February
2019

Laserfiche Office Project

Final Initial Study/Mitigated Negative Declaration

Prepared for the City of Long Beach

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0.1 Introduction

This Final Initial Study (IS)/Mitigated Negative Declaration (MND) has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.) and CEQA Guidelines (California Administrative Code Section 15000 et seq.) for the Laserfiche Office Project. As required by CEQA, a Notice of Intent (NOI) to adopt an MND was filed with the State Clearinghouse December 13, 2018, and sent to various public agencies, organizations, and interested individuals.

The Draft IS/MND was available for public review for 32 days, from December 17, 2018, to January 17, 2019. Copies of the Draft IS/MND and supporting materials were available for public review at the City of Long Beach Development Services Department, the Long Beach Main Library, and online at the City of Long Beach website (http://www.lbds.info/planning/environmental_planning/environmental_reports.asp).

This section comprises the comments received during the public review period and the responses to the comments received. Six comment letters were received during the public review period.

The City of Long Beach, as lead agency, is required to consider agency and public comments on a CEQA document as part of the decision process to approve a project. CEQA does not require the preparation of responses to comments received on an IS/MND; however, responses have been prepared.

No significant changes have been made to the information contained in the Draft IS/MND as a result of the response to comments, and no significant new information has been added that would require recirculation of the IS/MND. However, minor revisions were made to the Draft IS/MND circulated for public review.

0.1.1 Format of the Final Initial Study/Mitigated Negative Declaration

Section 0.1 Introduction

This section describes CEQA requirements and content of this Final IS/MND.

Section 0.2 Comments and Responses to Comment Letters

This section provides copies of the comment letters received on the Draft IS/MND and individual responses to written comments. The responses conform to CEQA Guideline 15088, providing good faith, reasoned analysis in response.

Section 0.3 Final IS/MND

This section includes the Final IS/MND with minor revisions based on comments received during the public review period in strike-through/underlined text. The Final Mitigation Monitoring and Reporting Program (MMRP), which identifies the mitigation measures, timing and responsibility for implementation of the measures, is included in the Final IS/MND.

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0.2 Comments and Responses to Comment Letters

This section contains comment letters received and responses to all comment letters on the Draft IS/MND. Six letters were received during the comment period, which began December 17, 2018, and closed January 17, 2019. A copy of each letter with bracketed comment numbers on the right margin is followed by the response for each comment as indexed in the letter. The comment letters are listed in Table 0.2-1.

Table 0.2-1. City of Long Beach Draft IS/MND Comment Letters

Letter	Commenter	Date
State Agency		
S1	California Department of Transportation	January 9, 2019
Local Agency		
L1	Sanitation Districts of Los Angeles County	January 11, 2019
Organization		
O1	Tongva Ancestral Territorial Tribal Nation	December 17, 2018
O2	Gabrieleno Band of Mission Indians – Kizh Nation	December 20, 2018
O3	Laborers International Union of North America	January 11, 2019
O4	Laborers International Union of North America	January 17, 2019

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STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7 – Office of Regional Planning
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-9140
FAX (213) 897-1137
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

January 9, 2019

Alexis Oropeza
City of Long Beach
333 W. Ocean Blvd.
Long Beach, CA 90802

RE: Laserfiche Office Project
Mitigated Negative Declaration
GTS # 07-LA-2018-02098
SCH# 2018121025
Vic. LA / 405 / PM 6.497

Dear Ms. Oropeza:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for this Office construction Project. The Proposed Laserfiche Office Project includes a new 102,848-sf office building that is up to 74 ft in height (max four stories) above ground level. The building includes offset terraces and mezzanine design features, along with a separate three-story parking garage with rooftop level of parking with a total of 343 parking spaces, and installation of a traffic signal. The project also requires zone changes for ten parcels, zone code amendment, site plan review, tentative tract map, and general plan conformity finding.

Caltrans has reviewed the Mitigated Negative Declaration and has the following comments:

1- Current queue on the northbound I-405 Long Beach Blvd off-ramp is near storage capacity during AM peak hour. With the 41 trips generated from the development that would be utilizing the off-ramp during AM peak hour, vehicles may spillover and create significant speed differences between stopping and moving vehicles that may increase the number of conflicts. Please conduct a Queuing Analysis for this offramp.

• Should a significant impact to the northbound I-405 Long Beach Blvd off-ramp be identified, appropriate mitigation may be requested. S1-A

2- Page 8, Table 1 of the Draft Traffic Impact Analysis (TIA): Please add the other roadways such as Bixby Road and 35th St. to the scope of the analysis/various TIA tables. S1-B

3- Page 20, Table 5 of the Draft TIA: Please reevaluate the no significant impact for the 8th intersection (Long Beach Blvd/I-405 NB off-ramp). The PM peak hour should be taken into consideration. This intersection is an off-ramp and the LOS is already an F. S1-C

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

State Agency: California Department of Transportation

Letter Code: S1

Commenter: Miya Edmonson, IGR/CEQA Branch Chief

Date: January 9, 2019

S1-A The comment requests a queuing analysis for the northbound I-405 Long Beach Boulevard off-ramp. A queuing analysis for this intersection has been provided in the updated version of the Traffic Impact Analysis (TIA) (Appendix F of the Final IS/MND). The 41 AM peak hour project trips described in the comment are anticipated to turn right at the off-ramp. Based on current and future volumes, the westbound right-turn movement is not the critical movement at this off-ramp. AM peak hour queue lengths are not currently forecast to spill back onto the mainline, which is approximately 550 feet from the intersection stop line. No additional changes are required to the Final IS/MND.

S1-B The comment requests Bixby Road and 35th Street be added to the scope of the traffic analysis. These roadways were included in the scope of the traffic analysis but were inadvertently omitted in Table 1 of the TIA. The configurations and descriptions of these two roadways have been provided in Table 1 in the updated version of the TIA (Appendix F of the Final IS/MND). No additional changes are required to the Final IS/MND.

S1-C The comment requests the Long Beach Boulevard/I-405 northbound off-ramp be reevaluated because the comment indicates the intersection LOS is an F. This intersection is unsignalized (stop-controlled); therefore, it is not considered significantly impacted even though the operation is LOS F. The LOS F operation reflects the delay experienced by stopped vehicles at the intersection (i.e., the off-ramp) only, not the total average delay of all vehicles (since the north-south volumes on Long Beach Boulevard are free-flow). If the average of all volumes was considered, the intersection would instead operate at

	LOS D. California Department of Transportation does not have specific guidance on significant impact criteria for unsignalized intersections. For these reasons, the impact results in the TIA will remain unchanged. No additional changes are required to the Final IS/MND.

Ms. Oropeza
January 9, 2019
Page 2 of 2

4- Page 13, Table 3 & page 25, Table 7 of the Draft TIA: The control type of the 5th intersection (I-405 NB/Wardlow Rd) is mistakenly listed as stop-controlled when it is uncontrolled, please correct this. S1-D

5- Page 25, Table 7 of the Draft TIA: The control type of the 5th intersection (I-405 NB/Wardlow Rd) is "uncontrolled", please make this correction. S1-E

6- Page 33, Table 11 of the Draft TIA: The peak hour volumes of this table do not match the AM and PM Volume of Figure 11 at the 3rd intersection (Long Beach Blvd & 35th St.), please clarify. S1-F

7- - Appendix A-D of the Traffic Impact Analysis was not provided. S1-G

As a reminder, any transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State highways will need a Caltrans transportation permit. We recommend large size truck trips be limited to off-peak commute periods.

We look forward to reviewing your future environmental documents and will provide additional comments at that time, if warranted. If you have any questions, please contact Reece Allen, the project coordinator, at reece.allen@dot.ca.gov, and refer to GTS # 07-LA-2018-02098 S1-H

Sincerely,

MIYA EDMONSON
IGR/CEQA Branch Chief

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

S1-D The comment identifies a typo in Table 3 and Table 7 of the TIA. The control type for this intersection has been corrected in the updated version of the TIA. No additional changes are required to the Final IS/MND.

S1-E The comment identifies a typo in Table 7 of the TIA. The control type for this intersection has been corrected in the updated version of the TIA. No additional changes are required to the Final IS/MND.

S1-F The comment requests clarification on the peak hour volumes in Table 11 and on Figure 11. The peak hour volumes shown on Figure 11 of the TIA are based on traffic counts collected in April 2018, only during the two 2-hour periods (AM and PM) for use in the LOS analysis. As a follow up to these counts for the purposes of signal warrant analysis, 24-hour traffic counts were collected at each leg of the Long Beach Boulevard/35th Street intersection in September 2018 (shown in Table 11).

Thus, the differences in volumes are due to having two sets of counts taken at the intersection for two different analysis purposes (LOS analysis and signal warrant analysis). The difference in volumes does not warrant additional analysis for either the LOS analysis or the signal warrant analysis. No changes are required to the Draft IS/MND.

S1-G The comment notes no TIA appendices were attached in the Draft IS/MND. The full set of appendices has been provided in the updated version of the TIA (Appendix F of the Final IS/MND).

S1-H This comment provides a reminder that any transportation of heavy equipment and/or materials requires the use of oversized transportation vehicles on state highways and a Caltrans transportation permit. This comment does not raise a substantive issue on the content of the Draft IS/MND. The comment will be made

	available for decision makers. No further response is required.

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

January 11, 2019

Ref. Doc. No.: 4857440

Ms. Alexis Oropeza, Planner
Development Services Department
City of Long Beach
333 West Ocean Boulevard, 5th Floor
Long Beach, CA 90802

Dear Ms. Oropeza:

NOI Response the Laserfiche Office Project

The Sanitation Districts of Los Angeles County (Districts) received a Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) for the subject project on December 17, 2018. The proposed project is located within the jurisdictional boundaries of District No. 3. We offer the following comments regarding sewerage service:

1. The wastewater flow originating from the proposed project will discharge to a local sewer line, which is not maintained by the Districts, for conveyance to the Districts' Joint Outfall C Unit 3E Trunk Sewer, located in Long Beach Boulevard south of Columbia Street. The Districts' 21-inch diameter trunk sewer has a capacity of 17.4 million gallons per day (mgd) and conveyed a peak flow of 4.8 mgd when last measured in 2013. L1-A

2. The wastewater generated by the proposed project will be treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a capacity of 400 mgd and currently produces an average flow of 254.7 mgd. L1-B

3. The expected increase in average wastewater flow from the project, described in the notice as a 102,848 square foot office building, is 17,893 gallons per day, after all structures on the project site are demolished. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link. L1-C

4. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and search for the appropriate link. L1-D

DOC 4882302.D03

Local Agency: County of Sanitation Districts of Los Angeles County

Letter Code: L1

Commenter: Adriana Raza, Customer Service Specialist

Date: January 11, 2019

L1-A The comment provides additional information on the sewerage system for which the project would connect. The last paragraph on page 61 of the Final IS/MND has been modified as follows:

> Wastewater from the project would discharge to a local sewer line for conveyance to ~~Primarily,~~ the Los Angeles County Sanitation District (Districts) Joint Outfall C Unit 3E Trunk Sewer, located in Long Beach Boulevard south of Columbia Street. The District's 21-inch diameter trunk sewer has a capacity of 17.4 million gallons per day (mgd).

L1-B The comment provides information regarding where the wastewater generated by the project would be treated, and includes a clarification of the current average flow. The last paragraph on page 61 of the Final IS/MND has been modified as shown below. Additionally, reference to the Long Beach Water Reclamation Plan has been removed.

> The Joint Water Pollution Control Plant, located in the City of Carson, receives the City's wastewater. Secondarily, the Long Beach Water Reclamation Plant of the Sanitation Districts of Los Angeles County also receives the City's wastewater. The Joint Water Pollution Control Plant provides advanced primary and partial secondary treatment for 254.760 million gallons of wastewater per day (mgd), with a permitted capacity for 400 mgd of wastewater (Sanitation Districts of Los Angeles County 2016). The Long Beach Water Reclamation Plant provides primary, secondary, and tertiary

treatment for 25 mgd of wastewater (Sanitation Districts of Los Angeles County 2016).

L1-C The comment provides clarification on the expected increase in gallons per day generated by the project. The first full paragraph and Table 20 on page 62 of the Final IS/MND has been modified as follows:

> As shown in Table 20, the project would generate an estimated net total of ~~5,715~~20,570 gallons of wastewater per day (gpd). However, according to the Districts, the project would result in 17,893 gallons per day, after accounting for the recent demolition of existing structures on the project site.

Table 2. Generation Rates

Land Use	Quantity (SF)	Generation Factor	Amount (gpd)
Office Building	~~28,578~~102,848	200 gpd ~~al~~/1,000 sf	~~5,715~~ 20,570

Source: Sanitation Districts of Los Angeles County

Note:

Parking lot uses are not included as a facility that would generate wastewater.

gpd = gallons per day, SF = square feet

L1-D The comment provides information about the District's authority to charge a fee to connect to the District's Sewerage System. This comment does not raise a substantive issue on the content of the Draft IS/MND. The comment will be made available for decision makers. No further response is required.

Ms. Alexis Oropeza -2- January 11, 2019

In determining the impact to the Sewerage System and applicable connection fees, the Districts' Chief Engineer and General Manager will determine the user category (e.g. Condominium, Single Family home, etc.) that best represents the actual or anticipated use of the parcel or facilities on the parcel. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at (562) 908-4288, extension 2727. L1-D cont.

5. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CCA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities. L1-E

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

cc: A. Schmidt
A. Howard

DOC 4882302.D03

L1-E The comment states that wastewater service is not guaranteed because the District is limited to the levels associated with the approved growth identified by the Southern California Association of Governments. This comment does not raise a substantive issue on the content of the Draft IS/MND. The comment will be made available for decision makers. No further response is required.

From: Johntommy Rosas
To: Alexis Oropeza; JOHNTOMMY ROSAS
Subject: Re: NOI_Application No. 1804-14
Date: Monday, December 17, 2018 5:00:16 PM

thanks I recommend AB 52/AJR 42 tribal consultation
and initiate the na monitoring process-
especially since there is no arch report -
that land is in a highly sensitive tribal cultural / natural resources-
thanks again jt

O1-A

On Mon, Dec 17, 2018 at 4:56 PM Alexis Oropeza <Alexis.Oropeza@longbeach.gov> wrote:

> Please be advised that the City of Long Beach has prepared a mitigated negative declaration for a proposed office building and separate parking garage (Application No. 1804-14) at 3443 Long Beach Boulevard and 210 East 35th Street (previously addressed as 3435-3459 Long Beach Blvd. and 3464-3432 Locust Ave.). Please find the Notice of Intent attached. The public review period begins today and runs through January 17, 2018. For your convenience, you can find the associated environmental documents at the following link: http://www.lbds.info/planning/environmental_planning/environmental_reports.asp.
>
> **Alexis Oropeza**
>
> *Planner V*
>
> **Long Beach Development Services I Planning Bureau**
>
> **T** 562.570.6413 **F** 562.570.6068
>
> 333 West Ocean Blvd., 5th Floor I Long Beach, CA 90802
>
> Alexis.Oropeza@longbeach.gov I www.lbds.info

--
JOHN TOMMY ROSAS
TRIBAL ADMINISTRATOR
TRIBAL LITIGATOR -TATTN JUDICIAL # 0001
TONGVA ANCESTRAL TERRITORIAL TRIBAL NATION
A TRIBAL SOVEREIGN NATION UNDER THE UNDRIP AND AS A TREATY [s] SIGNATORIES RECOGNIZED TRIB.,
INCLUDING BY THE STATE OF CALIFORNIA WITH HISTORICAL & DNA AUTHENTICATION ON CHANNEL ISLANDS AND
COASTAL VILLAGES - AND AS A CALIFORNIA NATIVE AMERICAN TRIBE / SB18-AB 52-AJR 42-ACHP/NHPA
- CALIFORNIA INDIANS JURISDICTIONAL ACT U S CONGRESS APPROVED MAY 18, 1928 45 STAT. L 602

Organization: Tongya Ancestral Territorial Tribal Nation

Letter Code: O1

Commenter: John Tommy Rosas

Date: December 17, 2018

O1-A Tribal cultural resources are discussed in Section XVI of the Draft IS/MND. Mitigation Measure TCR-1 requires Native American monitoring, which addresses the commenter's request for Native American monitoring during project construction. No changes are required to the Draft IS/MND.

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TONGVANATION.ORG

GABRIELENO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

Notice of Intent to Adopt An Initial Study/ Mitigated Negative Declaration

December 20, 2018

City of Long Beach

333 W. Ocean Boulevard, 5th floor

Long Beach, CA 90802

Good Afternoon Alexis Oropeza,

We have received your Notice of Intent to adopt a Negative Declaration for the Laserfiche Office Project in the location of the County of Los Angeles. Our Tribal Government would like to be consulted if any ground disturbance will be conducted for this project. O2-A

Sincerely,
Gabrieleno Band of Mission Indians/Kizh Nation
(1844) 390-0787 Office

Andrew Salas, Chairman
Albert Perez, treasurer I
Nadine Salas, Vice-Chairman
Martha Gonzalez Lemos, treasurer II
Dr. Christina Swindall Martinez, secretary
Richard Gradias, Chairman of the council of Elders

PO Box 393 Covina, CA 91723 www.gabrielenoindians@yahoo.com gabrielenoindians@yahoo.com

Organization: Gabrieleno Band of Mission Indians/Kizh Nation

Letter Code: O2

Commenter: Gabrieleno Band of Mission Indians/Kizh Nation

Date: December 20, 2018

O2-A Tribal cultural resources are discussed in Section in XVI of the Draft IS/MND. Mitigation Measure TCR-1 requires Native American monitoring, which addresses the commenter's request for Native American monitoring during project construction. No changes are required to the Draft IS/MND.

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Via Email and U.S. Mail

January 11, 2019

Alexis Oropeza, Planner
Department of Development Services
City of Long Beach
333 W. Ocean Blvd., 5th floor
Long Beach, CA 90802
Alexis.Oropeza@longbeach.gov

Christopher Koontz, AICP Planning Bureau Manager
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Monique De La Garza, CMC, City Clerk
City Clerk's Office
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Re: Comment on the Laserfiche Office Project (IS/MND 04-18 and SCH2018121025) Initial Study | Mitigated Negative Declaration

Dear Mr. Oropeza, Mr. Koontz and Ms. De La Garza:

I am writing on behalf of the Laborers International Union of North America, Local Union 300 and its members living in the City of Long Beach ("LIUNA"), regarding the Initial Study and Mitigated Negative Declaration ("IS/MND") prepared for the Project known as the Laserfiche Office Project (IS/MND 04-18 and SCH2018121025) for the applicant 888-5 Partners, LLC, including all actions related or referring to the construction of a new 102,848 square foot office building with offset terraces and mezzanine design features, a height of up to 74 feet above ground level (maximum of four stories), a separate three-story parking garage with rooftop parking and a total of 343 parking spaces, and installation of a traffic signal located at 3443 Long Beach Boulevard and 210 East 35th Street, APNs: 7141-004-019, 020, 027, 028, 029, 030, 031, 033, and 034 in the City of Long Beach ("Project"). O3-A

After reviewing the IS/MND, we conclude the IS/MND fails as an informational document, and that there is a fair argument that the Project may have adverse environmental impacts. Therefore, we request that the City of Long Beach ("City") prepare an O3-B

Organization: Laborers International Union of North America

Letter Code: O3

Commenter: Richard Drury, Lozeau Drury, LLP

Date: January 11, 2019

O3-A This comment states the commenter is writing on behalf of the Laborers International Union of North America, Local Union 300 and summarizes the Draft IS/MND's Project Description.

This comment does not raise a substantive issue on the content of the Draft IS/MND. The comment will be made available for decision makers. No further response is required.

O3-B The comment letter claims there is a fair argument that an environmental impact report is needed; however, the comment presents no facts or information supporting such claim. The fair argument standard requires substantial evidence that impacts will occur. CEQA Section 15384 Substantial Evidence states:

a. "Argument, speculation, unsubstantiated opinion or narrative, evidence, which is clearly erroneous or inaccurate… does not constitute substantial evidence."

b. "Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts."

No further response to this letter is possible, as no information is provided to support the fair argument claim.

environmental impact report ("EIR") for the Project pursuant to the California Environmental Quality Act ("CEQA"), Public Resources Code section 21000, et seq. O3-B contd.

We reserve the right to supplement these comments during public hearings concerning the Project. *Galante Vineyards v. Monterey Peninsula Water Management Dist.*, 60 Cal. App. 4th 1109, 1121 (1997).

Sincerely,

Richard Drury
Lozeau | Drury LLP

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January 17, 2019

Via Email and Hand Delivery

Chair Richard Lewis and Members of the City of Long Beach Planning Commission
c/o Christopher Koontz, Planning Bureau Manager
333 West Ocean Blvd., 4th Floor
Long Beach, CA 90802
Email: christopher.koontz@longbeach.gov

Alexis Oropeza, Planner
City of Long Beach
Development Services Department
333 W. Ocean Blvd., 5th Floor
Long Beach, CA 90802
Email: alexis.oropeza@longbeach.gov

Re: Laserfiche Office Project Initial Study/Mitigated Negative Declaration; (GPA17-008, ZCHG 18-002, ZCA 18-004 GPC 18-003, SPR 18-021, TPM 18-Q04, SCH 2018121025)

Dear Chair Richard Lewis and Honorable Members of the Planning Commission:

This letter is submitted on behalf of Laborers International Union of North America, Local 300, and its members living in and near the City of Long Beach (collectively "LIUNA") regarding the initial study/mitigated negative declaration ("IS/MND") prepared for the Laserfiche Office Project, Application No. 1804-14 (GPA17-008, ZCHG 18-002, ZCA 18-004 GPC 18-003, SPR 18-021, TPM 18-Q04, SCH 2018121025) including all actions related or referring to the development of a four-story, 102,848 square-foot, office building up to 74 feet in height along Long Beach Boulevard in the High Rise Overlay (HR) District (APNs 7141-004-019, 020, 033, 034) and a three-story parking garage, 38 feet in height, with vehicle access from 35th Street (APNs 7141-004-027, 028, 029, 030, 031) in the City of Long Beach (the "Project"). O4-A

After reviewing the IS/MND, we conclude that it fails as an informational document, and that there is a fair argument that the Project may have adverse environmental impacts. Therefore, we request that the City of Long Beach ("the City") prepare an environmental impact report for the Project pursuant to the California Environmental Quality Act, Public Resources Code section 21000, et seq. O4-B

Organization: Laborers International Union of North America

Letter Code: O4

Commenter: Richard Drury and Brian B. Flynn, Lozeau Drury, LLP

Date: January 17, 2019

O4-A This comment states the commenter is writing on behalf of the Laborers International Union of North America, Local Union 300 and summarizes the Draft IS/MND's Project Description.

This comment does not raise a substantive issue on the content of the Draft IS/MND. The comment will be made available for decision makers. No further response is required.

O4-B This comment states the Laborers International Union of North America reviewed the Draft IS/MND and provides an introductory statement that there is a fair argument that the project may have adverse environmental impacts.

The comment does not raise a substantive issue on the content of the Draft IS/MND. The comment will be made available for decision makers. No further response is required.

Laserfiche Office Project
City of Long Beach
Planning Commission
January 17, 2019
Page 2 of 8

I. Project Description

The Project proposes to build an office building and parking garage on approximately 2.1 acres of land located between Locust Avenue and Long Beach Boulevard, south of East 35th Street, and north of Interstate 405 in the central portion of the City of Long Beach. The Project would contain a new 102,848-square-foot office building that is up to 74 feet in height (maximum four stories) above ground level, including offset terraces and mezzanine design features, as well as a separate three-story parking garage with one rooftop level of parking with a total of 343 parking spaces. O4-C

II. Legal Background

As the California Supreme Court has held, "[i]f no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR." (*Communities for a Better Env't v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 319-320 ["*CBE v. SCAQMD*"], citing, *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, 88; *Brentwood Assn. for No Drilling, Inc. v. City of Los Angeles* (1982) 134 Cal.App.3d 491, 504–505.) "Significant environmental effect" is defined very broadly as "a substantial or potentially substantial adverse change in the environment." (Pub. Res. Code ["PRC"] § 21068; *see also* 14 CCR § 15382.) An effect on the environment need not be "momentous" to meet the CEQA test for significance; it is enough that the impacts are "not trivial." (*No Oil, Inc., supra,* 13 Cal.3d at 83.) "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." (*Communities for a Better Env't v. California Res. Agency* (2002) 103 Cal.App.4th 98, 109 ["*CBE v. CRA*"].)

