

Tustin Street/Meats Avenue Intersection Right Turn Lane

Mitigated Negative Declaration No. ENV 1850-16



Lead Agency:

City of Orange

Community Development Department • Planning Division

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Prepared by:

J.H. Douglas & Associates

Date:

Adopted November 9, 2016

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TABLE OF CONTENTS

1.0	Introduction.....	10
2.0	Project Description	11
2.1	Project Location and Limits	11
2.2	Objectives and Need for the Project	11
2.3	Environmental Setting.....	11
2.4	Project Characteristics.....	12
3.0	Environmental Factors Potentially Affected and Environmental Determination	15
4.0	Initial Study Checklist and Analysis of Environmental Impacts	17
4.1	Aesthetics	17
4.2	Agriculture & Forestry Resources.....	19
4.3	Air Quality.....	20
4.4	Biological Resources.....	26
4.5	Cultural Resources	27
4.6	Geology and Soils	30
4.7	Greenhouse Gas Emissions	35
4.8	Hazards and Hazardous Materials	37
4.9	Hydrology and Water Quality	43
4.10	Land Use and Planning.....	46
4.11	Mineral Resources	49
4.12	Noise.....	50
4.13	Population and Housing.....	52
4.14	Public Services.....	53
4.15	Recreation.....	54
4.16	Transportation/Traffic.....	54
4.17	Utilities and Service Systems	56
4.18	Mandatory Findings of Significance.....	58
5.0	References.....	60
6.0	Mitigation Monitoring and Reporting Program.....	61

Appendices

- A. Air Quality / Greenhouse Gas Analysis
- B. Geotechnical Study
- C. Phase I Environmental Site Assessment
- D. Noise Analysis
- E. Traffic Analysis
- F. Comments and Responses

LIST OF EXHIBITS

1	Regional Vicinity	7
2	Project Plan	8
3	Aerial Photo.....	9

LIST OF TABLES

1	Existing Intersection Conditions	12
2	Proposed Intersection Conditions	13
3	Affected Private Properties	14

Project Title:

Tustin Street/Meats Avenue Intersection
Right Turn Lane

Reference Application Number(s):

MND No. ENV 1850-16

Lead Agency & Address:

City of Orange
Community Development Department
300 East Chapman Avenue
Orange, CA 92866

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Project Location:

The Tustin Street/Meats Avenue intersection is located approximately 800 feet west of the Costa Mesa Freeway (SR-55) in the City of Orange, County of Orange, California (Exhibit 1: *Regional Vicinity* and Exhibit 2: *Project Vicinity*). The proposed project limits consist of existing road right-of-way (“ROW”) and portions of adjacent privately-owned properties on the east side of Tustin Street from Meats Avenue extending approximately 260 feet south of its centerline and on the south side of Meats Avenue from Tustin Street to approximately 220 feet east of its centerline (see Exhibit 3: *Intersection Widening Project Limits*).

General Plan Designation:

Tustin Street - Augmented Primary Arterial
Highway
Meats Avenue - Secondary Arterial Highway
GC, General Commercial

Zoning Classification:

C-TR, Limited Business

Initial Study/Mitigated Negative Declaration Prepared By:

J.H. Douglas & Associates

Date of Public Hearing by the Orange City Council:

The Orange City Council will consider approval of project plans and adoption of Mitigated Negative Declaration No. 1850-16 at its regularly scheduled meeting on November 8, 2016 in the Orange City Council Chambers (located at 300 East Chapman Avenue, Orange, CA) at 6:00 p.m. or as soon thereafter as the matter may be heard.

Required Agency Permits, Approvals, and Coordination:

The City of Orange (City) is the lead agency under the California Environmental Quality Act (CEQA), and is responsible for planning, partially funding, and implementing the proposed project. This environmental document is intended to meet the requirements of CEQA for all discretionary actions taken by the City related to the proposed project including, but not limited to, approval of preliminary project plans, approval of agreements related to ROW acquisition or utility relocations, approval of final plans and specifications, authorization to bid the project for construction, and authorization to award the construction contract.

The Orange County Transportation Authority (OCTA) is potentially a “Responsible Agency” under CEQA. The proposed project is funded through the Intersection Capacity Enhancement (ICE) program. Prior to construction, the City will coordinate with OCTA regarding the temporary closure and/or relocation of impacted bus stops.

If over the course of project construction, onsite contamination is encountered, the Orange County Health Care Agency, the Regional Water Quality Control Board (RWQCB), and/or the City of Orange Fire Department may have regulatory authority and oversight over remediation efforts.

The potential Responsible Agencies listed above (and any others identified over the course of the project) may use this environmental document for CEQA compliance purposes if and when a discretionary decision is made related to the project.

