so doing, it is waiving legal claims and rights which it might otherwise have with respect to the aviation activities permitted by the Easement.

³⁴~~As discussed previously, the California Airport Land Use Handbook documents that this level of sound insulation may include the following: 1) air conditioning/mechanical ventilation such that the units would not have to rely on open windows for ventilation; 2) 1/2-inch thick glazing, or a dual insulating glazed system comprised of 3/8-inch thick laminated glass/1/2-inch air space/1/4-inch glass (or acoustical equivalent); 3) doors and windows opening to the exterior with acoustical seals; 4) adding insulation to attics; and/or 5) fitting chimneys and vents with dampers and/or acoustic louvers.~~

Mitigation Measure V.I-16: Aircraft related to new aviation-related uses proposed within the ~~project~~ Project site shall comply with requirements in LBMC Chapter 16.43.030(B) which limits engine run-ups to designated areas at the Airport and between the hours of 7 A.M. and 9 P.M. on weekdays and 9 A.M. and 9 P.M. on weekends and holidays.

~~**Mitigation Measure V.I-17:** Development of residential uses in close proximity to the Boeing Enclave shall be prohibited until such time that 717 run-up activities permanently cease. The delineation of this area is provided in Figure 54 of Section V.I, Noise, of the Draft EIR.~~

Mitigation Measure V.I-18: Boeing shall preferentially use the testing positions along the southern side of the Boeing Enclave (Numbers 1-6), as shown in Figure 54 of ~~Section V.I, Noise, of the Draft~~ the Final EIR.

~~**Mitigation Measure V.I-19 :** The electrical substation shall include an eight foot high wall surrounding the electrical substation area if it is to be located within a residential area.~~

Mitigation Measure V.I-20: All mechanical equipment shall incorporate noise control measures to ensure that ~~City of~~ LBMC and LMC requirements are satisfied.

4. Cumulative Impacts

As with the Approved Project, in the event that simultaneous construction of the Revised Project and related projects in close proximity to the Project site does occur, cumulative construction noise levels may be significant at off-site sensitive receptors. However, cumulative increases in future predicted CNEL along the roadways due to ambient growth (including related projects) plus the Revised Project traffic are anticipated to be less than significant at nearby sensitive receptors. However, although no sensitive receptors are present, the cumulative traffic-related noise levels at Conant Street east of Lakewood Boulevard would exceed the significance thresholds. Noise levels generated by on-site sources associated with the Revised Project together with future related projects would result in less than significant cumulative noise impacts.

J. Employment, Housing and Population

1. Employment

(a) Approved Project Impacts

Development of the Approved Project would create approximately 3,832 construction jobs. Assuming that the Project is fully occupied by 2020 and that development occurs evenly over the construction period, construction employment associated with the Approved Project would constitute less than one percent of the annual countywide construction employment. As a result, anticipated construction employment at the Project site would not substantially alter the location, distribution, density or growth rate of construction employment in Los Angeles County. Therefore, significant impacts associated with construction employment would not occur.

The Approved Project would develop 1,400 residential units along with 3.3 million square feet of mixed commercial and light industrial development (which would include a maximum of 200,000 square feet of retail uses), and a 400-room hotel. Based on the most employee-intensive scenario, implementation of the Approved Project would be anticipated to generate a maximum workforce of up to approximately 13,865 full time equivalent on-site employees by Project buildout in 2020, depending on the land use mix ultimately developed.³² As analyzed in the Draft EIR, the pre-existing employment on the Project site was estimated at 545 employees.³³ The net increase in employees of 13,320 resulting from the Approved Project would be well within the projected employment growth for Long Beach, Lakewood, the Gateway Cities subregion, and the County of Los Angeles. Therefore, workforce growth associated with the Approved Project would not substantially alter the location, distribution, density, or growth rate of employment planned for the area by local and regional plans. As such, impacts associated with employment growth would be less than significant.

(b) Revised Project Impacts

Although the land use mix would change, development of the Revised Project would create a similar number of construction jobs as the Approved Project. Construction employment associated with the Revised Project would similarly be expected to constitute

³² *The estimate of approximately 13,865 on-site employees assumes that all of the commercial floor area will be developed as office with the exception of approximately 200,000 square feet of retail.*

³³ *Pre-existing on-site employment represents estimated employment on-site at the time the NOP was distributed in November 2002; this was considered existing conditions at the time the EIR was prepared.*

a small fraction of annual countywide construction employment. As a result, anticipated construction employment at the Project site would not substantially alter the location, distribution, density or growth rate of construction employment in Los Angeles County. Therefore, significant impacts associated with construction employment would not occur.

The Revised Project would develop up to 3.75 million square feet of mixed commercial and light industrial uses, up to 250,000 square feet of retail uses, and up to 400 hotel rooms. Using the employment factors set forth in the Draft EIR, implementation of the Revised Project would be anticipated to result in up to approximately 17,965 full time equivalent on-site employees by Project buildout in 2020, depending on the land use mix ultimately developed, as shown in Table III-10 on page III-89. As analyzed in the Draft EIR, the pre-existing employment on the Project site when the Draft EIR was prepared was approximately 545 employees. Therefore, the Revised Project would generate a net increase of up to approximately 17,420 employees, which includes 847 workers in the City of Lakewood. The forecasted employment growth between 2003-2020 is approximately 26,398 employees for the City of Long Beach, 2,743 for the City of Lakewood, 113,727 for the Gateway Cities subregion, and 4,561,782 for Los Angeles County. The Revised Project's workforce would represent approximately 65 percent of the projected employment growth in Long Beach, 31 percent of the projected employment growth in Lakewood, 16 percent of the projected employment growth in the Gateway Cities subregion, and 3 percent of the projected employment growth in Los Angeles County. Based on these comparisons, the increase in employees resulting from the Revised Project would be well within the projected employment growth for Long Beach, Lakewood, the Gateway Cities subregion, and the County of Los Angeles. Therefore, workforce growth associated with the Revised Project would not substantially alter the location, distribution, density, or growth rate of employment planned for the area by local and regional plans. As such, impacts associated with employment growth would be less than significant. In comparison to the Approved Project, development of the Revised Project would generate a similar number of temporary construction jobs and an increase in the number of permanent jobs, which would be well within relevant employment growth forecasts. Thus, the Revised Project's impacts associated with employment would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

No mitigation measures addressing impacts to employment are proposed.

(d) Cumulative Impacts

The impact analysis provided above includes an assessment of the Revised Project's employment in comparison with local and regional growth forecasts between

TABLE III-10
ESTIMATED MAXIMUM WORKFORCE GENERATION – APPROVED PROJECT VS. REVISED PROJECT

Land Use	Employment Factor	Approved Project Development	Approved Project Employees	Revised Project Development	Revised Project Employees
Office	225 sf/emp	1,300,000 sf	5,778	1,650,000 sf	7,333
Research & Development ^a	425 sf/emp	1,800,000 sf	4,235	2,100,000 sf	4,941
Retail	500 sf/emp	200,000 sf	400	250,000 sf	500
Hotel	1.1 emp/room	400 rooms	440	400 rooms	440
		TOTAL	10,853		13,214
		Baseline Employment	545		545
		Net New	10,308		12,669

^a Assumes 1,800,000 square feet and 2,100,000 sf of the total commercial square footage would be developed as Research & Development for the Approved Project and Revised Project, respectively.

Source: Matrix Environmental, 2009.

2003-2020, which account for planned or reasonably foreseeable development within each jurisdiction in the local area and the region. Therefore, the analysis is both a Project-level and cumulative analysis. As stated above, the net increase in employment associated with the Revised Project would be within the employment forecasts for the Cities of Long Beach and Lakewood, the Gateway Cities subregion, and Los Angeles County. Consequently, similar to the Approved Project, implementation of the Revised Project would not result in significant cumulative impacts associated with employment.

2. Housing

(a) Approved Project Impacts

The Approved Project would add 1,400 new housing units to the City of Long Beach. Based on SCAG projections, between 2003-2030, the forecasted growth in households for the City is approximately 26,889 households. The Approved Project's 1,400 housing units would represent 5 percent of the growth and thus, is well within the SCAG housing growth projections.

The indirect housing demand generated by employment growth under the Approved Project would also be accommodated by the existing and projected stock in the Cities of Long Beach and Lakewood, the subregion, and the County. The Approved Project would not substantially alter the location, distribution, density or growth rate of housing planned

for the area by local and regional plans. Therefore, impacts relative to housing would be less than significant.

(b) Revised Project Impacts

The Revised Project would not include the development of new housing units. Therefore, the Revised Project would not directly result in housing growth in the area and would not exceed SCAG forecasts for housing growth in the area.

Taking into account the percentage of Project employees who may be induced to move to the Project area for job reasons, the phasing of such new employees over time as the Project is developed through 2020, and the availability of existing and projected housing in the surrounding areas, the indirect housing growth generated by the Revised Project could also be accommodated by the existing and projected stock in the Cities of Long Beach and Lakewood, the subregion, and the County. Similar to the Approved Project, the Revised Project workforce would be expected to absorb a small percentage of annually available rental and ownership housing in the surrounding communities. As such, the Revised Project would not substantially alter the location, distribution, density or growth rate of housing planned for the area by local and regional plans. Therefore, impacts relative to housing would be less than significant. In comparison to the Approved Project, the Revised Project would eliminate 1,400 previously proposed housing units and any associated impacts. Thus, the Revised Project's impacts associated with housing growth would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

No mitigation measures addressing impacts to housing are proposed.

(d) Cumulative Impacts

As the Revised Project would not include the development of new residential units or removal of existing residential units, the Revised Project would not contribute to a cumulative impact with regard to exceedance of housing projections.

3. Population

(a) Approved Project Impacts

The Approved Project would develop 1,400 residential units in the City of Long Beach and generate a residential population of approximately 2,742 residents. This population growth would be less than that of the PacifiCenter @ Long Beach Project, as

analyzed in the Draft EIR (which evaluated growth of up to 4,784 residents on-site). Thus, the Approved Project would be well within the SCAG forecasted growth for the City of Long Beach and Los Angeles County. In addition, the Approved Project's commercial uses may indirectly induce new employees to relocate into the Project area. As provided in the Draft EIR, the direct and indirect population growth of the analyzed PacifiCenter @ Long Beach Project would be well within the SCAG forecasted growth for the Cities of Long Beach and Lakewood and Los Angeles County. Thus, the Approved Project, which represents a reduced development scenario as compared with the PacifiCenter @ Long Beach Project, would also be within the SCAG forecasted growth. As the additional population attributable to the Approved Project would not substantially alter the location, distribution, density, or growth rate of population planned and forecast in Long Beach, Lakewood or Los Angeles County, the Approved Project would not result in a significant population impact.

(b) Revised Project Impacts

The Revised Project would not include the development of new housing units. Therefore, the Revised Project would not directly induce new population growth in the City of Long Beach. The Revised Project's commercial uses could indirectly induce new employees to relocate into the Project area. However, this indirect growth would be less than the Approved Project's total direct and indirect population growth and thus, well within the SCAG forecasted growth for the Cities of Long Beach and Lakewood and Los Angeles County. The Revised Project would not result in a significant population impact. In comparison to the Approved Project, the Revised Project would eliminate 1,400 previously proposed housing units and the associated residential population. Thus, the Revised Project's impacts on population would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

No mitigation measures addressing impacts on population are proposed.

(d) Cumulative Impacts

As the Revised Project would not include the development of new residential units or removal of existing residential units, the Revised Project would not contribute to a cumulative impact with regard to exceedance of population projections.

K. Public Services

1. Police Protection

(a) Approved Project Impacts

The Approved Project would result in 2,742 new residents and an increase in the employee population, causing an increased demand for police services as compared to existing conditions. The Approved Project would also increase the existing officer to population ratio and increase the demand for police services, which could require additional officers and outlays for equipment. However, the Approved Project would provide security features that would include:

- Lighting of parking structures, elevators and lobbies to reduce areas of concealment;
- Lighting of building entries and pedestrian walkways to provide for pedestrian orientation and to clearly identify a secure route between parking areas and points of entry into buildings;
- Building addresses that are visible from the street and roof to facilitate emergency response;
- Provision that ATMs (cash machines) and public phones are located in visible areas and away from bus stops;
- Provision of lighting, fencing and landscaping within commercial areas in a manner that maximizes visibility and minimizes opportunities for hiding;
- Public spaces that are designed to be easily patrolled and accessed by public safety personnel; and
- Design of entrances to, and exits from buildings, open spaces around buildings, and pedestrian walkways to be open and in view of surrounding sites.