The EIR is the very heart of CEQA. (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1214; *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 927.) The EIR is an "environmental 'alarm bell' whose purpose is to alert the public and its responsible officials to environmental changes before they have reached the ecological points of no return." (*Bakersfield Citizens*, 124 Cal.App.4th at 1220.) The EIR also functions as a "document of accountability," intended to "demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." (*Laurel Heights Improvements Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392.) The EIR process "protects not only the environment but also informed self-government." (*Pocket Protectors*, 124 Cal.App.4th at 927.) O4-D

An EIR is required if "there is substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment." (PRC § 21080(d); see also *Pocket Protectors*, 124 Cal.App.4th at 927.) In very limited circumstances, an agency may avoid preparing an EIR by issuing a negative declaration, a written statement

O4-C The comment summarizes the Draft IS/MND's Project Description.

This comment does not raise a substantive issue on the content of the Draft IS/MND. The comment will be made available for decision makers. No further response is required.

O4-D The comment summarizes the legal background for a fair argument under CEQA and the requirements for the preparation of an environmental impact report.

This comment does not raise a substantive issue on the content of the Draft IS/MND. The comment will be made available for decision makers. No further response is required.

briefly indicating that a project will have no significant impact thus requiring no EIR (14 Cal. Code Regs.§ 15371), only if there is not even a "fair argument" that the project will have a significant environmental effect. (PRC, §§ 21100, 21064.) Since "[t]he adoption of a negative declaration . . . has a terminal effect on the environmental review process," by allowing the agency "to dispense with the duty [to prepare an EIR]," negative declarations are allowed only in cases where "the proposed project will not affect the environment at all." (*Citizens of Lake Murray v. San Diego* (1989) 129 Cal.App.3d 436, 440.)

Where an initial study shows that the project may have a significant effect on the environment, a mitigated negative declaration may be appropriate. However, a mitigated negative declaration is proper *only* if the project revisions would avoid or mitigate the potentially significant effects identified in the initial study "to a point where clearly no significant effect on the environment would occur, and…there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment." (Public Res. Code §§ 21064.5 and 21080(c)(2); *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322, 331.) In that context, "may" means a *reasonable possibility* of a significant effect on the environment. (Pub. Res. Code, §§ 21082.2(a), 21100, 21151(a); *Pocket Protectors*, *supra,* 124 Cal.App.4th at 927; *League for Protection of Oakland's etc. Historic Res. v. City of Oakland* (1997) 52 Cal.App.4th 896, 904-05.)

Under the "fair argument" standard, an EIR is required if any substantial evidence in the record indicates that a project may have an adverse environmental effect—even if contrary evidence exists to support the agency's decision. (14 CCR § 15064(f)(1); *Pocket Protectors*, 124 Cal.App.4th at 931; *Stanislaus Audubon Soc'y v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-15; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602.) The "fair argument" standard creates a "low threshold" favoring environmental review through an EIR rather than through issuance of negative declarations or notices of exemption from CEQA. (*Pocket Protectors*, 124 Cal.App.4th at 928.) O4-D Contd.

The "fair argument" standard is virtually the opposite of the typical deferential standard accorded to agencies. As a leading CEQA treatise explains:

> This 'fair argument' standard is very different from the standard normally followed by public agencies in making administrative determinations. Ordinarily, public agencies weigh the evidence in the record before them and reach a decision based on a preponderance of the evidence. [Citations]. The fair argument standard, by contrast, prevents the lead agency from weighing competing evidence to determine who has a better argument concerning the likelihood or extent of a potential environmental impact. The lead agency's decision is thus largely legal rather than factual; it does not resolve conflicts in the evidence but determines only whether substantial evidence exists in the record to support the prescribed fair argument.

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(Kostka & Zischke, *Practice Under CEQA*, §6.29, pp. 273-74.) The Courts have explained that "it is a question of law, not fact, whether a fair argument exists, and the courts owe no deference to the lead agency's determination. Review is de novo, with a **preference for resolving doubts in favor of environmental review**." (*Pocket Protectors*, 124 Cal.App.4th at 928 [emphasis in original].)

Every CEQA document must start from a "baseline" assumption. The CEQA "baseline" is the set of environmental conditions against which to compare a project's anticipated impacts. Section 15125(a) of the CEQA Guidelines (14 CCR § 15125(a)) states in pertinent part that a lead agency's environmental review under CEQA:

> "…must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time [environmental analysis] is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant." (Emphasis added.)

(*See*, *Save Our Peninsula Committee v. County of Monterey* (2001) 87 Cal.App.4th 99, 124-125 ("*Save Our Peninsula.*") As the court of appeal has explained, "the impacts of the project must be measured against the 'real conditions on the ground,'" and not against hypothetical permitted levels. (*Save Our Peninsula*, *supra*, 87 Cal.App.4th 99, 121-23.)

O4-D Contd.

III. Discussion

A. The IS/MND Failed to Conduct a Construction and Operational Health Risk Assessments for Sensitive Receptors.

The IS/MND improperly concludes that the Project would have a less than significant impact on the health of nearby sensitive receptors. To arrive at this conclusion, the IS/MND compared the levels of certain construction and operational pollutants to localized significance thresholds (LSTs) developed by the South Coast Air Quality Management District (SCAQMD). (IS/MND, p.22.) If the estimated emissions from the Project for a given pollutant were less than the LST, the IS/MND concluded that the emissions would not pose a significant impact. However, the reliance on only comparing Project emissions to SCAQMD's LSTs is improper under CEQA.

The SCAQMD thresholds only pertain to criteria air pollutants. As such, health impacts from exposure to toxic air contaminants (TACs), such as diesel particulate matter (DPM), were not analyzed. A toxic air contaminant is "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." (Health & Saf. Code, § 39655, subd. (a).) Facilities which manufacture, formulate, use, or release toxic air chemicals are required to conduct a health risk assessment under the Air Toxics "Hot Spots" Program. (Health & Saf. Code, §§ 44301, 44320, 44360.) The

O4-E

O4-E The comment states the Draft IS/MND did not adequately address the potential cancer risks associated with the construction and operation of the proposed project. The comment included the results of a screening level dispersion analysis conducted by others (technical expertise or qualifications of such individuals to perform these studies was not provided by the commenter). The screening level dispersion analysis provided in the comment presents results of construction and operational emissions and, based on the commenter's analysis, concluded that the project could result in long-term health risks to the surrounding sensitive land uses. However, the methods used to calculate the diesel particulate matter concentration and the associated health risk have been reviewed by an HDR air quality technical expert, and multiple errors have been found in the commenter's analysis as summarized in the following:

1) The comment calculated the average daily particulate matter emissions by dividing the total emissions (470.8 pounds) by the number of work days (360), resulting in 1.31 pounds per day. However, the analysis should only consider the on-site exhaust particulates when calculating the daily emissions. The total on-site particulate matter less than or equal to 2.5 micrometers in diameter ($PM_{2.5}$) that would be generated during construction is 276 pounds. Therefore, the pollutant emissions are off by a factor of 1.7 (470.8/276).

2) The operational emissions were calculated using the assumption that all of the proposed project's exhaust emissions would be generated on site. The average trip length for the project is 8.9 miles. Due to the size of the site (~2 acres), less than 0.25 mile of each trip would be generated on site. In addition, the comment letter assumes all the exhaust emissions are diesel. As the project is an office building, where the majority of the trips would be automobile and light vehicle

	commuters, most of the emissions would be from gas vehicles. The actual operational $PM_{2.5}$ emissions can be calculated by multiplying the annual emissions (0.0112 tons) by 2000 pounds/ton, resulting in 22.4 pounds per year. The on-site emissions can be calculated by multiplying the total emissions by the percentage of time the vehicles would be traveling on site (0.25/8.9). The total on-site $PM_{2.5}$ emissions generated during operation is 0.63 pounds per year, far lower than the 32 pounds per year used in the comment letter. Therefore, the operational pollutant emissions are off (i.e., miscalculated) by a factor of 50.8 (32/0.63). 3) The comment calculated the diesel particulate concentrations using an area source within the AERSCREEN model. Section 4.3.1.3 of the Office of Environmental Health Hazard Assessment's (OEHHA) Risk Assessment Guidelines[1] includes the following text related to the use of area sources within dispersion models: > Emissions that are to be modeled as area sources are typical of fugitive sources characterized by non-buoyant emissions containing negligible vertical extent (e.g., no plume rise or emissions distributed over a large horizontal area). Section 4.3.1.1 of the OEHHA includes the following text on the use of point sources: > Point sources are probably the most common type of source and most air dispersion models have the capability to simulate them. Typical examples of point sources include exhaust

[1] OEHHA, Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments, February 2015.

stacks. Isolated vents from buildings are special examples of point sources.

The only source of on-site diesel particulate matter is the construction equipment required to build the proposed project. Therefore, the emission concentrations should have been calculated using a point source.

To demonstrate the above errors have a profound effect on emission concentrations, HDR has conducted a screening level health risk assessment using AERSCREEN (v16216).

Construction

The average daily construction emission rate was calculated using the following formula:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{276\ pounds}{360\ days} x \frac{453.6\ grams}{pound} x \frac{1\ day}{24\ hours} x \frac{1\ hour}{3{,}600\ seconds} = 0.00403\ g/s$$

Construction equipment would be expected to operate at various locations within the project site; however, for purposes of this analysis, all diesel exhaust was modeled as if it came from a single point source on site. The table below shows the AERSCREEN concentrations at a range of locations using the emission rate calculated above. The annual concentrations were calculated by multiplying the 1-hour concentrations by 0.10.

Distance (meters)	1-hour Concentration (µg/m3)	Annual Concentration (µg/m3)
1	0.0178	0.00178
25	1.320	0.1320
50	0.7882	0.07882
75	0.5957	0.05957
100	0.4585	0.04585
125	0.3778	0.03778
150	0.3118	0.03118
175	0.2728	0.02728
200	0.2532	0.02532
225	0.2332	0.02332
250	0.2142	0.02142
275	0.2140	0.02140
300	0.2179	0.02179

µg/m^3 = microgram per cubic meter

At 50 meters, the distance from the center of the project site to the off-site residences, the annual diesel particulate matter concentration would be 0.07882 µg/m^3. Using the daily breathing rate, exposure frequency, exposure duration, averaging time, and age sensitivity factors listed in the OEHHA guidelines, the cancer risk for an individual exposed to that concentration for 1 year (3rd trimester through age 0.75) would be 9.2. This risks is below the 10 in 1 million threshold. Therefore, a refined health risk assessment is not required for the proposed project.

Operations

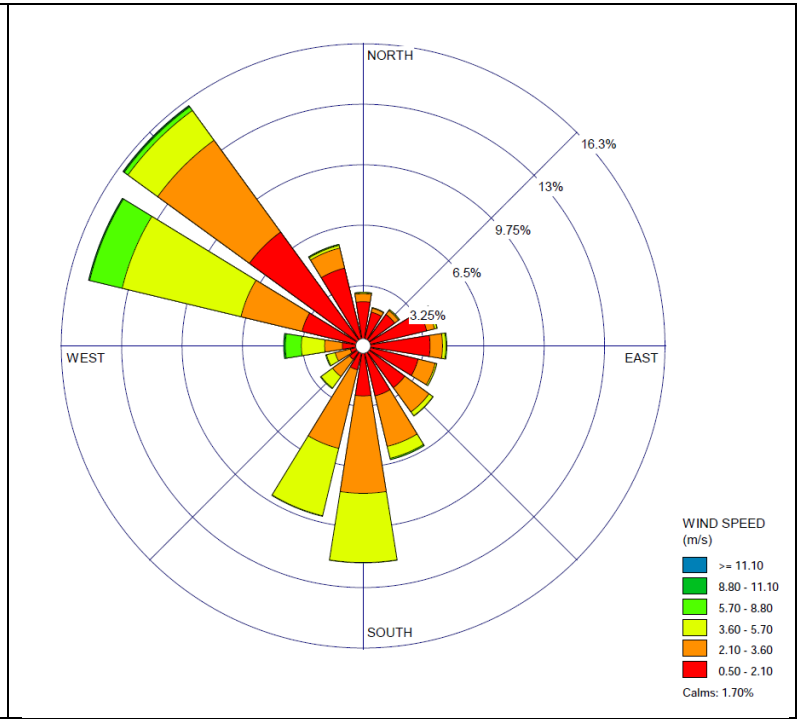
The average daily operation emission rate was calculated using the following formula:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{0.63\ pounds}{365\ days} x \frac{453.6\ grams}{pound} x \frac{1\ day}{24\ hours} x \frac{1\ hour}{3{,}600\ seconds} = 0.00000906\ g/s$$

The table below shows the AERSCREEN concentrations at a range of locations using the emission rate calculated above. The annual concentrations were calculated by multiplying the 1-hour concentrations by 0.10.

Distance (meters)	1-hour Concentration (µg/m3)	Annual Concentration (µg/m3)
1	0.399E-4	0.399E-5
25	0.297E-2	0.297E-3
50	0.177E-2	0.177E-3
75	0.134E-2	0.134E-3
100	0.103E-2	0.103E-3
125	0.849E-3	0.849E-4
150	0.701E-3	0.701E-4
175	0.613E-3	0.613E-4
200	0.569E-3	0.569E-4
225	0.524E-3	0.524E-4
250	0.482E-3	0.482E-4
275	0.481E-3	0.481E-4
300	0.476E-3	0.476E-4

	At 50 meters, the distance from the center of the project site to the off-site residences, the annual diesel particulate matter concentration would be 0.000177 µg/m^3. Using the daily breathing rate, exposure frequency, exposure duration, averaging time, and age sensitivity factors listed in the OEHHA guidelines, the cancer risk for an individual exposed to that concentration for 30 years (3rd trimester through age 30) would be 0.1. **Combined Risk** The combined cancer risk from construction and operation would be 9.3 in 1 million (9.2+0.1). This risks is below the 10 in 1 million threshold. Therefore, a refined health risk assessment is not required for the proposed project. The cancer risks calculated above assume the wind is constantly flowing from the source to the receiver for the entire duration of construction and operation. As shown on the figure below, the wind in the project area is predominantly from the northwest and south. Therefore, the emissions would be transported away from the existing houses to the south and west of the project site.


NORTH
SOUTH
WEST
EAST
16.3%
13%
9.75%
6.5%
3.25%
WIND SPEED
(m/s)
>= 11.10
8.80 - 11.10
5.70 - 8.80
3.60 - 5.70
2.10 - 3.60
0.50 - 2.10
Calms: 1.70%

health risk assessment must be prepared in accordance with the guidelines established by the California Office of Environmental Health Hazard Assessment (OEHHA). (Health & Saf. Code, § 44360, subd. (b)(2).) Without evaluating the health risks posed by TACs, such as DPM, the IS/MND cannot reasonably conclude that there will be no significant adverse impact on human health from the Project.

In February of 2015, OEHHA released its most recent Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, which was formally adopted in March of 2015. This guidance document describes the types of projects that warrant the preparation of a health risk assessment. Construction of the Project will produce emissions of diesel particulate matter (DPM), a human carcinogen, through the exhaust stacks of construction equipment. The OEHHA guidance recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors. Furthermore, once construction of the Project is complete, the Project will operate for a long period of time. During operation, the Project will generate vehicle trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to emissions.

The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR). Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, to be consistent with OEHHA guidelines, the IS/MND should have conducted health risk assessments (HRA) of both the construction phase and operational phase of the Project.

O4-E Contd.

Soil Air Water Pollution Enterprise (SWAPE), an environmental consulting firm, has reviewed the Project's IS/MND and prepared a summary of their findings (attached as Exhibit A [hereinafter "SWAPE"].) SWAPE notes that SCAQMD provides a threshold for determining a project's health risk impact of 10 in one-million. (SWAPE, p.2.) Guidance from SCAQMD recommends that health risk impacts from short-term projects, such as construction, be assessed. As such, The IS/MND should have conducted an HRA to assess the health risk impacts stemming from construction of the Project.

In addition to an HRA for the construction of the project, the IS/MND should have also conducted an operational HRA to asses to health risks associated with the operation of the Project. According to the IS/MND the Project, once constructed, would generate approximately 1,008 daily vehicle trips, of which 74 trips would be trucks. (SWAPE, p.3.) This substantial number of vehicle trips can reasonably be assumed to generate substantial amounts of DPM emissions, which should be properly assessed to ensure that there is not a significant health risk impact. (SWAPE, p.3.)

The failure of the IS/MND to conduct any HRA is inconsistent with OEHHA guidance. During the Project construction period of 360 days, the Project will inevitably emit DPM.

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OEHHA recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors. Additionally, OEHHA recommends that health risks from a project lasting more than 6 months should be evaluated for the duration of the project and that a 30-year exposure duration be utilized to asses individual cancer risk. Assuming that the Project will operate for at least 30 years, "health risks from Project operation should have also been evaluated by the IS/MND, as a 30-year exposure duration vastly exceeds the 2-month and 6-month requirements set forth by OEHHA." (SWAPE, p.4.)

In order to demonstrate the potential health risks posed by the project, SWAPE prepared a screen-level HRA for the Project. (SWAPE, pp.4-7; SWAPE HRA Data attached as Exhibit B) SWAPE's assessment found that construction of the project would generate approximately 471 pounds of DPM and that operation of the Project would generate approximately 32 pounds of DPM per year. (SWAPE, p.5.) At 25 meters from the Project site, at which distance sensitive receptors are present according to the IS/MND, the Project would result in an annualized average concentration of 1.758 $\mu g/m^3$ of DPM during construction and 0.1179 $\mu g/m^3$ during operation. (SWAPE, p.5.) Using applicable HRA methodologies prescribed by OEHHA and the SCAQMD to calculate the excess cancer risk to the residential receptors located closest to the Project, SWAPE found that the excess cancer risk to children, infants, and third-trimester gestations were 43, 240, and 24 in one-million, respectively. (SWAPE, p.5.) SWAPE found the excess cancer risk for a residential lifetime (30 years) to be 310 in one-million. (SWAPE, p.5.) Thus, "[t]he 3rd trimester, infantile, child, and lifetime cancer risks all greatly exceed the SCAQMD's threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND." (SWAPE, p.5.)

As SWAPE's preliminary screening-level HRA demonstrates, the construction and operation of the Project could result in significant health risk impacts. The City should prepare an EIR for the Project and include refined operational and construction HRAs to properly evaluate the Project's health impacts. SWAPE has suggested a number of potential mitigation measures which could reduce potential health risk impacts to less-than-significant levels. (SWAPE, pp.7-11.)

O4-E Contd.

B. The IS/MND Improperly Defers Specific Mitigation Measures for Hazards and Hazardous Materials.

LIUNA is very concerned that the EIR fails to adequately analyze potential risks related to soil contamination. The project site once contained an oil derrick in addition to multiple oil derricks in the vicinity of the project site. Although the IS/MND found "no evidence of significant impact to the subsurface as a result of the current and historical oil-related activities," the IS/MND concedes that "additional impacted soil could still be encountered during construction, resulting in a potentially significant impact." (IS/MND, p.36.) In order to mitigate this potentially significant impact of contaminated soil, the IS/MND recommends the implementation of MM HAZ-1. Under MM HAZ-1, "Prior to construction, a General Construction Soil Management Plan shall be prepared that includes general provisions for how

O4-F

O4-F As discussed on Page 36 of the Draft IS/MND, three Phase II Site Investigation Reports were prepared by SCS Engineers for the project site (Appendix D of the Final IS/MND). All three reports conclude there is no evidence of significant impact on the subsurface as a result of the historical activities (i.e., former oil and gas wells) at the property. However, the reports include a disclaimer that there is still a potential for impacted soil to be encountered. The discussion in the Draft IS/MND is based on the results and recommendations of these reports and concluded that while no there is no evidence of contaminated soils being present on site, as a precautionary measure, if any contaminated soils were encountered, then Mitigation Measure HAZ-1 would be implemented.

In summary, there is no deferral of mitigation. Mitigation Measure HAZ-1 is proposed as a precautionary measure to avoid a potentially significant impact should contaminated soils be encountered. The mitigation measure includes specific performance criteria that will be included in the Contaminated Soil Management Plan.

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soils will be managed on site for the duration of construction." (IS/MND, p.36.) The General Construction Soil Management Plan would address seven topics: (1) General worker health and safety procedures; (2) Encountering Potentially Impacted (Contaminated) Soil; (3) Disposal of Potentially Impacted Soil; (4) Dust control; (5) Management of soil stockpiles; (6) Traffic control; and (7) Stormwater erosion control using best management practices. (IS/MND, p.36.)

Despite acknowledging the potentially significant impact of contaminated soil, the IS/MND relies on deferred mitigation in violation of CEQA. The IS/MND may not rely on a soil management plan that is developed after Project approval and subjected only to staff level review. An EIR is required to propose specific mitigation measures that the public may review and comment upon.

Feasible mitigation measures for significant environmental effects must be set forth in a CEQA document for consideration by the lead agency's decision makers and the public before approval of a project. The formulation of mitigation measures generally cannot be deferred until after approval of a project. CEQA Guidelines, Section 15126.4(a)(1)(B) states: "Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way."

"A study conducted after approval of a project will inevitably have a diminished influence on decisionmaking. Even if the study is subject to administrative approval, it is analogous to the sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA." (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 307.) "[R]eliance on tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA's goals of full disclosure and informed decisionmaking; and[,] consequently, these mitigation plans have been overturned on judicial review as constituting improper deferral of environmental assessment." (*Communities for a Better Env't v. City of Richmond* (2010) 184 Cal.App.4th 70, 92.)

In order to conform to the requirements of CEQA, the City cannot rely on the unspecified, general mitigation measures in the IS/MND. Rather, the City must prepare an EIR which provides specific, enforceable mitigation measures to ensure that the impacts of encountering contaminated soil are reduced to less-than-significant levels.

O4-F Contd.

C. The IS/MND Fails to Adequately Assess the Project's Greenhouse Gas Impacts.

The IS/MND calculated that the Project's annual greenhouse gas (GHG) emissions would total 2,018 MT CO_2e/yr. (IS/MND, p.33.) The IS/MND compared the Project's GHG emissions of 2,018 MT CO_2e/yr to the proposed—but not adopted—SCAQMD threshold for residential, commercial, and mixed use priojects of 3,000 MT CO_2e/yr and concluded that the Project would have a less than significant impact for GHG emissions. (IS/MND, p.33.)

O4-G

O4-G The comment letter states that the IS/MND used an inappropriate threshold when evaluating the proposed project's greenhouse gas emissions. Because the South Coast Air Quality Management District has not adopted greenhouse gas emissions thresholds that apply to land use projects where the South Coast Air Quality Management District is not the lead agency and no greenhouse gas emissions reduction plan or greenhouse gas emissions thresholds have been adopted in the City of Long Beach, the proposed project was evaluated based on the South Coast Air Quality Management District's recommended/preferred option threshold for all land use types of 3,000 metric tons of carbon dioxide equivalent per year. The City of Long Beach has utilized the 3,000 metric tons of carbon dioxide equivalent per year threshold on other adopted environmental documents, including recently adopted IS/MNDs for similar projects.

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SWAPE contends that the threshold for GHG emissions used in the IS/MND is improper. In order "to afford the fullest possible protection to the environment," *CBE v. CRA*, *supra*, at 109, SWAPE suggests that the IS/MND should utilize the more recently proposed commercial threshold of 1,400 MT CO_2e/yr. (SWAPE, p.12.) The Project's annual GHG emission of 2,018 MT CO_2e/yr exceed the 1,400 MT CO_2e/yr threshold. As such, the Project would have a significant impact requiring mitigation measures to reduce operational GHG emissions. SWAPE has suggested a number of potential mitigation measures which could reduce GHG emissions to less-than-significant levels. (SWAPE, pp.13-17.) O4-G Contd.

IV. Conclusion

LIUNA asks that the City refrain from approving the Laserfiche Office Project in order to allow staff additional time to address the concerns raised herein. Please include this letter in the record of proceedings for this project. Thank you for your attention to these comments. O4-H

Very truly yours,

Richard Drury

Brian B. Flynn

O4-H The comment requests that the City of Long Beach refrain from approving the project in order to address the issues raised in the comment letter. All comments have been responded to above and conclude that an environmental impact report is not required for the project.

EXHIBIT A O4-I	**O4-I** See response to comment O4-E above.

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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January 15, 2019

Richard Drury
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Oakland, CA 94607

Subject: Comments on the Laserfiche Office Project

Dear Mr. Drury,

We have reviewed the December 2018 Initial Study and Mitigated Negative Declaration (IS/MND) for the Laserfiche Office Project ("Project") located in the City of Long Beach ("City"). The Project proposes to construct a 102,848-square foot office building as well as a 343-space parking garage on the 2.1-acre site.