Exhibit 1: Regional Vicinity

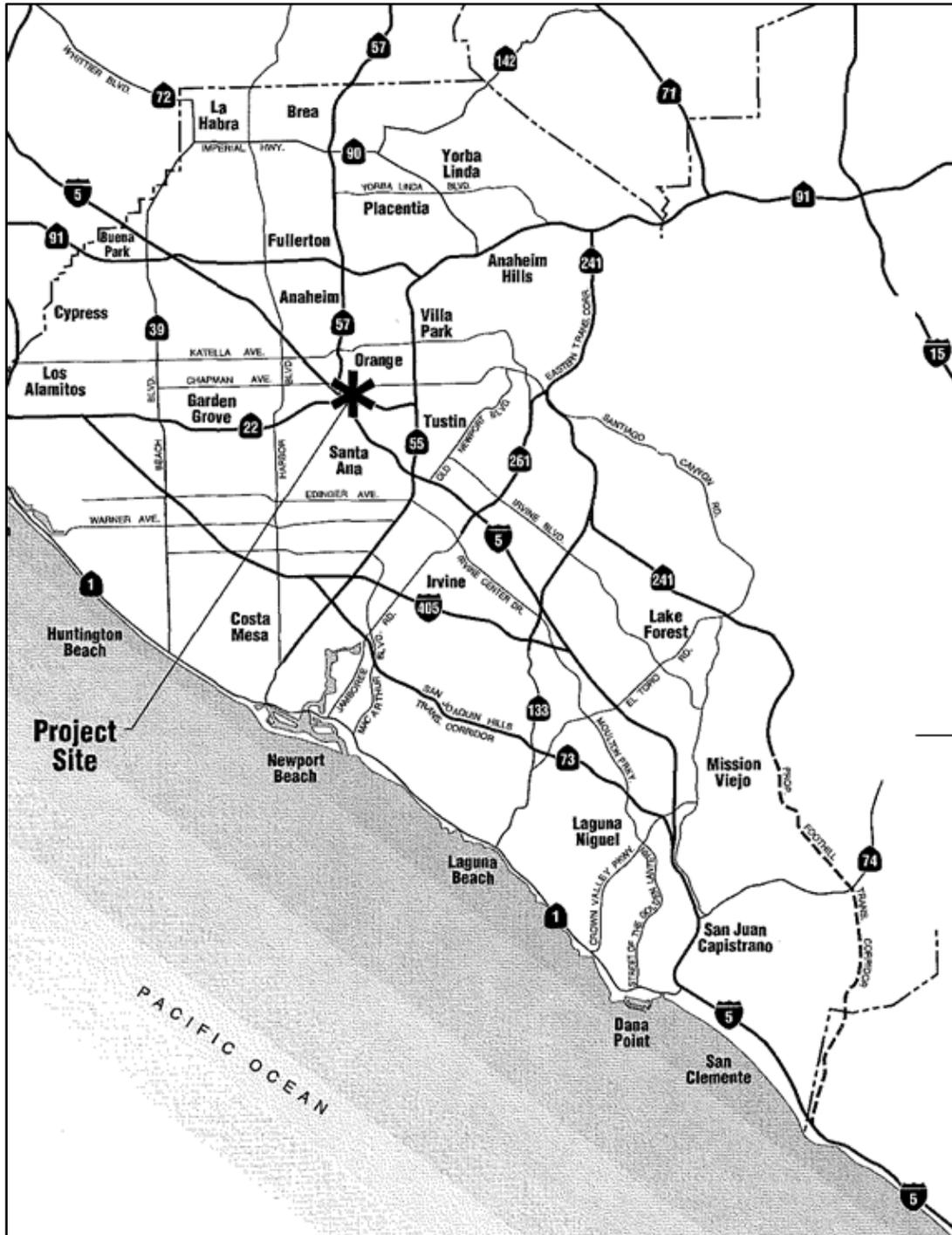


Exhibit 2: Project Plan

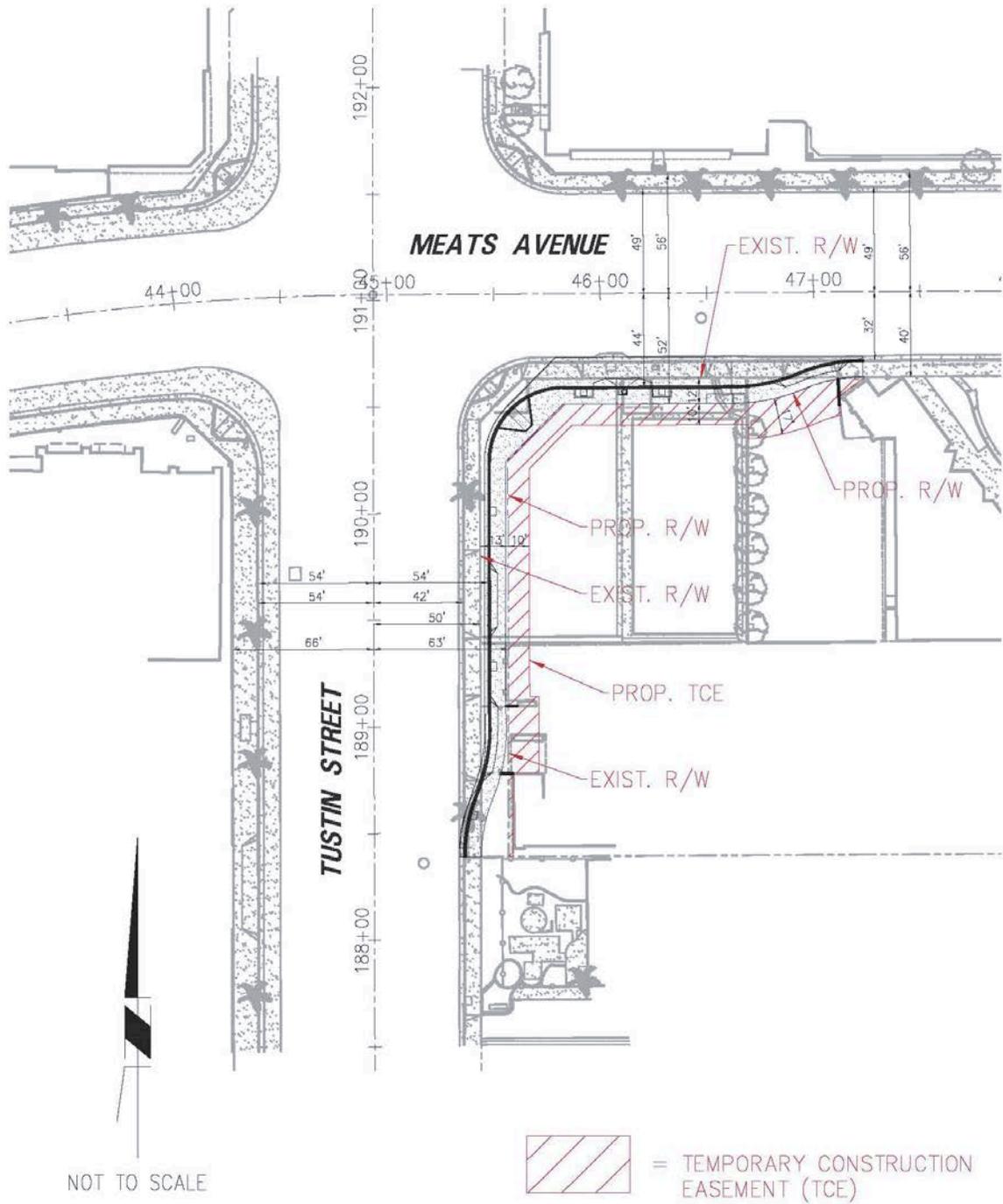
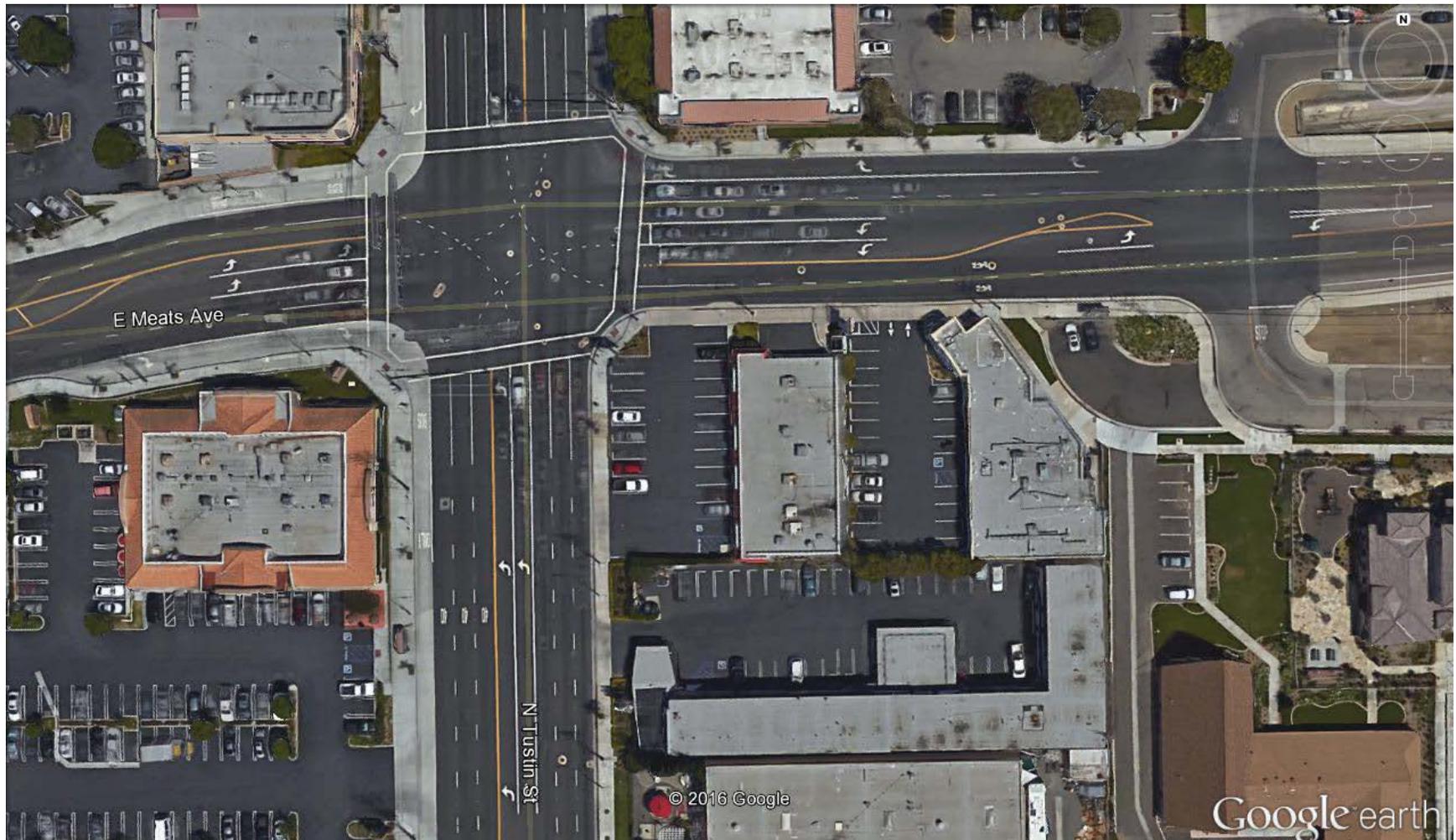


Exhibit 3: Aerial Photo



1.0. INTRODUCTION

The City of Orange Public Works Department is proposing to construct improvements to the Tustin Street/Meats Avenue intersection in the City of Orange, including a dedicated right turn lane from northbound Tustin Street to eastbound Meats Avenue and a bus turnout on Meats Avenue. The proposed project would require acquisition of right-of-way (ROW) from adjacent commercially zoned property (see Section 2.0, Project Description).

The City has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to address and disclose the potential environmental effects of project implementation in compliance with the California Environmental Quality Act of 1970 (CEQA) and the Guidelines for the Implementation of the California Environmental Quality Act (CEQA Guidelines), Section 15000 et seq.

Pursuant to CEQA, this IS/MND will be circulated for public review for 20 days, beginning **October 5, 2016** and ending on **October 24, 2016**. After the public review period, the Orange City Council will consider approval of this document and the proposed project at its regularly scheduled meeting on **November 8, 2016**. Written comments received during the public review period will be forwarded to the Orange City Council for consideration prior to making a decision on the proposed project. MND No. ENV 1850-16 will become final when the Orange City Council adopts the MND and approves the project, which completes the CEQA compliance process.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND LIMITS

The Tustin Street/Meats Avenue intersection is located approximately 800 feet west of the Costa Mesa Freeway (SR-55) in the City of Orange, County of Orange, California (Exhibit 1: *Regional Vicinity* and Exhibit 3: *Aerial Photo*). The proposed project limits consist of existing road right-of-way (“ROW”) and portions of adjacent privately-owned properties on the east side of Tustin Street from Meats Avenue extending approximately 260 feet south of its centerline and on the south side of Meats Avenue from Tustin Street to approximately 220 feet east of its centerline (Exhibit 2: *Project Plan*).