These security features would be incorporated to minimize the potential for crime on-site and the demand for additional police protection services. Additionally, revenue generated by the Approved Project could be used to provide for additional officers. While recurring General Fund revenue from the Approved Project would be sufficient to provide the necessary funds for the expenditures associated with the increased police staffing and associated outlays, it cannot be guaranteed that the revenue would be allocated to this specific resource. Therefore, impacts to police services would be considered potentially significant even with implementation of mitigation measures.

Future street improvements planned as part of the Approved Project could temporarily disrupt traffic flows and emergency access within the surrounding area. However, temporary traffic controls would be incorporated as required, and circulation patterns and response times would not be affected on a long-term basis. Therefore, implementation of the Approved Project would not affect the circulation pattern or result in a substantial increase in emergency response times within the Project area, and impacts associated with the emergency access and response would be less than significant.

(b) Revised Project Impacts

The Revised Project would not develop residential units and thus, would not result in a direct residential population. Since direct residential growth would not occur under the Revised Project, its implementation would not affect the existing officer to residential population ratio. However, the increase in the daily on-site employee population that would occur under the Revised Project could result in an increase in calls for police services as compared to existing conditions. The Revised Project would include similar security features as the Approved Project to minimize the potential for crime on-site and the demand for additional police protection services. In addition, police fees would be paid by the Applicant at the rate existing at the time development occurs. Furthermore, revenue generated by the Revised Project could be used to provide for additional officers. However, similar to the Approved Project, while municipal revenue generated by the Revised Project could be used to provide additional capacity as determined appropriate by the Long Beach Police Department and the Los Angeles County Sheriff's Department, the allocation of such revenue to a specific service cannot be guaranteed. Therefore, impacts to police services would also be potentially significant even with implementation of mitigation measures.

Similar to the Approved Project, future street improvements planned as part of the Revised Project could temporarily disrupt traffic flows and emergency access within the surrounding area. However, temporary traffic controls would be incorporated as required, and circulation patterns and response times would not be affected on a long-term basis. Therefore, implementation of the Revised Project would not affect the circulation pattern or result in a substantial increase in emergency response times within the Project area, and impacts associated with the emergency access and response would be less than significant.

In summary, the Revised Project's impacts on police services would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. The mitigation measures remain applicable to the Revised Project, with revisions as appropriate:

Mitigation Measure V.K.1-1: The Applicant shall provide the Long Beach Police Department or Los Angeles County Sheriff's Department with a diagram that will include access routes, ~~home addresses,~~ building unit numbers, and other information to facilitate police response.

Mitigation Measure V.K.1-2: The Applicant shall incorporate Crime Prevention Through Environmental Design (CPTED) principles and other crime prevention features into the ~~project~~ Project. Such features will include, but not be limited to, the following:

- Lighting of parking structures, elevators and lobbies to reduce areas of concealment;
- Lighting of building entries and pedestrian walkways to provide for pedestrian orientation and to clearly identify a secure route between parking areas and points of entry into buildings;
- Building addresses that are visible from the street and roof to facilitate emergency response;
- Provision that ATMs (cash machines) and public phones are located in visible areas and away from bus stops;
- Provision that lighting, fencing and landscaping within commercial areas, ~~residential areas,~~ parks, and other public amenities are placed in a manner that maximizes visibility and minimizes opportunities for hiding;
- Public spaces that are designed to be easily patrolled and accessed by public safety personnel; and
- Design entrances to and exits from buildings, open spaces around buildings, and pedestrian walkways to be open and in view of surrounding sites.

(d) Cumulative Impacts

Anticipated growth in the Cities of Long Beach and Lakewood, including the related projects identified in Table III-1 of this Addendum, would result in a demand for additional police protection services. Similar to the Revised Project, related projects would likely include specific features designed to reduce impacts on police protection services. In addition, related projects would be evaluated on an individual basis to determine appropriate measures that address additional demand. Also, the need for additional police protection associated with cumulative growth may be addressed through each City's

annual budgeting process and capital improvement programs, should the City of Long Beach and City of Lakewood determine that service improvements are necessary. However, such revenue allocation to a specific service cannot be guaranteed. As such, similar to the Approved Project, the cumulative impacts associated with the Revised Project's incremental effect and the effects of other related projects in the area could be significant.

2. Fire Protection and Emergency Medical Services

(a) Approved Project Impacts

The Approved Project would result in 2,742 new residents and an increase in the employee population, causing an increased demand for police services as compared to existing conditions. As such, demand for fire protection and emergency medical services would increase relative to existing conditions. The Approved Project would comply with regulations set forth by the Long Beach Fire Department (LBFD), Los Angeles County Fire Department (LACFD), California Fire Code (CFC), Building and Safety Codes of the Cities of Long Beach and Lakewood, and Insurance Services Office (ISO) Guidelines. However, the Approved Project could require additional fire protection equipment and fire inspection personnel in the City of Long Beach in order to maintain current levels of service. While recurring General Fund revenue from the Approved Project would be sufficient to provide the necessary funds for increased fire protection equipment and fire inspection personnel in the City of Long Beach, it cannot be guaranteed that such revenue would be allocated to this specific resource. Therefore, impacts to fire protection and emergency medical services in the City of Long Beach would be potentially significant even with implementation of mitigation measures.

Subsequent to preparation of the Certified EIR, it was determined that as part of the Approved Project the existing water infrastructure would be replaced by a new water infrastructure system. New water lines have already been installed within the Project site south of Cover Street. Additionally, new fire hydrants have been/will be installed to supply fire flows. Based on the domestic water system model developed for the Project site within the City of Long Beach, the water system can deliver the required 5,000 gallons per minute (gpm) to all on-site areas. As such, development on the Long Beach portion of the Project site would not be constrained by fire flows. In addition, a new 16-inch diameter water line would be installed as part of the Approved Project. With this new 16-inch diameter water line, the fire flow requirement of 5,000 gpm would be met on the Lakewood portion of the Project site. Thus, potential impacts relative to fire flow would be less than significant.

(b) Revised Project Impacts

The Revised Project would not develop residential units and, thus, would not result in a direct residential population. However, the additional commercial floor area would result in an increase in the daytime employee population relative to existing conditions, which would potentially result in an increase in calls for fire protection and emergency medical services. In addition, the retail uses and associated retail customers within the site may also result in an increase in call for fire protection and emergency medical services. Like the Approved Project, the Revised Project would comply with regulations set forth by the LBFD, CFC, Building and Safety Code of the City of Long Beach, and ISO Guidelines. Additionally, fire fees would be paid by the Applicant at the rate existing at the time development occurs. Nonetheless, also similar to the Approved Project, the Revised Project could require additional fire protection equipment and fire inspection personnel in the City of Long Beach. While municipal revenue generated by the Revised Project could be used to provide additional capacity as determined appropriate by the LBFD, the allocation of such revenue to a specific service cannot be guaranteed. Therefore, similar to the Project, implementation of the Revised Project could result in potentially significant impacts associated with the demand for additional fire protection services in the City of Long Beach even with implementation of mitigation measures.

As discussed previously, the existing water infrastructure has been and/or will be replaced by a new water infrastructure system. New water lines have already installed within the Project site south of Cover Street. Additionally, new fire hydrants have been/will be installed to supply fire flows. Based on current information provided by the LBWD, the existing water infrastructure within the City of Long Beach would meet fire flow requirements for the Revised Project. Per the Water/Reclaimed Water Technical Study for Douglas Park Rezone Application by Kimley-Horn, dated 2009, there is sufficient fire flow to supply a maximum building size of 250,000 square feet anywhere in the Project site. Additionally, with the completion of the new 16-inch diameter water line, fire flows in the City of Lakewood portion of the Project site would meet fire flow requirements. Thus, potential impacts of the Revised Project relative to fire flow would be less than significant.

Based on the above, the Revised Project's impacts on fire services would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. The mitigation measure pertaining to fire protection remains applicable to the Revised Project:

Mitigation Measure V.K.2-1: The proposed ~~project~~ Project shall incorporate all emergency access provisions required by the respective City of Long Beach and County of Los Angeles Fire Departments, including fire lanes, vertical clearance requirements, and Fire Department review, as appropriate. Specifically, review and approval by the respective Fire Departments' Fire Prevention Office shall be required prior to building permit issuance. In addition, fire flow requirements shall be determined by the Fire Department based on building type and building use, and fire inspection fees shall be paid as each building within the Project site is developed.

(d) Cumulative Impacts

Anticipated growth in the Cities of Long Beach and Lakewood, including the related projects identified in Table III-1 of this Addendum, would result in a demand for additional fire protection and emergency medical services. Similar to the Revised Project, related projects would likely include specific features designed to reduce impacts on fire protection and emergency medical services. In addition, related projects would be evaluated on an individual basis to determine appropriate mitigation measures that would address new demand. The need for additional fire protection and emergency medical services associated with cumulative growth may also be addressed through each City's annual budgeting process and capital improvement programs, as deemed necessary by each of the Cities' annual budgeting process and capital improvement programs, should the City of Long Beach or City of Lakewood determine that service improvements are necessary. However, the allocation of Project-generated revenue to a specific service cannot be guaranteed. Therefore, similar to the Approved Project, the combined cumulative impact associated with the Revised Project's incremental effect and the effects of future related projects could be significant.

Existing fire flow capacities and the presence of mainline piping networks within the Project vicinity will permit future development in the surrounding area with generally no constraints related to available fire flow. As required by the LBFD and LACFD, pipe sizes would be upgraded as necessary, depending on the proposed building types and sizes associated with future projects. As such, the cumulative fire flow impacts associated with the Revised Project's incremental effect and the effects of other related projects would be less than significant.

3. Schools

(a) Approved Project Impacts

The Approved Project would result in a direct and indirect increase in the residential population and an associated increase in the demand for schools in the Long Beach

Unified School District (LBUSD) service area. However, Project development would be subject to the fees required by Government Code Section 65995, which would fully mitigate impacts on school facilities. A funding and mitigation agreement that provides funding to increase the capacity of LBUSD schools was also entered into by the Project applicant and LBUSD on February 23, 2004.³⁴ Pursuant to Government Code Section 65995, payment of the developer fees required by State law would provide full and complete mitigation of impacts on schools.

(b) Revised Project Impacts

The Revised Project would not develop residential units and thus, would not result in a direct residential population. However, due to an anticipated indirect increase in the residential population resulting from Project-related employment growth, an indirect increase in demand for school facilities would occur. Like the Approved Project, development of the Revised Project would be subject to the school fees set forth by State law and in accordance with the funding and mitigation agreement entered previously into by the Project applicant and LBUSD. Similar to the Approved Project, impacts on school facilities would be fully mitigated with the payment of these mandatory fees. In comparison to the Approved Project, the Revised Project would eliminate 1,400 previously proposed housing units and the associated student population. Thus, the Revised Project's impacts on schools would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

No mitigation measures addressing impacts to schools are proposed.

(d) Cumulative Impacts

Similar to the Revised Project, related projects would be subject to the payment of mandatory fees to the LBUSD. Payment of these fees is considered full mitigation of impacts on schools. Therefore, no significant cumulative impacts on schools would occur.

4. Recreation

(a) Approved Project Impacts

The Approved Project would result in 2,742 new residents and a daytime employee population. These residents and on-site employees would have access to the 11 acres of

³⁴ *Agreement for Mitigation of School Facility Impacts Between Long Beach Unified School District and Boeing Realty Corporation, February 23, 2004.*

open space areas provided on-site. This park space would consist of 9 acres that would be dedicated and zoned for public open space and two acres of private open space. In addition to the provision of on-site facilities, the Applicant has paid fees to the City to fund parks and recreational facilities pursuant to the City of Long Beach Municipal Code. The payment of these fees, together with the park space improvements proposed as part of the Approved Project, would ensure that the demand for parks and recreational facilities generated by Project residents would be accommodated. In addition, it is anticipated that the majority of Project employees would utilize on-site recreational facilities and park space areas rather than off-site facilities during weekday lunch times. Therefore, the Approved Project would not cause existing ratios of developed parklands per resident to substantially decrease, nor would the Project substantially increase the demand for local parks and recreational facilities within the City of Long Beach or Lakewood. No significant impacts on parks and recreation facilities would occur. Nonetheless, mitigation measures for the Approved Project were included in the Certified EIR to ensure that impacts on parks and recreational facilities would be less than significant.