Our review concludes that the IS/MND fails to adequately evaluate the Project's Air Quality and Greenhouse Gas (GHG) impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. A Draft Environmental Impact Report (DEIR) should be prepared to adequately assess and mitigate the potential health risk and GHG impacts the Project may have on the surrounding environment.

Air Quality

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The IS/MND concludes that the proposed Project would have a less than significant impact on the health of sensitive receptors near the Project site without conducting a quantitative health risk assessment (HRA) for construction or operation (p. 25). The IS/MND fails to conduct a quantified HRA and instead solely relies upon a Localized Significance Threshold (LST) analysis, which found that Project emissions would not exceed the South Coast Air Quality Management District's (SCAQMD) LSTs (p. 23, p. 25). Based on the LST analysis, the IS/MND concludes that the Project would have a less than significant impact on nearby sensitive receptors (p. 21, p. 23, p. 25). The IS/MND attempts to justify this type of analysis by stating,

> "SCAQMD has developed localized significance threshold (LST) methodology and mass rate look-up tables by source receptor area that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts. LSTs represent the

O4-I Contd.

> maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area" (p. 22).

The IS/MND goes on to conclude,

> "Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics, particulate matter, and CO are of particular concern. The majority of the sensitive receptors adjacent to the project site are located to the west and south of the site, and consist of single-family residences. As discussed above, project emissions related to temporary construction and project operations would not exceed SCAQMD thresholds; therefore, sensitive receptors would not experience significant pollutant concentrations as a result of the project" (p. 25).

However, the failure to quantify the health risk posed to nearby sensitive receptors from exposure to toxic air contaminant (TAC) emissions released during Project activities, and instead rely solely upon the LST analysis, is incorrect for several reasons.

O4-I Contd.

First, the IS/MND does not even address its omission of an actual HRA, yet opts for analyzing the Project's emissions against the SCAQMD LSTs to determine whether the Project would expose sensitive receptors to substantial pollutant concentrations (p. 21, p. 23, p. 25). Using this method, the IS/MND states that since the Project's construction and operational emissions would not exceed the SCAQMD's LSTs for the specified pollutants (CO, NO_x, PM_{10}, and $PM_{2.5}$), impacts would be less than significant. The use of this method, as well as the subsequent significance determination, are entirely incorrect. While the LST method assesses the impact of pollutants at a local level, it only evaluates impacts from criteria air pollutants. As a result, health impacts from exposure to toxic air contaminants (TACs), such as diesel particulate matter (DPM), were not analyzed, thus leaving a gap within the IS/MND's analysis.

According to the Final Localized Significance Threshold Methodology document prepared by the SCAQMD, the LST analysis is only applicable to NO_x, CO, PM_{10}, and $PM_{2.5}$ emissions, which are collectively referred to as criteria air pollutants.[1] Because the LST method can only be applied to criteria air pollutants, this method cannot be used to determine whether emissions from DPM, a known human carcinogen, will result in a significant health risk impact to nearby sensitive receptors. By failing to prepare an HRA in addition to the LST analysis, the IS/MND fails to provide a comprehensive analysis of the sensitive receptor impacts that may occur as a result of exposure to substantial air pollutants. Furthermore, the SCAQMD provides a specific numerical threshold of 10 in one million for determining a project's health risk impact, which supports the requirement of a construction and operational HRA in addition to the LST analysis. Therefore, in order to determine the proposed Project's health-related

[1] "Final Localized Significance Threshold Methodology." SCAQMD, Revised July 2008, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

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impact, the IS/MND should have conducted an assessment that compares the Project's construction and operational health risk to the SCAQMD's specific numeric threshold of 10 in one million.

The suggestion that the IS/MND should have prepared an HRA that evaluates the Project's construction-related emissions in addition to the LST analysis is further supported by additional SCAQMD guidance. According to the SCAQMD's June 5, 2015 *Risk Assessment Procedures for Rules 1401, 1401.1, and 212*, it is recommended that health risk impacts from short-term projects, such as Project construction, also be assessed. The Guidance document states,

> "Since these short-term calculations are only meant for projects with limits on the operating duration, these short-term cancer risk assessments can be thought of as being the equivalent to a 30-year cancer risk estimate and the appropriate thresholds would still apply (i.e. for a 5-year project, the maximum emissions during the 5-year period would be assessed on the more sensitive population, from the third trimester to age 5, after which the project's emissions would drop to 0 for the remaining 25 years to get the 30-year equivalent cancer risk estimate)."[2]

As you can see in the excerpt above, an HRA is required by the SCAQMD to determine whether or not Project construction would expose sensitive receptors to substantial air pollutants, and as such, a proper HRA should have been prepared.

O4-I Contd.

Second, the IS/MND fails to conduct a quantified operational HRA. According to the Traffic Impact Study, provided as Appendix F to the IS/MND, the Project will generate approximately 1,008 daily operational vehicle trips as a result of the Project's proposed land uses (Table 4, Appendix F, p. 15). Review of the fleet mix used in the CalEEMod modeling demonstrates that of the 1,008 daily trips, there would be 74 truck trips per day.[3] Thus, as a result of the substantial number of annual operational vehicle trips that the Project will generate, it is reasonable to assume that substantial DPM emissions will be generated. As such, the IS/MND should have conducted an operational HRA, as long-term exposure to DPM and other TACs may result in a significant health risk impact and therefore, should be properly assessed.

Third, the omission of a quantified HRA is inconsistent with the most recent guidance published by the Office of Environmental Health Hazard Assessment (OEHHA), the organization responsible for providing recommendations for HRAs in California. In February of 2015, OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, which was formally adopted in March of 2015.[4] This guidance document describes the types of projects that

[2] Risk Assessment Procedures for Rules 1401, 1401.1 and 212, SCAQMD, June 2015, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/riskassprocjune15.pdf?sfvrsn=2, p. IX-2

[3] Review of the DEIR's CalEEMod modeling demonstrates that the Project Applicant assumes the following fleet mix of light heavy-duty 1 (LHD1), light heavy-duty 2 (LHD2), medium heavy-duty (MHD) and heavy heavy-duty (HHD): 0.015; 0.005; 0.012; and 0.021, respectively (Appendix B, pp. 60). Multiplying each of the fleet mixes by the net operational daily trip rate of 1,008 (Table 4, Appendix F, p. 15), the Project will generate approximately 17 daily LHD1 trips, 6 daily LHD2 trips, 21 daily MHD trips, and 30 daily HHD trips for a total of approximately 307 truck trips per day.

[4] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/hotspots2015.html

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warrant the preparation of a HRA. Construction of the Project will produce emissions of DPM, a human carcinogen, through the exhaust stacks of construction equipment over a construction period of 360 days, or approximately 12 months (Appendix B, pp. 45, pp. 74, pp. 99). The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors.[5] Therefore, per OEHHA guidelines, health risk impacts from Project construction should have been evaluated by the IS/MND. Furthermore, once construction of the Project is complete, the Project will operate for a long period of time. As previously mentioned, during operation, the Project will generate vehicle trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to emissions. The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project, and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR).[6] Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, health risks from Project operation should have also been evaluated by the IS/MND, as a 30-year exposure duration vastly exceeds the 2-month and 6-month requirements set forth by OEHHA. These recommendations reflect the most recent health risk policy, and as such, an updated assessment of health risks to nearby sensitive receptors from Project construction and operation should be included in a revised CEQA evaluation for the Project. In an effort to demonstrate the potential risk posed by the Project to nearby sensitive receptors, we prepared a simple screening-level HRA. The results of our assessment, as described below, demonstrate that construction and operational DPM emissions may result in a potentially significant health risk impact that was not previously identified or evaluated within the IS/MND.

O4-I Contd.

In order to conduct our screening-level risk assessment, we relied upon AERSCREEN, which is a screening-level air quality dispersion model.[7] The model replaced SCREEN3, which is included in OEHHA[8] and CAPCOA[9] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary health risk screening assessment of the Project's construction and operational impacts to sensitive receptors using the emissions estimates from the IS/MND's CalEEMod

[5] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf, p. 8-18
[6] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf, p. 8-6, 8-15
[7] "AERSCREEN Released as the EPA Recommended Screening Model," USEPA, April 11, 2011, *available at:* http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf
[8] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf
[9] "Health Risk Assessments for Proposed Land Use Projects," CAPCOA, July 2009, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf

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model. The IS/MND states that the closest sensitive receptors to the Project site are located approximately 25 meters away from the Project site (pp. 25, pp. 29). Consistent with recommendations set forth by OEHHA, we used a residential exposure duration of 30 years, starting from the third trimester of pregnancy. We also assumed that construction and operation of the Project would occur sequentially, with no gaps between each Project phase. The CalEEMod model's emissions indicate that construction activities will generate approximately 471 pounds of DPM over a 360-day construction period. The AERSCREEN model relies on a continuous average emissions rate to simulate maximum downwind concentrations from point, area, and volume emissions sources. To account for the variability in construction equipment usage over the many phases of Project construction, we calculated an average DPM emission rate for construction by the following equation.

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{470.8\ lbs}{360\ days} \times \frac{453.6\ grams}{lb} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} \approx \mathbf{0.006866}\ {}^{g}/_{s}$$

Using this equation, we estimated a construction emission rate of 0.006866 grams per second (g/s). Subtracting the 360-day construction duration from the total residential exposure duration of 30 years, we assumed that after Project construction, the MEIR would be exposed to the Project's operational DPM emissions for approximately an additional 29 years. The CalEEMod model's annual emissions indicate that operational activities will generate approximately 32 pounds of DPM per year. Applying the same equation used to estimate the construction DPM emission rate, we estimated the following emission rate for Project operation.

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$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{32\ lbs}{365\ days} \times \frac{453.6\ grams}{lb} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} \approx \mathbf{0.000460}\ {}^{g}/_{s}$$

Using this equation, we estimated an operational emission rate of 0.000460 g/s. Construction and operational activity was simulated as a 2.1-acre rectangular area source in AERSCREEN, with dimensions of 115 meters by 74 meters. A release height of three meters was selected to represent the height of exhaust stacks on construction equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.[10] There are sensitive receptors located approximately 25 meters away from the Project boundary. The single-hour concentration estimated by AERSCREEN for Project construction is approximately 17.58 $\mu g/m^3$ DPM at approximately 25 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 1.758 $\mu g/m^3$ for construction. For Project operation, the single-hour concentration in AERSCREEN is approximately 1.179 $\mu g/m^3$ DPM at approximately 25 meters

[10] http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf

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downwind. Again, multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.1179 µg/m^3 for operation.

We calculated the excess cancer risk to the residential receptors located closest to the Project site using applicable HRA methodologies prescribed by OEHHA and the SCAQMD. Consistent with the construction schedule proposed by the IS/MND, the annualized average concentration for construction was used for the entire 3rd trimester of pregnancy (0.25 years), and the first 0.75 years of the infantile stage of life (0-2 years). The annualized average concentration for operation was used for the remainder of the 30-year exposure period, which makes up the rest of the infantile stage of life, the entirety of the child stage of life (2 to 16 years), and the entirety of the adult stage of life (16 to 30 years). Consistent with OEHHA guidance, we used Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.[11] According to the updated guidance, quantified cancer risk should be multiplied by a factor of ten during the first two years of life (infant) and should be multiplied by a factor of three during the child stage of life (2 to 16 years). Furthermore, in accordance with guidance set forth by OEHHA, we used 95th percentile breathing rates for infants.[12] Finally, according to SCAQMD guidance, we used a Fraction of Time At Home (FAH) Value of 1 for the 3rd trimester, infant, and child receptors and we used a FAH Value of 0.73 for the adult receptors.[13] We used a cancer potency factor of 1.1 (mg/kg-day)$^{-1}$ and an averaging time of 25,550 days. The results of our calculations are shown below.

O4-I Contd.

The Maximum Exposed Individual at an Existing Residential Receptor (MEIR)

Activity	Duration (years)	Concentration (µg/m^3)	Breathing Rate (L/kg-day)	ASF	Cancer Risk
Construction	0.25	1.758	361	10	2.4E-05
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***2.4E-05***
Construction	0.75	1.758	1090	10	2.2E-04
Operation	1.25	0.1179	1090	10	2.4E-05
Infant Exposure Duration	***2.00***			***Infant Exposure***	***2.4E-04***
Operation	14.00	0.1179	572	3	4.3E-05
Child Exposure Duration	***14.00***			***Child Exposure***	***4.3E-05***
Operation	14.00	0.1179	261	1	4.7E-06
Adult Exposure Duration	***14.00***			***Adult Exposure***	***4.7E-06***
Lifetime Exposure Duration	**30.00**			**Lifetime Exposure**	**3.1E-04**

[11] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf
[12] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act," June 5, 2015, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6, p. 19
"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf
[13] "Risk Assessment Procedures for Rules 1401, 1401.1, and 212." SCAQMD, August 2017, *available at:* http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7

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As demonstrated above, the excess cancer risk to adults, children, infants, and 3rd trimester gestations at a sensitive receptor located approximately 25 meters away, over the course of Project construction and operation, are approximately 4.7, 43, 240, and 24 in one million, respectively. Furthermore, the excess cancer risk over the course of a residential lifetime (30 years) is approximately 310 in one million. Consistent with OEHHA guidance, exposure was assumed to begin in the 3rd trimester stage of pregnancy to provide the most conservative estimates of air quality hazards. The 3rd trimester, infantile, child, and lifetime cancer risks all greatly exceed the SCAQMD's threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND.

It should be noted that our analysis represents a screening-level HRA, which is known to be more conservative, and tends to err on the side of health protection.[14] The purpose of a screening-level HRA, however, is to determine if a more refined HRA needs to be conducted. If the results of a screening-level health risk are above applicable thresholds, then the Project needs to conduct a more refined HRA that is more representative of site-specific concentrations. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. As a result, refined construction and operational HRAs must be prepared to examine air quality impacts generated by Project construction and operation using site-specific meteorology. A DEIR should be prepared to adequately evaluate the Project's health risk impact and should include additional mitigation measures to reduce these impacts to a less-than-significant level.[15]

O4-I Contd.

Additional Mitigation Measures Available to Reduce Construction Emissions

Our HRA demonstrates that, when Project activities are modeled correctly, construction and operation-related DPM emissions would result in potentially significant health risk impacts. Therefore, additional mitigation measures must be identified and incorporated in a DEIR to reduce these emissions to a less than significant level.

Additional mitigation measures can be found in CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures,* which attempt to reduce GHG levels, as well as reduce criteria air pollutants such as particulate matter.[16] DPM is a byproduct of diesel fuel combustion and are emitted by on-road vehicles and by off-road construction equipment. In addition to the proposed Mitigation Measure MM AQ-1, Project mitigation for criteria pollutant emissions should include consideration of the following measures in an effort to reduce construction emissions.[17]

[14] http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf p. 1-5
[15] See section titled "Additional Mitigation Measures Available to Reduce Construction Emissions" on page 7 of this letter.
[16] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf
[17] For measures to reduce operational DPM emissions, see section titled "Feasible Mitigation Measures Available to Reduce Operational Emissions" on p. 14 of this letter. These measures would effectively reduce operational VOC and NOx emissions, DPM emissions, as well as GHG emissions.

7

Require Implementation of Diesel Control Measures

The Northeast Diesel Collaborative (NEDC) is a regionally coordinated initiative to reduce diesel emissions, improve public health, and promote clean diesel technology. The NEDC recommends that contracts for all construction projects require the following diesel control measures: [18]

- All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85 percent.
- All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend[19] approved by the original engine manufacturer with sulfur content of 15 parts per million (ppm) or less.

Repower or Replace Older Construction Equipment Engines

The NEDC recognizes that availability of equipment that meets the EPA's newer standards is limited.[20] Due to this limitation, the NEDC proposes actions that can be taken to reduce emissions from existing equipment in the *Best Practices for Clean Diesel Construction* report.[21] These actions include but are not limited to:

- Repowering equipment (i.e. replacing older engines with newer, cleaner engines and leaving the body of the equipment intact).

O4-I Contd.

Engine repower may be a cost-effective emissions reduction strategy when a vehicle or machine has a long useful life and the cost of the engine does not approach the cost of the entire vehicle or machine. Examples of good potential replacement candidates include marine vessels, locomotives, and large construction machines.[22] Older diesel vehicles or machines can be repowered with newer diesel engines or in some cases with engines that operate on alternative fuels. The original engine is taken out of service and a new engine with reduced emission characteristics is installed. Significant emission reductions can be achieved, depending on the newer engine and the vehicle or machine's ability to accept a more modern engine and emission control system. It should be noted, however, that newer engines or higher tier engines are not necessarily cleaner engines, so it is important that the Project Applicant check the actual emission standard level of the current (existing) and new engines to ensure the repower product is reducing emissions for DPM.[23]

- Replacement of older equipment with equipment meeting the latest emission standards.

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[18] Diesel Emission Controls in Construction Projects, *available at:*http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf
[19] Biodiesel lends are only to be used in conjunction with the technologies which have been verified for use with biodiesel blends and are subject to the following requirements: http://www.arb.ca.gov/diesel/verdev/reg/biodieselcompliance.pdf
[20]http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf
[21]http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf
[22] Repair, Rebuild, and Repower, EPA, *available at:*https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#repair
[23] Diesel Emissions Reduction Program (DERA): Technologies, Fleets and Projects Information, *available at:*http://www2.epa.gov/sites/production/files/2015-09/documents/420p11001.pdf

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Engine replacement can include substituting a cleaner highway engine for a nonroad engine. Diesel equipment may also be replaced with other technologies or fuels. Examples include hybrid switcher locomotives, electric cranes, LNG, CNG, LPG or propane yard tractors, forklifts or loaders. Replacements using natural gas may require changes to fueling infrastructure.[24] Replacements often require some re-engineering work due to differences in size and configuration. Typically, there are benefits in fuel efficiency, reliability, warranty, and maintenance costs.[25]

Install Retrofit Devices on Existing Construction Equipment

PM emissions from alternatively-fueled construction equipment can be further reduced by installing retrofit devices on existing and/or new equipment. The most common retrofit technologies are retrofit devices for engine exhaust after-treatment. These devices are installed in the exhaust system to reduce emissions and should not impact engine or vehicle operation. [26] It should be noted that actual emissions reductions and costs will depend on specific manufacturers, technologies and applications.

Use Electric and Hybrid Construction Equipment

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*[27] report also proposes the use of electric and/or hybrid construction equipment as a way to mitigate DPM emissions. When construction equipment is powered by grid electricity rather than fossil fuel, direct emissions from fuel combustion are replaced with indirect emissions associated with the electricity used to power the equipment. Furthermore, when construction equipment is powered by hybrid-electric drives, emissions from fuel combustion are also greatly reduced. Electric construction equipment is available commercially from companies such as Peterson Pacific Corporation,[28] which specialize in the mechanical processing equipment like grinders and shredders. Construction equipment powered by hybrid-electric drives is also commercially available from companies such as Caterpillar.[29] For example, Caterpillar reports that during an 8-hour shift, its D7E hybrid dozer burns 19.5 percent fewer gallons of fuel than a conventional dozer while achieving a 10.3 percent increase in productivity. The D7E model burns 6.2 gallons per hour compared to a conventional dozer which burns 7.7 gallons per hour.[30] Fuel usage and savings are dependent on the make and model of the construction equipment used. The Project Applicant should calculate project-specific savings and provide manufacturer specifications indicating fuel burned per hour.

O4-I Contd.

[24] Alternative Fuel Conversion, EPA, *available at:* https://www3.epa.gov/otaq/consumer/fuels/altfuels/altfuels.htm#fact
[25] Cleaner Fuels, EPA, *available at:*https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#cleaner
[26] Retrofit Technologies, EPA, *available at:*https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#retrofit
[27]http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf
[28] Peterson Electric Grinders Brochure, *available at:*http://www.petersoncorp.com/wp-content/uploads/peterson_electric_grinders1.pdf
[29] Electric Power Products, *available at:*http://www.cat.com/en_US/products/new/power-systems/electric-pow generation.html
[30]http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

9

Implement a Construction Vehicle Inventory Tracking System

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*[31] report recommends that the Project Applicant provide a detailed plan that discusses a construction vehicle inventory tracking system to ensure compliances with construction mitigation measures. The system should include strategies such as requiring engine run time meters on equipment, documenting the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment and daily logging of the operating hours of the equipment. Specifically, for each onroad construction vehicle, nonroad construction equipment, or generator, the contractor should submit to the developer's representative a report prior to bringing said equipment on site that includes:[32]

- Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number.
- The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level.
- The Certification Statement[33] signed and printed on the contractor's letterhead.

Furthermore, the contractor should submit to the developer's representative a monthly report that, for each onroad construction vehicle, nonroad construction equipment, or generator onsite, includes: [34]

- Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
- Any problems with the equipment or emission controls.
- Certified copies of fuel deliveries for the time period that identify:
  - Source of supply
  - Quantity of fuel
  - Quality of fuel, including sulfur content (percent by weight)

In addition to these measures, we also recommend that the Applicant implement the following mitigation measures, called "Enhanced Exhaust Control Practices,"[35] that are recommended by the Sacramento Metropolitan Air Quality Management District (SMAQMD):

1. The project representative shall submit to the lead agency a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project.
   - The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment.

O4-I Contd.

[31] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf
[32] Diesel Emission Controls in Construction Projects, *available at:* http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf
[33] Diesel Emission Controls in Construction Projects, *available at:* http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf The NEDC Model Certification Statement can be found in Appendix A.
[34] Diesel Emission Controls in Construction Projects, *available at:* http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf
[35] http://www.airquality.org/ceqa/Ch3EnhancedExhaustControl_10-2013.pdf

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- The project representative shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.
- This information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment.
- The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.

2. The project representative shall provide a plan for approval by the lead agency demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20% NOX reduction and 45% particulate reduction compared to the most recent California Air Resources Board (ARB) fleet average.
    - This plan shall be submitted in conjunction with the equipment inventory.
    - Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.
    - The District's Construction Mitigation Calculator can be used to identify an equipment fleet that achieves this reduction.
3. The project representative shall ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour.
    - Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately. Non-compliant equipment will be documented and a summary provided to the lead agency monthly.
    - A visual survey of all in-operation equipment shall be made at least weekly.
    - A monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.
4. The District and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this mitigation shall supersede other District, state or federal rules or regulations.

When combined, the measures that we recommend in these comments offer a cost-effective, feasible way to incorporate lower-emitting equipment into the Project's construction fleet, which subsequently reduces DPM emissions released during Project construction. A DEIR must be prepared to include additional mitigation measures, as well as include an HRA to ensure that the necessary mitigation measures are implemented to reduce construction emissions. Furthermore, the Project Applicant needs to demonstrate commitment to the implementation of these measures prior to Project approval to ensure that the Project's construction-related emissions are reduced to the maximum extent possible.

O4-I Contd.

11

Greenhouse Gas

Failure to Adequately Assess the Project's Greenhouse Gas Impacts

The IS/MND determines that the Project would result in annual GHG emissions of 2,018 CO_2e/yr (Table 9, p. 33). The Applicant compares this emissions estimate to the SCAQMD screening threshold for non-industrial projects in order to conclude that the Project's GHG impact would be less than significant (p. 33). The IS/MND justifies the use of this GHG screening threshold by stating,

> "The SCAQMD's interim thresholds for commercial, residential, mixed use and industrial development projects are as follows:
>
> - **Industrial projects –** 10,000 MT of carbon monoxide equivalent (CO_2e) per year
> - **Residential, commercial, and mixed use projects** (including parks, warehouses, etc.) – 3,000 MT CO_2e per year
>
> The project is a commercial office building. Thus, for purposes of this analysis, both direct and indirect GHG emissions from the project are discussed in the context of the 3,000 MT threshold levels" (p. 32).

The IS/MND goes on to conclude,

> "The total annual GHG emissions of 2,018 MT of CO_2e is less than the county's screening threshold of 3,000 MT of CO_2e per year. Therefore, the proposed project will have a less than significant individual and cumulative impact for GHG emissions" (p. 33).

O4-I Contd.

The Project Applicant's use of this non-industrial GHG screening threshold as well as the subsequent significance determination, however, are entirely incorrect. In December 2008, the SCAQMD released its *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans* report ("*Interim Thresholds*") that proposed a multi-tiered approach for evaluating the GHG impacts of a project.[36] As subsequently clarified, SCAQMD recommended that for projects not exempt from CEQA (Tier 1) or consistent with a qualified GHG reduction plan (Tier 2), lead agencies should compare a project's GHG emissions to numeric screening thresholds (Tier 3).[37] Under Tier 3, the lead agencies may choose between two options: Option 1 proposes the use of a 1,400 MT CO_2e/yr threshold for commercial developments, 3,000 MT CO_2e/yr threshold for mixed-use developments, a 3,500 MT CO_2e/yr threshold for residential developments, and a 10,000 MT CO_2e/yr threshold for industrial projects; whereas Option 2 proposes a single numerical threshold of 3,000 MT CO_2e/yr for non-industrial projects.