2.2 OBJECTIVE AND NEED FOR THE PROJECT

The Tustin Street/Meats Avenue intersection is one of the “critical intersections” identified in the City’s Master Plan of Streets and Highways. Due to a combination of limited roadway capacity, forecast high traffic and pedestrian volumes, and bus stops near the intersection, congestion and traffic delays are forecast to occur under future conditions. The other three legs of this intersection were recently widened; however, a dedicated right turn pocket from northbound Tustin Street to eastbound Meats Avenue is also needed in order to expedite traffic flow and reduce delay. The proposed project would complete the widening of Tustin Street at Meats Avenue to the ultimate intersection configuration envisioned in the City’s General Plan. Additionally, the proposed project would accommodate a bus turnout on Meats Avenue, thereby reducing existing conflicts between vehicles and stopped buses. Together, the additional right turn pocket and bus turnout would improve the intersection’s overall operations and reduce congestion and traffic delays.

2.3 ENVIRONMENTAL SETTING

Tustin Street is a major commercial corridor within an urbanized portion of the City. The proposed project area is bordered by commercial uses including restaurants, service commercial, retail shops and a motel. The General Plan land use designation and zoning district for adjacent properties are GC (General Commercial) and C-TR (Limited Business Tustin Redevelopment Project Area District).

The Master Plan of Streets and Highways (Figure CM-2 of the General Plan Circulation and Mobility Element) designates Tustin Street as a Major Arterial and Meats Avenue as a Secondary Arterial in the project vicinity. The Tustin Street/Meats Avenue intersection is identified as a “critical intersection” in the City’s Critical Intersection Program (Figure CM-2). Critical intersections are intersections with high existing or future anticipated traffic volumes, where improvements are needed to accommodate the volumes. A critical intersection deviates from the established standard intersection design by increasing the number of lanes at the intersection beyond what typically would be required, thereby reducing delay.

Table 1: *Existing Intersection Conditions* outlines the existing roadway configurations for Tustin Street and Meats Avenue. One bus stop is located in the project area on the south side of Meats

Avenue approximately 250 feet east of Tustin Street. There is an existing Class II (on street) bike lane on Meats Avenue in the project area and no curbside parking. Sidewalks, street trees/ornamental landscaping, water/electrical/telephone/cable utilities, drainage facilities, and street/traffic lights are present.

Table 1: Existing Intersection Conditions

Description	Tustin Street	Meats Avenue
Right-of-way (Feet)	South Leg: 116	East Leg: 96
Curb-to-Curb (Feet)	South Leg: 96	East Leg: 81
Lanes	South Leg: <ul style="list-style-type: none"> • 2 lanes NB/DLT • 3 lanes NB • 3 lanes SB 	East Leg: <ul style="list-style-type: none"> • 2 lanes EB • 2 lanes WB • 2 lanes WB/DLT • 1 lane WB/DRT
OCTA Bus Stops	South Leg, East Side: none	East Leg, South Side: Route No. 167
Notes: NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; LT = Left Turn; RT = Right Turn; DLT = Dedicated Left Turn; DRT = Dedicated Right Turn.		

2.4 PROJECT CHARACTERISTICS

The City of Orange Public Works Department is proposing to add a dedicated right turn pocket on northbound Tustin Street at Meats Avenue and add a bus bay on the south side of Meats Avenue as illustrated in Exhibit 2: *Project Plan*¹ and described in greater detail below.

2.4.1 Intersection Improvements

The City proposes widening the southeastern quadrant of the Tustin Street/Meats Avenue intersection in order to accommodate a dedicated right turn pocket on northbound Tustin Street at Meats Avenue. The proposed widening would require acquisition of ROW from adjacent commercially zoned properties (see Section 2.4.2 below) and would impact setbacks, landscaping, signage, parking, a commercial building, and public and private utilities. More specifically, the proposed project involves the following improvements, as summarized in Table 2:

- Tustin Street, South Leg, East Side: Widen ROW by approximately 13 feet for a distance of approximately 135 feet; and
- Meats Avenue, East Leg, South Side: Widen ROW by approximately 12 feet for a distance of 80 feet

¹ Full size plans are available for review at the City of Orange Community Development Department located at 300 East Chapman Avenue, Orange, California

Table 2: Proposed Intersection Conditions

Description	Tustin Street	Meats Avenue
Right-of-way (Feet)	South Leg: 129	East Leg: 108
Curb-to-Curb (Feet)	South Leg: 108	East Leg: 93
Lanes	South Leg: <ul style="list-style-type: none"> • 2 lanes NB/DLT • 3 lanes NB • 1 lane NB/DRT • 3 lanes SB 	East Leg: <ul style="list-style-type: none"> • 2 lanes EB • 2 lanes WB • 2 lanes WB/DLT • 1 lane WB/DRT
OCTA Bus Stops	South Leg, East Side: none	East Leg, South Side: Route No. 167 (turnout)
Notes: NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; LT = Left Turn; RT = Right Turn; DLT = Dedicated Left Turn; DRT = Dedicated Right Turn.		

In addition, relocating the existing bus stop and adding a bus turnout on the south side of Meats Avenue would remove existing conflicts occurring between vehicles and stopped buses in the travel way. Together, these intersection modifications would improve the overall operations at the intersection and reduce congestion and traffic delays.

Project construction would require the removal/reconstruction of private property improvements, as indicated on the proposed project plans; removal/relocation of existing asphalt/concrete, curb, gutter, sidewalk, driveway aprons, storm drain inlets, hydrants, street trees/ornamental landscaping, utility boxes, bus stop shelters/benches/signs, street/traffic lights, telephone lines, and utilities; minor leveling and compaction; asphalt/concrete work; restriping the roadway; and re-installing traffic signals, streetlights, street trees/landscaping, curb/ gutter, utilities, and other streetscape improvements at the new street boundary.

2.4.2 Private Property Impacts and ROW Acquisition

Project implementation would affect three privately-owned commercial properties as described in Table 3: *Affected Private Properties* and illustrated in Exhibit 2, *Project Plan*. ROW acquisitions are conducted through a voluntary purchase system, based on an appraisal of the fair market value of the portion of the property acquired. If a voluntary purchase is unable to be completed, the City Council will make a decision whether or not to authorize condemnation of the needed ROW.

2.4.3 Operational Impacts During Construction

The proposed intersection widening project would involve a total disturbance area of approximately 8,000 square feet (0.18 acres) during construction. The proposed project would require localized excavation to depths ranging from approximately 1.5 feet for new curb/gutters to approximately 6 feet for storm drains, with no extensive excavation substantially beyond previous grading limits.

Table 3: Affected Private Properties

Assessor Parcel No.	Address	Existing Use	Permanent Acquisition	Temporary Construction Easement	Impacted Improvements
372-131-03	2085 N. Tustin St.	Villa Park Motel	None	531 sq. ft.	Remove & reconstruct driveway; sign relocation; landscaping; parking area pavement
372-131-01	2091 N. Tustin St.	Eye Max, Pizza Hut, Smoke Shop, Mattress Retail Store	3,090 sq. ft.	1,025 sq. ft.	Full building demolition; remove & reconstruct one driveway; remove landscaping
372-131-02	1736 E. Meats Ave.	Baskin-Robbins, hair salon, massage, jewelry	304 sq. ft.	225 sq. ft.	Remove & reconstruct driveway; sign relocation; landscaping; parking area pavement
Note: Acquisition areas are approximate and may be refined during final design and ROW negotiations					

During construction, the City would close traffic lanes on Tustin Street and Meats Avenue to allow construction activities within the road ROW. The City would maintain a minimum of two traffic lanes in each direction on Tustin Street, and one lane in each direction on Meats Avenue, within the construction area, so that reasonable two way traffic flow through the intersection is maintained at all times. In addition, the City's construction contractor would implement traffic control measures to ensure traffic safety during construction. Traffic control measures would be identified in a Traffic Control Plan prepared by a California-licensed Traffic Engineer (retained by the City's construction contractor) and approved by the City Engineer or designee in consultation with the City's Traffic Engineer prior to the start of construction. Traffic control may involve signage, use of delineators, flashing arrow signs, and/or temporary lane lines at the discretion of the City Engineer. All traffic control would conform to the provisions of the Work Area Traffic Control Handbook.

During construction, driveways and access to the adjacent commercial properties on Tustin Street and Meats Avenue would be affected. The City would ensure that access to private properties within the construction area is maintained at all times. In addition, the City would require the construction contractor to provide notification to all businesses and property owners adjacent to the construction area at least seven calendar days prior to beginning construction work. The City would also provide signage indicating that businesses in the area are open during construction. These measures are included in standard City contract specifications Sections 7-10, 7-10.1 and 7-10.3.

Construction of the intersection widening is anticipated to take approximately four months and is anticipated to begin in 2018.

3.0. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND ENVIRONMENTAL DETERMINATION

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a ‘Potentially Significant Impact’ as indicated by the checklist on the following pages.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forest Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION:

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a ‘Potentially Significant Impact’ or ‘Potentially Significant Unless Mitigated’ Impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- 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, nothing further is required.

Signature

Date

Printed name

Title

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 Section XVII, 'Earlier Analyses,' 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.