(b) Revised Project Impacts

The Revised Project would not develop residential units and, thus, would not result in a direct residential population that would generate a permanent demand for parks and recreational facilities. Nonetheless, the Revised Project would provide approximately 10 acres of community open space in the form of Donald Douglas Plaza, Jansen Green, bike paths, an enhanced McGowen Street parkway, street gateways, mid-block pedestrian connections, and landscape buffers on-site. It is anticipated that the majority of Project employees would utilize the on-site community open space areas rather than off-site facilities during weekday lunch times. Therefore, the Revised Project would result in a less than significant impact on parks and recreational facilities. Nonetheless, mitigation measures are also proposed for the Revised Project to ensure that impacts on parks and recreational facilities would be less than significant. In comparison to the Approved Project, the Revised Project would eliminate 1,400 previously proposed housing units and the associated residential demand for parks and recreation facilities. Thus, the Revised Project's impacts on off-site parks and recreational facilities would be well below the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. Since the Revised Project would not include the development of residential units that could generate a direct demand for recreational facilities, several of the mitigation measures are no longer applicable to the Revised Project, as indicated below. The balance of the mitigation measures previously adopted for the Approved Project shall remain applicable to the Revised Project, with revisions as appropriate:

~~**Mitigation Measure V.K.4-1:** The Applicant shall be required to ensure that provide approximately 10.5 acres of active or passive park community open space is provided on-site, with an additional 2.5 acres of in the form of Donald Douglas Plaza, Jansen Green, view corridors/pedestrian easements and bicycle bike paths, an enhanced McGowen Street parkway, street gateways, mid-block pedestrian connections, and landscape buffers.~~

~~**Mitigation Measure V.K.4-1a:** Playground facilities or an equivalent recreational amenity shall be included in a minimum of two on-site parks.~~

~~**Mitigation Measure V.K.4-1b:** A multi-sport overlay field, consisting of a youth-sized football/soccer field with a youth-sized baseball/softball backstop, or an equivalent recreational amenity shall be included in at least one of the on-site parks.~~

~~**Mitigation Measure V.K.4-1c:** A recreational center, with a floor area equal to one square foot per resident, or an equivalent recreational amenity shall be provided on-site.~~

~~**Mitigation Measure V.K.4-2:** The Applicant shall contribute fees for parks and recreational facilities pursuant to Chapter 18.18, Park and Recreation Facilities Fee, of the City of Long Beach Municipal Code.~~

(d) Cumulative Impacts

As the Revised Project would not include the development of residential units which would generate a direct demand for recreational facilities, the Revised Project would not contribute to a cumulative impact on recreational facilities. Furthermore, it should be noted that the Revised Project would provide approximately 10 acres of community open space areas on-site. Thus, similar to the Approved Project, no significant cumulative impacts on recreational facilities would occur.

5. Libraries

(a) Approved Project Impacts

The Approved Project would result in 2,742 new residents in the City of Long Beach. The Approved Project would generate a direct increase in the demand for resources and expansion of the book collection at the Ruth Bach Library in the City of Long Beach. As a result of the Approved Project, the library workload and collections at the Ruth Bach Library would need to be expanded. Annually recurring project-generated General Fund revenue would be sufficient to fund the necessary library expenditures associated with additional demand from the Approved Project. However, that revenue stream may not be pre-

allocated to a specific purpose. As such, if the project-generated revenue were allocated to other needed municipal purposes other than to the provision of additional resources at the Ruth Bach Library, a potentially significant impact associated with demand for library facilities would occur.

(b) Revised Project Impacts

The Revised Project would not develop residential units and, thus, would not result in a direct residential population. In comparison to the Approved Project, the Revised Project would eliminate the Approved Project's residential demand for libraries. Incremental use of library resources by new Project employees in the form of walk-in visits to the library or telephone calls to the library reference desk could occur. However, the actual demand on library resources for professional daytime use by Project employees would be minimal, particularly since employee research needs are commonly met by in-house or on-line reference resources. Therefore, the Revised Project would result in less than significant impacts on library facilities. The Revised Project's impacts on library facilities would thus be well below the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

No mitigation measures addressing impacts to libraries are proposed.

(d) Cumulative Impacts

As the Revised Project would not include the development of residential units which would generate a direct demand for libraries, the Revised Project would not contribute to a cumulative impact on libraries. Thus, similar to the Approved Project, no significant cumulative impacts on libraries would occur.

L. Transportation/Circulation and Parking

1. Approved Project Impacts

The Approved Project would provide circulation improvements throughout the site and along the local street network, as shown in Figure II-5 in Section II, Project Description, of this Addendum. One access point would be provided from Carson Street and six access points would be provided from Lakewood Boulevard via the Project's east-west streets. The existing access from Paramount Boulevard and Cover Street would be reconstructed/realigned. Additional streets would be developed to provide internal circulation.

The Approved Project would generate a net increase of 51,700 daily trips which includes 4,027 trips during the A.M. peak hour and 5,033 trips during the P.M. peak hour, as shown in Table III-11 on page III-103. After incorporation of mitigation measures, the Approved Project would result in significant and unavoidable impacts at two intersections (Spring Street and Lakewood Boulevard, and Carson Street and Lakewood Boulevard) and at eight freeway segments along the I-405. With the incorporation of mitigation measures, impacts on residential street segments would be less than significant. However, should the jurisdictions fail or be unable to implement acceptable and adequate mitigation measures, some or all of the impacts at three residential street segments could remain significant. The Approved Project would result in short-term construction traffic impacts. Such impacts would be intermittent.

With regard to bicycle and pedestrian impacts, the Approved Project would not disrupt existing bicycle or pedestrian routes. Rather, it would include improvements to these systems in the project vicinity. Specifically, the Approved Project would continue the existing Class I bicycle path along Carson Street from Lakewood Boulevard to the western boundary of the site. Additionally, the Carson Street Class I bicycle path would be extended from Carson Street to the south along the western perimeter of the site (adjacent to the Lakewood Country Club Golf Course), and then west to the Paramount Boulevard/Cover Street intersection. As such, no significant impacts to bicycle and pedestrian paths would occur.

A parking plan would be implemented as part of the Approved Project. Under the Approved Project, parking would comply with Long Beach and Lakewood Municipal Code parking requirements and may include surface and/or structured parking. On-street parking within the Project site may be used to accommodate guest parking requirements for some specified residential and retail uses as well as to accommodate parking requirements for the on-site parks. As such, a less than significant impact to parking would occur.

2. Revised Project Impacts

The circulation improvements of the Approved Project would be modified under the Revised Project. As shown in Figure II-12 in Section II, Project Description, three access points would be provided from Carson Street, and five access points would be provided from Lakewood Boulevard via the Project's east-west streets as well as via the private driveway at the southern edge of the Project site. The existing access from Paramount Boulevard and Cover Street would be reconstructed/realigned. Additional streets would be developed to provide internal circulation.

**TABLE III-11
APPROVED PROJECT AND REVISED PROJECT TRIP GENERATIONS**

Reduced Intensity Alternative Project (Approved Project) Per Draft EIR								
Use	Size	Daily	A.M. Peak Hour			P.M. Peak Hour		
			I/B	O/B	Total	I/B	O/B	Total
Commercial/Office Park	3,100,000 sf	32,720	3,443	426	3,869	541	3,326	3,867
Retail	200,000 sf	10,640	147	94	241	476	516	992
Hotel	400 rm	3,290	137	87	224	129	115	244
Residential	1,400 du	8,500	121	512	633	529	272	801
		55,150	3,848	1,119	4,967	1,675	4,229	5,904
Internal Trip Reduction								
Residential, 5%		(430)	(0)	(26)	(26)	(26)	(0)	(26)
Commercial/ Office Park		(430)	(26)	(0)	(26)	(0)	(26)	(26)
		(860)	(26)	(26)	(52)	(26)	(26)	(52)
TDM Trip Reduction								
Commercial/Office Park (20% of Peak Hours)		(1,340)	(683)	0	(683)	0	(660)	(660)
Existing Driveways Volumes		(1,250)	(152)	(53)	(205)	(30)	(129)	(159)
Total Net Trip Generation		51,700	2,987	1,040	4,027	1,619	3,414	5,033
Douglas Park 4.0 MSF Rezone Project (Revised Project)								
Use	Size	Daily	A.M. Peak Hour			P.M. Peak Hour		
			I/B	O/B	Total	I/B	O/B	Total
Commercial/Office Park	3,750,000 sf	39,490	4,037	499	4,536	652	4,003	4,655
Retail	250,000 sf	12,290	168	108	226	552	598	1,150
Hotel	400 rm	3,290	137	87	224	129	115	244
		55,070	4,342	694	5,036	1,333	4,716	6,049
Internal Trip Reduction								
Retail, 5%		(610)	(0)	(5)	(5)	(28)	(0)	(28)
Commercial/ Office Park		(610)	(5)	0	(5)	(0)	(28)	(28)
		(1,220)	(5)	(5)	(10)	(28)	(28)	(56)
TDM Trip Reduction								
Commercial/Office Park (20% of Peak Hours)		(1,600)	(806)	0	(806)	0	(795)	(795)
Existing Driveways Volumes		(1,250)	(152)	(53)	(205)	(30)	(129)	(159)
Total Net Trip Generation		51,000	3,379	636	4,015	1,275	3,764	5,039

Source: Crain & Associates, 2008 (see Appendix F of this Addendum).

The Revised Project would generate a net increase of 51,000 daily trips which includes 4,015 trips during the A.M. peak hour and 5,039 trips during the P.M. peak hour, as shown in Table III-11 above. Given the similarities in trip generation, traffic generation

impacts would be similar to the Approved Project. In addition, traffic counts were conducted in 2008 and the results were compared with the traffic assumptions set forth in the traffic model used to evaluate the Approved Project. The comparative analysis demonstrated that traffic conditions today are within the envelope of what was assumed in the comprehensive traffic model used to evaluate impacts of the Approved Project. Specifically, based on the new traffic counts, it appears that current conditions are better overall than have been forecast for 2008, leaving more unused capacity than forecasted. Thus, the future level of service conditions with the Revised Project would be no worse than analyzed in the EIR for the Approved Project. Based on the trip generation analysis and recent traffic counts, similar to the Approved Project, after incorporation of mitigation measures, the Revised Project would result in significant and unavoidable impacts at two intersections (Spring Street and Lakewood Boulevard, and Carson Street and Lakewood Boulevard) and at eight freeway segments along the I-405. Also similar to the Approved Project, with the incorporation of mitigation measures, impacts on residential street segments under the Revised Project would be less than significant. However, should the jurisdictions fail or be unable to implement acceptable and adequate mitigation measures, some or all of the impacts at three residential street segments could remain significant.

With regard to bicycle and pedestrian impacts, the Revised Project would not disrupt existing bicycle or pedestrian routes. Rather, it would include improvements to these systems in the project vicinity. Specifically, the Revised Project would continue the existing Class I bicycle path along Carson Street from Lakewood Boulevard to the western boundary of the site. Additionally, the Carson Street Class I bicycle path would be extended from Carson Street to the south along Brizendine Avenue and down McGowen Street to Cover Street. As detailed in Mitigation Measure V.L-20 below, Class II and III bike lanes would be provided elsewhere throughout the site to provide connectivity. As such, no significant impacts to bicycle and pedestrian paths would occur.

A parking plan would also be implemented as part of the Revised Project. Similar to the Approved Project, parking for the Revised Project would comply with current Long Beach and Lakewood Municipal Code parking requirements and may include surface and/or structured parking. On-street parking within the Project may be used to accommodate customer parking requirements for commercial and retail uses as well as to accommodate parking requirements for the on-site community open space areas. As such, a less than significant impact to parking would occur.

Overall, the Revised Project's traffic impacts would be within the envelope of impacts identified in the Certified EIR.