The IS/MND's Draft Air Quality/Greenhouse Gas Technical Memorandum ("AQ/GHG Memorandum") evaluates the Project's GHG impact by comparing the Project's estimated GHG emissions to the

[36] SCAQMD (Dec. 5, 2008) Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2; *see also* SCAQMD (Oct. 2008) Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf.

[37] SCAQMD (Sep. 28, 2010) Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group # 15, http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf.

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SCAQMD significance threshold of 3,000 MT CO_2e/yr for non-industrial projects. Based on this analysis, the AQ/GHG Memorandum determines that since the Project's GHG emissions are approximately 2,018.2 MT CO_2e/yr, which is below the SCAQMD's non-industrial significance threshold of 3,000 MT CO_2e/yr, the Project would have a less than significant GHG impact (Appendix B, p. 33). This significance determination, however, is incorrect, because SCAQMD's 3,000 MT CO_2e/yr threshold is the general threshold for all non-industrial projects. The Laserfiche Office Project, however, explicitly proposes a "commercial office building" with an associated parking structure and therefore will be operated solely as a commercial land use (p. 32). As a result, the Project should have conducted the most conservative analysis possible, as is required by CEQA,[38] and compared the Project's GHG emissions to the 1,400 MT CO_2e/yr threshold for commercial projects. Had this threshold been used within the AQ/GHG Memorandum, the AQ/GHG Memorandum would have found the Project's GHG emissions to be significant (see table below).

Annual Project Greenhouse Gas Emissions	
Project Phase	**GHG Emissions ($MTCO_2e$)**
Amortized Construction	16.5
Operation	2,001.7
Total	**2,018.2**
SCAQMD Threshold	1,400
Threshold Exceeded?	***Yes***

O4-I Contd.

As the above table demonstrates, the proposed Project's annual GHG emissions exceed the SCAQMD's 1,400 MT CO_2e/yr screening threshold for commercial developments, thereby resulting in a potentially significant impact not previously identified or addressed by the IS/MND. Prior to Project Approval, an updated GHG analysis should be conducted that implements mitigation to reduce operational GHG emissions.

Feasible Mitigation Measures Available to Reduce Operational Emissions

Our analysis demonstrates that the Project's operational DPM and GHG emissions may present a potentially significant air quality impact. In an effort to reduce these emissions, we identified several operational mitigation measures that are applicable to the Project. Mitigation measures that could be implemented to reduce operational DPM and GHG emissions include, but are not limited to, the following: [39,40]

- Use passive solar design, such as: [41,42]

[38] SCAQMD (June 2014) Warehouse Truck Trip Study Data Results and Usage Presentation: Inland Empire Logistics Council, pp. 3, http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/final-ielc_6-19-2014.pdf?sfvrsn=2.
[39] http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf
[40] http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf
[41] Santa Barbara Air Pollution Control District, Scope and Content of Air Quality Sections in Environmental Documents, September 1997.
[42] Butte County Air Quality Management District, Indirect Source Review Guidelines, March 1997.

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- Orient buildings and incorporate landscaping to maximize passive solar; heating during cool seasons, and minimize solar heat gain during hot seasons; and
- Enhance natural ventilation by taking advantage of prevailing winds.

- Reduce unnecessary outdoor lighting by utilizing design features such as limiting the hours of operation of outdoor lighting.
- Develop and follow a "green streets guide" that requires:
  - Use of minimal amounts of concrete and asphalt;
  - Installation of permeable pavement to allow for storm water infiltration; and
  - Use of groundcovers rather than pavement to reduce heat reflection.[43]
- Implement Project design features such as:
  - Shade HVAC equipment from direct sunlight;
  - Install high-albedo white thermoplastic polyolefin roof membrane;
  - Install high-efficiency HVAC with hot-gas reheat;
  - Install formaldehyde-free insulation; and
  - Use recycled-content gypsum board.
- Provide education on energy efficiency to customers and/or tenants. Provide information on energy management services for large energy users.
- Meet "reach" goals for building energy efficiency and renewable energy use.
- Maximize the use of solar energy including solar panels.
- Limit the use of outdoor lighting to only that needed for safety and security purposes.
- Require use of electric or alternatively fueled sweepers with HEPA filters.
- Include energy storage where appropriate to optimize renewable energy generation systems and avoid peak energy use.
- Plant low-VOC emitting shade trees, e.g., in parking lots to reduce evaporative emissions from parked vehicles.
- Use CARB-certified or electric landscaping equipment in project and tenant operations; and introduce electric lawn, and garden equipment exchange program.

Furthermore, the Kimball Business Park Project Final Environmental Impact Report includes various feasible mitigation measures that would reduce on-site area emissions that are applicable to the proposed Project, and include, but are not limited to:[44]

- Increase in insulation such that heat transfer and thermal bridging is minimized.
- Limit air leakage through the structure and/or within the heating and cooling distribution system.
- Use of energy-efficient space heating and cooling equipment.
- Installation of dual-paned or other energy efficient windows.

O4-I Contd.

[43] *See* Irvine Sustainable Travelways "Green Street" Guidelines; www.ci.irvine.ca.us/civica/filebank/blobdload.asp?BlobID=8934; and Cool Houston Plan; www.harc.edu/Projects/CoolHouston.
[44] Mitigation Monitoring Plan for the Kimball Business Park Project Final Environmental Impact Report, July 2016, *available at*: http://www.cityofchino.org/home/showdocument?id=13244

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- Installation of automatic devices to turn off lights where they are not needed.
- Application of a paint and surface color palette that emphasizes light and off-white colors that reflect heat away from buildings.

Finally, additional, feasible mitigation measures can be found in CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*, which attempt to reduce GHG levels.[45] GHG and DPM emissions are produced during fuel combustion, and are emitted by on-road vehicles and by off-road equipment. Therefore, in an effort to reduce operational GHG and DPM emissions, the Applicant should consider the following measures:

- Neighborhood/Site Enhancements
  - Providing a pedestrian access network to link areas of the Project site encourages people to walk instead of drive. This mode shift results in people driving less and thus a reduction in VMT. The project should provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site. The Project should minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, landscaping, and slopes that impede pedestrian circulation should be eliminated.
- Incorporate Bike Lane Street Design (On-Site)
  - Incorporating bicycle lanes, routes, and shared-use paths into street systems, new subdivisions, and large developments can reduce VMTs. These improvements can help reduce peak-hour vehicle trips by making commuting by bike easier and more convenient for more people. In addition, improved bicycle facilities can increase access to and from transit hubs, thereby expanding the "catchment area" of the transit stop or station and increasing ridership. Bicycle access can also reduce parking pressure on heavily-used and/or heavily-subsidized feeder bus lines and auto-oriented park-and-ride facilities.
- Limit Parking Supply
  - This mitigation measure will change parking requirements and types of supply within the Project site to encourage "smart growth" development and alternative transportation choices by project residents and employees. This can be accomplished in a multi-faceted strategy:
    - Elimination (or reduction) of minimum parking requirements
    - Creation of maximum parking requirements
    - Provision of shared parking
- Unbundle Parking Costs from Property Cost
  - Unbundling separates parking from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost from the property cost. This removes the burden from those who do not wish to utilize a parking space. Parking should be priced separately from home rents/purchase prices or office leases.

O4-I Contd.

[45] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

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- Implement Subsidized or Discounted Transit Program
  - The Project can provide subsidized/discounted daily or monthly public transit passes to incentivize the use of public transport. The Project may also provide free transfers between all shuttles and transit to participants. These passes can be partially or wholly subsidized by the employer or development. Many entities use revenue from parking to offset the cost of such a project.
- Provide End of Trip Facilities
  - Non-residential projects can provide "end-of-trip" facilities for bicycle riders including showers, secure bicycle lockers, and changing spaces. End-of-trip facilities encourage the use of bicycling as a viable form of travel to destinations, especially to work. End-of-trip facilities provide the added convenience and security needed to encourage bicycle commuting.
- Implement Commute Trip Reduction Marketing
  - The project can implement marketing strategies to reduce commute trips. Information sharing and marketing are important components to successful commute trip reduction strategies. Implementing commute trip reduction strategies without a complementary marketing strategy will result in lower VMT reductions. Marketing strategies may include:
    - New employee orientation of trip reduction and alternative mode options
    - Event promotions
    - Publications
- Implement Preferential Parking Permit Program
  - The project can provide preferential parking in convenient locations (such as near public transportation or building front doors) in terms of free or reduced parking fees, priority parking, or reserved parking for commuters who carpool, vanpool, ride-share or use alternatively fueled vehicles. The project should provide wide parking spaces to accommodate vanpool vehicles.
- Implement Car-Sharing Program
  - The Project should implement a car-sharing program to allow people to have on-demand access to a shared fleet of vehicles on an as-needed basis. User costs are typically determined through mileage or hourly rates, with deposits and/or annual membership fees. The car-sharing program could be created through a local partnership or through one of many existing car-share companies. Car-sharing programs may be grouped into three general categories: residential- or citywide-based, employer-based, and transit station-based. Transit station-based programs focus on providing the "last-mile" solution and link transit with commuters' final destinations. Employer-based programs provide a means for business/day trips for alternative mode commuters and provide a guaranteed ride home option.
- Price Workplace Parking
  - The project should implement workplace parking pricing at its employment centers. This may include: explicitly charging for parking for its employees, implementing above

O4-I Contd.

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market rate pricing, validating parking only for invited guests, not providing employee parking and transportation allowances, and educating employees about available alternatives.

  - Though similar to the Employee Parking "Cash-Out" strategy, this strategy focuses on implementing market rate and above market rate pricing to provide a price signal for employees to consider alternative modes for their work commute.

- Implement Employee Parking "Cash-Out"
  - The project can require employers to offer employee parking "cash-out." The term "cash-out" is used to describe the employer providing employees with a choice of forgoing their current subsidized/free parking for a cash payment equivalent to the cost of the parking space to the employer.

When combined together, these measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduces emissions released during Project operation. A Project-specific DEIR must be prepared to include additional mitigation measures, as well as include an updated air quality and GHG analysis to ensure that the necessary mitigation measures are implemented to reduce operational emissions to below thresholds. Furthermore, the Project Applicant must also demonstrate commitment to the implementation of these measures prior to Project approval, to ensure that the Project's operational emissions are reduced to the maximum extent possible.

O4-I Contd.

Sincerely,

Matt Hagemann, P.G., C.Hg.

Kaitlyn Heck

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EXHIBIT B O4-J	**O4-J** See response to comment O4-E above.

```
                                Laserfiche_Const

Start date and time  01/10/19 10:24:57

                            AERSCREEN 16216


Laserfiche, Construction


            Laserfiche, Construction



         -----------------  DATA ENTRY VALIDATION  -----------------

                       METRIC              ENGLISH

 ** AREADATA **  ---------------     ----------------


 Emission Rate:    0.687E-02 g/s         0.545E-01 lb/hr

 Area Height:           3.00 meters           9.84 feet

 Area Source Length:  115.00 meters         377.30 feet

 Area Source Width:    74.00 meters         242.78 feet

 Vertical Dimension:    1.50 meters           4.92 feet

 Model Mode:           URBAN

 Population:          469450

 Dist to Ambient Air:           1.0 meters             3. feet



 ** BUILDING DATA **

                                     Page 1
```

O4-J Contd.

```
                              Laserfiche_Const

No Building Downwash Parameters



** TERRAIN DATA **


No Terrain Elevations

Source Base Elevation:   0.0 meters        0.0  feet


Probe distance:   5000. meters       16404. feet


No flagpole receptors


No discrete receptors used



** FUMIGATION DATA **


No fumigation requested



** METEOROLOGY DATA **


Min/Max Temperature:  250.0 / 310.0 K   -9.7 /  98.3 Deg F

                                     Page 2
```

O4-J
Contd.

```
                                Laserfiche_Const

 Minimum Wind Speed:     0.5 m/s

 Anemometer Height:   10.000 meters

 Dominant Surface Profile: Urban
 Dominant Climate Type:    Average Moisture

 Surface friction velocity (u*): not adjusted

DEBUG OPTION ON

 AERSCREEN output file:
 Laserfiche_Const.out

 *** AERSCREEN Run is Ready to Begin

 No terrain used, AERMAP will not be run
**************************************************
                                  Page 3
```

O4-J
Contd.

```
                                Laserfiche_Const

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...


Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season             Albedo     Bo       zo

Winter              0.35     1.50     1.000

Spring              0.14     1.00     1.000

Summer              0.16     2.00     1.000

Autumn              0.18     2.00     1.000


Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl


Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl


Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl


Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl


Buildings and/or terrain present or rectangular area source, skipping probe


FLOWSECTOR   started 01/10/19 10:27:34
 ******************************************


                                   Page 4
```

O4-J Contd.

```
                                Laserfiche_Const
  Running AERMOD

 Processing Winter


Processing surface roughness sector  1


****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   3


                                     Page 5
```

O4-J Contd.

```
                                Laserfiche_Const
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6


                                     Page 6
```

O4-J Contd.

```
                                Laserfiche_Const
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ******************************************


  Running AERMOD

 Processing Spring
```

O4-J Contd.

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                                   Page 7
```

```
                                Laserfiche_Const

Processing surface roughness sector  1


****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


                                     Page 8
```

O4-J
Contd.

```
                                Laserfiche_Const
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


                                    Page 9
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O4-J Contd.

```
                                Laserfiche_Const
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 *******************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1

                                     Page 10
```

O4-J
Contd.

```
                                Laserfiche_Const

****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

                                     Page 11
```

O4-J
Contd.

```
                                Laserfiche_Const

****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

                                     Page 12
```

O4-J
Contd.

```
                                Laserfiche_Const

****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***
 ******************************************


  Running AERMOD

 Processing Autumn


Processing surface roughness sector  1


****************************************************

                                  Page 13
```

O4-J
Contd.

```
                                Laserfiche_Const
Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

                                   Page 14
```

O4-J
Contd.

```
                                Laserfiche_Const
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

                                   Page 15
```

O4-J
Contd.

```
                                Laserfiche_Const
Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


FLOWSECTOR   ended 01/10/19 10:27:55


REFINE       started 01/10/19 10:27:55


 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


                                     Page 16
```

O4-J
Contd.

```
                                Laserfiche_Const
REFINE       ended 01/10/19 10:27:57


 **********************************************

 AERSCREEN Finished Successfully

 With no errors or warnings

 Check log file for details

 **********************************************


 Ending date and time  01/10/19 10:27:59


                                Page 17
```

O4-J
Contd.

```
                        Laserfiche_Const_max_conc_distance
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.14962E+02         1.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17579E+02        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19510E+02        50.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
*  0.20095E+02        59.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16692E+02        75.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10007E+02       100.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.73117E+01       125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57267E+01       150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46533E+01       175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38859E+01       200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33150E+01       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28761E+01       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25273E+01       275.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22478E+01       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20157E+01       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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                         Laserfiche_Const_max_conc_distance
   0.18226E+01       350.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16603E+01       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15209E+01       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14007E+01       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12963E+01       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12044E+01       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11235E+01       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10512E+01       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.98637E+00       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.92841E+00       575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.87610E+00       600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.82867E+00       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.78566E+00       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.74644E+00       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.71043E+00       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67728E+00       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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                    Laserfiche_Const_max_conc_distance
   0.64675E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61837E+00       775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59209E+00       800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56773E+00       825.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54504E+00       850.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52393E+00       875.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50423E+00       900.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48574E+00       925.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46840E+00       950.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45208E+00       975.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43672E+00      1000.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.42225E+00      1025.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.40863E+00      1050.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.39576E+00      1075.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38359E+00      1100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37203E+00      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                  Page 3
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                    Laserfiche_Const_max_conc_distance
   0.36109E+00      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35071E+00      1175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34083E+00      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33143E+00      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32247E+00      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31388E+00      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30568E+00      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29933E+00      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29175E+00      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28450E+00      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27755E+00      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27090E+00      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26451E+00      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25838E+00      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25249E+00      1500.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24683E+00      1525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                   Page 4
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                    Laserfiche_Const_max_conc_distance
   0.24139E+00      1550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23615E+00      1575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23111E+00      1600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22625E+00      1625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22156E+00      1650.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21704E+00      1675.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21268E+00      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20846E+00      1725.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20439E+00      1750.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20046E+00      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19665E+00      1800.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19297E+00      1824.99      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18940E+00      1850.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18595E+00      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18261E+00      1900.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17937E+00      1924.99      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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                    Laserfiche_Const_max_conc_distance
   0.17622E+00      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17317E+00      1975.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17021E+00      2000.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16734E+00      2025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16455E+00      2050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16184E+00      2075.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15921E+00      2100.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15665E+00      2124.99      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15416E+00      2150.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15173E+00      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14938E+00      2200.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14708E+00      2225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14485E+00      2250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14267E+00      2275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14055E+00      2300.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13849E+00      2325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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                    Laserfiche_Const_max_conc_distance
   0.13647E+00      2350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13451E+00      2375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13260E+00      2400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13073E+00      2425.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12890E+00      2450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12712E+00      2475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12539E+00      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12369E+00      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12203E+00      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12041E+00      2575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11883E+00      2600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11728E+00      2625.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11577E+00      2650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11429E+00      2675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11285E+00      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11143E+00      2725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                  Page 7
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                    Laserfiche_Const_max_conc_distance
   0.11005E+00      2750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10869E+00      2775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10736E+00      2800.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10607E+00      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10479E+00      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10355E+00      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10233E+00      2900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10113E+00      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.99962E-01      2950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.98814E-01      2975.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.97688E-01      2999.99      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.96585E-01      3025.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.95503E-01      3050.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.94442E-01      3075.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.93401E-01      3100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.92379E-01      3125.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                   Page 8
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                    Laserfiche_Const_max_conc_distance
   0.91377E-01      3150.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.90394E-01      3174.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.89429E-01      3199.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.88481E-01      3225.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.87551E-01      3249.99      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.86637E-01      3275.00      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.85740E-01      3300.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.84859E-01      3325.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.83994E-01      3350.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.83143E-01      3375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.82308E-01      3400.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.81487E-01      3425.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.80680E-01      3450.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.79886E-01      3475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.79106E-01      3500.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.78340E-01      3525.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                   Page 9
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                    Laserfiche_Const_max_conc_distance
   0.77586E-01      3550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.76844E-01      3575.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.76115E-01      3600.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.75397E-01      3625.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.74691E-01      3650.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.73997E-01      3675.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.73314E-01      3700.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.72641E-01      3724.99      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.71979E-01      3750.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.71328E-01      3775.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70686E-01      3800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70055E-01      3825.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.69434E-01      3849.99      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68821E-01      3875.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68218E-01      3900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67625E-01      3925.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                   Page 10
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                    Laserfiche_Const_max_conc_distance
   0.67039E-01      3950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66463E-01      3975.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65895E-01      4000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65336E-01      4025.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64785E-01      4050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64242E-01      4075.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63706E-01      4100.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63179E-01      4125.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62659E-01      4150.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62146E-01      4175.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61640E-01      4200.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61142E-01      4225.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.60650E-01      4250.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.60165E-01      4275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59687E-01      4300.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59216E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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                    Laserfiche_Const_max_conc_distance
   0.58751E-01      4350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58292E-01      4375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57839E-01      4400.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57393E-01      4425.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56952E-01      4449.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56517E-01      4475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56088E-01      4500.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.55665E-01      4525.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.55247E-01      4550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54834E-01      4575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54427E-01      4600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54025E-01      4625.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.53628E-01      4650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.53236E-01      4675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52849E-01      4700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52467E-01      4725.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                   Page 12
```

O4-J Contd.

```
                    Laserfiche_Const_max_conc_distance
   0.52089E-01      4750.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51717E-01      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51349E-01      4800.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50985E-01      4825.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50626E-01      4850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50271E-01      4875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49920E-01      4900.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49574E-01      4924.99      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49232E-01      4950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48894E-01      4975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48560E-01      5000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

O4-J Contd.

Page 13

```
                              Laserfiche_Operation

Start date and time  01/10/19 10:28:38

                            AERSCREEN 16216


Laserfiche, Operation


            Laserfiche, Operation



         -----------------  DATA ENTRY VALIDATION  -----------------

                       METRIC              ENGLISH

 ** AREADATA **  ---------------     ----------------


 Emission Rate:    0.460E-03 g/s         0.365E-02 lb/hr

 Area Height:           3.00 meters           9.84 feet

 Area Source Length:  115.00 meters         377.30 feet

 Area Source Width:    74.00 meters         242.78 feet

 Vertical Dimension:    1.50 meters           4.92 feet

 Model Mode:           URBAN

 Population:          469450

 Dist to Ambient Air:           1.0 meters             3. feet



 ** BUILDING DATA **

                                     Page 1
```

O4-J Contd.

```
                              Laserfiche_Operation

No Building Downwash Parameters



** TERRAIN DATA **


No Terrain Elevations

Source Base Elevation:   0.0 meters        0.0  feet


Probe distance:   5000. meters       16404. feet


No flagpole receptors


No discrete receptors used



** FUMIGATION DATA **


No fumigation requested



** METEOROLOGY DATA **


Min/Max Temperature:  250.0 / 310.0 K   -9.7 /  98.3 Deg F
```

O4-J Contd.

```
                                     Page 2
```

```
                              Laserfiche_Operation

 Minimum Wind Speed:     0.5 m/s

 Anemometer Height:   10.000 meters

 Dominant Surface Profile: Urban
 Dominant Climate Type:    Average Moisture

 Surface friction velocity (u*): not adjusted

DEBUG OPTION ON

 AERSCREEN output file:
 Laserfiche_Operation.out

 *** AERSCREEN Run is Ready to Begin

 No terrain used, AERMAP will not be run
**************************************************

                                   Page 3
```

O4-J Contd.

```
                              Laserfiche_Operation

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...


Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season             Albedo     Bo       zo

Winter              0.35     1.50     1.000

Spring              0.14     1.00     1.000

Summer              0.16     2.00     1.000

Autumn              0.18     2.00     1.000


Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl


Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl


Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl


Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl


Buildings and/or terrain present or rectangular area source, skipping probe


FLOWSECTOR   started 01/10/19 10:30:26
 *******************************************


                                    Page 4
```

O4-J Contd.

```
                                Laserfiche_Operation
  Running AERMOD

 Processing Winter


Processing surface roughness sector  1


****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   3
```

O4-J Contd.

```
                                     Page 5
```

```
                                Laserfiche_Operation
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6
```

O4-J Contd.

```
                                     Page 6
```

```
                                Laserfiche_Operation
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 *******************************************


  Running AERMOD

 Processing Spring
```

O4-J Contd.

```
                                     Page 7
```

```
                              Laserfiche_Operation

Processing surface roughness sector  1

****************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

****************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

****************************************************

Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10

                                     Page 8
```

O4-J Contd.

```
                                Laserfiche_Operation
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


                                    Page 9
```

O4-J Contd.

```
                                Laserfiche_Operation
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 *******************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1

                                     Page 10
```

O4-J Contd.

```
                              Laserfiche_Operation

****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

                                     Page 11
```

O4-J
Contd.

```
                              Laserfiche_Operation

****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

                                     Page 12
```

O4-J Contd.

```
                              Laserfiche_Operation

****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 *****************************************


  Running AERMOD

 Processing Autumn


Processing surface roughness sector  1


****************************************************

                                   Page 13
```

O4-J Contd.

```
                              Laserfiche_Operation
Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

                                   Page 14
```

O4-J Contd.

```
                                Laserfiche_Operation
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

                                   Page 15
```

O4-J Contd.

```
                                Laserfiche_Operation
Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   8


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  35


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


FLOWSECTOR   ended 01/10/19 10:30:47


REFINE       started 01/10/19 10:30:47


 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


                                     Page 16
```

O4-J Contd.

```
                                Laserfiche_Operation
REFINE       ended 01/10/19 10:30:49


 ********************************************

 AERSCREEN Finished Successfully

 With no errors or warnings

 Check log file for details

 ********************************************


 Ending date and time  01/10/19 10:30:52
```

O4-J Contd.

```
                                Page 17
```

```
                    Laserfiche_Operation_max_conc_distance
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.10031E+01         1.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11785E+01        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13080E+01        50.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
*  0.13472E+01        59.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11191E+01        75.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67089E+00       100.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49020E+00       125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38393E+00       150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31197E+00       175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26052E+00       200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22225E+00       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19282E+00       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16943E+00       275.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15070E+00       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13514E+00       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

O4-J Contd.