4.0. INITIAL STUDY CHECKLIST AND ANALYSIS OF ENVIRONMENTAL IMPACTS

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

Impact Analysis

4.1.a A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public.² Portions of Orange are characterized by scenic vistas including undeveloped hillsides, ridgelines, and open space areas that provide a unifying visual backdrop to the urban environment; refer to City of Orange General Plan Program Environmental Impact Report (GPEIR) Figure 5.1-1, Viewscape Corridors. The proposed project involves improvements to an existing intersection along a roadway located in a fully developed area of the City. The topography in this area is generally level and does not support far reaching views. The proposed project site is not located within the viewshed of a scenic vista; refer to GPEIR Figure 5.1-1. Therefore, project implementation would not have an adverse effect on a scenic vista.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.1.b The proposed project site is located approximately 800 feet west of the SR-55 Freeway. SR-55 within the City of Orange is not a State-designated scenic highway. Moreover, there are no scenic resources (such as trees, rock outcroppings, or historic buildings) within or adjacent to the construction area. Project implementation would not damage scenic resources within a state scenic highway.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.1.c The existing visual character of the proposed project site and its surroundings is dominated by urban development (paved roadways, landscaping, parking lots, and commercial uses). The surrounding area is characterized by urban development. There are no unique or scenic visual resources on the proposed project site or in its vicinity.

2 GPEIR Page 5.1-1

A project is generally considered to have a significant visual/aesthetic impact if the project substantially changes the character of the project site such that it becomes visually incompatible or visually unexpected when viewed in the context of its surroundings. These changes would degrade the existing visual character or quality of the site and its surroundings. The proposed intersection widening improvements would not result in an appreciable change to the visual character of the site or its surroundings in that they would represent a continuation of urban uses. The proposed project would require removal of a small amount of ornamental landscaping in the private property proposed to be acquired. Two street trees would be removed and replaced in the sidewalk area. In consideration of the developed context, project implementation would not substantially degrade the existing visual character or quality of the site and its surroundings and impacts would be less than significant.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.1.d The proposed project would not produce any new light, glare, or shadows that are not already created by existing streetlights in the project area. The proposed project would involve the replacement and relocation of existing streetlights to the new street boundary, ultimately moving the streetlights closer to commercial uses. These streetlights are typical of commercial corridors in urban areas and are low-level light sources that by their nature are not capable of generating a substantial amount of light or glare. In addition, the proposed project would conform to OMC Section 17.12.030, *Lighting*, which prohibits the creation of glare or nuisance lighting. Lighting would be shielded and light fixtures would be directed downward toward the roadway. Therefore, relocation of existing streetlights would not introduce new substantial sources of light and glare into the proposed project area that could adversely affect day or nighttime views.

Existing Regulations

Nuisance lighting is regulated by OMC Section 17.12.030, which states:

A. Lighting on any premises shall be directed controlled, screened or shaded in such a manner as not to shine directly on surrounding premises.

B. On any commercial or industrial zoned property, glare from exterior lighting shall be shielded screened or oriented so as not to be seen from any point beyond the exterior of the property and so the source shall not be a nuisance to any point beyond the exterior boundaries of the property or cause illumination in residential districts in excess of 0.5 foot-candles. Flickering or intrinsically bright sources of illumination shall be controlled so as not to be a nuisance in residential districts.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.2 AGRICULTURE AND FOREST RESOURCES – Would the project:				
<i>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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board.</i>				
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)				X
d) Result in loss of forest land or conversion of forest land to non-forest use?				X
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?				X

Impact Analysis

4.2.a The proposed project site involves an existing roadway and commercial uses on the adjacent properties. The site is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.³ Therefore, project implementation would not convert farmland to non-agricultural use.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.2.b The Williamson Act, passed by the California legislature in 1965, provides a tax incentive for retaining land in open space and agricultural uses. The proposed project site is not zoned for agriculture or within a Williamson Act contract; therefore, project implementation would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.2.c The proposed project site is not zoned for forest land or timberland; therefore, project implementation would not conflict with existing zoning for such uses.

Significance Determination: No Impact.

³ GPEIR Figure 5.2-1, *Important Farmland*

<p>Mitigation Measures: None Required. Significance After Mitigation: No Impact.</p> <p>4.2.d The proposed project site does not contain forest land or timberland; therefore, project implementation would not result in the loss of forest land or conversion of forest land to non-forest use.</p> <p>Significance Determination: No Impact. Mitigation Measures: None Required. Significance After Mitigation: No Impact.</p> <p>4.2.e The proposed project site involves existing roadways and adjacent commercial uses, and there are no agricultural uses located in the proposed project’s immediate vicinity. Therefore, project implementation would not involve changes in the existing environment that could result in conversion of farmland to non-agricultural use.</p> <p>Significance Determination: No Impact. Mitigation Measures: None Required. Significance After Mitigation: No Impact.</p>
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	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.3 AIR QUALITY – Would the project:				
<i>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.</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
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)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?		X		
e) Create objectionable odors affecting a substantial number of people?			X	

The following analysis is based on the technical air quality study prepared by Giroux & Associates dated April 6, 2016 (Appendix A).

Impact Analysis

4.3.a The proposed project site is located within the City of Orange, which is part of the South Coast Air Basin (SCAB). The SCAB includes all of Orange County, and portions of Los Angeles, Riverside

and San Bernardino counties. Air quality within the SCAB is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Consistency with the Air Quality Management Plan for the South Coast Air Basin (AQMP) means that a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the Federal and State air quality standards. Per the SCAQMD CEQA Air Quality Handbook, there are two main indicators of a project's consistency with the applicable Air Quality Management Plan: 1) Whether the project would increase the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and 2) Whether the project would exceed the AQMP's assumptions for 2030 or yearly increments based on the year of project buildout and phasing.

As indicated in the operational analysis provided in Response 4.3.b below, the proposed project would not exceed the SCAQMD's thresholds of significance. Therefore, the proposed project would be consistent with the AQMP in this regard. The proposed project involves adding a right turn pocket and bus turnout at the Tustin Street/Meats Avenue intersection; refer to Section 2.0, *Project Description*. The proposed project would be consistent with the City's General Plan and zoning, and would not induce substantial population growth either directly or indirectly (e.g., though construction of housing or infrastructure extensions into previously undeveloped areas); refer to Response 4.12.b. Therefore, the proposed project would be consistent with the AQMP growth forecasts and a less than significant impact would occur in this regard.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.3.b A project may have a significant impact where project-related emissions would exceed federal, State, or regional standards or thresholds, or where project-related emissions would substantially contribute to an existing or projected air quality violation.

Construction Emissions

The expected type and duration of demolition and construction activities associated with the proposed project are described in Table 6 of Appendix A. Air pollutant emissions would occur from construction equipment exhaust; fugitive dust from demolition and site grading; exhaust and particulate emissions from trucks hauling demolition debris; soil and materials to and from the proposed project site and from vehicles driven to and from the proposed project site by construction workers; and volatile emissions from painting and asphalt paving operations.

A project with daily emission rates below the SCAQMD air quality significance thresholds (shown below and in Table 7 of Appendix A) would have a less than significant effect on regional air quality. Emissions for all pollutant categories are estimated to be substantially less than SCAQMD thresholds; therefore, project-related impacts would be less than significant.

**Construction Activity Emissions
Maximum Daily Emissions (pounds/day)**

Maximal Construction Emissions	ROG	NO_x	CO	SO₂	PM-10	PM-2.5
Unmitigated	2.8	27.5	22.5	0.0	7.5	4.2
Mitigated	2.8	27.5	22.5	0.0	3.9	2.5
SCAQMD Thresholds	75	100	550	150	150	55
Source: Appendix A, Table 7						

Asbestos Pursuant to guidance issued by the Governor’s Office of Planning and Research, State Clearinghouse, lead agencies are encouraged to analyze potential impacts related to naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed.

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties of the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. According to the Department of Conservation Division of Mines and Geology, A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report (dated August 2000), the proposed project is not located in an area where NOA is likely to be present. Therefore, impacts would be less than significant.

Operational Emissions

Unlike land development projects (e.g., residential, commercial, or retail developments), the proposed project would not directly create vehicle trips and therefore would not generate pollutants over existing conditions. Therefore, long-term air emissions modeling is not necessary in this case. Instead, transportation-related projects typically result in the redistribution of traffic along the local and regional transportation networks or changes in level of service (LOS) on roadways. In cases where traffic volume and/or delay increase, localized impacts of carbon monoxide concentrations can be a concern. The SCAQMD requires a carbon monoxide (CO) screening to determine if the potential exists for air quality impacts.

The proposed project would not increase the vehicular volume or redistribute traffic along the roadways; it is intended to improve the roadway’s overall operations and reduce congestion and traffic delays. Thus, the potential for localized CO impacts would be reduced compared to existing conditions and a less than significant impact would result from long-term operations.

Existing Regulations

The contractor must comply with SCAQMD Rule 403, which requires that all active operations utilize the applicable best available control measures included in Table 1 of Rule 403, such as covering any stockpiles with a tarp and watering disturbed soil to minimize dust emissions.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.3.c The SCAQMD neither recommends quantified analysis of cumulative construction emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction impacts. However, if individual development projects generate emissions that exceed the SCAQMD recommended daily thresholds, project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the SCAB is in non-attainment.