3. Mitigation Measures

A MMRP was adopted for the Approved Project. Some of the mitigation measures identified in the MMRP included in the Certified EIR have been completed, as indicated where appropriate below. However, the balance of the mitigation measures remain applicable, with some revisions as appropriate for the Revised Project, as indicated in redline/strikeout text below. The following mitigation measures are proposed for the Revised Project:

Area-Wide Adaptive Traffic Control System (ATCS) and Intelligent Transportation Systems (ITS) Measures

Mitigation Measure V.L-1: Fund or cause the funding for the design and construction of a state-of-the-art traffic signal system such as Adaptive Traffic Control System (ATCS) for the following eight arterial corridors: (1) Del Amo Boulevard, approximately from the Long Beach Freeway (I-710) to the San Gabriel River Freeway (I-605); (2) Carson Street, approximately from Long Beach Boulevard – San Antonio Drive to I-605; (3) Spring Street, approximately from Atlantic Avenue to I-605; (4) Willow Street, approximately from Atlantic Avenue to I-605; (5) Atlantic Avenue, approximately from the Artesia Freeway (SR-91) to Willow Street; (6) Cherry Avenue, approximately from SR-91 to Pacific Coast Highway; (7) Lakewood Boulevard, approximately from SR-91 to Stearn Street; and (8) Bellflower Boulevard, approximately from SR-91 to the San Diego Freeway (I-405).³⁵

Mitigation Measure V.L-2: Fund or cause the funding for the design and construction of an area-wide ITS program to improve capacity at both corridor and non-corridor signalized intersections. The ITS program shall include interconnect, traffic detectors, surveillance cameras, message signs, and other means that connect the arterial traffic signal system with adjacent freeway on- and off-ramps meters and signals. Such connectivity and linkage with the freeway system will

³⁵ *The capacity of the signalized intersections along the eight arterials being implemented with the ATCS and supportive ITS measures were assumed to improve by ten percent, which is consistent with that experienced in other jurisdictions with ATCS/ITS programs, such as the Cities of Los Angeles, Pasadena, and Glendale. Signalized intersections in the study area not directly along the ATCS/ITS routes would also benefit and experience improved traffic flow overall due to ITS technology informing motorists of traffic conditions in the area. Motorists can use this information to seek better routes and thereby better balance traffic demand with capacity. It was assumed that this betterment is commensurate with an approximately three percent improvement in capacity at these other intersections.*

provide feedback to the surface street signal system and allow further adjustments in signal operations to enhance area-wide system capacity.

ATCS and the affiliated ITS program measures affecting the following intersections shall be installed no later than the triggering of the corresponding peak-hour trips:

Corridors and Study Intersections	Corridor Trigger Value
o Lakewood Corridor (A):	1,081
- Lakewood Blvd./Carson St. (I/S #45; 1,081*)	
- Lakewood Blvd./Spring St. (I/S #78; 1,113*)	
- Lakewood Blvd./South St. (I/S #17; 1,332*)	
- Lakewood Blvd./Stearns St. (I/S #95; 1,499*)	
- Lakewood Blvd./Willow St. (I/S #89; 1,772*)	
o Bellflower/Spring Corridor	1,257
- Bellflower Blvd./Wardlow Rd. (I/S #68; 1,257*)	
- Bellflower Blvd./Spring St. (I/S #80; 3,559*)	
- Spring St./Clark Ave. (I/S #79; 3,866*)	
- Spring St./Cherry Ave. (I/S #74; 5,073*)	
o Carson Corridor (A)	1,449
- Carson St./Clark Ave. (I/S #47; 1,449*)	
- Carson St./Woodruff Ave. (I/S #49; 2,002*)	
- Carson St./Cherry Ave. (I/S #43; 2,183*)	
- Carson St./Palo Verde Ave. (I/S #50; 2,559*)	
o Paramount Corridor (A)	1,507
- Paramount Blvd./Del Amo Blvd. (I/S #31; 1,507*)	
- Paramount Blvd./South St. (I/S #16; 1,663*) ^b	
- Paramount Blvd./Artesia Blvd. (I/S #12; 1,677*) ^b	
- Paramount Blvd./Alondra Blvd. (I/S #2; 2,265*) ^a	
o Redondo/Pacific Corridor	2,223
- Pacific Coast Hwy./Redondo Ave. (I/S #99; 2,223*) ^a	
- Redondo Ave./Anaheim St. (I/S #101; 3,384*) ^b	
- Redondo Ave./Willow St. (I/S #88; 4,135*)	
- Redondo Ave./Spring St. (I/S #77; 4,403*)	
- 7th St./Pacific Coast Hwy. (I/S #104; 5,073*) ^a	
o Lakewood Corridor (B)	2,402
- Lakewood Blvd./Artesia Blvd. (I/S #13; 2,402*)	
- Lakewood Blvd./Candlewood St. (I/S #23; 3,307*)	
- Lakewood Blvd./Del Amo Blvd. (I/S #32; 3,766)	
- Wardlow Rd./Douglas Rd./Lakewood Blvd. (I/S #66; 4,584*)	
- Lakewood Blvd./Conant St.—G Street (I/S #60; 4,610*)	
- Lakewood Blvd./Alondra Blvd. (I/S #3; 4,850*) ^a	
o Del Amo Corridor	3,194
- Del Amo Blvd./Clark Ave. (I/S #33; 3,194*)	
- Del Amo Blvd./Woodruff St. (I/S #35; 3,194*)	
- Del Amo Blvd./Orange Ave. (I/S #29; 3,718*)	
- Del Amo Blvd./Palo Verde Ave. (I/S #36; 4,459*)	

Corridors and Study Intersections	Corridor Trigger Value
<ul style="list-style-type: none"> o Carson Corridor (B) <ul style="list-style-type: none"> - Carson St./Los Coyotes Diagonal (#51; 3,981*) - Carson St./605 Fwy. SB Off-Ramp (#52; 4,646*) - Carson St./Norwalk Blvd. (#55; 4,646*)^a - Carson St./Paramount Blvd. (#44; 4,891*) o Atlantic Corridor <ul style="list-style-type: none"> - Atlantic Ave./Carson St./ (I/S #41; 4,459*) - Wardlow Rd./Atlantic Ave. (I/S #63; 4,850*) o South St./Clark Ave. (I/S #18; 5,073*)^b 	<p>3,981</p> <p>4,459</p> <p>5,073</p>

* Individual intersection (I/S) trigger value.

^a Each of these intersections are either already a part of the Caltrans ATCS system, thus fulfilling the intent of the mitigation measure, or an alternative traffic flow improvement measure has been implemented or proposed to be completed.

^b These intersections are not expected to be significantly impacted by traffic growth associated with the Project since such traffic is expected to migrate to the ATCS corridors due to faster travel speeds and reduced delays afforded motorists originating from or destined to Douglas Park.

The following alternative traffic flow enhancements will be completed if approved and accepted by the appropriate governing jurisdiction by or before 2,265 peak hour trips are generated from the development:

- o Paramount Boulevard & Alondra Boulevard (City of Paramount): Upgrade the traffic controller and software to provide for enhanced peak period traffic management capabilities through the implementation of an automatic split adjustment algorithm.
- o Norwalk Boulevard & Carson Street (City of Hawaiian Gardens): Upgrade the intersection to provide right-turn overlap operation for westbound, eastbound, and northbound traffic.

Mitigation Measure V.L-3: Fund or cause the funding for the design and construction of a centralized ATCS/ITS command center to operate and manage the area-wide ATCS and affiliated ITS measures.

- o Trigger Value: 1,081 peak-hour trips

Intersection Improvements

Mitigation Measure V.L-4: Del Amo Boulevard and Lakewood Boulevard (Intersection 32, Cities of Lakewood and Long Beach): Widen on the east side of the north leg and the west sides of the south ~~north~~ leg of Lakewood Boulevard; remove the nose islands and modify the

remaining raised islands on the north and south legs; and restripe the north and south legs to provide a second southbound left-turn and three through lanes in each direction on Lakewood Boulevard.

- o Trigger Value: 891 peak-hour trips

Mitigation Measure V.L-5: Carson Street and Paramount Boulevard (Intersection 44, City of Lakewood): Widen on the east side of the south leg of Paramount Boulevard; modify and shift the raised island on the north leg; remove the raised island on the south leg; and restripe the north and south legs to provide a northbound right-turn-only lane on Paramount Boulevard.

- o Trigger Value: 618 peak-hour trips

Mitigation Measure V.L-6: Carson Street and Lakewood Boulevard (Intersection 45, Cities of Long Beach and Lakewood): Widen on the west side of Lakewood Boulevard between Carson Street and F-Cover Street. At Carson Street, remove the second southbound left-turn lane; modify and shift the raised islands on the north and south legs; and restripe the north and south legs to provide an extended southbound left-turn lane, and a fourth southbound through lane from north of Carson Street to the vicinity of F-Cover Street, where the lane becomes a right-turn-only lane accessing F-Cover Street.

[This mitigation measure, originally set forth in the MMRP included in the Certified EIR and revised herein, has been completed.]

- o Trigger Value: First Project ~~residential~~commercial certificate of occupancy.

Mitigation Measure V.L-7: Carson Street and Bellflower Boulevard (Intersection 48, Cities of Long Beach and Lakewood): Prohibit parking during the A.M. peak period on the north side of Carson Street (up to approximately 75 spaces) for a length of approximately three blocks east and west of Bellflower Boulevard; modify and lengthen the left-turn channelization along the raised islands on the east and west legs of Carson Street; and restripe this length of Carson Street to provide a third westbound through lane, including conversion of the right-turn lane at Bellflower Boulevard, for the A.M. peak periods, and lengthened left-turn lanes approaching Bellflower Boulevard.

The affected parking spaces are adjacent to residential and commercial uses that appear to have off-street parking facilities

capable of satisfying parking requirements. Therefore, removal of the on-street parking is not expected to have a significant impact.

[This mitigation measure as set forth in the MMRP included in the Certified EIR has been completed.]

- o Trigger Value: 1,677 peak-hour trips

Mitigation Measure V.L-8: Cover Street and Paramount Boulevard (Intersection 56, City of Lakewood); Cover Street from Paramount Boulevard to West of Industry Avenue (Cities of Long Beach and Lakewood): Construct and stripe the Project Roadway east leg of Cover Street approaching the intersection of Cover Street and Paramount Boulevard to provide two through lanes and a in each direction and a separated bike path easterly of Paramount Boulevard.

Restripe Paramount Boulevard north of Cover Street to provide one southbound left-turn lane onto eastbound Cover Street, two southbound right-turn-only lanes onto westbound, and a bike lane in each direction Cover Street, and two northbound through lanes.

Reconstruct Cover Street, as necessary, from Paramount Boulevard to Industry Avenue, remove the raised median island, and restripe to provide a modified left-turn channelization lane and two through lanes eastbound, and a bike lane in each direction. Restripe Paramount Boulevard to provide a left-turn lane and a right-turn-only lane southbound.

Remove on-street parking on the north side of Cover Street (up to approximately three spaces); widen on the north side of Cover Street from approximately 100 feet west of Industry Avenue to 340 feet east of Industry Avenue; modify and lengthen the left-turn channelization along the raised island on the east leg at Industry Avenue; and restripe to provide two through lanes, left-turn channelization and a bike lane in each direction, including an extended westbound left turn lane at Industry Avenue, from Industry Avenue to the improvement at Paramount Boulevard. Restripe the west leg of Cover Street at Industry Avenue to provide two eastbound through lanes, including conversion of the right turn only lane, and two westbound right turn-only lanes departing the intersection and approaching Cherry Avenue.

Restripe Industry Avenue between Cover Street and Bixby Road to provide a left turn lane and two right turn only lanes northbound, a southbound through lane, and a bike lane in each direction to provide one northbound left-turn lane onto westbound Cover Street, one

northbound right-turn-only lane onto eastbound Cover Street, and one southbound through lane.

The affected parking spaces are adjacent to commercial and industrial uses. There appears to be sufficient off-street capability to satisfy parking requirements. Therefore, removal of the on-street parking is not expected to have a significant impact.

(Note: These improvements are designed to enhance project Project access via the Cover Street – Cherry Avenue route and should be implemented with Mitigation Measures ~~V.L. 9~~ and V.L-14.)