Page 1

```
                        Laserfiche_Operation_max_conc_distance
   0.12219E+00       350.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11131E+00       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10197E+00       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.93909E-01       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.86909E-01       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.80746E-01       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.75319E-01       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70472E-01       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66129E-01       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62243E-01       575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58736E-01       600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.55556E-01       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52673E-01       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50043E-01       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47629E-01       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45407E-01       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                   Page 2
```

O4-J Contd.

```
                        Laserfiche_Operation_max_conc_distance
   0.43360E-01       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41457E-01       775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.39695E-01       800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38062E-01       825.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.36541E-01       850.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35126E-01       875.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33805E-01       900.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32566E-01       925.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31402E-01       950.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30308E-01       975.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29279E-01      1000.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28309E-01      1025.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27396E-01      1050.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26533E-01      1075.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25717E-01      1100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24942E-01      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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                    Laserfiche_Operation_max_conc_distance
   0.24208E-01      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23512E-01      1175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22850E-01      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22220E-01      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21619E-01      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21043E-01      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20494E-01      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20068E-01      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19560E-01      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19074E-01      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18608E-01      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18162E-01      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17733E-01      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17323E-01      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16928E-01      1500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16548E-01      1525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                   Page 4
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                    Laserfiche_Operation_max_conc_distance
   0.16184E-01      1550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15832E-01      1575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15494E-01      1600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15168E-01      1625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14854E-01      1650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14551E-01      1675.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14259E-01      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13976E-01      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13703E-01      1750.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13439E-01      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13184E-01      1800.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12937E-01      1825.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12698E-01      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12467E-01      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12242E-01      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12025E-01      1924.99      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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                    Laserfiche_Operation_max_conc_distance
   0.11814E-01      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11610E-01      1975.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11412E-01      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11219E-01      2025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11032E-01      2050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10850E-01      2075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10674E-01      2100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10502E-01      2125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10335E-01      2150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10173E-01      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10015E-01      2200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.98609E-02      2224.99      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.97112E-02      2250.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.95653E-02      2275.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.94231E-02      2300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.92846E-02      2325.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
                                   Page 6
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                    Laserfiche_Operation_max_conc_distance
   0.91497E-02      2350.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.90180E-02      2375.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.88896E-02      2399.99      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.87643E-02      2425.00      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.86421E-02      2449.99      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.85227E-02      2475.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.84063E-02      2500.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.82925E-02      2525.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.81814E-02      2550.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.80728E-02      2575.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.79667E-02      2600.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.78630E-02      2625.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.77616E-02      2650.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.76625E-02      2675.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.75655E-02      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.74706E-02      2725.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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                    Laserfiche_Operation_max_conc_distance
   0.73778E-02      2750.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.72869E-02      2775.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.71980E-02      2800.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.71110E-02      2824.99      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70257E-02      2850.00      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.69422E-02      2875.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68604E-02      2900.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67802E-02      2925.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67017E-02      2950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66247E-02      2975.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65493E-02      3000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64753E-02      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64028E-02      3050.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63316E-02      3074.99      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62618E-02      3100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61934E-02      3125.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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                    Laserfiche_Operation_max_conc_distance
   0.61262E-02      3150.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.60602E-02      3174.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59955E-02      3199.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59320E-02      3225.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58696E-02      3250.00      0.00  10.0        Winter       0-360   10011001
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0.3 Final Initial Study/Mitigated Negative Declaration

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Appendix B – Air Quality/Greenhouse Gas Technical Memorandum

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Appendix F – Revised Traffic Impact Analysis

Appendix G – Assembly Bill 52 Consultation Correspondence

Acronyms

AB	Assembly Bill
AQMP	Air Quality Management Plan
BMP	Best Management Practices
CA	California
CalEEMod	California Emissions Estimator Model®
CCN	District to Community 4-4-N Commercial
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2e	Carbon dioxide equivalent
dBA	A-weighted decibels
EIR	Environmental Impact Report
FHWA	Federal Highways Administration
GHG	greenhouse gas
gpd	gallons per day
HAZWOPER	Hazardous Waste Operations and Emergency Response
HR	High Rise
LBMC	Long Beach Municipal Code
LID	Low Impact Development
LLC	Limited Liability Corporation
LOS	level of service
LST	localized significance threshold
LUD	Land Use Designation
mgd	millions of gallons per day
MT	metric tons
NB	northbound
NOx	Oxides of Nitrogen
PM	particulate matter
PPV	Peak Particle Velocity
R-1-N	Single Family Residential District
R-4-N	Medium-density Multiple Residential
SCAQMD	South Coast Air Quality Management District
SB	southbound
SF	square foot
SO_x	oxides of sulfur
VdB	vibration decibels

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Environmental Checklist Form

1. **Project Title:** Laserfiche Office Project
2. **Lead Agency and address:** City of Long Beach Planning Bureau, 333 West Ocean Boulevard – 5th Floor, Long Beach, CA,90802
3. **Contact person and phone number:** Alexis Oropeza, Senior Planner (562) 570-6413
4. **Project Address:** 3443 Long Beach Boulevard and 210 East 35th Street. Previously addressed as 3435-3459 Long Beach Boulevard and 3432-3464 Locust Avenue
5. **Project Assessor Parcel Numbers:** 7141-004-019, 020, 027, 028, 029, 030, 031, 033, and 034
6. **Project sponsor's name and address:** 888-5 Partners, LLC, 3545 Long Beach Boulevard, Long Beach, CA 90807
7. **General Plan designation:** Land Use Designation (LUD) 1 (Single Family District) and LUD 8 (Major Commercial Corridor)
8. **Zoning:** Single-Family Residential (R-1-N) District and Community Commercial Automobile-Oriented District within the High-Rise Overlay (HR-4) District
9. **Description of project:** The project includes consolidation of 10 existing lots to a single lot for development of a new 102,848-square-foot office building and a separate 3-story parking garage with one rooftop level of parking.
10. **Surrounding land uses and setting: Briefly describe the project's surroundings:** Surrounding land uses include a multi-tenant office commercial building and parking lot with an inactive oil well to the north; a restaurant, several active oil wells, and above-ground storage tanks to the east; single-family residences, an active oil well, and an Arco Gas Station to the south; and single-family residences to the west.
11. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):** The City of Long Beach is the California Environmental Quality Act (CEQA) lead agency. Approvals by other public agencies, including the California Department of Conservation Division of Oil, Gas, and Geothermal Resources, may also be required to implement the project.
12. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?** The City initiated Assembly Bill (AB) 52 consultation by mailing letters via certified mail on July 17, 2018, to five Native American tribes that have requested project information under AB 52. To date, one request for consultation has been received from the Gabrieleno Band of Mission Indians.

Project Summary

A. Project Location

The project site is approximately 2.1 acres and consists of ten parcels most of which are now vacant, dirt-covered lots. The project site is located between Locust Avenue and Long Beach Boulevard, south of East 35th Street, and north of Interstate 405 (I-405) in the central portion of the City of Long Beach (Figure 1). A description of the project site and current uses is provided below:

- The five parcels along Locust Avenue comprise the western portion of the project site. These five parcels are currently vacant.
- The five parcels along Long Beach Boulevard comprise the eastern portion of the project site. These five parcels are currently vacant.

B. Project Description

The Laserfiche Office Project (project) consists of a new four-story office building and a separate three-story parking garage. Table 1 summarizes the key elements associated with the office building and parking garage, and Figure 2 depicts the project site plan. The project includes the following primary components:

- Office building – The project includes a new 102,848-square-foot office building that is up to 74 feet in height (maximum four stories) above ground level. The building includes offset terraces and mezzanine design features.
- Parking garage – The project includes a separate three-story parking garage with one rooftop level of parking with a total of 343 parking spaces. Access to the parking garage would occur from East 35th Street west of the existing alley entrance in the center of the project site.
- Offsite improvements – The project includes modification of the East 35th Street intersection from a two-way stop-controlled intersection to a signalized intersection, improving level of service (LOS) conditions.
- Entitlements and project approvals – The project requires the following entitlements and discretionary actions:
- Zone Change of five existing lots (assessor parcel numbers: 7141-004-033, 034, 019, and 020) fronting on Long Beach Boulevard from a Community Commercial Automobile-Oriented District to Community R-4-N Commercial (CCN) District
- Zone Change of five existing lots (assessor parcel numbers: 7141-004-027, 028, 029, 030, and 031) fronting on Locust Street from Single-Family Residential District (R-1-N) to CCN District in conjunction with a General Plan Amendment from LUD 1 to LUD 8
- Zoning Code Amendment to permit the averaging of setbacks for the proposed office building within the High-Rise Overlay (HR-4) District.
- Site plan review of a four-story office building up to 74 feet in height, containing 102,848 square feet of floor area, and a three-story parking garage with one rooftop level of parking with a total of 343 parking spaces.
- Tentative Tract Map to create a single lot for development, including vacation of a portion of the alley that runs north-to-south (between Long Beach Boulevard and Locust Street)
- The alley easement will be maintained.
- General Plan Conformity Finding for the vacation of the northern 250 feet of the unnamed alley, which runs north-to-south between East 35th Street and Wardlow Road

Figure 3 through Figure 5 depict the visual simulations prepared for the project site. Figure 6 through Figure 9 depict representative site photos taken in December 2018.

Table 1. Laserfiche Office Project – Building and Site Characteristics

Project Element	Office Building			Parking Garage		
Project Site Summary						
Project Address	3443 Long Beach Boulevard			210 E. 35th Street		
Lot Area	84,761 SF (for both office and parking)			84,761 SF (for both office and parking)		
Assessor Parcel Numbers	7141-004-019, 020, 033, 034			7141-004-027, 028, 029, 030, 031		
Zone	Existing: CCA with HR-4 Overlay / Proposed: CCN with HR-4			Existing: R-1-N / Proposed: CCN		
General Plan	Existing: LUD 8 (Major Commercial Corridor) / Proposed: LUD 8			Existing: LUD 1 (Single Family District) / Proposed: LUD 8		
Project Summary						
Proposed Stories	4 Stories			3 Stories with Rooftop Parking		
Proposed Building Height	74'-0" to top of parapet			38'-0" to top of parapet		
Setbacks	**Location**	**Required (per HR overlay)**	**Proposed***	**Location**	**Required (per CCN)**	**Proposed***
	Long Beach Avenue (front)	20'-0"	18-6" minimum (Level 1) / 21'-3" average setback**	Locust Avenue (front)	15'-0"	15'-0" minimum
	E. 35th Street	20'-0"	30'-0" (Level 1) / 20'-2" average setback**	E. 35th Street (side)	10'-0"	10'-0" minimum
	Adjacent property	Underlying (5'-0" per CCN)	37'-0" (to stair) / 25'-0" (to building face)	Adjacent property (residential rear yard)	20'-0"	20'-0" minimum
	Locust Avenue	Not Applicable	See parking	Adjacent property (residential side yard)	10'-0"	10'-0" minimum
				Long Beach Boulevard	Not Applicable	See Office

Table 1. Laserfiche Office Project – Building and Site Characteristics

Project Element	Office Building			Parking Garage		
Proposed Building Area	**Level**	**Building Area (SF)**	**Notes**	**Level**	**Building Area (SF)**	**Notes**
	1	24,072	6,300 SF Outdoor Patio	1	33,108	None
	2	25,609		2	33,108	
	3	27,261	410 SF Balcony	3	33,108	None
	4	25,906	1,500 SF Balcony	Roof	Not Applicable	33,108 SF Rooftop Parking
	Total	102,848		Total	99,324	None
Lot Coverage (Allowed / Proposed)	35.4% 30,018 SF / 84,761 SF)			39.1% (33,108 SF / 84,761 SF)		
Parking Summary						
Proposed Vehicular Spaces	See Parking Garage			343		
Proposed Bicycle Spaces	See Parking Garage			54		

Note:
** See plans and elevations for addition information (Appendix A)*
*** Zoning code amendment to high rise (HR) overlay district allowing the averaging of setbacks*
CCA: Community Commercial Automobile-Oriented

C. Figures

Figure 1. Regional Vicinity and Project Location

Note: Aerial image date December 16, 2017; site conditions depicted do not reflect current vacant status of lot.

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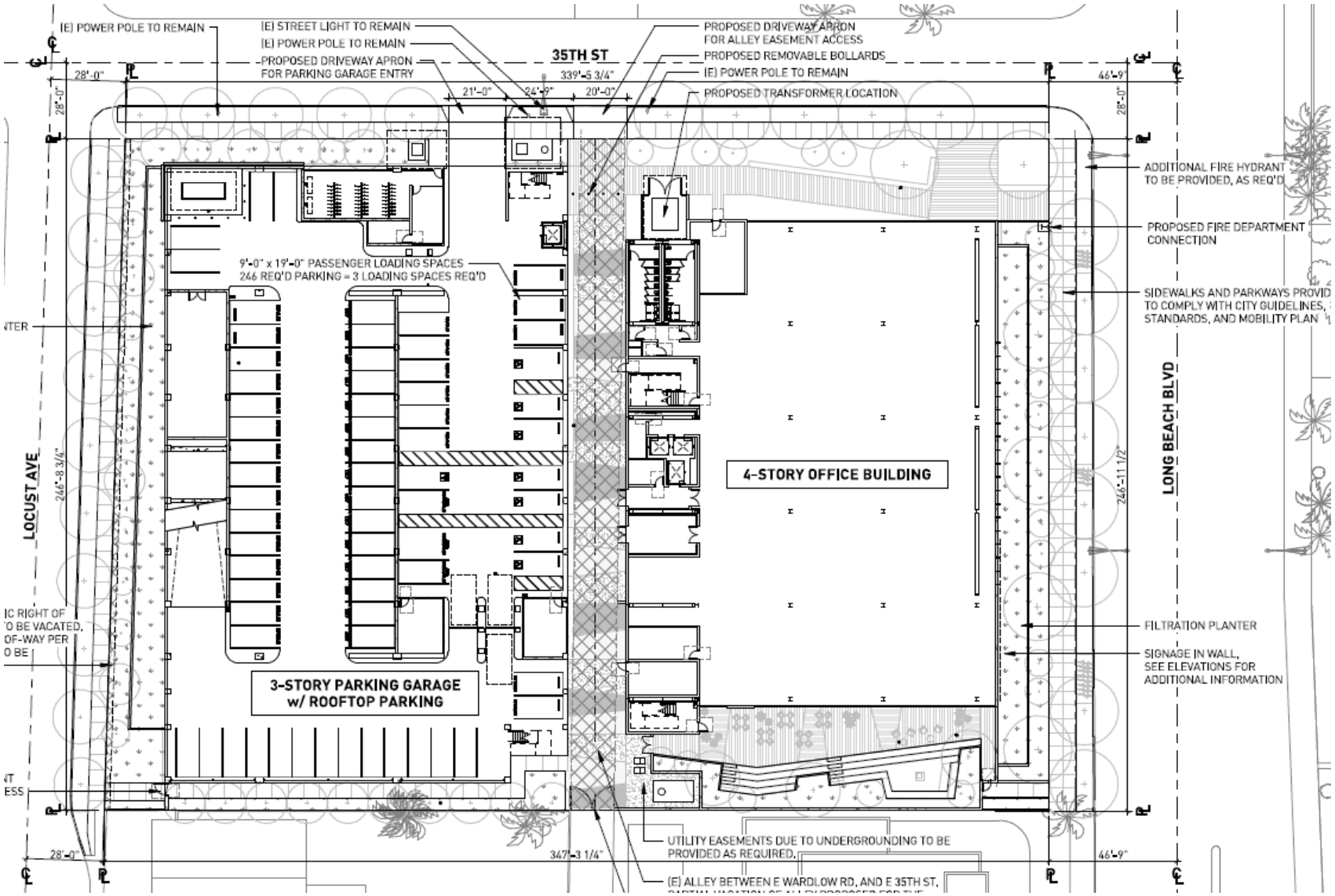
Figure 2. Project Site Plan



Source: 888-5 Partners, LLC 2018

Figure 3. Visual Simulation from Interstate 405

Source: 888-5 Partners, LLC 2018

Figure 4. Visual Simulation from Long Beach Boulevard (Northbound)

Source: 888-5 Partners, LLC 2018

Figure 5. Visual Simulation from Locust Avenue/East 35th Street (Sidewalk)

Source: 888-5 Partners, LLC 2018

Figure 6. Site Photo – East 35th Street and Locust Avenue – Northwest Corner Facing South

Figure 7. Site Photo – East 35th Street Facing South – Existing Alley

Figure 8. Site Photo – Southeast Parcels from Alley – Former Location of Rocks Cocktail Lounge

Figure 9. Site Photo – Northeast Parcels – View from Alley Facing East

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, which involves at least one impact that is a "Potentially Significant Impact" or “Less Than Significant With Mitigation Incorporated” as indicated by the checklist below and on the following page.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Geology /Soils
☐	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials	☐	Hydrology / Water Quality
☐	Land Use / Planning	☐	Mineral Resources	☒	Noise
☐	Population / Housing	☐	Public Services	☐	Recreation
☒	Transportation/Traffic	☒	Tribal Cultural Resources	☐	Utilities / Service Systems
☒	Mandatory Findings of Significance				

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the project would not have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project may have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.

☐ I find that the proposed project may have a "Potentially Significant Impact" or "Less Than Significant with Mitigation Incorporated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An EIR is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, that nothing further is required.

12/12/2018

Date:

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significance.

I. Aesthetics

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista or scenic highway?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Impact Analysis:

The project site is vacant with dirt-covered lots. Multi-tenant office commercial buildings and a parking lot with an active oil well are located to the north of the site, a restaurant, several active oil wells, and above-ground storage tanks to the east, single-family residences, an active oil well, and an Arco Gas Station to the south, and single-family residences to the west.

a) **No Impact** – The City of Long Beach (City) General Plan Scenic Routes Element (1975) identifies areas within the City that are considered scenic assets, of which there are none identified within the project area. According to the California Scenic Highway Mapping System for the Orange County area, there are no designated scenic highways in the project area (Caltrans 2018a).

b) **No Impact** – The project site is not within a state scenic highway (Caltrans 2018a). Additionally, the project would not damage any scenic resources, including trees, rock outcroppings or historic buildings as these resources are not present on the project site.

c) **Less Than Significant Impact** –The project includes a new four-story office building (with an additional below grade level) and a separate three-story parking garage (with an additional below grade level). The building character and scale is compatible with other existing office and commercial related uses located along Long Beach Boulevard, which includes three- and four-story structures in proximity to the project site. Also, the proposed landscape plan includes shrubs and trees that would provide screening to complement and enhance the visual quality of the parking structure as viewed from surrounding areas. Therefore, the project would not degrade the visual quality or substantially change the visual character of the project area.

d) **Less Than Significant Impact** – The site and its surroundings are located in an urbanized environment, with nighttime lighting. The project involves the construction of a new four-story office building and a separate three-story parking garage. Light and glare from the proposed building would be similar to the light and glare currently produced from the existing residential, commercial, and industrial/ manufacturing uses. The project would be required to comply with the lighting requirements for parking garages of the Long Beach Municipal Code (LBMC), including Section 21.41.259, which requires that all light introduced by the project to be directed and shielded. Therefore, the project would not create a new source of light or glare that would adversely affect day or nighttime view in the area.

II. Agricultural Resources

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Impact Analysis:

The project site is located in an urban setting and characterized as an "Urban and Built-Up Land" by the California Department of Conservation, Farmland Mapping and Monitoring Program (2016). Urban and Built-Up Land is characterized by structures with a building density of at least 1 unit to 1.5 acres, such as commercial structures.

a) **No Impact** –The project site is not utilized for agriculture production. No farmland is present that could be converted.

b) **No Impact** – The project site is not zoned for agriculture and is not under a Williamson Act (California Department of Conservation 2017) contract.

c) **No impact** – The project site is zoned for commercial use and therefore not zoned for forest use or timberland production (City of Long Beach 2018).

d) **No Impact** – See II. Agricultural Resources, Environmental Issue Area: b) and c).

e) **No Impact** – See II. Agricultural Resources, Environmental Issue Area: b) and c).

III. Air Quality

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Impact Analysis:

The following analysis is based on the *Laserfiche Air Quality/Greenhouse Gas Technical Memorandum* (HDR 2018) (Appendix B).

The project is located in the City of Long Beach, an area within the South Coast Air Basin, which includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Air quality regulation in the South Coast Air Basin is administered by South Coast Air Quality Management District (SCAQMD).

The *CEQA Air Quality Handbook* (SCAQMD 1993) was used to determine whether potential air quality impacts of the project are significant. Table 2 lists the daily thresholds for construction and operational emissions that have been established by the SCAQMD.

Table 2. South Coast Air Quality Management District Air Quality Thresholds of Significance

Pollutant	Construction (pounds/day)	Operation (pounds/day)
Oxides of Nitrogen (NO_X)	100	55
Volatile Organic Compounds	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
Oxides of Sulfur (SO_x)	150	150
CO	550	550

Source: SCAQMD 1993

SCAQMD has developed localized significance threshold (LST) methodology and mass rate look-up tables by source receptor area that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area. LSTs are derived based on the location of the activity (i.e., the source receptor area); the emission rates of NOx, CO, $PM_{2.5}$, and PM_{10}; the size of the project study area, and the distance to the nearest exposed individual. For this project, the appropriate source receptor area for the LST is the South Coastal Los Angeles County area (Area 4). The nearest sensitive receptors are the homes located immediately south and west of the project site. Table 3 lists the LST emission rates for a 2-acre site located within 25 meters of a sensitive use.

Table 3. South Coast Air Quality Management District Localized Significance Thresholds

Pollutant	Construction (pounds/day)	Operation (pounds/day)
NOx	131	131
PM_{10}	842	845
$PM_{2.5}$	7	2
CO	5	1

Source: SCAQMD 1993

Construction Impacts – Construction activities associated with implementation of the project have the potential to create air quality impacts through the use of heavy-duty construction equipment, construction worker vehicle trips, material delivery trips, and heavy-duty haul truck trips generated from construction activities. In addition, earthwork activities would result in fugitive dust emissions and paving operations and would also release Reactive Organic Gases (ROGs) from off-gassing. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources. Table 4 shows typical emissions related to construction phases.

Table 4. Construction Emissions

Phase	CO	ROGs	NOx	PM_{10}	$PM_{2.5}$
Site Preparation	12.3	1.8	21.5	1.3	0.8
Grading	10.6	2.1	22.8	4.1	2.5
Building Construction	20.5	3.2	23.7	2.4	1.4
Paving	12.6	1.3	12.6	0.9	0.7
Architectural Coating	2.6	18.4	1.9	0.3	0.2
Peak Day (pound/day)	**23.1**	**21.5**	**25.6**	**4.1**	**2.5**
SCAQMD Thresholds	**550**	**75**	**100**	**150**	**55**
Exceedance	**No**	**No**	**No**	**No**	**No**

Table 5 shows the construction-related emissions of CO, NOx, PM10, and PM2.5 compared to the LSTs for the South Coastal Los Angeles County area at a distance of 25 meters. As required by the SCAQMD's Localized Significance Threshold Methodology (2008), only the on-site construction emissions are included in Table 5.

Table 5. Summary of On-Site Construction Emissions, Localized Significance

Project Phase	Emission Rates (pounds/day)			
	CO	NOX	PM_{10}	$PM_{2.5}$
Site Preparation	11.9	21.5	1.2	0.8
Grading	10.2	22.7	3.9	2.5
Building Construction	15.3	18.9	1.1	1.0
Paving	11.9	12.6	0.7	0.7
Architectural Coating	1.8	1.8	0.1	0.1
Peak Day (pound/day)	**18.9**	**22.7**	**3.9**	**2.5**
SCAQMD Thresholds	**842**	**131**	**7**	**5**
Exceeds Daily SCAQMD Threshold?	**No**	**No**	**No**	**No**

As identified, the calculated emissions rates for the proposed on-site construction activities would not exceed the SCAQMD's LSTs; although fugitive dust emissions generated during construction may cause significant impacts if not properly managed, especially on sensitive receptors near the project site. Implementation of Mitigation Measure (MM) AQ-1 would reduce potential impacts to a level less than significant.

MM AQ-1: Fugitive Dust Control

During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the SCAQMD Rule 403. All material excavated or graded shall be sufficiently watered in sufficient quantities to prevent the generation of visible dust plumes. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on-site or off-site shall be securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust. These control techniques shall be indicated in project specifications.

In addition, where feasible, the following measures will be implemented to reduce construction emissions;

- Minimize land disturbance
- Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas
- Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes
- Cover trucks when hauling dirt
- Stabilize the surface of dirt piles if not removed immediately
- Limit vehicular paths on unpaved surfaces and stabilize any temporary roads
- Minimize unnecessary vehicular and machinery activities
- Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway
- Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities
- Ensure that all construction equipment is properly tuned and maintained
- Minimize idling time to 5 minutes, which saves fuel and reduces emissions
- Provide an operational water truck on-site at all times and use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas
- Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators

Operation Impacts

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The proposed project would have potential long-term operational air quality impacts from mobile source emissions associated with project-related vehicular trips and stationary source emissions from on-site energy consumption. Table 6 shows anticipated daily operational emissions.

Table 6. Daily Operational Emissions

Source	CO	NOx	ROG	SO_x	PM10	PM2.5
Area	0.05	0.00	2.36	0.00	0.00	0.00
Energy	0.24	0.29	0.03	0.00	0.02	0.02
Mobile	25.90	9.44	1.95	0.09	6.94	1.92
Total	26.19	9.73	4.35	0.09	6.97	1.94
SCAQMD Thresholds	**550**	**55**	**55**	**150**	**150**	**55**
Exceeds Daily SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Columns may not add up due to rounding.