With respect to the proposed project's construction-period air quality emissions and cumulative SCAB-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the Air Quality Management Plan pursuant to Federal Clean Air Act mandates. As such, the proposed project would comply with SCAQMD Rule 403 requirements and implement all feasible mitigation measures. Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted Air Quality Management Plan emissions control measures) would also be imposed on construction projects throughout the SCAB, which would include cumulative projects slated for construction at the same time as the project.

As described in Response 4.3.b, the proposed project's emissions would not exceed SCAQMD thresholds, thus project impacts would be less than significant. Compliance with SCAQMD rules and regulations, as well as implementation of Mitigation Measure 4.3-1, would further reduce the proposed project's construction-related impacts. Thus, based on SCAQMD guidance, it can be reasonably inferred that project-related construction emissions, in combination with those from other projects in the area, would not substantially deteriorate the local air quality. Thus, a less than significant impact would occur.

Cumulative Long-Term Emissions

The SCAQMD neither recommends quantified analysis of cumulative operational emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative operational impacts. However, if individual development projects generate operational emissions that exceed the SCAQMD recommended daily thresholds, project-specific impacts would also cause a cumulative considerable increase in emissions for those pollutants for which the SCAB is in non-attainment. The proposed project would not generate traffic trips or directly emit long-term air pollutants. Therefore, the proposed project would not contribute to the long-term air pollutant environment. As a result, the proposed project would not contribute to a cumulatively considerable net increase of any nonattainment criteria pollutant, and cumulative operational impacts would be less than significant.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

4.3.d Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Localized Significance Thresholds

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was approved by SCAQMD's Mobile Source Committee in 2005. Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this proposed project the nearest sensitive use is the motel adjacent to the proposed project site, therefore the most conservative 25-meter distance was modeled.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to 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 and distance to the nearest sensitive receptor.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, and the following table is used to determine the maximum daily disturbed-acreage for comparison to LSTs.

Maximum Daily Disturbed Acreage per Equipment Type

Equipment Type	Acres/8-hr-day
Crawler Tractor	0.5
Graders	0.5
Rubber Tired Dozers	0.5
Scrapers	1

Based on this table, the proposed project would result in 1.0 disturbed daily acre during peak construction grading activity:

(1 grader x 0.5 + 1 dozer x 0.5 = 1.0 acre disturbed).

The following thresholds and emissions are therefore determined (pounds per day):

LST and Project Emissions (pounds/day)

LST 1.0 acres/25 meters Central Orange County	CO	NO_x	PM-10	PM-2.5
Max Allowable On-Site Emissions	485	81	4	3
Max Project Emissions				
Unmitigated	23	28	7	4
Mitigated	23	28	4	3

LSTs were compared to the maximum daily construction activities. As seen above, emissions would meet the LST for construction thresholds with the application of the Mitigation Measure 4.3-1.

Significance Determination: Less Than Significant Impact With Mitigation.

Mitigation Measures:

MM 4.3-1 During construction, the Contractor shall implement the following fugitive dust emissions reduction measures:

- Replace groundcover in disturbed areas as quickly as possible.
- Apply water to disturbed areas every three hours (three times per day) including prior to and during any earth movement.
- All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain 2 feet of freeboard.
- Prohibit pavement demolition and grading, and cover storage piles during high wind conditions (i.e. when wind speeds exceed 25 miles per hour).

These measures shall be included in project plans and specifications, and enforced by the City's construction inspector.

Significance After Mitigation: Less Than Significant Impact.

4.3.e According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors. Therefore, impacts would be less than significant.

Construction activities associated with the proposed project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature, disperse over distance, and cease upon project completion. Any impacts to existing adjacent land uses would be short-term and low intensity, and are concluded to be less than significant.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.4 BIOLOGICAL RESOURCES –				
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?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
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?				X
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 native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?				X
<p>Impact Analysis</p> <p>4.4.a to 4.4.d The proposed project involves improvements to existing roadways located within an urbanized commercial area that has been fully developed. The proposed project site contains one commercial building, paved roadways, sidewalks, ornamental landscaping, signage, lighting, and utilities. The onsite vegetation consists of exotic ornamental shrubs and groundcover located in landscaped areas of commercially developed properties along Tustin Street and Meats Avenue. Based on a field inspection of the proposed project site by the City’s CEQA consultant on April 12, 2016, there are no candidate, sensitive, or special status species, or riparian habitats or sensitive natural communities present. Additionally, there are no wetlands or wildlife movement corridors within the proposed project site. The nearest open space areas are the Southern California Edison easement, Santiago Creek and the Santa Ana River located a few miles from the proposed project site with no contiguous connections. Therefore, project implementation would not result in adverse effects in this regard.</p> <p>Significance Determination: No Impact. Mitigation Measures: None Required. Significance After Mitigation: No Impact.</p>				

4.4.e The proposed project would involve removal of ornamental shrubs, groundcover and two small palm trees within the ROW and landscape setbacks on commercial properties along Tustin Street and Meats Avenue. The City’s tree preservation ordinance is addressed in OMC Chapter 12.32, *Tree Preservation*. The street trees that would be removed are not designated “historic” and are not located on “undeveloped property” or “public interest property,” as defined by OMC Chapter 12.32. Therefore, tree removals would not conflict with local ordinances protecting biological resources.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

4.4.f The City of Orange is a participating agency in the Orange County Central Coastal NCCP. Designated areas are located in the eastern portion of the City and within the City’s sphere of influence, along hill slopes and other undeveloped natural areas. The proposed project site is in the central urbanized portion of the City and is not located within an NCCP designated reserve or other special use area or a Habitat Conservation Plan (HCP) area, and thus would not conflict with the provisions of the NCCP.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.5 CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?			X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	
e) Cause a substantial adverse change in the significance of a tribal cultural resource pursuant to PRC §21073 et seq.?			X	

Impact Analysis

4.5.a The proposed project limits include existing ROW and portions of adjacent privately-owned commercial properties. The proposed project site contains one commercial building, paved roadways, sidewalks, landscaping, signage, lighting, and utilities. Moreover, there are no historical resources located within the proposed project limits or on adjacent properties; refer to GPEIR Figure 5.5-1, *Designated Historic Resources*, and GPEIR Figure 5.5-3, *Resources Recommended for Designation*. Therefore, project implementation would not cause an adverse change in the significance of a historical resource.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.5.b and 4.5.c The proposed project involves improvements to existing roadways located within an urbanized commercial area that has been fully developed. The proposed improvements would require localized excavation to depths ranging from approximately 1.5 feet for new curbs/gutters to approximately 6 feet for relocated traffic signals. The proposed project site contains one commercial building, paved roadways, sidewalks, landscaping, signage, lighting, and utilities. The intersection was previously disturbed for installation of these existing improvements, and no archaeological or paleontological resources were discovered. Therefore, due to the level of past disturbance within the proposed project limits, the potential for encountering undiscovered archaeological/paleontological resources is minimal. Additionally, the proposed project is subject to compliance with California Public Resources Code Section 5097.5, which prohibits the excavation upon, removal, destruction, injury, or defacement of cultural resources, should any unanticipated resources be discovered during construction. Accordingly, should any undiscovered cultural material be uncovered during construction, standard contract specifications require contractors to halt work until the City can retain a qualified cultural resources specialist, and determine the nature and the significance of the find. If significant cultural materials are found, they are salvaged and collected under the responsible direction of a qualified cultural resources specialist. Compliance with State regulations would reduce potential impacts to archaeological or paleontological resources to a level that is less than significant.

Existing Regulations

Standard Contract Specifications require compliance with California Public Resources Code Section 5097.5, which states:

(a) No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art or other archaeological paleontological or historic features situated on public lands ...

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.5.d The proposed project involves improvements to existing roadways located within an urbanized commercial area that has been fully developed. Extensive excavation substantially beyond previous grading limits would not be required. The intersection was previously disturbed for installation of existing improvements. No conditions exist that suggest human remains are likely to be found within the proposed project limits. Therefore, due to the level of past disturbance within the proposed project limits, it is not anticipated that human remains, including those interred outside of formal cemeteries, would be encountered during construction. Notwithstanding, ground-disturbing activities, such as grading or excavation, have the potential to disturb as yet unidentified human remains. If human remains were found, those remains would require proper treatment, in accordance with applicable laws. California Public Resources and Health and Safety Codes describe the general provisions for human remains. Specifically, Health and Safety Code Section 7050.5 describes the requirements if any human remains are accidentally discovered during excavation of a site. Pursuant to State law, the requirements and procedures set forth in California Public Resources Code Section 5097.98 would be implemented. If human remains are found during grading or excavation, activities must stop in the vicinity of the find and any area that is reasonably suspected to overly adjacent remains until the County coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with State regulations, which

detail the appropriate actions necessary in the event human remains are encountered, impacts in this regard would be considered less than significant.