- o Trigger Value: Pursuant to Section 2.4.2(c) of Development Agreement schedule

~~Mitigation Measure V.L-9: Bixby Road and Cherry Avenue (Intersection 59, Cities of Long Beach and Lakewood):~~ Remove on-street parking on Bixby Road between Cherry Avenue and Industry Avenue (up to approximately 37 spaces); and restripe the east leg of Bixby Road to provide one left-turn lane, one left-turn/through shared lane and one right-turn-only lane.

The affected parking spaces are adjacent to commercial uses. There appears to be sufficient off-street capability to satisfy parking requirements, with the possible exception of delivery/service needs. Therefore, removal of some of the on-street parking may result in a shortage of parking in the area during times of peak demand.

~~(Note: This improvement is designed to enhance project access via the Cover Street – Cherry Avenue route and should be implemented with Mitigation Measures ~~MM-V.L-8~~ and ~~MM-V.L-14~~.)~~

[This mitigation measure has been replaced with Mitigation Measure V.L-14.]

- o Trigger Value: Construction of ~~MM-V.L-8~~ above

Mitigation Measure V.L-10: Conant Street/G Street and Lakewood Boulevard (Intersection 60, City of Long Beach): Construct Conant Street as a fully improved public street, with a basic curb-to-curb width of no less than 56 feet, exclusive of any raised median, between proposed 2nd Worsham Avenue and Lakewood Boulevard. Construct additional roadway width on ~~G~~ Cover Street approaching Lakewood Boulevard to provide one left-turn lane, one through lane and two right-turn-only

lanes eastbound. Restripe and convert the right-turn-only lane on the east leg of Conant Street to a westbound through/right-turn shared lane. Modify the existing traffic signal at Conant Street as necessary to control this intersection.

[This mitigation measure, originally set forth in the MMRP included in the Certified EIR and revised herein, has been completed.]

- o Trigger Values: ~~First Project residential certificate of occupancy for construction of G Street and~~ 3,637 peak-hour trips for restriping changes to Conant Street

Mitigation Measure V.L-11: Wardlow Road and Cherry Avenue (Intersection 65, City of Long Beach): Remove on-street parking on Cherry Avenue; widen on ~~both sides~~ the east side of the south leg of Cherry Avenue; shorten the raised island on the north leg; and restripe the north and south legs to provide a third southbound through lane.

The affected parking spaces are adjacent to commercial and residential uses. There appears to be sufficient off-street capability to satisfy parking requirements. Therefore, removal of the on-street parking is not expected to have a significant impact.

[This mitigation measure, originally set forth in the MMRP included in the Certified EIR and revised herein, has been completed.]

(Note: This improvement is designed to enhance ~~project~~ Project access via Cherry Avenue.)

- o Trigger Value: 1,851 peak-hour trips

Mitigation Measure V.L-12: Douglas Center Drive/G-McGowen Street and Lakewood Boulevard (Intersection 105, City of Long Beach): Construct ~~G-McGowen~~ Street as a fully improved public street with a curb-to-curb width of no less than 36 feet, exclusive of any raised median, between proposed ~~2nd~~ Worsham Avenue and Lakewood Boulevard; modify the raised island on Lakewood Boulevard for left-turn channelization; and restripe to provide a northbound left-turn lane accessing ~~G-McGowen~~ Street. Modify the existing traffic signal at Douglas Center Drive as necessary to control this expanded intersection.

(Note: This improvement is designed to enhance ~~project~~ Project access capacity on Lakewood Boulevard.)

- o Trigger Value: Certificate of occupancy for first Project building along ~~C McGowen~~ Street between 2nd ~~Worsham~~ Avenue and Lakewood Boulevard

Mitigation Measure V.L-13: ~~F Cover~~ Street and Lakewood Boulevard (Intersection 106, City of Long Beach): Construct ~~F Cover~~ Street as a fully improved public street with a curb-to-curb width of no less than 50 feet, exclusive of any raised median, between proposed 2nd ~~Worsham~~ Avenue and Lakewood Boulevard; open and modify the raised island on Lakewood Boulevard to provide left-turn channelization; and restripe to provide a northbound left-turn lane accessing ~~F Cover~~ Street. Install a traffic signal to control this intersection.

[This mitigation measure, originally set forth in the MMRP included in the Certified EIR and revised herein, has been completed.]

(Note: This improvement is designed to enhance ~~project~~ Project access capacity on Lakewood Boulevard.)

- o Trigger Value: First ~~project~~ Project residential-commercial certificate of occupancy

Mitigation Measure-V.L-14: ~~Cover~~ Street and Cherry Avenue (Intersection 108, Cities of Long Beach and Lakewood); ~~Cover~~ Street from Cherry Avenue to Industry Avenue (Cities of Long Beach and Lakewood): ~~Remove on-street parking on the east side of Cherry Avenue (up to approximately 12 spaces) and both sides of Cover Street (up to approximately 24 spaces); Widen on the north side of Cover Street from Cherry Avenue to Industry Avenue; open and modify remove the raised median island on Cherry Avenue opposite Cover Street; between Roosevelt Road and Bixby Road, and restripe remove on-street parking on the east side of Cherry Avenue south of Cover Street (up to approximately 3 spaces) and on both sides of Cover Street east of Cherry Avenue (up to approximately 24 spaces). Restripe Cherry Avenue to provide a southbound left-turn lane accessing Cover Street and a third northbound through lane right-turn only lane onto eastbound Cover Street.~~

~~Restripe Cover Street to provide two westbound left-turn lanes onto southbound Cherry Avenue, one a second westbound right-turn-only lane onto northbound Cherry Avenue, one eastbound through lane, and one eastbound right-turn-only lane onto southbound Industry Avenue, and no westbound left turn lane. Remove the stop sign control on Cover Street and install a "half signal" that controls all~~

~~movements except for the southbound through movement on Cherry Avenue.~~

~~The affected parking spaces are adjacent to commercial and industrial uses. Some of these uses may not have sufficient off-street capability to satisfy parking requirements. Therefore, removal of the on-street parking may result in a shortage of parking in the area during times of peak demand.~~

(Note: This improvement is designed to enhance ~~project~~ Project access via the Cover Street – Cherry Avenue route and should be implemented with Mitigation Measures V.L-8 and V.L-9.)

- o Trigger Value: Construction of Mitigation Measure V.L-8 above

Mitigation Measure V.L-15: Carson Street and 2nd Worsham Avenue (Intersection 109, City of Long Beach): Construct ~~Second~~ Worsham Avenue as a fully improved public street with a curb-to-curb width of no less than 50 feet, exclusive of any raised median, between Carson Street and proposed ~~G~~ McGowen Street. Restripe Carson Street to provide a westbound left-turn lane accessing 2nd Worsham Avenue. Install a traffic signal with to control this intersection.

Also, construct 2nd Worsham Avenue as a fully improved public street with a curb-to-curb width of no less than 50 feet, exclusive of any raised median, between proposed ~~G~~ McGowen Street and proposed ~~F~~ Cover Street no later than the certificate of occupancy for the first ~~project~~ Project building along this street segment. In addition, construct 2nd Worsham Avenue as a fully improved public street with a curb-to-curb width of no less than 36 feet, exclusive of any raised median, between proposed ~~F~~ Cover Street and proposed ~~G~~ Conant Street no later than the certificate of occupancy for the first ~~project~~ Project building along this street segment.

[This mitigation measure, originally set forth in the MMRP included in the Certified EIR and revised herein, has been completed.]

- o Trigger Value: Certificate of occupancy for first ~~project~~ Project building along 2nd Worsham Avenue between Carson Street and ~~G~~ McGowen Street

Project Transportation Demand Management (TDM) Program

Mitigation Measure V.L-16: Prior to the issuance of the first building permit for any Office Park (“Commercial District”) use, the Applicant shall submit for

City approval a Transportation Demand Management (TDM) Program. The TDM Program shall be designed to achieve a 20 percent reduction in P.M. peak-hour trips generated by the Office Park (“Commercial District”) uses. The employee commute mode choice shall be annually monitored and the TDM Program adjusted, if necessary, to achieve a 20 percent trip reduction. The City shall determine, based on actual performance, whether the TDM Program will reasonably achieve a 20 percent reduction in P.M. peak-hour trips. The City shall not issue building permits for Office Park (“Commercial District”) uses beyond ~~2,480,000~~ 3,000,000 square feet, except to the degree to which actual reductions have been achieved and subject to any adjustments for equivalency conversion between uses. The following formula shall be used for this determination:

$$\text{Allowable Office Park ("Comm. Distr.") Building Area} = (80 \text{ percent} \times \del{3,100,000} \u{3,750,000} \text{ gsf}) + (\text{percent actual trip reduction achieved} \times \del{3,100,000} \u{3,750,000} \text{ gsf})$$

The issuance of building permits for Office Park (“Commercial District”) uses shall be subject to the limitation that the Office Park (“Commercial District”) building area shall not exceed ~~3,100,000~~ 3,750,000 gross square feet unless other uses are reduced in size by the equivalency procedures. In the event that the equivalency procedures are used, the ~~3,100,000~~ 3,750,000 gross square-foot limits described above shall all be adjusted accordingly.

The TDM program may include but not be limited to the following measures:

- On-Site Employee Transportation Coordinator (ETC) – The ETC would be a full-time position. The ETC would be responsible for maintaining the transportation displays and providing services such as on-site monthly transit pass sales, assistance with carpool/vanpool matching, oversight of the carpool/vanpool program and other ridesharing related services. The ETC would also coordinate resources and ideas with other transportation management organizations.
- On-Site Transportation Management Office – This facility would be a dedicated office for the ETC and any support personnel. It would serve as a tangible focal point for the TDM program. The location and contact number of this office would be well publicized so that employees could conveniently call or come in for assistance.

- Preferential Parking Management – The ETC would oversee a preferred employee carpool/vanpool parking program. This program would assign preferential parking spaces (i.e., the more desirable and convenient spaces) to eligible employee carpools and vanpools, and monitor the use of the identified spaces to ensure that they are being properly used.
- Carpool/Vanpool Matching – A ride matching service would be made available to help employees seek carpool and vanpool partners. The ETC would facilitate employee ride matching, with the primary emphasis on matching project employees with one another. The availability of this service would be advertised on on-site transportation displays.
- Vanpool Start-Up Assistance – The ETC would assist employers or employees attempting to initiate vanpool service at the project. This assistance could include research of van leasing arrangements, research of applicable tax credits, increased marketing activity and developing vanpool routes.
- Vanpool Staging Areas – Special vanpool passenger loading/unloading areas would be established at one or more locations on-site. This incentive would make it more convenient and safer for commuters to load and unload their vanpools outside the normal flow of traffic.
- On-Site Transit Pass Sales – Monthly LBT, joint LBT/MTA, and MTA passes would be available for purchase through the on-site transportation management office (TMO).
- Centralized Information Board – A centralized bulletin board or kiosk with information on alternative transportation modes, including transit, would be provided on-site. ~~A centralized transportation information board with similar information for residents would also be provided on-site.~~
- New Business/Employee Commuter Benefits/Flier Packet – The ETC would prepare fliers and/or packets outlining key TDM amenities and services that are made available by the project in support of alternative transportation modes. The fliers/packets would be distributed to employers for their dissemination to employees.

- Guaranteed Ride Home Program – This program would provide the means to those employees who carpool, vanpool, bus or bicycle to work to have a guaranteed ride home in the event of an emergency or unexpected overtime.
- Compressed Work Week Schedule - Implement compressed work week schedules where weekly work hours are compressed into fewer than five days.
- Other Marketing – The annual state- and regional-level events of California Rideshare Week and Southern California Bike-to-Work Day would be advertised and potentially used as the setting for a site-specific marketing event or transportation fair.
- Shuttle System – This shuttle system would be implemented through a joint arrangement with the City of Long Beach and/or Long Beach Transit, whereby the project would supply the shuttle vehicles and other capital needed to operate the service, and the City agencies would operate the service. It is anticipated that the shuttle system would provide limited stop service to the Metro Blue Line and intersecting bus lines that are en route during the morning and afternoon commute periods, and would operate as a free project circulator during non-commute periods to provide an alternative to walking or short driving trips within the Douglas Park site.
- Fleet Vehicles - Develop a program to minimize the use of fleet vehicles during smog alerts for businesses not subject to Rule 2202 or Regulation XII.
 - o Trigger Value: First Project building permit for Office Park (“Commercial District”) use

Regional Transportation Improvements

Mitigation Measure V.L-17: I-405 (San Diego Freeway) Northbound On-Ramp from Southbound Cherry Avenue: Widen the two northbound on-ramps in the area where these ramps merge to provide an elongation of the merge section for a smoother and safer merge. Additionally, the ramp metering location for southbound traffic from Cherry Avenue could be relocated to provide added queuing length between the meter and Cherry Avenue.