~~SO_x: Oxides of Sulfur~~

Table 7 identifies the operational emissions of CO, NOX, PM10, and PM2.5 compared to the LSTs for the South Coastal L.A. County area at a distance of 25 m. As required by the SCAQMD's LST Methodology, only the on-site emissions are included in Table 7, which includes all of the area source and energy emissions, and five percent of the on-road emissions. As shown, the calculated emissions rates for the proposed on-site operational activities would not exceed the LSTs.

Table 7. Summary of On-Site Operation Emissions, Localized Significance

Project Phase	Emission Rates (pounds/day)			
	CO	NOx	PM_{10}	$PM_{2.5}$
Area	0.05	0.00	0.00	0.0
Energy	0.24	0.29	0.02	0.02
Mobile	1.30	0.47	0.35	0.10
Total (pounds/day)	**1.59**	**0.76**	**0.37**	**0.12**
SCAQMD Thresholds	**842**	**131**	**2**	**1**
Exceeds Daily SCAQMD Threshold?	**No**	**No**	**No**	**No**

Given the extremely low level of CO concentrations in the project area, project-related vehicular trips are not anticipated to result in the CO concentrations exceeding the state or federal CO standards. Because no CO hot spot would occur, there would be no project-related impacts on CO concentrations.

a) **Less Than Significant Impact** – An Air Quality Management Plan (AQMP) describes air pollution control strategies to be taken by a city/county or region classified as a nonattainment area. The main purpose of an AQMP is to bring the area into compliance with the requirements of federal and state air quality standards. CEQA requires that certain proposed projects be analyzed for consistency with the AQMP. For a project to be consistent with the 2016 AQMP, the pollutants emitted from the project should not exceed the SCAQMD daily threshold or cause a significant impact on air quality. However, if feasible mitigation measures are implemented and shown to reduce the impact level from significant to less than significant, the project is deemed consistent with the AQMP. The project's short-term construction and long-term operational emissions would not exceed the SCAQMD's significance thresholds and implementation of the project will not conflict with the 2016 AQMP.

b) **Less Than Significant with Mitigation Incorporated** – Air pollutant emissions would occur over the short term from construction activities, and would be generated by fugitive dust from site preparation and grading and emissions from equipment exhaust. Long-term regional emissions are associated with project-related vehicular trips and stationary source emissions. Implementation of MM AQ-1 would reduce potential significant impacts to a level less than significant.

c) **Less Than Significant with Mitigation Incorporated –** See III. Air Quality, Environmental Issue Area: b).

d) **Less Than Significant Impact –** Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics, particulate matter, and CO are of particular concern. The majority of the sensitive receptors adjacent to the project site are located to the west and south of the site, and consist of single-family residences. As discussed above, project emissions related to temporary construction and project operations would not exceed SCAQMD thresholds; therefore, sensitive receptors would not experience significant pollutant concentrations as a result of the project.

e) **Less Than Significant Impact –** Construction of the project could result in emission of odors from construction equipment and vehicles (e.g., diesel exhaust). It is anticipated that these odors would be short-term, limited in extent at any given time, and distributed throughout the project site throughout construction, and, therefore, would not affect a substantial number of individuals.

IV. Biological Resources

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Impact Analysis:

The project site currently consists of a number of vacant lots surrounded by urban development. Although the project site supports no native habitat, several ornamental trees provide suitable habitat.

a) **Less Than Significant with Mitigation Incorporated –** The ornamental trees located on the project site provide suitable nesting habitat for avian species protected by the Migratory Bird Species Act (MBTA) (16 **U.S.C.** 703-712). Direct disturbance of an active nest would be significant. With implementation of MM BIO-1, potential significant impacts would be reduced to a level less than significant. The project site does not provide suitable habitat for any other candidate, sensitive, or special-status species.

   MM BIO-1: Migratory Bird Treaty Act Covered Species

   If clearing and grubbing is required during the avian breeding season (February 15-August 15), the applicant shall retain the services of a qualified biologist to conduct a pre-construction nest survey (in suitable areas) for migratory birds within 10 days of construction. Should an active nest of any the Migratory Bird Species Act covered species occur within or adjacent to the project impact area, an appropriate buffer, as determined by a qualified biologist, shall be established around the nest and no construction shall occur within this area until a qualified biologist determines the nest is no longer active or the young have fledged.

b) **No Impact –** As noted above, the project site does not support native habitat. The project site does not contain any riparian habitat or sensitive vegetation communities identified in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife and U.S. Fish and Wildlife Service.

c) **No Impact –** As noted above, the project site is located in an urban area. The project site does not contain any natural hydrologic features or federally protected wetlands as defined by Section 404 of the Clean Water Act.

d) **No Impact –** The project site does not provide nursery habitat. The project is located in an urban area and is enclosed by fencing, therefore it provides no wildlife movement function. The redevelopment of the project site would not impact wildlife movement due to the surrounding conditions.

e) **No Impact –** The project site does not provide significant biological resource value identified for conservation and is not located within the Local Coastal Program Planning Areas (City of Long Beach 1973 and 1980, respectively). Therefore, the project is consistent with both the Conservation and Local Coastal Program elements of the General Plan. The project site does not support trees subject to City ordinance.

f) **No Impact –** There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other local, regional, or State habitat conservation plans in the City of Long Beach; therefore the project would not conflict with any such plans.

V. Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Impact Analysis:

The following analysis is based on review of geological maps and previous paleontological studies conducted in the area, the Department of Parks and Recreation 523A Form prepared by HDR in September 2018, Archival Research and a Pedestrian Archeological Survey performed by HDR in August 2018, and consultation with the South Central Coastal Information Center by HDR in August 2018.

a) **Less Than Significant with Mitigation Incorporated –** Southern California is home to a number of Native American tribes, with Gabrieleno groups having occupied the Long Beach area prior to the arrival of Europeans. The project area has been subject to extensive development related to both oil and gas extraction and urban growth over the last century.

The project site includes ten parcels which are now vacant, dirt-covered lots. The project site is bordered at the east by a major street (Long Beach Boulevard), at the north and west by side streets, and at the south by commercial and residential and commercial properties. Ground disturbance for the project would occur only in areas that have already been heavily disturbed by prior development and land use activities. Archival research indicates that the project area housed oil wells as part of the Long Beach Oil Field during the first half of the twentieth century. As recently as 2016, the project site was occupied by several commercial structures, oil derricks, above-ground storage tanks, and a single-family residence. Since 2016, however, all of these have been removed.

The South Central Coastal Information Center was consulted regarding the project. Its response indicated that the project area has not been previously surveyed and no resources have been recorded. A pedestrian archaeological survey of the project area was carried out by HDR on August 13, 2018. One resource older than 45 years, the Rocks Cocktail Lounge property located at 3445 Long Beach Boulevard, was identified during the survey. The property includes the lounge building, a small auxiliary office and an open parking area. The lounge is a single-story, 1,822-square-foot building constructed in 1958. It appears to originally have been a store, and has operated as a cocktail lounge since 1985. The auxiliary office was completed by 1963 and includes 330 sq. ft. The lounge property was evaluated and recommended ineligible for listing in the California Register of Historical Resources and the National Register of Historic Places. In accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, the property is not a historical resource for the purposes of CEQA. Thus, no historical resources or

archaeological resources were identified in the project area during survey. The lounge and ancillary building were demolished after the August 2018 pedestrian survey and the project site is currently vacant.

The inadvertent discovery of cultural materials or human remains during project-related ground-disturbing activities could result in significant impacts if not properly managed. Implementation of Mitigation Measures CULT-1 and CULT-2 are proposed to reduce potential impacts to a less than significant level.

MM CULT-1 Inadvertent Discovery of Cultural Materials

If cultural materials (e.g., chipped or ground stone, deposits of marine shell, historic debris, building foundations, or bone) are discovered during ground-disturbing activities, work within 20 meters (66 feet) of the discovery shall be stopped. Per the requirements of CEQA (Title 14 CCR 15064.5 [f]), and the City of Long Beach Planning Bureau, the Planning Bureau shall be notified of the discovery. Work near the archaeological find(s) shall not resume until a professional archaeologist who meets the criteria and qualifications as set forth by the *Secretary of the Interior's Standards and Guidelines* has evaluated the materials and offered recommendations for further action. Any identified cultural resources shall be recorded on Department of Parks and Recreation 523 historic resource recordation forms from the Office of Historic Preservation. If Native American archaeological remains are inadvertently encountered, representatives from local tribes engaged in consultation about the project shall be immediately notified, permitted to observe the findings in the field, and afforded the opportunity to make recommendations for avoiding, minimizing, or mitigating impacts from the proposed development.

MM CULT-2 Inadvertent Discovery of Human Remains

If human remains are discovered during project construction, work within 20 meters (66 feet) of the discovery location, and within any nearby area reasonably suspected to overlie human remains, shall cease (Public Resources Code, Section 7050.5) and the City of Long Beach Planning Bureau shall be notified of the discovery. The Los Angeles County Coroner shall be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws regarding the disposition of Native American burials, which fall within the jurisdiction of the California Native American Heritage Commission (Public Resources Code, Section 5097). In this case, the coroner will contact the California Native American Heritage Commission. The descendants or most likely descendants of the deceased will be contacted, and work shall not resume until they have made a recommendation to the landowner or person responsible for excavation work with direction regarding appropriate means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98.

b) **Less Than Significant with Mitigation Incorporated** – See V. Cultural Resources, Environmental Issue Area: a).

c) **No Impact** – Review of the California Geological Survey map of the region (Saucedo et al. 2016) and field observations indicate that sediment in the project site consists of artificial fill underlain by *Qom - Old shallow marine deposits on wave-cut surface, undivided (late to middle Pleistocene)*. These poorly consolidated marine deposits are composed mostly of fine- to coarse-grained sand and may locally carry common late Pleistocene molluscan fauna (Addicott 1964). Following Caltrans' (2018b) paleontological sensitivity scale, these units are considered to have low potential to contain significant vertebrate, significant invertebrate, or significant plant fossils. Rock units designated as having low potential generally do not require monitoring and mitigation. Based on review of previous studies (e.g., Delong 1939; Smith 2013), the project would not impact any unique paleontological resources or unique geologic features.

d) **Less Than Significant Impact** – There is no available evidence for the presence of human remains on the project site. Implementation of Mitigation Measure CULT-2, as identified in response Cultural Resources, Environmental Issue Area a). Mitigation Measure CUL-2 would address the inadvertent discovery of human remains during project-related ground-disturbing activities.

VI. Geology and Soils

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction and seiche/tsunami?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in the latest Uniform Building Code, creating substantial risk to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Impact Analysis:

Analysis based on review of existing data from California Geological Survey (CGS 1998).

ai) **No impact –** There are no known active or potentially active faults that have been mapped at the project site, and the site is not located within a State of California Earthquake Fault Zone (formerly known as an Alquist-Priolo Special Studies Zone). However, an Earthquake Fault Zone is located about 600 feet southwest of the project site. See additional discussion in aii, below.

aii) **Less Than Significant Impact** – Although the project site is outside of an Earthquake Fault Zone as described above, it is in relatively close proximity. During design, the project facilities would be designed consistent with the California Building Code.

aiii) **No impact –** CGS (1998) maps the area outside of liquefaction zones. This may be due to relatively dense soils. A site specific geotechnical investigation should be performed to confirm these findings.

aiv) **No impact –** CGS (1998) maps the area outside of a landslide zone. Due to the relatively flat topography of the existing and proposed conditions, landslide risk is considered low.

b) **No impact –** Due to the relatively flat topography described above and the lack of exposed slopes, the risk of substantial erosion or loss of topsoil is considered low.

c) **No impact –** Due to the lack of expected liquefaction at the project site, lateral spreading, subsidence, et cetera are not anticipated to occur at the project site.

d) **No impact** – CGS maps the area within an old alluvial geologic deposit (Qoa) generally described as dense to very dense sand and silty sand deposits that are not prone to expansion.

e) **No impact** – The old alluvial geologic deposits described above are not generally considered incapable of supporting alternative wastewater disposal systems.

VII. Greenhouse Gas Emissions

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have an adverse effect on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Impact Analysis:

The following analysis is based on the *Laserfiche Air Quality/Greenhouse Gas Technical Memorandum* (HDR 2018) (Appendix B).

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. The analysis of greenhouse gas (GHG) emissions, unlike air quality analysis, which is a 'per day' threshold, is an aggregate quantity requiring summation over the total estimated number of work days (i.e., the total number of days that any construction grading vehicle would have an engine running).

For the purposes of determining whether or not GHG emissions from affected projects are adverse, SCAQMD specifies that project emissions must include direct, indirect, and, to the extent information is available, life cycle emissions during construction and operation. Based on this direction, construction emissions were amortized over the life of the project (defined as 30 years) added to the operational emissions, and compared to the applicable GHG significance thresholds.

The SCAQMD's interim thresholds for commercial, residential, mixed use and industrial development projects are as follows:

- **Industrial projects** – 10,000 MT of carbon monoxide equivalent (CO_2e) per year
- **Residential, commercial, and mixed use projects** (including parks, warehouses, etc.) – 3,000 MT CO_2e per year

The project is a commercial office building. Thus, for purposes of this analysis, both direct and indirect GHG emissions from the project are discussed in the context of the 3,000 MT threshold levels.

Construction Emissions

Construction of the project would result in temporary emissions associated with diesel engine combustion from mass grading, and site preparation construction equipment will be assumed to occur for engines running at the correct fuel-to-air ratios (the ratio whereby complete combustion of the diesel fuel occurs). Construction-related GHG emissions include site preparation, excavation, and associated construction of the proposed office facilities.

The most recent version of the CalEEMod model (Version 2016.3.2) was used to calculate the construction emissions. Table 8 quantifies the expected GHG emissions from construction activities. As shown, construction of the proposed project would generate 495 MT of CO2e. Amortized over a 30-year period, the approximate life of the project, the yearly contribution to GHG from the construction of the build alternatives with an at-grade concourse would be 16.5 MT of CO_2e per year.

Table 8. Construction Greenhouse Gas Emissions

Year	Pollutant Emissions (Metric Tons/year)			
	CO_2	CH_4	N_2O	CO_2e
2019	493.0	0.07	0.00	494.8

Operational Emissions

The operational GHG emission estimates were also calculated using CalEEMod. The following activities associated with the project could directly or indirectly contribute to the generation of GHG emissions:

Gas, Electricity, and Water Use: Natural gas use results in the emissions of two GHGs: CH_4 (the major component of natural gas) and CO_2 from the combustion of natural gas. Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. Annual electricity emissions were estimated using the reported GHG emissions per kilowatt-hour for Southern California Edison; the supplier would provide electricity for the project.

Solid Waste Disposal: Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH_4 from the anaerobic decomposition of organic materials. CH_4 is 21 times more potent a GHG than CO_2. However, landfill CH_4 can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere.

Motor Vehicle Use: Transportation associated with the project would result in GHG emissions from the combustion of fossil fuels in vehicle trips. The project would result in GHG emissions through the vehicular traffic generated.

Combined Emissions: The GHG emission estimates presented in Table 9 show the emissions associated with the level of development at build-out. Appendix A of the *Laserfiche Air Quality/Greenhouse Gas Technical Memorandum* includes the annual CalEEMod calculations for GHG emissions. Table 9 shows that project operations would result in average annual emissions of 2,018 metric tons of CO_2e per year.

The total annual GHG emissions of 2,018 MT of CO_2e is less than the county's screening threshold of 3,000 MT of CO_2e per year. Therefore, the proposed project will have a less than significant individual and cumulative impact for GHG emissions.

Table 9. Annual Greenhouse Gas Emissions

Source	Pollutant Emissions (metric tons/year)					
	Bio-CO2	NBio-CO2	CO2	CH4	N2O	CO2e
Construction Emissions Amortized over 30 Years	0.0	16.4	16.4	0.002	0.00	16.5
Operational Emissions						
Area Sources	0.00	0.01	0.01	0.00	0.00	0.01
Energy Sources	0.00	730.7	730.7	0.03	0.00	733.4
Mobile Sources	0.00	1,078.0	1,078.0	0.06	0.00	1,079.4
Waste Sources	19.4	0.00	19.4	1.15	0.00	48.1
Water Usage	5.8	115.5	121.3	0.60	0.02	140.8
Total Operational Emissions	25.2	1,924.2	1,949.4	1.83	0.02	2,001.7
Total Project Emissions	25.2	1,940.6	1,965.8	1.83	0.02	2,018.2

Note: Columns may not add up due to rounding.

a) **Less Than Significant Impact** – Construction activities would generate greenhouse gas emissions from equipment use and transportation of workers travelling to and from the project site. The amount of greenhouse gas emissions that would be generated is not anticipated to be substantial due to the temporary nature of construction.

b) **Less Than Significant Impact** – See III. Air Quality, Environmental Issue Area: a).

VII. Hazards and Hazardous Materials

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

VII. Hazards and Hazardous Materials

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Impact Analysis:

The following analysis is based on the *Phase I Environmental Site Assessment* (SCS Engineers 2017a, SCS Engineers 2017b, SCS Engineering 2017c) (Appendix C) and the *Phase II Site Investigation Report* (SCS Engineers 2017a, SCS Engineering 2017b, SCS Engineering 2017c) (Appendix D).

a) **Less Than Significant Impact** – The project would involve the construction of an office building and a separate parking garage, which do not typically involve the use or storage of large quantities of hazardous materials. During construction, the use of potentially hazardous materials such as fuels, lubricants, and solvents would occur. However, the transport, use, and storage of hazardous materials would be conducted in accordance with all applicable state and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. Adherence to these requirements would reduce impacts to a less than significant level.

b) **Less Than Significant with Mitigation Incorporated** – The project site has historically been occupied by a residential dwelling and an oil derrick, along with numerous derricks in the vicinity as exploration of the Long Beach Oil Field was underway. However, based on the results of the *Phase II Site Investigation Report*, and the proposed commercial use of the site, there is no evidence of significant impact to the subsurface as a result of the current and historical oil-related activities. Further, the oil storage tanks, pumping units and associated piping on the site has been removed to comply with California Public Resource Code, Section 1766, in order to restore the site to the former natural state. However, additional impacted soil could still be encountered during construction, resulting in a potentially significant impact. Implementation of MM HAZ-1, would be reduce potentially significant impacts related to inadvertent discovery of impacted soil to a level less than significant.

MM HAZ-1 Soil Management Plan

Prior to construction, a General Construction Soil Management Plan shall be prepared that includes general provisions for how soils will be managed on site for the duration of construction. General soil management controls to be implemented by the contractor and the following topics shall be addressed within the Soil Management Plan:

- General worker health and safety procedures
- Encountering Potentially Impacted (Contaminated) Soil
- Disposal of Potentially Impacted Soil
- Dust control
- Management of soil stockpiles
- Traffic control
- Stormwater erosion control using best management practices

c) **Less Than Significant Impact** – The nearest schools are the Parkridge Private School and the Intellectual Virtues Academy of Long Beach, located approximately 0.25 miles north of the site. The project would not involve the use or storage of large quantities of hazardous materials. These types of uses do not typically emit or involve the handling of hazardous materials and therefore the project would not emit hazardous materials within 0.25 miles of a school.

d) **Less Than Significant Impact** – Pursuant to Government Code Section 65962.5, the following databases were checked for known hazardous materials contamination at the project site:

- Comprehensive Environmental Response, Compensation, and Liability Information System;
- Geotracker (leaking and underground storage tanks)
- Department of Toxic Substances Control's Site Mitigation and Brownfields Database

The CERLCIS database revealed no evidence of toxic substances at the project site.

Geotracker revealed that there are no leaking and underground storage tanks or hazardous waste deposits on the project site nor within 500 feet of the project site.

The Department of Toxic Substances Control Site Mitigation and Brownfields Database revealed no evidence of clean-up programs on the project site.

e) **No Impact** – The project site is located approximately 1.23 miles to the west of the Long Beach Airport. The site is not within the airport land use planning area for the airport. The proposed office building would have a maximum height of four-stories (74 feet) and the garage would have a maximum height of 38 feet. Neither the office building nor the parking garage would interfere with airport operations, alter air traffic patterns, or in any way conflict with established Federal Aviation Administration flight protection zones.

f) **No Impact** – There are no private airstrips located within two miles of the site, therefore no impact would occur.

g) **Less Than Significant Impact** – The project would not involve the development of structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project includes design features that would maintain access for emergency vehicles. The design features would be reviewed and approved by the Long Beach Fire Department to ensure that emergency access meets City standards.

h) **No Impact** – The city is an urbanized community and there are no wild lands in the project site vicinity (Los Angeles County Department of Regional Planning 2003). There would be no risk of exposing people or structures to a significant risk of loss, injury, or death involving wild land fires.

VIII. Hydrology and Water Quality

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	☐	☐	☐	☒

VIII. Hydrology and Water Quality

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

Impact Analysis:

a) **Less Than Significant with Mitigation Incorporated** – Construction related activities such as site preparation, grading and paving associated with the project would occur and could result in temporary soil erosion that could subsequently degrade water quality. This is considered a significant impact. MM HWQ-1 would reduce potentially significant impacts to a level less than significant.

> ***MM HWQ-1:*** National Pollutant Discharge Elimination System ***Compliance***
>
> The contractor shall comply with Chapter 18.95 the Long Beach Municipal Code (LBMC), the National Pollutant Discharge Elimination System as part of Section 402 of the Clean Water Act and Standard Urban Stormwater Mitigation Plan regulations. Provisions for construction-related erosion and sediment control Best Management Practices (BMP) shall be incorporated within the construction plans and specifications.
>
> Because the project would result in increased impervious surface area, the project is subject to compliance with the Low Impact Development (LID) Ordinance (Section 18.74.040 LBMC) and LID BMP Design Manual (Long Beach Development Services 2013). Section 18.74.040 of the LBMC, which requires runoff to be infiltrated, captured and reused, evapotranspired, and/or treated on-site through stormwater BMPs listed in the LID Best Management Practices Manual. The project is designed to meet these requirements, reducing potential water quality impacts during operation of the project. The project would not result in a long-term change in hydrology or water quality.

b) **Less Than Significant Impact** – The City of Long Beach Water Department would provide water service to the project site, and the project would not deplete groundwater supplies. The project would also be required to comply with current stormwater regulations (see VIII. Hydrology and Water Quality, Environmental Issue Area: a) and would not interfere with groundwater recharge.

c) **Less Than Significant Impact** – The project area is heavily urbanized area and the project site has been previously developed. The project is located within the Los Angeles River Watershed. As discussed in Hydrology and Water Quality, Environmental Issue Area: a), the project would be required to comply with the City's urban runoff regulations and design standards, which would reduce both the amount and concentration of pollutants from the sites runoff. The project would not impact the existing drainage patterns, exceed capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff that would degrade water quality.

d) **Less Than Significant Impac**t – See VIII. Hydrology and Water Quality, Environmental Issue Area: c).

e) **Less Than Significant Impact** – See VIII. Hydrology and Water Quality, Environmental Issue Area: c).

f) **Less Than Significant Impact** – See VIII. Hydrology and Water Quality, Environmental Issue Area: c).

g) **No Impact** - The project site is in Federal Emergency Management Agency Flood Zone X, Minimal Flood Hazard, which is outside the 100-year flood plain (FEMA 2018). The project would not place structures in the flood hazard area.

h) **No Impact** – See VIII. Hydrology and Watery Quality, g).

i) **No Impact** – There are three flood control dams that lie more than 30 miles upstream from the City, including Sepulveda Basin, Hansen Basin and Whittier Narrows Basin. In the unlikely event that these damns fail, the waters are expected to dissipate before reaching the City of Long Beach. (City of Long Beach 1975).The project would not expose people to a significant risk of flooding due to levee or dam failure.

j) **Less Than Significant Impact** – The project site is located approximately four miles from the coastline and one mile from the Los Angeles River. The project site is located in a low hazard area for tsunamis, seiches or mudflow and would not expose people to these risks (City of Long Beach 1975).

IX. Land Use and Planning

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural communities' conservation plan?	☐	☐	☐	☒

Impact Analysis:

The project site is within the Bixby Knolls community of the City of Long Beach and is not included in any specific planning elements of the City of Long Beach General Plan.

a) **No Impact** – The project site is located within the heavily urbanized community of Bixby Knolls. The project is an infill development on parcels that were previously developed. The project would not physically divide an established community.

b) **Less Than Significant Impact** – The project consists of the construction of a new four-story office building and a new three-story parking garage. The project would require discretionary actions, including Zone Change(s) of four existing lots from a Community Commercial Automobile-Oriented District to a CCN District; Single-Family Residential District (R-N-1) to CCN District in conjunction with a General Plan Amendment from LUD 1 to LUD 8; and a Zoning Code Amendment to permit averaging of setbacks for the office building within the High-Rise overlay (HR-4) District. The project is consistent with the zoning that currently exists immediately surrounding the site, and the Midtown Corridor District Specific Plan for Long Beach Boulevard, in general. The required entitlements are site-specific and an allowable discretionary action and would not conflict with applicable land use plans, policies or regulations; as they would not result in broader changes to the goals, policies and programs.

   The project site is not located in a coastal zone and is not subject to the Local Coastal Program.

c) **No Impact** – There are no existing habitat conservation plans in the project area and the project would not conflict with any habitat conservation plans.

X. Mineral Resources

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Impact Analysis:

a) **No Impact** – Oil is a mineral resources found on the project site. The project site has a history for oil production. The City of Long Beach is located in Oil and Gas District 1. The California Department of Conservation Division of Oil, Gas, and Geothermal Resources well finder (California Department of Conservation, 2018) indicates that the project site is located in the Long Beach Oil Field, and contains active oil well sites. However, the applicant has recently removed all oil storage tanks, pumping units, containment walls, and associated piping on the site to comply with California Public Resource Code Section 1766 and current Division of Oil, Gas and Geothermal Resources standards for plugging active wells. The project would not result in the loss of availability of a locally-important mineral. Additionally, the project site is located on the San Gabriel Production-Consumption Region, but is not in an area where significant Portland Cement Concrete-Grade aggregate resources are located (an MRZ-2 area) (Kohler 2010). There are no active mine operations in the project area (Division of Mine Reclamation 2016). Therefore, the project site does not contain significant mineral resources that would cause a loss of value to the region.

b) **No Impact** – See X, Mineral Resources, Environmental Issue Area: a).

XI. Noise

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Impact Analysis:

The following analysis is based on the *Laserfiche Noise and Vibration Technical Memorandum* (HDR 2018) (Appendix E). The analysis uses the 65 Lmax (A-weighted decibels [dBA]) (District One) nighttime threshold for determining impacts from on-site activities.

Noise

Noise is generally defined as unwanted sound. To account for the large pressure response range of the human ear, noise levels are presented on a logarithmic scale expressed in units of decibels (dB). Because the human ear does not perceive every frequency with equal loudness, sounds are often adjusted with a weighting filter. The A-weighted filter is applied to compensate for the frequency response of the human auditory system, known as dBA. An inherent property of the logarithmic decibel scale is that the sound pressure levels of two separate sources are not directly additive. For example, if a sound of 50 dBA is added to another sound of 50 dBA in the proximity, the result is a 3-decibel increase (or 53 dBA), not an arithmetic doubling to 100 dBA. Additional noise metrics are defined below.

- ***L_{eq}:*** the energy-averaged, A-weighted sound level over a specified time period, also conventionally expressed as dBA.
- ***L_{max}:*** The maximum A-weighted sound level as determined during a specified measurement period.
- ***L_{dn}:*** The L_{dn} is the averaged hourly A-weighted L_{eq} for a 24-hour period with a 10 dB penalty added to sound levels occurring during the evening hours (7:00 p.m. to 10:00 p.m.) to account for individuals' increased sensitivity to noise levels during nighttime hours.
- ***CNEL:*** Community noise equivalent level is another average A-weighted L_{eq} sound level measured over a 24-hour period, adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours; adding 5 dB to sound levels occurring during evening hours (7:00 p.m. to 10:00 p.m.) and 10 dB to noise levels occurring during nighttime hours (10:00 p.m. to 7:00 a.m.).

The human ear perceives changes in sound pressure level relative to changes in "loudness," scientific research demonstrates the following general relationships between sound level and human perception for two sound levels with the same or very similar frequency characteristics:

- One dBA is the practical limit of accuracy for sound measurement systems and corresponds to an approximate 10 percent variation in the sound pressure level. A 1 dBA increase or decrease is a non-perceptible change in sound.
- Three dBA increase or decrease is a doubling (or halving) of acoustic pressure level and it corresponds to the threshold of change in loudness perceptible in a laboratory environment. In practice, the average person is not able to distinguish a 3 dBA difference in environmental sound outdoors.
- Five dBA increase or decrease is described as a perceptible change in sound level and is a discernible change in an outdoor environment.
- Ten dBA increase or decrease is a tenfold increase or decrease in acoustic pressure level but is perceived as a doubling or halving in loudness (i.e., the average person will judge a 10 dBA change in sound level to be twice or half as loud).

A dBA increase or decrease is a doubling (or halving) of sound pressure level and it corresponds to the threshold of change in loudness perceptible in a laboratory environment. In practice, the average person is not able to distinguish a 3 dBA difference in environmental sound outdoors. An increase of 3 dBA is considered to be a significant off-site traffic noise impact requiring mitigation. The City has not established an exterior CNEL noise standard for office uses. Therefore, for the purposes of this analysis, a significant on-site noise impact (assumed to be generated from project-related traffic) would occur if the interior noise exceeds 45 dBA CNEL.

Certain land uses are considered more sensitive to noise than others. Examples of these types of land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The project site is located in an urban area. The closest off-site sensitive land uses are the existing residences located to the south and west of the project site across Locust Avenue at a distance of approximately 50 feet.

The LBMC (Chapter 8.80, Noise), establishes exterior and interior noise limits for the generation of sound within the City. The analysis uses the 65 dBA Lmax nighttime threshold for determining the impacts from on-site activities. The levels listed in the table are for events lasting 30 minutes within an hour. The maximum noise levels are 20 dB higher. Exterior noise limits are summarized in Table 10.

Table 10. Exterior Noise Limits

Receiving Land Use District	Time Period	Noise Level (dBA)	L_{max} (dBA)
District One	Night (10 p.m. to 7 a.m.)	45	65
	Day (7 a.m. to 10 p.m.)	50	70
District Two	Night (10 p.m. to 7 a.m.)	55	75
	Day (7 a.m. to 10 p.m.)	60	80
District Three	Any time	65	85
District Four	Any time	70	90
District Five	Regulated by other agencies and laws		

Note:
District One: Predominantly residential with other land use types also present
District Two: Predominantly commercial with other land use types also present
District Three and Four: Predominantly industrial with other land use types also present
District Five: Airports, freeways, and waterways regulated by other agencies
District Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts

The LBMC forbids any person within the City limits to create outdoor sound that causes the noise levels to exceed:

1) The noise standard for that land use district as specified in Table 10 for a cumulative period of more than 30 minutes in any hour; or
2) The noise standard plus 5 decibels for a cumulative period of more than 15 minutes in any hour; or
3) The noise standard plus 10 decibels for a cumulative period of more than 5 minutes in any hour; or
4) The noise standard plus 15 decibels for a cumulative period of more than 1 minute in any hour; or
5) The noise standard plus 20 decibels or the maximum measured ambient, for any period of time.

Interior noise limits are summarized in Table 11 below.

Table 11. Interior Noise Limits

Receiving Land Use District	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)
All	Residential	10 p.m. to 7 a.m. 7 a.m. to 10 p.m.	35 45
All	School	7 a.m. to 10 p.m. (while school is in session	45
Hospital, designated quiet zones, and noise sensitive zones		Any time	40

The LBMC forbids any person within the City limits to create indoor sound that causes the noise levels to exceed:

1) The noise standard for that land use district as specified in Table 11 for a cumulative period of more than 5 minutes in any hour; or
2) The noise standard plus 5 dB for a cumulative period of more than 1 minute in any hour; or
3) The noise standard plus 10 dB or the maximum measured ambient, for any period of time.

Construction Noise Limits

Section 8.80.202 of the LBMC restricts construction activities to weekdays between the hours of 7:00 a.m. and 7:00 p.m. and Saturdays, between 9:00 a.m. and 6:00 p.m., except for emergency work. Construction work on Sundays is prohibited unless the City's Noise Control Officer issues a permit. The permit may allow work on Sundays between 9:00 a.m. and 6:00 p.m.

Vibration

Vibration Annoyance. Ground-borne noise is the vibration of floors and walls that may cause rattling of items such as windows or dishes on shelves, or a rumbling noise. The rumbling is created by the motion of the room surfaces, which act like a giant loudspeaker. The Federal Transit Authority provides criteria for acceptable levels of ground-borne vibration based on the relative perception of a vibration event for vibration-sensitive land uses (Table 12).

Table 12. Groundborne Vibration and Noise Impact Criteria – Human Annoyance

Land Use Category	Max Lv (VdB)[1]	Description
Workshop	90	Distinctly felt vibration. Appropriate to workshops and non-sensitive areas.
Office	84	Felt vibration. Appropriate to offices and non-sensitive areas.
Residential – Daytime	78	Barely felt vibration. Adequate for computer equipment.
Residential – Nighttime	72	Vibration not felt, but ground-borne noise may be audible inside quiet rooms.

Note: [1] As measured in 1/3-octave bands of frequency over the frequency ranges of 8 to 80 Hz

Vibration-Related Structural Damage. The level at which ground-borne vibration is strong enough to cause structural damage has not been determined conclusively. The most conservative estimates are reflected in the Federal Transit Authority standards, shown in Table 13 below. According to the Caltrans' "Transportation Related Earthborne Vibration" (2002), extreme care must be taken when sustained pile driving occurs within 25 feet of any building; the threshold at which there is a risk of architectural damage to normal houses with plastered walls and ceilings is 0.2 in/sec.

Table 13. Groundborne Vibration and Noise Impact Criteria – Structural Damage

Building Category	PPV (in/sec)[1]	VdB
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Nonengineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Note: [1] Root Mean Square velocity calculated from vibration level (VdB) using the reference of one microinch/second
PPV: peak particle velocity

The primary existing noise sources in the project area are transportation facilities. Traffic on Long Beach Boulevard, East Wardlow Road, and I-405 is the dominant source contributing to area ambient noise levels. Noise from motor vehicles is generated by engine vibrations, the interaction between the tires and the road, and the exhaust system.

a) **Less Than Significant Impact** – The project consists of construction of an office building and a separate parking garage. Based on the noise analysis, the project-related traffic noise level increase would be 0.2 dBA or less for all analyzed roadway segments. Along East 35th Street the project-related traffic noise level increase

would be 3.9 dBA. Although this increase is greater than 3 dBA, the total traffic noise level would remain very low with the 60 dBA CNEL traffic noise contour contained within the roadway right-of- way. Therefore, the project would not result in exposure of persons to excessive noise levels.

The office building would be located at a distance of approximately 65 feet from the roadway centerline of Long Beach Boulevard. At this distance, the office building would be exposed to an exterior noise level of 70 dBA CNEL. Standard building construction provides 25 dBA of exterior to interior noise attenuation when windows are closed and 15 dBA of exterior to interior noise attenuation when windows are open (EPA 1978). All new construction requires some form of mechanical ventilation to ensure that proper indoor air quality is maintained even with all windows and doors closed. Therefore, with windows and doors closed, interior noise levels would meet the 45 dBA CNEL standard (i.e., 70 dBA - 25 dBA = 45 dBA). In addition, modern commercial building construction would likely provide more than the standard 25 dBA of noise attenuation. The project would not expose users of the office building to noise levels in excess of applicable noise standards.

Operation of the project would result in some acoustic emissions but would not result in vibration emissions. On-site stationary noise would include building heating, ventilation, and air conditioning systems and parking lot usage, including door closing/slamming, horn honking, and car alarms. Heating, ventilation, and air conditioning systems typically result in noise levels that average between 50 and 60 dBA Lmax at 50 feet from the equipment. Parking lots typically generate noise levels of up to 70 dBA Lmax at 50 feet. The closest sensitive receptors to the project site, the residential uses to the south, are located within 50 feet of the on-site stationary sources. In addition, there are existing residences located to the west at a distance of approximately 80 feet. The safety barriers and proposed landscaping along the edge of the parking structure would reduce the parking lot noise by 5-8 dB to 62 to 65 dBA Lmax. Therefore, the project's stationary source noise impacts would be lower than the City's nighttime threshold of 65 dBA Lmax.

a) **Less Than Significant with Mitigation Incorporated** – Project construction activities would involve the use of typical equipment that would result in ground-borne vibration that may be felt on properties in the vicinity of the project site. Table 14 identifies the vibration source amplitudes for construction equipment. As pile driving is not required, the highest reference Peak Particle Velocity (PPV) is 0.210 per second (in/sec) associated with on-site vibration rollers.

Table 14. Vibration Source Amplitudes for Construction Equipment

Equipment	PPV at 25 feet (in/sec)	Approximate Lv1 at 25 feet (VdB)
Pile Driver (impact) – upper range	1.518	112
Pile Driver (impact) – typical	0.644	104
Pile Drive (sonic) – upper range	0.734	105
Pile Drive (sonic) – typical	0.170	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall) – in soil	0.008	66
Hydromill (slurry wall) – in rock	0.017	75
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86

Table 14. Vibration Source Amplitudes for Construction Equipment

Equipment	PPV at 25 feet (in/sec)	Approximate Lv1 at 25 feet (VdB)
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Federal Transit Administration~~, Transit Noise and Vibration Impact Assessment Guidelines, May~~ 2006~~. Table 12-2~~

Note: [1] Root Mean Square velocity in decibels (VdB) re 1 micro-inch/second

Project construction activities associated with on-site vibration rollers, would affect the residential structures, located approximately 50 feet to the south of the project site. For sensitive receptors, distance attenuation would reduce the construction vibration levels from the proposed project to 0.074 in/sec. This level is much lower than the 0.12 in/sec threshold for buildings extremely susceptible to vibration damage (See Table 8 in Noise and Vibration Technical Memorandum). For consideration of annoyance or interference with vibration-sensitive activities, at 50 feet the roller vibration level would be reduced from 94 to 85 VdB. This level would exceed the Federal Transit Authority's daytime annoyance threshold of 78 VdB (See Table 7 in Noise and Vibration Technical Memorandum).

Mitigation Measure NOI-1 would reduce potentially significant impacts from construction vibration impacts to a level less than significant.

MM NOI-1: City Noise Construction Compliance

Construction shall be limited to the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and Saturdays, between 9:00 a.m. and 6:00 p.m., in accordance with City standards. No construction activities shall occur outside of these hours or on Sundays and federal holidays.

The following measures shall be implemented by the contractor to reduce potential construction noise impacts on nearby sensitive receptors.

- During all site excavation and grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- The project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

Operational noise is not predicted to result in an increase in received noise levels at nearby noise sensitive receptors.

b) **Less Than Significant Impact** – Noise associated with operation of the project would primarily be due an increase in traffic on local roadways. Project-related long-term vehicular trip increases are anticipated to be small when distributed to adjacent street segments. The Federal Highway Administration (FHWA) highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate highway traffic-related noise conditions along the roadway segments in the project vicinity. The typical vehicle mix for Southern California was used. Table 15 shows project traffic volumes.

Table 15. 2020 With Project Traffic Volumes

Roadway Segment	Average Daily Travel	Centerline to 70 CNEL (ft)	Centerline to 65 CNEL (ft)	Centerline to 60 CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Project Related Increase CNEL (dBA)
Long Beach Boulevard between NB 405 off-ramp and Wardlow Road	24,780	55.4	175.1	553.6	68.7	0.1
Long Beach Boulevard between Wardlow Road and 35th	26,460	59.1	186.9	591.2	69.0	0.2
Long Beach Boulevard between 35th and 36th	24,650	55.1	174.2	550.7	68.7	0.0
Long Beach Boulevard between 36th and Bixby	24,740	55.3	174.8	552.7	68.7	0.0
Wardlow Road between NB 405 on-ramp and Long Beach Boulevard	26,460	59.1	186.9	591.2	69.4	0.0
Wardlow Road east of Long Beach Boulevard	19,680	<50	139.0	439.7	68.1	0.0
35th west of Long Beach Boulevard	1,950	<50	<50	<50	54.0	3.9

As shown in Table 15, with the exception of the roadway segment along East 35th Street, the project-related traffic noise level increase would be 0.2 dBA or less for all analyzed roadway segments. Along East 35th Street the project-related traffic noise level increase would be 3.9 dBA. Although this increase is greater than 3 dBA the total traffic noise level would remain very low with the 60 dBA CNEL traffic noise contour contained within the roadway right-of-way.

On-site operations would also involve typical noise from office buildings and would be consistent with surrounding uses in the area. Therefore, development of the project would not create a substantial permanent increase in ambient noise levels above levels existing without the project.

c) **Less Than Significant with Mitigation Incorporated** – Project construction would generate a temporary increase in noise levels near the project site. The nearest sensitive receptors to the project site are the existing residences to the south and west of the project site. At its closest point, the construction activity would be located within 25 feet of these land uses. On average, the distance between the on-site construction activities and the sensitive receptors is approximately 100 feet. Table 16 shows project noise levels based on anticipated equipment to be used.

Table 16. Project Construction Noise Levels by Phase

Phase	Equipment[1]			Composite Sound Level[3]	
	Type	Quantity	L_{max} at 50 feet	L_{max} at 25 feet	L_{eq} at 100 feet
Site Preparation	Grader	1	85.0	91.0	78.0
	Scraper	1	83.6		
	Loader	1	79.1		
Grading	Grader	2	85.0	91.0	79.8
	Loader	1	79.1		
	Tractor	1	84.0		
Building Construction	Crane	1	80.6	91.0	78.9
	Forklift	2	74.7		
	Generator	1	80.6		
	Loader	1	79.1		
	Welder	3	74.0		
Paving	Mixer	1	78.8	90.0	77.5
	Paver	1	77.2		
	Paving Equipment	1	77.2		
	Roller	2	80.0		
	Tractor	1	84.0		
Architectural Coating	Compressor	1	77.7	83.7	67.7

Note:

1 *Equipment mix obtained from the CalEEMod emission calculations prepared for the Air Quality Assessment, July 2018.*

2 *Measured Lmax at given reference distance obtained from the FHWA Roadway Construction Noise Model, FHWA 2006.*

3 *Distance factor determined by the inverse square law defined as 6 dBA per doubling of distance as sound travels away from an idealized point.*

As shown in Table 16 above, during the loudest construction phase the maximum noise level is projected to be 95.6 dBA Lmax and the average level is projected to be 79.8 dBA Leq. Construction noise would attenuate with increased distance from the noise sources.

Project-related traffic noise during construction is not anticipated to be a significant source of noise because traffic levels would not double or cause traffic noise on adjacent roadways to increase by 3 dBA. The project's construction traffic on adjacent roadways would increase hourly traffic volumes by much less than a factor of two; therefore, the increase in construction related traffic noise would be less than 3 dBA.

Construction noise would cause an increase in existing ambient noise levels in the area and may cause temporary disturbance to nearby residents, causing a potentially significant impact. Mitigation Measure NOI-1 is proposed to reduce temporary construction noise impacts to a level less than significant.

d) **Less Than Significant Impact** – The project site is located approximately 1.5 miles west of the Long Beach Airport. Although located within 2 miles of the airport, based on the Long Beach Airport Influence Area, the project site would be located outside of the 65 dBA CNEL noise contour.

e) **Less Than Significant Impact** – See Noise, Environmental Issue Area: e).

XII. Population and Housing

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Impact Analysis:

a) **No Impact** – The project consists of an office building and separate parking garage. The project would not directly impact population growth through the increase in office and parking space. Additionally, the project would not indirectly add population since the facilities would service employees from the existing community.

b) **No Impact** – There is no existing housing on the project site and the project would not cause displacement or necessitate construction of replacement housing elsewhere.

c) **No Impact** – See XII. Population and Housing, Environmental Issue Area: b).

XIII. Public Services

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire Protection?	☐	☐	☒	☐
ii) Police Protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☒	☐
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☒	☐

Impact Analysis:

ai) **Less Than Significant Impact** – The project site is within the jurisdiction of the Long Beach Fire Department and the Los Angeles County Fire Department, which would provide fire protection, medical, paramedic and other first aid rescue services. The Long Beach Fire Department fire station nearest to the site is Fire Station 9, located at 3917 Long Beach Boulevard, approximately 0.66 miles from the site. The Los Angeles County Fire Department station nearest to the site is Station 60 located approximately 1.87 miles from the site at 2300 E 27th Street. Prior to project approval, the Long Beach Fire Department would be required to review and approve project activities. Applicable Fire Code requirements, California Fire Code and the Uniform Building Code requirements would be relevant to the proposed project. The project would not result affect community fire protection services or result in the need for construction of additional fire protection facilities.

aii) **Less Than Significant Impact** – Police protection is provided by the Long Beach Police Department (LBPD). The LBPD nearest to the project site is Long Beach Police North Division, located at 4891 Atlantic Ave, approximately 1.0 mile from the project site. Although the project would increase the number of buildings and individuals on site during daytime working hours, it would be an incremental increase that would not require additional police presence or demand on site.

aiii) **Less Than Significant Impact** – The project does not include any housing that would directly add students to the Long Beach Unified School District. The applicant would be required to pay school impact fees. Pursuant to Section 65995 (3)(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998).

aiv) **No Impact** – The project consists of building an office building and parking lot, which would not directly add residents to the area and increase the demand for parks.

av) **Less Than Significant Impact** – The closest public library branch is the Long Beach Public Library – Dana Branch, approximately 1.0 mile away, located at 3680 Atlantic Ave. The project would develop an office building, of which would not generate a demand for libraries.

XIV. Recreation

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Impact Analysis:

a) **No Impact** – The project includes development of an office building and a parking garage and would not result in a substantial increase demand for recreational uses.

b) **No Impact** – The project does not include recreational facilities and would not require the construction or expansion of recreational facilities.

XV. Transportation/Traffic

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Impact Analysis:

The following analysis is based on the *Laserfiche Office Project Traffic Impact Analysis* (Iteris 2018) (Appendix F).

Analysis of traffic operations are conducted according to the traffic impact analysis guidelines used by the City of Long Beach. At signalized intersections within the City's jurisdiction, LOS analysis is performed using Intersection Capacity Utilization operations methodology per the City's guidelines utilizing the Traffix software. In addition, analysis of traffic operations of intersections operated under Caltrans' jurisdiction and unsignalized intersections is conducted utilizing the Highway Capacity Manual (HCM) methodology, which uses vehicular delay criteria to determine LOS. A brief description of each level of service letter grade, as well as the range of delays or V/C ratios associated with each grade for signalized and unsignalized intersections is presented in Table 17.

Table 17. Intersection Level of Service Definitions – Intersection Capacity Utilization and Methodologies

Level of Service	Description	Volume to Capacity (V/C) Ratio	HCM Average Delay (sec) – Signalized Intersections	HCM Average Delay (sec) – Unsignalized Intersections
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0.000-.0600	≤ 10	≤ 10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>0.600-0.700	>10-20	>10-15
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>0.700-0.800	>20-35	>15-25
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	>0.800-0.900	>35-55	>25-35
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>0.900-1000	>55-80	>35-50
F	Forced flow. Represents jammed conditions. Backups form locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	>1.000	>80	>50

The City of Long Beach Traffic Impact Guidelines considers LOS D as the limit for acceptable intersection operations. Furthermore, an impact is considered significant when the resulting level-of service with the project traffic is E or F and project related traffic contributes a V/C of 0.02 or more to the critical movements. Note the local streets are not defined in the City's General Plan. Thus, significant impact criteria does not apply to local streets.

a) **Less Than Significant with Mitigation Incorporated** – During construction, construction-related traffic, such as deliveries of equipment and materials and construction worker traffic, would be generated. However, construction traffic would be temporary and would not substantially interfere with the existing traffic load and capacity of the street system.

During operation, the project would generate traffic. Based on the Laserfiche Office Project Traffic Impact Analysis, anticipated trips for an office complex are approximately 1,008 per day, with 120 new a.m. peak hour trips and 119 new p.m. peak hour trips, as displayed in Table 18.

Table 18. Proposed Project Trip Generation

Land Use (ITE Code)	Size	Trip Generation Rates							Trip Generation						
		AM Peak Hour			PM Peak Hour				AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	Daily	In	Out	Total	In	Out	Total	Daily
General Office (710)	103.456 tsf	86%	14%	1.16	16%	84%	1.15	9.74	103	17	120	19	100	119	1,008
								Total	**103**	**17**	**120**	**19**	**100**	**119**	**1,008**

The increase in the amount of trips due to the project has the potential to affect existing intersections and streets around the project site. As shown below in Table 19, a significant impact would occur at the Long Beach Boulevard/Wardlow Avenue intersection in the existing condition and opening year (2020) condition. Increases in average delay are anticipated at unsignalized intersections, though are not considered significantly impacted per the City's thresholds of significance. Mitigation Measure TR-1 would reduce impacts to a level less than significant.

MM TR-1: Long Beach Boulevard / Wardlow Avenue Left Turn Lane