Existing Regulations

Standard Contract Specifications require compliance with California Health and Safety Code Section 7050.5, which states:

(b) In the event of discovery of human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are located are discovered has determined... that the remains are not subject to the provisions of Section 27491 of the Government Code or any other law concerning investigation of the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her representative, in the manner provided in Section 5097.98 of the Public Resources Code. ...

Standard Contract Specifications also require compliance with Public Resources Code Section 5097.98, which states:

(a) Whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

(b) Upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.5.e The proposed project area is not located within an area considered to be a tribal cultural resource pursuant to PRC §21073 et seq., or to have high sensitivity for prehistoric archaeological resources (General Plan EIR Appendix D, Figure 1). However, there is some potential for resources to be found within the developed area of Orange. Such resources may have been concealed during the process of development, or possibly buried prehistorically as the alluvial plain of Orange was developing. The

only practical means of dealing with such resources is to have individuals responsible for subsurface work remain alert to the potential for unexpected and potentially important discoveries.⁴ As noted in Sections 4.5.b, c and d, above, Standard Contract Specifications require that if cultural material is uncovered during construction, contractors shall halt work until the City can retain a qualified cultural resources specialist, and determine the nature and the significance of the find. If human remains are found during grading or excavation, activities must stop in the vicinity of the find and any area that is reasonably suspected to overly adjacent remains until the County coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. These existing requirements would reduce potential impacts in this regard to a level that is less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.6 GEOLOGY AND SOILS -- 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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
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?				X
d) Be located on expansive soil, as defined in Table 18- 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
The following analysis is based in part on a technical report prepared by Harrington Geotechnical Engineering, Inc. dated January 8, 2016 (Appendix B).				

4 General Plan EIR, p. 5.5-10

Impact Analysis

4.6.a.i Fault rupture is caused by the breakage of the ground surface overlaying a fault, as a result of seismic activity. The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and issue appropriate maps. ("Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994.) Cities and counties affected by the zones must regulate certain development within the zones. Development permits for sites within the zones must be withheld until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Typically, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

GPEIR Figure 5.6-2, *Environmental and Natural Hazard Policy Map*, illustrates the locations of faults that traverse the City and indicates the Peralta Hills Fault traverses Tustin Street approximately one-half mile north of the proposed project. The California Division of Mines and Geology (DMG) evaluates faults on an individual basis to determine if a fault will be classified as an Earthquake Fault Zone. In general, faults must satisfy certain DMG criteria to be classified as an Earthquake Fault Zone. The Peralta Hills Fault is not classified as an Earthquake Fault Zone and the proposed project does not involve the construction of buildings used for human occupancy. The potential impacts associated with fault rupture would be the same for the proposed project, as for the existing condition and would be sufficiently mitigated for the proposed improvements through design and construction in conformance with current codes and engineering standards. Therefore, project implementation would not expose people or structures to substantial adverse effects involving fault rupture.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.6.a.ii The proposed project has the potential to expose people or structures to potential adverse effects from seismic shaking due to the site's location in a seismically active area, as is the condition throughout Southern California. GPEIR Figure 5.6-1, *Regional Fault Location Map*, illustrates the locations of the large active faults that exist in the region and GPEIR Figure 5.6-2 illustrates the locations of faults that traverse the City. As indicated in GPEIR Figures 5.6-1 and 5.6-2, the faults located nearest the proposed project site are the Peralta Hills Fault to the north, the El Modena Fault located to the east/southeast, and the Whittier, Chino, and Elsinore Faults located to the north. These faults are capable of producing ground shaking that could affect the proposed project site. The intensity of ground shaking would depend upon the magnitude of the earthquake, distance to the epicenter, and the geology of the area between the epicenter and the project site. However, the proposed project involves widening an existing intersection and does not propose construction of new habitable structures or a change in land use that could expose new populations to seismic activity. The possibility of moderate to high ground acceleration or shaking in the City (and site) may be considered similar to the Southern California region, as a whole. The potential impacts associated with strong seismic ground shaking would be the same as exposure experienced under existing conditions and would be sufficiently mitigated for the proposed improvements through design and construction in conformance with current codes and engineering standards. Therefore, project implementation would not expose people or structures to substantial adverse effects involving strong seismic ground shaking beyond the risks currently experienced at the proposed project site and throughout southern California.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

4.6.a.iii-4.6.a.iv Liquefaction is one of the major causes of geotechnical failure during earthquakes. It is generally a concern in areas characterized by sandy soils or loose sands, and/or shallow groundwater. Liquefaction occurs when ground shaking causes small displacements of soil particles, densifying the soil. When sand contains water in its voids, friction between the soil particles is reduced, reducing its strength, and the soil behaves as a liquid. As a result, structures resting on the soil will sink or tilt. Seismically-induced landslides occur in areas where steep slopes, unstable geologic features, and/or or seismic activity combine to upset the force of gravity and cause earth to move down a hillside.

GPEIR Figure 5.6-2 illustrates the locations of the City's Liquefaction Hazard Areas and Landslide Hazard Areas.⁵ As indicated in Figure 5.6-2, the proposed project site is not located in an area susceptible to liquefaction or seismically-induced landslide hazards. Therefore, project implementation would not expose people or structures to adverse effects involving liquefaction or seismically-induced landslide hazards.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.6.b The topography within the proposed project limits is generally level with a slight slope to the southwest. Under existing conditions, site drainage is directed as sheet flow over paved areas onto existing roadways and into the storm drain system via the curb, gutter and inlet system.

The soils series present on the Project site is Sorrento-Mocho Association.⁶ This soil association is described as nearly level to moderately sloping, well drained sandy loams, loams, or clay loams on alluvial fans and flood plains. More specifically, the two soil types present on the proposed project site are Sorrento Clay Loam No. 209 (2-9 percent slope) in the area north of the intersection and Sorrento Clay Loam No. 208 (0-2 percent slope) in the area south of the intersection. These soil types are described as having a permeability of 0.2 to 2.0 inches per hour. Runoff is slow and erosion hazard is slight for these soil types.

Clearing, excavation, and grading for construction of the proposed improvements could expose soils to minimal short-term erosion by wind and water, and loss of topsoil. However, project implementation would result in less than significant impacts regarding soil erosion or loss of topsoil, based on the following factors:

- The proposed project's construction activities would not involve extensive or substantial changes to topography;
- The onsite soil type exhibits slow runoff and minimal erosion hazard characteristics, as described above.

⁵ Based on California Division of Mines and Geology, *Seismic Hazards Zones Map – Orange Quadrangle*, April 15, 1998.

⁶ United States Department of Agriculture Soil Conservation Service and Forest Service, *Soil Survey of Orange and Western Part of Riverside County, California, Sheet No. 5 and Table 10 - Physical and Chemical Properties of Soils*, Issued September 1978.

- With the exception of landscape planters, the excavated area would be paved with asphalt and other hardscape materials, thus, no long-term potential for soil erosion would result.

Existing Regulations

Construction activities must conform to standard erosion control measures outlined in the *Greenbook - Standard Specifications for Public Works Construction* as part of the City's standard construction contract provisions. These standards require that the contractor exercise every reasonable precaution to protect channels, storm drains, and bodies of water from pollution, and conduct operations so as to minimize or avoid muddying and silting of channels, drains, and waters. Standard construction contract specifications also require the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP); see also Response 4.9.a below. Per existing regulations, the City requires the contractor to submit a SWPPP to the City for review and approval prior to commencement of construction. The SWPPP must identify Best Management Practices (BMPs) to control erosion and pollutant transport. Applicable BMPs include the following measures (or the equivalent):

- Sediment from areas disturbed during construction must be retained onsite using structural controls (such as storm drain inlet protection, plastic sheeting, sandbags, check berms or desilting basins) to prevent erosion to storm drains, channels or other bodies of water.
- Stockpiles of soil or other materials must be properly contained and covered to avoid sediment transport from the construction site via runoff, vehicle tracking, or wind.
- Runoff from equipment and vehicle washing must be contained at the construction site and not be discharged to the storm drain system.

During construction, the contractor must implement the SWPPP and the City's construction manager enforces these contract requirements in the field. These standard requirements would reduce potential impacts to a level that is less than significant.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.6.c Landslides, mudslides, rockfalls, and soil creep are phenomena earth scientists refer to as "mass wasting." The movement may be rapid (landsliding, rockfall), or gradual (soil creep). These geologic hazards occur in areas where steep slopes, unstable geologic features, and/or heavy rainfall combine to cause earth to move down a hillside. GPEIR Figure 5.6-2 illustrates the locations of the City's Landslide Hazard Areas and indicates the proposed project site is not located within or adjacent to an area susceptible to landslide hazards. Moreover, the topography within the proposed project limits and surrounding areas is generally level.

Additionally, due to their past use as waste disposal sites and the ongoing decomposition of landfill waste, landfill areas may contain unstable geology and soils and lead to landslide, subsidence, or lateral spreading. GPEIR Figure 5.6-2 illustrates the locations of abandoned and closed landfills and indicates none are present within the proposed project limits.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion unconsolidated material or more commonly by liquefaction of either the soil layer or a

subsurface layer underlying soil material on a slope. The proposed project area has been previously graded, filled, and compacted to accommodate the existing roadway and adjacent commercial development. The proposed project would involve minor excavation, small quantities of fill, and compaction to stabilize the widened roadway. Therefore, lateral spreading is unlikely.