- o Trigger Value: No later than 5,000 P.M. peak-hour trips

Residential Street Measures

Mitigation Measure V.L-18: The Applicant or its designee shall make an initial lump sum payment of \$250,000 to the City of Long Beach, which the City shall administer for the study, design and implementation of neighborhood traffic management measures to deter potential Project traffic intrusion into the residential areas analyzed in the Draft EIR. The City shall coordinate with the City of Lakewood and other neighborhood groups in residential areas that may be significantly affected by such traffic intrusion. Potential neighborhood traffic management measures may include, but not be limited to, the following: additional Stop signs; speed bumps; turn restrictions; signal timing strategies; signalization prohibiting through traffic movements; parking restrictions; diverters; chokers; cul-de-sacs; partial cul-de-sacs; median islands; woonerfs (“chicanes”); traffic circles; one-way streets; and residential identity signs, gates, or monuments.

If requested by the City, and no sooner than 3,000 P.M. peak-hour trips, and provided that the initial \$250,000 payment has been spent and a complete accounting thereof is submitted to and accepted by the Applicant or its designee, the Applicant or its designee shall make an additional lump sum payment of \$250,000 to the City for additional design and implementation of neighborhood traffic management measures for the above-described residential areas. Any unused portion of this payment shall be returned to the Applicant or its designee within one year after the expiration of the Development Agreement.

- o Trigger Value: First Project building permit for initial \$250,000 payment; 3,000 P.M. peak-hour trips, provided that the initial \$250,000 has been spent and accounted for

Public Transit Measures/Improvements

Mitigation Measure V.L-19: The Applicant shall consult with Long Beach Transit (LBT) and ~~the Metropolitan Transportation Authority (MTA)~~ to address the projects anticipated transit demand needs.

Bicycle Facility Improvements

Mitigation Measure V.L-20: In keeping with the intent of the Long Beach Bicycle Master Plan, the project will continue to provide a Class I bike lane within the Carson Street parkway adjacent to the site and will provide

~~a Class I bike lane that extends through the Project site south from Carson Street and west to the Paramount Boulevard/Cover Street intersection along Brizendine Avenue and down McGowen Street to Cover Street. Class II bike lanes will be provided on Cover Street, Conant Street and Heinemann Avenue subject to approval by the City of Long Beach Traffic Engineer. All other public street portions within Vesting Tentative Tract Map No. 70937 shall be designed as Class III bicycle route capable. These bicycle facility improvements will occur simultaneously with the phasing of the on-site streets.~~

- o Trigger Value: Pursuant to Development Agreement schedule

Parking Measure

Mitigation Measure V.L-21: A shared parking analysis will be prepared and submitted to the City of Long Beach for review and approval to justify a reduction in the Code-required on-site parking for the uses that will implement joint-use parking.

(4) Cumulative Impacts

The traffic models used in the traffic analysis of the Final EIR incorporated existing traffic volumes together with forecasted traffic increases due to ambient growth and related projects through the future study year of 2020. As described above, the trip generation for the Revised Project would be similar to that of the Approved Project. Given the similarities in trip generation, traffic generation impacts would be similar to the Approved Project. In addition, traffic counts were conducted in 2008 and the results were compared with the traffic assumptions set forth in the traffic model used to evaluate the Approved Project. The comparative analysis demonstrated that traffic conditions today are within the envelope of what was assumed in the comprehensive traffic model used to evaluate impacts of the Approved Project. Specifically, based on the new traffic counts, it appears that current conditions are better overall than have been forecast for 2008, leaving more unused capacity than forecast. In addition, based on the related projects list provided in Table III-1, the trips associated with the related projects have been accounted for in the traffic model. Thus, the cumulative traffic impacts would be within the envelope of those specified in the EIR. As with the Approved Project, the Revised Project would contribute to cumulative impacts relative to intersections and freeways.

Cumulative growth in the area surrounding the Project site will result in increases in traffic on residential street segments in the vicinity. It is expected that related projects will be required to mitigate any significant impacts to these roadways, as necessary. However should the respective jurisdictions fail or be unable to implement acceptable and adequate

mitigation measures, the project together with the related projects will also contribute to a cumulatively considerable impact on these residential street segments.

Cumulative impacts from construction traffic may occur on certain roadways if multiple projects in proximity to one another are constructed at the same time. As with the Revised Project, related projects would be expected to implement standard procedures for mitigating construction traffic impacts on roadways, similar to the project. Nonetheless, since the Revised Project's impacts from construction have been identified as potentially significant short-term impacts, cumulative impacts from construction are also considered to be potentially significant temporary, short-term significant impacts. While these cumulative impacts have the potential to be significant, cumulative construction impacts would be reduced with the Revised Project when compared with cumulative impacts under the Approved Project.

M. Utilities

1. Water

(a) Approved Project Impacts

Implementation of the Approved Project would result in an increase in water demand associated with the new land uses. Potable water used for domestic purposes within the Long Beach and Lakewood portions of the site would be obtained from the City of Long Beach Water Department (LBWD) and Lakewood Department of Water Resources, respectively, and water used for irrigation and landscaping purposes in the City of Long Beach would be provided by LBWD via a proposed reclaimed water distribution system. As provided in the Draft EIR, the total domestic water demand of the analyzed PacifiCenter @ Long Beach Project (i.e., 1,407,500 gallons per day (gpd)) would be within the projected water demand during the normal, single-dry, and multiple-dry water years of the LBWD.³⁶ The Approved Project, which represents a reduced development compared with the analyzed PacifiCenter @ Long Beach Project, would thus result in a decreased water demand that would also be within the LBWD's projected water demands. Specifically, the average potable water demand of the Approved Project would be approximately 1,105,000 gpd, as shown in Table III-12 on page III-120.³⁷ The Approved Project's net annual water

³⁶ *Of the total estimated water demand of 1,407,500 gpd, it is estimated that 1,313,400 gpd would be in the City of Long Beach. The remaining water demand represents the demand for the portion of the Project site located in the City of Lakewood.*

³⁷ *Water/Reclaimed Water Technical Study, August 25, 2008; Kimley-Horn and Associates, Inc. (see Appendix D of this Addendum).*

**TABLE III-12
ESTIMATED DOMESTIC WATER DEMAND – APPROVED PROJECT VS. REVISED PROJECT**

Land Use	Approved Project		Revised Project		
	Water Demand Factor (gpd/sf or unit)	Proposed Development (sf or unit)	Water Demand (gpd)	Proposed Development (sf or unit)	Water Demand (gpd)
Commercial	0.2	3,300,000	660,000	4,000,000	880,000
Hotel	150	400	60,000	400	60,000
Housing	275	1,400	385,000	0	0
Total			1,105,000		940,000
Baseline			75,900		75,900
Net (gpd)			1,029,100		946,100
Net (afy)			1,238 afy		946 afy

Source: Matrix Environmental, 2009.

demand over baseline conditions (approximately 1,238 acre feet per year (afy)) represents approximately 1.5 percent of LBWD’s future 2025 domestic demand (80,346 acre feet) estimated in the 2000 Urban Water Management Plan (UWMP). Additionally, based on the most recent 2005 UWMP (which was prepared subsequent to the Certified EIR), the domestic water demand of the Approved Project would represent 1.7 percent of the future 2030 annual domestic water demand (72,200 acre feet) estimated in the 2005 UWMP.

As stated in the Draft EIR, the average demand for reclaimed water generated by the PacifiCenter @ Long Beach Project was estimated to be approximately 402,715 gpd based on an 8-hour nighttime irrigation period, scheduled three times per week. This reclaimed water demand, which would be provided by LBWD, would be within LBWD’s future reclaimed water demands estimated in the 2000 UWMP. The Approved Project would result in the same reclaimed water demand as the analyzed PacifiCenter @ Long Beach Project.³⁸ Therefore, the Approved Project would also be within the LBWD’s projected reclaimed water demands. Specifically, the Approved Project would have a reclaimed water demand of 402,715 gpd (or 451 acre feet), which represents approximately 3.5 percent of LBWD’s future 2025 reclaimed water demand (13,025 acre feet) estimated in the 2000 UWMP. Additionally, based on the most recent 2005 UWMP (which was prepared subsequent to the Certified EIR), the reclaimed water demand of the Approved Project would represent 3.3 percent of the future 2030 reclaimed water demand (14,400 acre feet) estimated in the 2005 UWMP.

³⁸ *Ibid.*

As part of the Approved Project, a new domestic water system consisting of 12- and 16-inch domestic water mains was recently installed at the Project site. Additionally, a reclaimed water system was installed throughout the site. A new 16-inch water line in Paramount Boulevard parallel to the City of Lakewood's existing lines has also been completed. With this new 16-inch water line, the Approved Project would meet fire flow requirements in the Lakewood portion of the site. The on-site water systems have been designed and constructed to provide adequate water service and flows for the Project site. Thus, implementation of the Approved Project would not inhibit the capacity of the system serving the surrounding Project area.

Based on the above, implementation of the Approved Project would not result in a significant impact on water supply or services. Nonetheless, mitigation measures for the Approved Project were included in the Certified EIR to ensure implementation of certain Project features related to water supply and services.

(b) Revised Project Impacts

Based on the land uses proposed for the Revised Project, the average domestic water demand of the Revised Project would be approximately 940,000 gpd, as shown in Table III-12.³⁹ Additionally, the reclaimed water demand of the Revised Project would be approximately 312,203 gpd.⁴⁰ Both the domestic and reclaimed water demands of the Revised Project would be less than those of the Approved Project. Thus, the Revised Project's water demands would be within the LBWD's projected water demands in the 2000 and 2005 UWMP. Additionally, the new domestic and reclaimed water system that was installed for the Approved Project would be adequate to serve the Revised Project. Thus, the Revised Project's impacts on water would be within the envelope of impacts identified in the Certified EIR. Nonetheless, mitigation measures are also proposed for the Revised Project to ensure implementation of certain Project features related to water supply and services.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. The mitigation measures provided below remain applicable to the Revised Project:

³⁹ *Ibid.*

⁴⁰ *Ibid.*

Mitigation Measure V.M.1-1: Water line abandonment, new water system connections, and the construction of on-site infrastructure needed for future development on-site shall be completed in accordance with the requirements of the City of Long Beach Water Department, City of Lakewood Department of Water Resources, Long Beach Fire Department, and the County of Los Angeles Fire Prevention Division, Engineering and Building Plan Check Unit.

Mitigation Measure V.M.1-2: The installation of new domestic water infrastructure shall be coordinated with Douglas Park development and on-site street improvements.

Mitigation Measure V.M.1-3: The proposed on-site reclaimed water distribution system shall be constructed in accordance with the requirements of the Long Beach Water Department. The installation of new reclaimed water infrastructure shall be coordinated with Douglas Park development and on-site street improvements.

Mitigation Measure V.M.1-4: Project development shall comply with State law regarding water conservation measures, including pertinent provisions of Title 20 and Title 24 of the California Government Code regarding the use of water efficient appliances.

These mitigation measures have been implemented for improvements that have been completed on the Project site. Continued implementation of these mitigation measures for future improvements would reduce potential impacts of the Revised Project.

(d) Cumulative Impacts

The Revised Project in conjunction with the related projects identified in Table III-1 of this Addendum would cumulatively increase water demand and the capacity of associated water infrastructure. However, should the water demand associated with related projects exceed local infrastructure capacity, related projects are expected to make appropriate infrastructure upgrades. Therefore, no substantive cumulative impacts on local water distribution infrastructure would occur.

Cumulatively, the Revised Project and the identified related projects in the City of Long Beach would increase the City's average daily water demand. Similarly, related projects in the City of Lakewood when combined with the Revised Project would increase Lakewood's average daily water demand. However, related projects of a larger nature would be subject to the water supply assessment requirements of SB610 to ensure that adequate water supplies would be available to accommodate projected demand.