The applicant shall add a second northbound left-turn lane along Long Beach Boulevard. Due to two northbound left turn lanes, the existing traffic signal shall also be modified from protected plus permitted to protected-only at the northbound approach.

Table 19. Existing Plus Project Intersection Peak Hour Level of Service

Intersection	Time Period	Existing Conditions LOS	Existing Plus Project Conditions LOS	Change V/C or Delay		Significant Impact?
				AM Peak Hour	PM Peak Hour	
Long Beach Boulevard/ Bixby Rd	AM	A	A	0.003	0.003	No
	PM	A	A			
Long Beach Boulevard/ 36th St	AM	B	B	0.007	0.006	No
	PM	B	B			
Long Beach Boulevard/ 35th St	AM	B	C	6.8	29.7	No**
	PM	C	F			
Crest Dr/ Wardlow Rd	AM	C	C	1.3	0.3	No
	PM	C	C			
I-405 NB On-ramp/Wardlow Rd	AM	A	A	0.0	0.0	No
	PM	A	A			
Long Beach Boulevard/Wardlow Rd	AM	E	E	0.023	0.020	Yes
	PM	E	E			

Table 19. Existing Plus Project Intersection Peak Hour Level of Service

Intersection	Time Period	Existing Conditions LOS	Existing Plus Project Conditions LOS	Change V/C or Delay		Significant Impact?
				AM Peak Hour	PM Peak Hour	
Crest Dr/I-405 SB Ramps	AM	F	F	-6.2	1.8	No
	PM	D	D			
Long Beach Boulevard/I-405 NB Off-ramp	AM	D	D	2.9	6.6	No
	PM	F	F			
Long Beach Boulevard/Crest Dr	AM	B	B	0.0	0.6	No
	PM	C	C			

Note:
*** Local streets are not defined in the City's General Plan. Thus, significant impact criteria does not apply to this location.*
V/C = Volume to Capacity Ratio, LOS = Level of Service
Dr: Drive; St: Street; Rd: Road; NB: northbound; SB: Southbound

b) **Less Than Significant Impact** – The Congestion Management Program (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (Metro), requiring that the traffic impact of individual development projects of potential regional significance be analyzed. The project's trip generation is forecast to be higher than 50 trips. However, based to the proposed project trip distribution, the dispersal of project traffic onto multiple routes would result in the actual number of trips expected to pass through these intersections at less than the 50 trip threshold. The proposed project is in close proximity to Interstate 405 (I-405). Based on incremental project trip generation estimates, the proposed project would not add more than 150 peak hour trips; therefore, a CMP mainline freeway segment analysis is not required. Therefore, the project would not conflict with an applicable congestion management program.

c) **No Impact** – As discussed in Section VIII, Hazards and Hazardous Materials and Section XII, Noise, the project site is located approximately 1.23 miles to the west of the Long Beach Airport. The proposed office building would have a maximum height of four-stories (74 feet) and the garage would have a maximum height of 38 feet. Neither the office building nor the parking garage would interfere with airport operations, alter air traffic patterns, or in any way conflict with established Federal Aviation Administration flight protection zones.

d) **No Impact** – See XV. Transportation/Traffic, Environmental Issue Area: c).

e) **Less Than Significant Impact** – The project includes partially closing the alley between Locust Avenue and Long Beach Boulevard for connectivity of the parking garage and office building. Emergency vehicle access would be maintained by installing a gate at each end of the closure. Therefore, the project would not impact emergency access.

Vehicular access to and from the project site would be provided by a driveway located on 35th Street. Since the only site access is through 35th Street, 100 percent of the calculated exiting volumes was assigned to eastbound approach at the Long Beach Boulevard/35th Street intersection. Given the heavy traffic conditions already on Long Beach Boulevard, additional left northbound turning movements could be hazardous, resulting in a potentially significant impact. A Manual on Uniform Traffic Control Devices signal warrant analyses was conducted for the Long Beach Boulevard/35th Street intersection, to determine if traffic volume forecasts are high enough to justify the installation of a traffic signal in opening year 2020. The traffic signal warrants 1 (eight-hour vehicular volume), 2 (four-hour vehicular volume) and 3 (peak hour) are met for opening year 2020 volumes at the Long Beach Boulevard/35th Street intersection. As part of the project features, the applicant will be responsible for the off-site improvement to modify 35th Street intersection from a stop-controlled intersection to a signalized intersection, allowing for an improved LOS during operation.

f) **Less Than Significant Impact** – The project site is currently served by public transportation and bicycle programs. Sidewalks and parkways along Locust Avenue, 35th Street and Long Beach Boulevard would be improved to comply with the City of Long Beach guidelines and standards. The project includes bicycle parking. The project site is located in between two bus stops and served by multiple bus lines, all of which would not be affected by implementation of the project. The project would not affect or conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities.

XVI. Tribal Cultural Resources

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

Impact Analysis:

The analysis provided in this section is based on the results of the Assembly Bill (AB) 52 consultation process completed in support of the project. Consultation letters and responses are included in Appendix G of this document.

a) **Less than Significant with Mitigation Incorporated** – AB 52 consultation letters were sent to five tribes based on a list provided by the Native American Heritage Commission. The letters were sent via both email and certified mail on July 17, 2018. Copies of the letters are on file with the City of Long Beach Planning Bureau. A response letter was received from Andrew Salas of the Gabrieleno Band of Mission Indians on July 23, 2018. The letter requested consultation under Public Resources Code Section 21080.3.1. The City of Long Beach responded by email on August 6, 13, and 15, 2018 requesting a meeting to initiate consultation. On November 30, 2018, Mr. Salas responded to the City by email and indicated the project site is within the ancestral land of the Gabrieleno Band of Mission Indians - Kizh Nation. Therefore the following mitigation measures would be required to reduce impacts on tribal cultural resources to a level less than significant.

MM TCR-1: Native American Monitoring

Prior to the issuance of any Grading Permit for the project, the City of Long Beach Development Services Department shall ensure that the construction contractor provide access for Native American monitoring during ground-disturbing activities. This provision shall be included on project plans and specifications. The site shall be made accessible to any Native American tribe requesting to be present, provided adequate notice is given to the construction contractor and that a construction safety hazard does not occur. The monitor(s) shall be approved by a local tribal representative and shall be present on-site during the construction phases that involve any ground disturbing activities. The monitor(s) shall possess Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the monitor(s) shall be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities pertinent to the provisions outlined in the CEQA, California Public Resources

Code Division 13, Section 21083.2 (a) through (k). Neither the City of Long Beach, project applicant, nor construction contractor shall be financially obligated for any monitoring activities. If evidence of any tribal cultural resources is found during ground-disturbing activities, the monitor(s) shall have the capacity to halt construction in the immediate vicinity of the find, in order to recover and/or determine the appropriate plan of recovery for the resource. The recovery process shall not unreasonably delay the construction process. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources.

MM TCR-2: Recovery Procedures

All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and Native American monitor. If the resources are Native American in origin, the tribe shall coordinate with the landowner regarding treatment and curation of these resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) shall be the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis.

b) **Less than Significant with Mitigation Incorporated** – See XVI. Tribal Cultural Resources, Environmental Issue Area: a).

XVII. Utilities and Service Systems

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Impact Analysis:

Wastewater from the project would discharge to a local sewer line for conveyance to~~Primarily,~~ the Los Angeles County Sanitation District (District) Joint Outfall C Unit 3E Trunk Sewer, located in Long Beach Boulevard south of Columbia Street. The District's 21-inch diameter trunk sewer has a capacity of 17.4 million gallons per day (mgd).~~,~~ The Joint Water Pollution Control Plant, located in the City of Carson, receives the City's wastewater. ~~Secondarily, the Long Beach Water Reclamation Plant of the Sanitation Districts of Los Angeles County also receives the City's wastewater.~~ The Joint Water Pollution Control Plant provides advanced primary and partial secondary treatment for 254.7~~60 million gallons of wastewater per day (~~mgd~~)~~, with a permitted capacity for 400 mgd of wastewater (Sanitation

Districts of Los Angeles County 2016). ~~The Long Beach Water Reclamation Plant provides primary, secondary, and tertiary treatment for 25 mgd of wastewater (Sanitation Districts of Los Angeles County 2016).~~

Generation rates based on the project uses is based on wastewater generation rates developed by the Sanitation Districts of Los Angeles County (2006). As shown in Table 20, the project would generate an estimated net total of ~~5,715~~20,570 gallons of wastewater per day (gpd). However, according to the District, the project would result in 17,893 gallons per day, after accounting for the recent demolition of existing structures on the project site.

Table 20. Generation Rates

Land Use	Quantity (SF)	Generation Factor	Amount (gpd)
Office Building	~~28,578~~102,848	200 gpd ~~al~~/1,000 sf	~~5,715~~ 20,570

Source: Sanitation Districts of Los Angeles County
Note:
gpd = gallons per day, SF = square feet
Parking lot uses are not included as a facility that would generate wastewater.

a) **Less Than Significant Impact** – As described above, the projects contribution to the wastewater capacity would be less than 0.1 percent. The increase associated with the percent of the available daily capacity, which would not cause the wastewater treatment limits to be exceeded.

b) **Less Than Significant Impact** – See XVII. Utilities and Service Systems, Environmental Issue Area a).

c) **Less Than Significant Impact** – As discussed in Section IX. Hydrology and Water Quality, the project would comply with State and Local storm water regulations and would not increase runoff, requiring new or expanded stormwater facilities.

d) **Less Than Significant Impact** – According to the City of Long Beach's 2015 Urban Water Management Plan, the total citywide water demand for 2015 was 55,206 acre feet and will increase by 3,900 acre feet in 2040. The City of Long Beach's 2015 Urban Water Management Plan identifies water supply as adequate to meet the needs of planned development in the City. The projects incremental contribution to the future demand would not result in the need for new sources of water supply.

e) **Less Than Significant Impact** – See XVII, Utilities and Service Systems, Environmental Issue Area a).

f) **Less Than Significant Impact** – The project involves construction of an office building. Approximately 120 individuals were assumed to be employed in the building. CalRecycle maintains a waste characterization list of waste generation rates. The most recent information for employee disposal rates indicates a waste generation rate of 11.4 pounds of waste per employee per day (CalRecycle 2016). Based on this rate, the 120 employees would generate approximately 1,368 pounds of solid waste per day. This increase would be within the capacity of Scholl Canyon Landfill, which currently receives 1,400 tons per day, with 2,000 tons per day of capacity available (City of Glendale 2014; FEMA 2008). Based on the disposal capacity of landfills serving the project site, this incremental increase in solid waste generation would not affect the availability of solid waste disposal capacity.

g) **No Impact** – Construction debris would be generated and disposed of in accordance with all federal, state and local requirements for solid waste disposal.

XVIII. Mandatory Findings of Significance

Environmental Issue Area:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Impact Analysis:

a) **Less Than Significant with Mitigation Incorporated** – As discussed in Section IV, Biological Resources, the project site is currently disturbed and located in an urban area. There is no native vegetation on the project site and no open body of water that serves as a natural habitat in which fish could exist. The non-native ornamental vegetation provides suitable nesting habitat for avian species protected by the Migratory Bird Species Act. Direct disturbance of an active nest would be significant. With implementation of MM BIO-1, potential significant impacts would be reduced to a level less than significant and fish or wildlife species would not drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. The project site does not provide suitable habitat for any other candidate, sensitive, or special-status species.

Additionally, as discussed in V. Cultural Resources ground disturbance for the project would occur only in areas that have already been heavily disturbed by prior development and land use activities. Archival research indicates that the project area housed oil wells as part of the Long Beach Oil Field during the first half of the twentieth century. As recently as 2016, the project site was occupied by several commercial structures, oil derricks, above-ground storage tanks, and a single-family residence. Since 2016, however, all of these have been removed. The inadvertent discovery of cultural materials or human remains during project-related ground-

disturbing activities could result in significant impacts if not properly managed. Implementation of MM CULT-1 and CULT-2 are proposed to reduce potential impacts to a less than significant level. Additionally, MM TCR-1 and MM TCR-2 would be implemented to reduce impacts on tribal cultural resources that may present in the project site. With the implementation of the mitigation measures, the project is not anticipated to eliminate important examples of the major periods of California history or prehistory.

b) **Less Than Significant Impact** – The project site is currently disturbed and is located in an urban area of the City of Long Beach. The proposed project would rely on and can be accommodated by the existing road system, public parks, public services, and utilities. As discussed in XVIII Mandatory Findings of Significance, Environmental Issue Area a), the proposed project would not result in or contribute to a significant biological or cultural impact. Based on the project description and the preceding analysis, impacts related to the proposed project are less than significant or can be reduced to less than significant levels with incorporation of mitigation measures. Therefore, the proposed project's contribution to any significant cumulative impacts would be less than cumulatively considerable.

c) **Less Than Significant with Mitigation Incorporated** – The project site is currently vacant located in an urbanized area. The proposed project involves the construction of a 102,848 sf office building and separate parking structure. The proposed project would require a zoning change, zoning code amendment. The proposed project would result in less than significant impacts with respect to air quality and GHG emissions with the implementation of MM AQ-1, which would minimize the effects of fugitive dust on nearby receptors. As stated previously, the project would also result in less than significant impacts with respect to biological, archeological, paleontological and tribal cultural resources with implementation of MM BIO-1, MM CULT-1, MM CULT-2, MM TCR-1, and MM TCR-2. Additionally the proposed project would result in less than significant impacts with respect to hazardous materials with implementation of MM HAZ-1 and would reduce impacts from noise with the implementation of MM NOI-1. Based on the project description and the preceding analysis, development of the proposed project would not cause substantial adverse effects to human beings because of all potentially significant impacts of the proposed project would be mitigated to a less than significant level.

Mitigation Monitoring and Reporting Program

Public Resources Code Section 21081.6 (enacted by the passage of AB 3180) mandates that the following requirements shall apply to all reporting or mitigation monitoring programs:

- The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a Responsible Agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the Lead Agency or a Responsible Agency, prepare and submit a proposed reporting or monitoring program.
- The Lead Agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based. A public agency shall provide the measures to mitigate or avoid significant effects on the environment that are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.
- Prior to the close of the public review period for a draft EIR or Mitigated Negative Declaration, a Responsible Agency, or a public agency having jurisdiction over natural resources affected by the project, shall either submit to the Lead Agency complete and detailed performance objectives for mitigation measures which would address the significant effects on the environment identified by the Responsible Agency or agency having jurisdiction over natural resources affected by the project, or refer the Lead Agency to appropriate, readily available guidelines or reference documents. Any mitigation measures submitted to a Lead Agency by a Responsible Agency or an agency having jurisdiction over natural resources affected by the project shall be limited to measures which mitigate impacts to resources that are subject to the statutory authority of, and definitions applicable to, that agency. Compliance or noncompliance by a Responsible Agency or agency having jurisdiction over natural resources affected by a project with that requirement shall not limit that authority of the Responsible Agency or agency having jurisdiction over natural resources affected by a project, or the authority of the Lead Agency, to approve, condition, or deny projects as provided by this division or any other provision of law.

Table 21. Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
Air Quality		
MM AQ-1: Fugitive Dust Control. During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the SCAQMD Rule 403. All material excavated or graded shall be sufficiently watered in sufficient quantities to prevent the generation of visible dust plumes. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on-site or off-site shall be securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust. These control techniques shall be indicated in project specifications.	Designee/Construction Contractor	During construction

Table 21. Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
In addition, where feasible, the following measures will be implemented to reduce construction emissions; • Minimize land disturbance • Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas • Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes • Cover trucks when hauling dirt • Stabilize the surface of dirt piles if not removed immediately • Limit vehicular paths on unpaved surfaces and stabilize any temporary roads • Minimize unnecessary vehicular and machinery activities • Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway • Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities • Ensure that all construction equipment is properly tuned and maintained • Minimize idling time to 5 minutes, which saves fuel and reduces emissions • Provide an operational water truck on-site at all times and use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas • Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators		
Biological Resources		
MM BIO-1: Migratory Bird Treaty Act Covered Species. If clearing and grubbing is required during the avian breeding season (February 15–August 15), the applicant shall retain the services of a qualified biologist to conduct a pre-construction nest survey (in suitable areas) for migratory birds within 10 days of construction. Should an active nest of any the Migratory Bird Species Act covered species occur within or adjacent to the project impact area, an appropriate buffer, as	City of Long Beach Director of Development Services, or designee/ Construction Contractor	Three (3) days prior to commencement of construction activities/February 15–August 15

Table 21. Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
determined by a qualified biologist, shall be established around the nest and no construction shall occur within this area until a qualified biologist determines the nest is no longer active or the young have fledged.		
Cultural Resources		
MM CULT-1: Inadvertent Discovery of Cultural Materials. If cultural materials (e.g., chipped or ground stone, deposits of marine shell, historic debris, building foundations, or bone) are discovered during ground-disturbing activities, work within 20 meters (66 feet) of the discovery shall be stopped. Per the requirements of CEQA (Title 14 CCR 15064.5 [f]), and the City of Long Beach Planning Bureau, the Planning Bureau shall be notified of the discovery. Work near the archaeological find(s) shall not resume until a professional archaeologist who meets the criteria and qualifications as set forth by the *Secretary of the Interior's Standards and Guidelines* has evaluated the materials and offered recommendations for further action. Any identified cultural resources shall be recorded on Department of Parks and Recreation 523 historic resource recordation forms from the Office of Historic Preservation. If Native American archaeological remains are inadvertently encountered, representatives from local tribes engaged in consultation about the project shall be immediately notified, permitted to observe the findings in the field, and afforded the opportunity to make recommendations for avoiding, minimizing, or mitigating impacts from the proposed development.	City of Long Beach Director of Development Services, or designee	In the event that archaeological resources are discovered during excavation, grading, or construction activities/ prior to commencement of grading activities
MM CULT-2: Inadvertent Discovery of Human Remains. If human remains are discovered during project construction, work within 20 meters (66 feet) of the discovery location, and within any nearby area reasonably suspected to overlie human remains, shall cease (Public Resources Code, Section 7050.5) and the City of Long Beach Planning Bureau shall be notified of the discovery. The Los Angeles County Coroner shall be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws regarding the disposition of Native American burials, which fall within the jurisdiction of the California Native American Heritage Commission (Public Resources Code, Section 5097). In this case, the coroner will contact the California Native American Heritage Commission. The descendants or most likely descendants of the deceased will be contacted, and work shall not resume until they have made a recommendation to the landowner or person responsible for excavation work with direction regarding appropriate means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98.	City of Long Beach Director of Development Services, or designee	Prior to the commencement of ground-disturbing activities /In the event that human remains are encountered on the project site
Hazards and Hazardous Materials		
MM HAZ-1. Soil Management Plan. Prior to construction, a General Construction Soil Management Plan shall be prepared that includes general provisions for how soils will be managed on site for the duration of construction. General soil	City of Long Beach Director of Development Services, or designee/	Prior to commencement of construction activities

Table 21. Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
management controls to be implemented by the contractor and the following topics shall be addressed within the Soil Management Plan: • General worker health and safety procedures • Encountering Potentially Impacted (Contaminated) Soil • Disposal of Potentially Impacted Soil • Dust control • Management of soil stockpiles • Traffic control • Stormwater erosion control using best management practices	Construction Contractor	
Hydrology and Water Quality		
MM HWQ-1: National Pollutant Discharge Elimination System Compliance. The contractor shall comply with Chapter 18.95 the Long Beach Municipal Code (LBMC), the National Pollutant Discharge Elimination System as part of Section 402 of the Clean Water Act and Standard Urban Stormwater Mitigation Plan regulations. Provisions for construction-related erosion and sediment control BMPs shall be incorporated within the construction plans and specifications. Because the project would result in increased impervious surface area, the project is subject to compliance with the Low Impact Development (LID) Ordinance (Section 18.74.040 LBMC) and LID BMP Design Manual (Long Beach Development Services 2013). Section 18.74.040 of the LBMC, which requires runoff to be infiltrated, captured and reused, evapotranspired, and/or treated on-site through stormwater BMPs listed in the LID Best Management Practices Manual. The project is designed to meet these requirements, reducing potential water quality impacts during operation of the project. The project would not result in a long-term change in hydrology or water quality.	City of Long Beach Director of Development Services, or designee/ Construction Contractor	Prior to commencement of construction activities
Noise		
MM NOI-1: City Noise Construction Compliance. Construction shall be limited to the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and Saturdays, between 9:00 a.m. and 6:00 p.m., in accordance with City standards. No construction activities shall occur outside of these hours or on Sundays and federal holidays. The following measures shall be implemented by the contractor to reduce potential construction noise impacts on nearby sensitive receptors. • During all site excavation and grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards. • The project contractor shall place all stationary construction equipment so that emitted noise is	City of Long Beach, its designee, or its contractor	Prior to issuance of building permits/during construction activities/ during all project area excavation and on-site grading

Table 21. Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
directed away from sensitive receptors nearest the project site. • The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.		
Transportation/Traffic		
MM TR-1: Long Beach Boulevard/Wardlow Avenue Left Turn Lane. The applicant shall add a second northbound left-turn lane along Long Beach Boulevard. Due to two northbound left turn lanes, the existing traffic signal shall also be modified from protected plus permitted to protected-only at the northbound approach.	City of Long Beach Director of Public Works, or designee	Prior to issuance of a certificate of occupancy
Tribal Cultural Resources		
MM TCR-1: Native American Monitoring. Prior to the issuance of any Grading Permit for the project, the City of Long Beach Development Services Department shall ensure that the construction contractor provide access for Native American monitoring during ground-disturbing activities. This provision shall be included on project plans and specifications. The site shall be made accessible to any Native American tribe requesting to be present, provided adequate notice is given to the construction contractor and that a construction safety hazard does not occur. The monitor(s) shall be approved by a local tribal representative and shall be present on-site during the construction phases that involve any ground disturbing activities. The monitor(s) shall possess Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the monitor(s) shall be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities pertinent to the provisions outlined in the CEQA, California Public Resources Code Division 13, Section 21083.2 (a) through (k). Neither the City of Long Beach, project applicant, nor construction contractor shall be financially obligated for any monitoring activities. If evidence of any tribal cultural resources is found during ground-disturbing activities, the monitor(s) shall have the capacity to halt construction in the immediate vicinity of the find, in order to recover and/or determine the appropriate plan of recovery for the resource. The recovery process shall not unreasonably delay the construction process. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources.	City of Long Beach Director of Development Services Department, or designee	Prior to commencement of any ground-disturbing activities/throughout ground-disturbing activities
MM TCR-2: Recovery Procedures. All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and Native American monitor. If the resources are Native American in origin, the tribe shall coordinate with the landowner regarding treatment and curation of these resources. The treatment plan established for the resources shall be in accordance with	City of Long Beach Director of Development Services Department, or designee	In the event that Tribal cultural resources are discovered during excavation, grading, or construction activities

Table 21. Mitigation and Monitoring Reporting Program

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) shall be the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis.		

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Appendix A – Laserfiche Site Plan Review

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Appendix B – Air Quality/Greenhouse Gas Technical Memorandum

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Appendix C – Phase I Environmental Site Assessment Report

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Appendix D – Phase II Environmental Site Assessment Report

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Appendix E – Noise Technical Memorandum

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Appendix F – Revised Traffic Impact Analysis

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Appendix G – Assembly Bill 52 Consultation Correspondence

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