Land subsidence is the lowering of the land surface elevation from changes that take place underground such as the pumping of water, oil, and gas from underground reservoirs. For the improved intersection, the proposed improvements would require localized excavation to depths ranging from approximately 1.5 feet for new curbs/gutters to approximately 6 feet for relocated traffic signals. Pumping of water, oil, or gas from underground reservoirs would not be required.

Therefore, the proposed project does not involve a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed improvements, and would not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Refer to Response 4.6.a.iii regarding potential liquefaction hazards.

The geotechnical report (Appendix B) prepared for the proposed project recommends pavement specifications based on soil type encountered on site.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.6.d Expansiveness, or the potential to swell and shrink with repeated cycles of wetting and drying is a common feature of fine-grained clayey soils. The change in volume exerts stress on buildings and other loads placed on these soils. The occurrence of these soils is often associated with geologic units having marginal stability. The distribution of expansive soils can be widely dispersed, and they can occur in hillside areas as well as low-lying alluvial basins. As previously stated, the proposed project site is underlain by Sorrento Clay Loam No. 208 (0-2 percent slope). This soil types is described as having a moderate shrink-swell potential.^{7, 8} Therefore, project implementation would not create substantial risks to life or property due to expansive soils. The geotechnical report (Appendix B) prepared for the proposed project recommends pavement specifications based on soil type encountered on site.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

4.6.e The proposed project involves improvements to existing roadways, thus, no wastewater would be generated. Moreover, sewers are available within the proposed project area for the disposal of wastewater, thus, use of septic tanks or alternative wastewater disposal systems would not be necessary.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

⁷ United States Department of Agriculture Soil Conservation Service and Forest Service, Soil Survey of Orange and Western Part of Riverside County, California, *Sheet No. 5 and Table 10 - Physical and Chemical Properties of Soils*, Issued September 1978.

⁸ Soils with high shrink-swell potential indicates the need for special design.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.7 GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			X	

The following analysis is based on the technical greenhouse gas study prepared by Giroux & Associates dated April 6, 2016 (Appendix A).

Impact Analysis

4.7.a “Greenhouse gases” (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as “global warming.” These greenhouse gases contribute to an increase in the temperature of the earth’s atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed several executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is designed to maintain California’s reputation as a “national and international leader on energy conservation and environmental stewardship.” It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Requires the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate “early action” control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California’s GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on- and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

Project-Related GHG Emissions Generation

The proposed project is assumed to be built in approximately one year. During project construction, the CalEEMod2013.2.2 computer model predicts that construction activities would generate the annual CO₂e emissions identified in the following table.

Construction Emissions (Metric Tons CO₂e)

	CO₂e
Year 2017	72.2
Amortized	2.4

Source: Appendix A, CalEEMod Output

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant. Total project GHG emissions are substantially below the proposed significance threshold of 3,000 MT suggested by the SCAQMD. Hence, the proposed project would not result in generation of a significant level of greenhouse gases.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.7.b The applicable GHG planning document is AB-32. As discussed above, the proposed project would not result in a significant increase in GHG emissions. As a result, the proposed project's GHG emissions would be well below the recommended SCAQMD 3,000-ton threshold of significance. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.8 HAZARDS AND HAZARDOUS MATERIALS –				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
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?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
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?				X
<p>The following analysis is based on the Phase I Environmental Site Assessment prepared by SCS Engineers dated May 27, 2016 (Appendix C).</p> <p>Impact Analysis</p> <p>4.8.a The potential exists for the contractor to use, transport, or dispose of hazardous materials as a routine part of the construction process. Construction equipment uses gasoline or diesel fuel; compressed gases may be used for welding; and solvents may be used for cleaning equipment. However, safe handling measures are required by the City Fire Department and the County of Orange Department of Environmental Health throughout the life of the project. These measures include standards and regulations regarding the storage, handling, and use of these materials. Impacts associated with these materials would be reduced to a level that is less than significant through required Best Management Practices that must be implemented during construction.</p> <p>Significance Determination: Less Than Significant Impact. Mitigation Measures: None Required. Significance After Mitigation: Less Than Significant Impact.</p>				

4.8.b SCS Engineers (SCS) conducted a Phase I Environmental Site Assessment for the proposed project (see Appendix C). The affected project area consists of public streets and sidewalks, a commercial building and adjacent driveways, signage, landscape planters and parking. The proposed project includes acquisition and demolition of the commercial building with four suites at 2091-2097 N. Tustin Street. The current tenants include Eye Max Optometry, Smoke Shop, Mattress Shop and Pizza Hut. None of these businesses currently uses hazardous materials other than janitorial supplies. With the exception of minor surficial staining (interpreted to be from automotive lubricants) observed at various locations on the asphalt-paved parking area, no obvious indications were observed that a release of hazardous materials/wastes or petroleum products had occurred at the site. The minor surficial releases on paved surfaces are considered likely to be de minimis as defined by ASTM; however, the Phase I study also examined the potential for contamination that could have occurred in the past, as discussed below. In addition, the Phase I addresses the potential for asbestos or lead-based paint to be present in the existing building on site, which if present, could be released during demolition.

Existing Regulations

In California, hazardous waste management is regulated under the California Code of Regulations (CCR), Title 22, Division 4.5 (Environmental Health Standards for the Management of Hazardous Waste). The state oversight agency is Cal-EPA, Department of Toxic Substances Control. At the local level, oversight can be granted to Certified Unified Program Agencies (CUPAs). In the City of Orange, the Orange Fire Department is the CUPA for underground storage tanks (and releases from underground storage tanks) and hazardous materials management. The Orange County Health Care Agency, Environmental Health Division oversees hazardous wastes and accidental releases. In addition, the Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) requires an inspection for asbestos to be performed on facilities which are to undergo demolition work. In addition, EPA's Rule to Ensure Safe Conduct of Lead Based Paint Activities addresses lead risk assessment, inspection, and abatement for buildings constructed prior to 1978 that may contain lead based paint.

Site History and Potential Impacts

Regulatory agency records indicate that a dry cleaning facility operated at the proposed project site (2095 North Tustin Street) from approximately 1983 to 2013. Based on a review of regulatory records, it was reported that tetrachloroethylene or PCE was used as the dry cleaning agent at this facility. Over time, PCE liquid and vapor have the ability to permeate flooring and building foundations, entering the subsurface soils and potentially groundwater. The Phase I report notes that the long-term use of PCE at this facility creates the potential for subsurface impacts given the tendency for PCE to migrate through flooring and building foundations. As such, there is a moderate to high likelihood that a recognized environmental condition exists at the site. The Phase I study recommends collecting soil vapor samples at the former dry cleaning facility location and analysis for volatile organic compounds (VOCs). The mitigation measures listed below would implement this recommendation and reduce this potential impact to a level that is less than significant.

Based on a review of historical resources, a gasoline service station was reported to have historically been located at the site. The station was operated prior to the time environmental records were maintained, hence no information was available as to whether releases occurred at the facility. Based on the length of time the facility was operated (interpreted to be approximately 20 years), the Phase I report indicates a moderate likelihood that releases occurred during the operation of the facility and that impacted soil and/or soil vapor may be present beneath the site. The Phase I report recommends that a

subsurface assessment be conducted to determine whether contamination is present. The mitigation measures listed below would implement this recommendation and reduce this potential impact to a level that is less than significant.

A review of aerial photographs revealed that some type of agricultural activity took place at the site and the surrounding vicinity, possibly prior to 1938 and continued to about 1952. The agricultural activity is interpreted to have possibly taken place at the time when organochlorine pesticides such as dichlorodiphenyltrichloroethane (DDT), chlordane, and metal-based pesticides, such as lead, copper, and arsenic, were in wide general use for pest control. These classes of pesticides are known to have the potential to remain in detectable concentrations in the subsurface for extended periods of time. If the site was used for agricultural purposes, it is possible that organochlorine and metal-based pesticides may have been used, stored, and/or mixed at the site. The Phase I report concludes that there is a moderate likelihood that residual concentrations of organochlorine and metal-based pesticides could be present in the shallow surface soil beneath the site, and therefore limited soil sampling is recommended as a precautionary measure to ensure that construction workers and others are not exposed to elevated concentrations of CoCs, if present. In addition, if soil is to be excavated and exported, soil sampling should be conducted to assess whether the soil contains concentrations of CoCs that would cause the soil to be classified as a hazardous or regulated waste. The mitigation measures listed below would implement this recommendation and reduce this potential impact to a level that is less than significant.