Furthermore, in light of the City of Long Beach's LEED certification requirements and adopted Green Building Standards for Public and Private Development, related projects are anticipated to incorporate specific features to reduce water demand. Therefore, as with the Approved Project, no significant cumulative impacts on water services would occur in conjunction with the Revised Project.

2. Sewer

(a) Approved Project Impacts

The Los Angeles County Department of Public Works (LACDPW) serves the portion of the Project site within the City of Lakewood, and the LBWD provides sewer service to the portion of the site within the City of Long Beach. Under current conditions, sewage flows from the site are conveyed to either one of two pipelines (a 15-inch and a 21-inch sewer), which connect to the County Sanitation District of Los Angeles County (CSDLAC) Joint Outfall A Unit 1A North Long Beach Interceptor Trunk Sewer (NLBITS) at the intersection of Conant Street and Clark Avenue. The 15-inch line is a private pipeline that only serves the Project site. The 21-inch pipeline is a public pipeline that serves the Project site and other areas of Long Beach and Lakewood.

Implementation of the Approved Project would generate average daily sewage flows of approximately 1,055,450 gpd, as shown in Table III-13 on page III-124, resulting in peak flows in the sewer system of 3.47 million gallons per day (mgd).⁴¹ Since preparation of the Certified EIR, new sewer infrastructure has been installed for the Approved Project on the Project site and in the surrounding vicinity. This includes new sewer lines ranging from 8 to 21 inches in diameter that have been located in the new roadways south of Cover Street. In addition, the private 15-inch main sewer line located on-site was transferred to LBWD to increase capacity within the public sewer system, with appropriate upgrades undertaken, as necessary. Portions of the existing 15- to 21-inch line in Conant Street were also replaced on-site. The existing downstream sewer lines are not currently used to their full capacity and would be able to accommodate the additional sewage flows from the Project site.

All site-generated wastewater is treated at either the Long Beach Water Reclamation Plant (LBWRP) or the Joint Water Pollution Control Plant (JWPCP). The CSDLAC has indicated that both treatment plants have adequate capacity to treat the

⁴¹ *Sewer Technical Study, August 25, 2008; Kimley-Horn and Associates, Inc. (see Appendix E of this Addendum). Includes on- and off-site flows running through the on-site sewer system.*

**TABLE III-13
ESTIMATED WASTEWATER GENERATION – APPROVED PROJECT VS. REVISED PROJECT**

Land Use	Wastewater Factor	Approved Project		Revised Project	
		Development (sf or unit)	Wastewater Generation (gpd)	Development (sf or unit)	Wastewater Generation (gpd)
Commercial ^a	211.5 g/ksf/day	3,300,000	697,950	4,000,000	846,000
Hotel ^a	150 g/room/day	400	60,000	400	60,000
Housing ^b	85 g/person/day	1,400	297,500	0	0
Average Daily Flow Total			1,055,450		906,000
Peak Flow (mgd) ^c			3.47		2.0

^a Commercial uses include office, retail, R&D, light industrial, and aviation-related uses. For purposes of this analysis, light industrial uses are assumed to comprise 100 percent of the Commercial area in order to present a conservative or worst-case scenario relative to wastewater generation. In addition to the total proposed 3.3 million square feet of commercial uses, up to 400 hotel rooms (listed separately in the table) may be developed.

^b Residential occupancy is assumed to be 2.5 persons per dwelling unit. This is a standard number and provides a conservative analysis since the average household size for proposed on-site units is estimated to be 1.78 persons.

^c Peak Wastewater Flow or $Q_{peak} = 2.04 * (Q_{avg})^{0.983}$ where Q is flow in cfs, then converted to mgd. Includes on- and off-site flows running through the on-site sewer system.

Source: Kimley-Horn and Associates, Inc.; Matrix Environmental, 2009.

additional flows generated by the Approved Project. Therefore, the increase in wastewater would not exceed the capacity of the sewer delivery system, or the existing capacity of LBWRP or JWPCP. Therefore, impacts associated with demand for sewer facilities would be less than significant. Nonetheless, mitigation measures for the Approved Project were included in the Certified EIR to ensure implementation of certain Project features related to sewer service.

(b) Revised Project Impacts

Based on the land uses proposed for the Revised Project, the average daily wastewater generation associated with the Revised Project at full buildout would be 906,000 gpd, resulting in peak flows in the sewer system of approximately 2.0 mgd, as shown in Table III-13 above. The Revised Project’s wastewater generation would be less than that of the Approved Project. As such, the LBWRP and the JWPCP would have capacity to treat the flows generated by the Revised Project. As discussed above, new sewer infrastructure has been installed on the Project site and vicinity. This includes new sewer lines ranging from 8 to 21 inches in diameter that have been located in the new roadways south of Cover Street. The wastewater infrastructure north of Cover Street

would be reconfigured to accommodate the land use changes of the Revised Project. Therefore, impacts associated with sewer facilities would be less than significant. Nonetheless, mitigation measures are also proposed for the Revised Project to ensure implementation of certain Project features related to sewer service. Thus, the Revised Project's impacts on sewer facilities would be within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. The mitigation measures below remain applicable to the Revised Project:

Mitigation Measure V.M.2-1: The proposed on-site sewer line improvements and associated sewer line connections located within the City of Lakewood portion of the Project site shall be designed to meet applicable standards set forth by the Los Angeles County Department of Public Works (LACDPW) and shall be maintained by the LACDPW. Associated wastewater flows shall discharge into sewer facilities located within the City of Long Beach portion of the Project site, and the Long Beach Water Department (LBWD), on behalf of the City of Long Beach, shall accept such flows from the Lakewood portion of the on-site sewer system (approximately 1,000 feet in length). During the design phase of the on-site sewer line improvements, a new sewer manhole shall be located at the boundary between the Cities of Long Beach and Lakewood as a point of demarcation.

Mitigation Measure V.M.2-2: Any food service uses located within the Project site shall implement a grease control program, as appropriate, that shall include the installation of grease traps at the property, proper maintenance, and regular inspections.

Mitigation Measure V.M.2-1 has been implemented for improvements that have been completed on the Project site. Continued implementation of this mitigation measure for future improvements would reduce the potential impacts of the Revised Project.

(d) Cumulative Impacts

The Revised Project in conjunction with the related projects identified in Table III-1 of this Addendum would cumulatively increase sewage generation and thus, decrease the capacity of associated sewer infrastructure. However, should the sewage generation associated with related projects exceed local infrastructure capacity, related projects are

expected to make appropriate infrastructure upgrades. Therefore, similar to the Approved Project, the Revised Project would not result in significant cumulative impacts on the local sewer infrastructure.

Within its service area, the CSDLAC uses SCAG forecasts of future population and employment growth to project needed capacity. Because the CSDLAC projects that its existing and programmed wastewater treatment capacity would be sufficient to accommodate the growth forecasted by SCAG within its service area, development that is generally consistent with this forecast can be adequately served by CSDLAC facilities. Estimates of the Revised Project's employment growth fall within SCAG growth projections for the sub-region, the Cities of Long Beach and Lakewood, as well as Los Angeles County through 2020. Therefore, it can be concluded from a cumulative perspective that the Revised Project is consistent with regional planning for future wastewater treatment capacity. Therefore, similar to the Approved Project, the Revised Project would not contribute to significant cumulative impacts on sewer facilities.

3. Solid Waste

(a) Approved Project Impacts

Construction of the Approved Project would result in a less than significant impact relative to solid waste. While construction would generate an estimated 57,000 tons of building material and hardscape, the majority of the hardscape would be processed and reused on the site. Some construction waste would be disposed of at unclassified landfills. The unclassified landfills that would accept such materials have sufficient capacity to accommodate the disposal materials that would be generated by construction activities. Therefore, construction impacts would be less than significant with regard to solid waste.

Operation of the Approved Project would generate an estimated 10,269 tons per year of solid waste, as shown in Table III-14 on page III-127, resulting in a net increase in solid waste of 10,052 annual tons. This increase would represent a minor percentage of the total annual solid waste generated and disposed of by the Cities of Long Beach and Lakewood. Additionally, the Approved Project would incorporate waste diversion programs on-site and would comply with applicable regulations regarding solid waste. Given the percentage increase of solid waste disposal resulting from Project implementation, the regional landfills and the Southeast Resource Recovery Facility (SERRF) that are used for the disposal of solid waste from Long Beach and Lakewood have sufficient capacity to accommodate the demand for Class III disposal facilities generated by the Project. Although the Approved Project would result in less than significant impacts with regard to

TABLE III-14
ESTIMATED ANNUAL SOLID WASTE GENERATION -
APPROVED PROJECT VS. REVISED PROJECT

Land Use	Solid Waste Factor (Tons/Employee or Residence/Year) ^a	Approved Project Total Annual Solid Waste (Tons)	Revised Project Total Annual Solid Waste (Tons)
Office	0.52	6,332	8,412
Research & Development	1.9	1,609	1,609
Retail	1.9	760	950
Hotel	2.1	924	924
Residential	0.46	644	0
Total		10,269	11,896
Baseline		218	218
Net Increase		10,052	11,678

Note: Numbers may not add up due to rounding.

^a *The factor for office was obtained from the Los Angeles County Facilities Study, 1999-2000. These disposal factors are annual tons per employee by business type. The factor for residences was obtained from the CIWMB website and is conservative as it represents multi-family. Single-family factor is 0.41/residence.*

Source: Matrix Environmental, 2009.

solid waste, mitigation measures were included in the Certified EIR to further reduce potentially significant solid waste impacts.

However, the Approved Project in conjunction with the related projects would result in a significant cumulative impact as the Project would contribute to recognized regional landfill capacity shortages. Therefore, the Project would contribute to a significant and unavoidable cumulative impact with regard to solid waste.

(b) Revised Project Impacts

As with the Approved Project, construction of the Revised Project would result in demolition and construction debris. As with the Approved Project, some construction waste would be disposed of at unclassified landfills. The unclassified landfills that would accept such materials have sufficient capacity to accommodate the disposal materials that would be generated by construction activities. Therefore, as with the Approved Project, the Revised Project would result in less than significant impacts with respect to solid waste during construction.

With regard to operation, as shown in Table III-14 on page III-127, the Revised Project would generate approximately 11,678 tons of solid waste per year. In comparison, the Revised Project would generate approximately 1,626 tons more of solid waste annually compared to the Approved Project. The majority of the waste would be generated in the City of Long Beach. Approximately 1,609 tons per year of the total waste generated by the Project would be generated on the portion of the site located within the City of Lakewood.⁴²

The solid waste generated by the uses within the City of Long Beach, approximately 10,078 tons annually, represent an increase of approximately 1.7 percent of the 2007 annual solid waste disposed of by the City of Long Beach.⁴³ In comparison, the solid waste generated annually by the Approved Project represents an increase of 1.4 percent of the 2007 annual solid waste disposed of by the City of Long Beach.

The solid waste generated by the Approved Project or the Revised Project within the City of Lakewood would be the same, since the Revised Project would not change the land uses within that portion of the site. The estimated 1,609 tons of solid waste that would be generated by the Revised Project uses located in the City of Lakewood represents 2.2 percent of the 2007 annual solid waste disposed of by the City of Lakewood.⁴⁴

The regional landfills and the waste-to-energy facilities that are currently used for the disposal of solid waste from Long Beach and Lakewood have sufficient capacity to accommodate the demand for Class III disposal facilities generated by the Revised Project. More specifically, the SERRF has a permitted capacity of 2,240 tpd, with an average daily intake of 1,290 tpd. Sufficient solid waste disposal capacity is available to accommodate the Revised Project's solid waste disposal needs. As such, no significant Project impact would occur with respect to solid waste generation and disposal.

In addition, as with the Approved Project, the Revised Project would comply with Senate Bill 1374 (Construction and Demolition Waste Materials: Diversion Requirements). In addition, with implementation of a program to divert 30 to 50 percent of the waste generated by the commercial uses, the Revised Project would comply with California Integrated Waste Management Act (Assembly Bill 939). Therefore, the Revised Project

⁴² *This assumes the development of 360,000 square feet of research and development uses in the City of Lakewood.*

⁴³ *The City of Long Beach had an estimated 592,057 tons of solid waste disposed of in the year 2007. Of this, 374,517 tons were disposed of at landfills and 217,540 tons were sent to a waste-to-energy facility.*

⁴⁴ *The City of Lakewood had an estimated 73,522 tons of solid waste disposed of in the year 2007. Of this, 25,373 tons were disposed of at landfills and 48,149 tons were sent to a waste-to-energy facility.*

would comply with federal, state, and local statutes and regulations related to solid waste. Impacts with respect to regulatory compliance would be less than significant.

With regard to cumulative impacts, the related projects are expected to recycle and reuse a large portion of the construction debris, thereby reducing the amount of material disposed of at landfills. Given that the region's unclassified landfills do not face a capacity shortfall, cumulative impacts to solid waste during construction would be less than significant. However, as with the Approved Project, the Revised Project in conjunction with the related projects would result in a significant cumulative impact relative to solid waste during operations. Due to recognized long-term capacity shortages, although development of the Revised Project itself would not exacerbate landfill shortages in the region, when considering the Project together with other future growth expected by SCAG through 2020, cumulative impacts associated with solid waste disposal during Project operation would be significant.

Implementation of the mitigation measures would facilitate recycling on-site and help to ensure that the Project's impact on regional solid waste disposal capacity is minimized to the extent feasible. However, cumulative impacts associated with disposal at Class III landfills would remain significant and unavoidable.

Similar to the Approved Project, the Revised Project would not result in a significant impact with regard to solid waste, while cumulative impacts would be significant and unavoidable. As such, the Revised Project's impacts on solid waste would be similar to those of the Approved Project and within the envelope of impacts identified in the Certified EIR.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. The following mitigation measures remain applicable to the Revised Project, with revisions as appropriate:

Mitigation Measure V.M.3-1: The allocation of adequate storage space for the collection and loading of recyclable materials shall be included in the design of buildings and waste collection points throughout the Douglas Park site to encourage recycling. Recycling shall be provided for residential developments with four or more units as well as commercial and light industrial developments.

Mitigation Measure V.M.3-2: A program shall be implemented by the City or private hauler to divert 30 to 50 percent of the waste generated by

the project's commercial uses. The precise percentage to be diverted will depend on the specific commercial use to be implemented and will be defined by the City of Long Beach Environmental Services Bureau and the City of Lakewood Department of Public Works.

(d) Cumulative Impacts

Construction of the Revised Project and related projects would cumulatively increase the amount of construction waste. Similar to the Revised Project, related projects are expected to recycle and reuse a large portion of the construction debris, thereby reducing the amount of material disposed of at unclassified landfills. Furthermore, the region's unclassified landfills face no capacity shortfall. Therefore, similar to the Approved Project, the Revised Project's cumulative impacts on the region's unclassified landfills capacity would be less than significant.

Solid waste generation from the operation of Revised Project and the identified related projects would cumulatively increase solid waste generation and associated demand for landfill capacity. Due to recognized long-term capacity shortages, although development of the Revised Project itself would not exacerbate landfill shortages in the region, when considering the Revised Project together with other future growth expected by SCAG through 2020, cumulative impacts associated with solid waste disposal would be significant (as with the Approved Project's cumulative impacts).

4. Energy

(a) Approved Project Impacts

(1) Electricity

Under existing conditions, Southern California Edison (SCE) provides electricity service to the Project site via the two 66 kilovolt (kV) lines located along Carson Street that supply the Boost substation, located on a Boeing property immediately east of Lakewood Boulevard. The 66-kV Carson Street lines previously supplied the Turbo and Stress substations, which were located on-site and served the site in the past. Since preparation of the Certified EIR, the Turbo and Stress substations have been removed from the site as part of the remediation program for the site. In addition, a 12-kV distribution line along Carson Street provides backup service to the Boeing property east of Lakewood Boulevard and other off-site uses.

The peak electrical demand associated with the Approved Project would be approximately 30.29 megawatts (MW), with an annual consumption projected at 179,771 megawatt-hours (MWh), as shown in Table III-15 on page III-131. Based on the

TABLE III-15
ESTIMATED ELECTRICITY DEMAND – APPROVED PROJECT VS. REVISED PROJECT

	Approved Project				Revised Project		
	Peak Demand Factor (kW/sf or unit)	Development (sf or unit)	Peak Demand (kW)	Annual Demand (kWh)	Development (sf or unit)	Peak Demand (kW)	Annual Demand (kWh)
Light Industrial	0.008	3,100,000	24,800	147,188,000	3,750,000	30,000	178,050,000
Retail	0.0042	200,000	840	4,985,400	250,000	1,050	6,231,750
Hotel	4.8	400	1,920	11,395,200	400	1,920	11,395,200
Residential	1.95	1,400	2,730	16,202,550	0	0	0
		Total	30,290	179,771,150		32,970	195,676,950

Source: *Matrix Environmental, 2009.*

SCE's service area projections of 24,960 MW of peak demand in 2012 and a net energy load of 125.2 MWh, the Approved Project's peak electrical demand would represent 0.12 percent of that forecast, and maximum annual consumption would represent 0.14 percent of forecasted growth.

A new underground electrical distribution system to be operated and maintained by SCE is currently under construction on-site. Initially, the proposed system will connect to an existing 12-kV distribution line adjacent to the site, which SCE has indicated has available capacity of approximately 6 to 7 MW to serve initial development. As electricity demand increases concurrent with the phasing of development over time, SCE would construct an on-site 66-kV/12-kV substation (in approximately 2009) with a total capacity of 128 megawatt amperes (MWA) to replace the Turbo and Stress substations previously removed from the site. The new substation would connect to the existing 66-kV transmission lines along Carson Street. Once the on-site substation is constructed, more than sufficient capacity would be provided for full buildout of the site, as future electrical demand of the Approved Project is estimated to comprise less than 25 percent of the substation's total capacity. Off-site improvements would not be necessary, and the supply and distribution of power within the Project area would not be reduced or inhibited as a result of the Approved Project. As such, impacts relating to electricity would be less than significant. Nonetheless, mitigation measures were included in the Certified EIR to ensure that on-site electricity improvements are implemented to the satisfaction of SCE.

(2) Natural Gas

Natural gas services to the portion of the Project site within the City of Long Beach are provided by Long Beach Energy (LBE), which receives its gas supplies through the Southern California Gas Company's (SoCal Gas) transmission network. LBE has the capacity to deliver over 155 million cubic feet per day. In 2002, LBE extended an 8-inch gas main along Conant Street west of Lakewood Boulevard with sufficient capacity to serve the Approved Project. The Lakewood portion of the site does not currently require natural gas, and although SoCal Gas provides natural gas services to the City of Lakewood, any future gas service for this area would be provided by either SoCal Gas or LBE, based upon mutual agreement between the two utilities.

Development of the Approved Project would generate a natural gas demand of approximately 28.2 million cubic feet per month (cf/mo), as shown in Table III-16 on page III-133. A new gas distribution system is currently being constructed on-site to replace the existing private system. The new system would connect to existing on- and off-site gas transmission lines (i.e., the new 8-inch gas main, which currently supplies the Boeing Enclave, and LBE's existing distribution facilities along Carson Street). The gas demand of the Approved Project would represent approximately 0.61 percent of LBE's total daily delivery capacity of 155 million cubic feet per day. In addition, the efforts of SoCal Gas to increase the availability of natural gas through transmission expansion projects and the withdrawal of gas from several of its storage fields would ensure that adequate supplies will continue to exist. Substantial adverse physical impacts associated with the construction or provision of new or physically altered energy transmission facilities would not occur, and the Approved Project would not result in the use of substantial amounts of natural gas. Therefore, the supply and distribution of natural gas within the area surrounding the Project site would not be reduced or inhibited as a result of the Approved Project, and significant impacts to local or regional gas supplies would not occur. __Nonetheless, mitigation measures for the Approved Project were included in the Certified EIR to ensure that on-site natural gas system improvements are implemented to the satisfaction of LBE.

(b) Revised Project Impacts

(1) Electricity

Based on the land uses proposed, the peak electricity demand of the Revised Project at full buildout would be approximately 32.97 MW, as shown in Table III-15 on page III-131. As with the Approved Project, a 66kV/12kV substation would be constructed on the site. The Revised Project's electricity demands would be slightly greater than the Approved Project's electricity demand. However, the substation has an available capacity of 128 MVA and thus, would have adequate capacity to serve the Revised Project's peak

TABLE III-16
ESTIMATED NATURAL GAS DEMAND – APPROVED PROJECT VS. REVISED PROJECT

	Consumption Factor (cf/sf or unit/mo)	Approved Project		Revised Project	
		Development (sf or unit)	Monthly Consumption (cf/mo)	Development (sf or unit)	Monthly Consumption (cf/mo)
Light Industrial	6.62	3,100,000	20,522,000	3,750,000	24,825,000
Retail	2.9	200,000	580,000	250,000	725,000
Hotel	3,840	400	1,536,000	400	1,536,000
Residential	4011.5	1,400	5,616,100	0	0
		Total	28,254,100		27,086,000

Source: Matrix Environmental, 2009.

demand of 32.97 MW. Therefore, impacts associated with electricity would be less than significant. Thus, the Revised Project's impacts associated with electricity would be within the envelope of impacts identified in the Certified EIR. Mitigation measures are also proposed for the Revised Project to ensure that on-site electricity improvements are implemented to the satisfaction of SCE.

(2) Natural Gas

Development of the Revised Project would generate a natural gas demand of approximately 27.08 million cf/mo as shown in Table III-16 above. As indicated above, a new gas distribution system is currently being constructed on-site to replace the existing private system. The new system would connect to existing on- and off-site gas transmission lines (i.e., the new 8-inch gas main which currently supplies the Boeing Enclave and LBE's existing distribution facilities along Carson Street). The gas demand of the Revised Project would be less than that of the Approved Project and would represent approximately 0.58 percent of LBE's total daily delivery capacity of 155 million cubic feet per day. Therefore, as the Revised Project would result in a decreased demand relative to the Approved Project, the Revised Project's impacts associated with natural gas within the area surrounding the Project site would also be less than significant. Thus, the Revised Project's impacts associated with natural gas would be within the envelope of impacts identified in the Certified EIR. Mitigation measures are also proposed for the Revised Project to ensure that on-site natural gas system improvements are implemented to the satisfaction of LBE.

(c) Mitigation Measures

A MMRP was adopted for the Approved Project. The following Mitigation Measures V.M.4-1 through V.M.4-3 remain applicable to the Revised Project, with necessary changes shown in redline/strikeout:

Mitigation Measure V.M.4-1: The installation of new utility infrastructure and underground substructures shall be coordinated with Douglas Park development and on-site street improvements. New electricity and natural gas facilities shall utilize current design, construction, and operating specifications and shall be installed per the construction standards and tariffs of Southern California Edison and Long Beach Energy, respectively.

Mitigation Measure V.M.4-2: During project development, the project Applicant shall coordinate with Southern California Edison to construct a new electric substation on-site or ensure that adequate infrastructure capacity is otherwise provided. The precise location of the substation shall be determined based on input from Southern California Edison. Refer to ~~Figure 8 in Section III, Project Description, Figure 3 of the Draft EIR PD-32 North Design Guidelines~~ for an illustration of ~~potential areas within the site that may be used~~ the proposed area for the substation.

Mitigation Measure V.M.4-3: The installation of gas meters shall be completed in accordance with the specifications of Long Beach Energy and to the extent feasible, gas meters shall be installed outside.

These mitigation measures have been implemented for improvements that have been completed on the Project site. Continued implementation of these mitigation measures for future improvements would reduce potential impacts of the Revised Project.

(d) Cumulative Impacts

The Revised Project in conjunction with related projects would increase energy demand. Given the number of expansion projects for major power plants and natural gas facilities that are currently planned or underway, sufficient supplies are anticipated to be available to serve future development. In addition, related projects would be subject to Title 24 requirements and would be evaluated on a case-by-case basis to determine the need for specific distribution infrastructure improvements. Furthermore, given the City's new LEED certification requirements and Green Building Standards for Public and Private Development, it can be anticipated that related projects would incorporate similar energy

saving measures as the Revised Project. Thus, as with the Approved Project, the Revised Project would not contribute to significant cumulative impacts associated with electricity or natural gas.

DOUGLAS PARK ADDENDUM APPENDICES



PLEASE REFER TO THE ATTACHED APPENDICES,
INCLUDED SEPARATELY