In addition to the former dry cleaning establishment that was located on the proposed project site, the Phase I report noted that two nearby off-site uses (a former Mobil gasoline station at 2098 N. Tustin Street and Orange Villa Cleaners at 2080 N. Tustin Street) could have resulted in contaminated soil and subsurface soil vapor. Both are located across Tustin Street to the west of the proposed project site. Any impact to soils is likely to be at least 10 feet below ground surface (bgs). Since the proposed project does not require excavations greater than approximately 6 feet, contaminated soils, if any, are unlikely to be encountered. Potential impacts from subsurface soil vapor would not create a soil contamination or hazardous waste issue, but could potentially impact worker health and safety during trenching. To mitigate this concern, the Phase I report recommends that soil vapor samples be collected at the western portion of the site to assess the potential of vapor migration from these two former adjacent facilities. The mitigation measures listed below would implement this recommendation and reduce this potential impact to a level that is less than significant.

The potential exists for asbestos or lead-based paint to be present in the existing building on site, which if present, could be released during demolition. Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) requires an inspection for asbestos to be performed on facilities which are to undergo demolition work. Materials found to contain asbestos may need to be removed prior to the start of demolition work. In addition, paint surfaces in poor condition (“loose and flaking”) known to contain lead may need to be properly stabilized and disposed of prior to demolition work. Mitigation Measure 4.8-8 would reduce this impact to a level that is less than significant.

Significance Determination: Less Than Significant Impact With Mitigation Incorporated.

Mitigation Measures:

MM.4.8-1 Prior to commencement of construction, the City shall retain an environmental consultant with Phase II/site characterization experience to sample the project site to determine whether existing and/or past uses have contaminated soil that underlies the project site. Sampling shall be conducted in the manner recommended by the Phase I Environmental Site Assessment (Appendix B).

Results of sampling shall indicate the level of remediation efforts required, if necessary. At a minimum, if contaminated soil is present, the City's Project Manager shall notify the Orange County Health Care Agency (OCHCA) and Orange Fire Department (OFD) and the material shall be contained, removed, and disposed of at a permitted landfill facility by a qualified remediation contractor in accordance with existing regulations (including the Orange County Health Care Agency requirements governing soil remediation). Additionally, if contaminated soil is present, the construction contractor shall manage soils as hazardous waste, including removing, covering, and transporting to an approved disposal facility, in conformance with OCHCA and OFD requirements. These requirements shall be included in the construction contract and enforced by the City's Project Manager and construction inspector.

MM 4.8-2 Prior to commencement of construction, soil vapor assessments shall be conducted under the supervision of a qualified professional experienced in soil vapor investigations as recommended by the Phase I Environmental Site Assessment. The results shall be evaluated by a Certified Industrial Hygienist to determine what, if any, precautions would be necessary during construction activities to ensure worker health and safety and to minimize deleterious impacts to public health. The City's Project Manager shall ensure that the Certified Industrial Hygienist's recommendations are incorporated into the construction contract specifications and enforced by the City's construction inspector.

MM 4.8-3 The construction contractor shall continuously monitor air quality within excavations and trenches during construction activities, and provide appropriate worker health and safety equipment for potential soil vapors to workers. This measure shall be implemented, even if a soil vapor assessment detected no vapor concentrations of concern. This requirement shall be included in the construction contract and enforced by the City's Project Manager and construction inspector.

MM 4.8-4 If unknown wastes or suspect materials are discovered during construction by the contractor, which he/she believes may involve hazardous waste/materials, the contractor shall be required to complete the following:

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- Notify the City's Project Manager;
- Secure the areas as directed by the City's Project Manager; and
- Notify the Orange Fire Department and OCHCA Hazardous Waste/Materials Coordinator.

This requirement shall be included in the construction contract and enforced by the City's Project Manager and construction inspector.

MM 4.8-5 Prior to commencement of construction, the City shall coordinate with Southern California Edison (SCE) to determine whether removal/relocation of pad- and pole- mounted transformers is necessary for the project. If determined necessary, the City's Project Manager and the contractor shall coordinate with SCE to ensure that work is done consistent with handling procedures for PCBs for the transformers. This

requirement shall be included in the construction contract and enforced by the City's Project Manager and construction inspector.

MM 4.8-6 During construction, the contractor shall ensure that any ground asphalt containing yellow paint or thermoplastic traffic stripes is recycled at a facility for reuse in asphalt products in accordance with the OMC Construction Waste Ordinance. This requirement shall be included in the construction contract and enforced by the City's Project Manager and construction inspector.

MM 4.8-7 If striping is removed and disposed of, prior to disposal the contractor shall test representative samples of striping paint. If lead is found, the material shall be disposed of to an appropriate, permitted disposal facility that accepts lead-impacted construction waste. Prior to soil disturbance, a qualified contractor shall test soil adjacent to the roadway for lead and other heavy metals in accordance with existing regulations. If lead is found in the soil, the removed soil shall be contained, covered, and disposed of at a permitted facility. This requirement shall be included in the construction contract and enforced by the City's Project Manager and construction inspector.

MM.4.8-8 Prior to commencement of construction, the City's Project Manager shall ensure that an environmental consultant with Phase II/site characterization experience conducts an investigation of the project site to determine whether asbestos or lead-based paint are present. Sampling shall be conducted in the manner recommended by the Phase I Environmental Site Assessment (Appendix B). If asbestos or lead is found to be present, the City's Project Manager shall ensure that such materials are properly stabilized and disposed of by a qualified hazardous materials contractor prior to commencement of demolition work.

Significance After Mitigation: Less Than Significant Impact.

4.8.c One school (Independence Christian School, 1820 East Meats Avenue) is located within one-quarter mile of the proposed project site. As noted in 4.8.b above, there is a potential for locally increased emissions of certain volatile hazardous materials during construction if vapor plumes presently exist in the subsurface. Mitigation measures have been included to reduce these potential impacts to less than significant levels. Beyond this, the proposed project would not emit any hazardous emissions or handle any hazardous or acutely hazardous materials beyond what would normally be anticipated in any construction project (i.e., fuels, solvents, etc. [refer to Response 4.8.a]).

The proposed project site involves existing roadways, which are currently used for the transport of hazardous materials, similar to other roadways within the City or County. Additionally, project implementation could result in the transport of hazardous materials during construction (e.g., LBPs and/or contaminated soils associated with remediation activities [if any], etc.). The proposed project is subject to compliance with City of Orange, County of Orange (Department of Environmental Health), and South Coast Air Quality Management District standards and regulations that govern the handling and transport of hazardous materials. Following compliance with these regulatory provisions, project implementation would result in a less than significant impact.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.8.d As noted in the Phase I report and discussed in 4.8.b above, the proposed project site was previously occupied by a dry cleaning facility, a gasoline station, and agricultural uses, which may have resulted in hazardous materials releases on the site. The mitigation measures listed above would reduce this impact to a level that is less than significant (refer to Response 4.8.b).

Significance Determination: Less Than Significant Impact With Mitigation Incorporated.

Mitigation Measures: See 4.8.b, above.

Significance After Mitigation: Less Than Significant Impact.

4.8.e and 4.8.f The proposed project site is not located within 2 miles of a public airport or in the vicinity of a private airstrip. The nearest airport facilities are Fullerton Municipal Airport, located approximately 11 miles to the west, and John Wayne Airport, located approximately 12 miles to the south. Therefore, project implementation would not result in a safety hazard related to airports.

Significance Determination: No Impact.

Mitigation Measures: None required.

Significance After Mitigation: No Impact.

4.8.g The City's Multi-Hazard Functional Plan does not indicate evacuation routes for emergency situations, since the routes of escape would be dependent upon the scale and scope of the disaster. Notwithstanding, GPEIR Figure 5.7-1, *Generalized Evacuation Corridors*, identifies the City's major east-west and north-south arterials, which are "generalized evacuation routes." Neither Tustin Street nor Meats Avenue are designated Generalized Evacuation Corridors.

Because emergency egress would vary depending on the type and scale of emergencies, the potential exists for Tustin Street and Meats Avenue to be used for emergency response/evacuation. During construction, temporary lane closures on Tustin Street and Meats Avenue would be required. These temporary lane closures could physically interfere with emergency response or evacuation. However, the City's standard specifications for public works construction require that "emergency vehicles shall be permitted to pass through the work area without delay at all times." All construction contractors are required to comply with this requirement, therefore the proposed project would result in less than significant impacts regarding physical interference with emergency response or evacuation.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None Required.

Significance After Mitigation: Less Than Significant Impact.

4.8.h The proposed project involves improvements to an existing intersection, centrally located in an urbanized portion of the City. As noted in GPEIR Figure 5.6-2 (Wildland High and Very High Fire Hazard Areas), the proposed project site is not located in an area susceptible to wildland fires. Therefore, project implementation would not expose people to a significant risk involving wildland fires.

Significance Determination: No Impact.

Mitigation Measures: None required.

Significance After Mitigation: No Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.9 HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
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)?			X	
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?			X	
d) Substantially alter the existing drainage pattern 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?			X	
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?			X	
f) Otherwise substantially degrade water quality?			X	
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?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
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?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	
k) Potentially impact stormwater runoff from construction activities?			X	
l) Potentially impact stormwater runoff from post-construction activities?			X	
m) Result in a potential for discharge of stormwater pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas?			X	
n) Result in the potential for discharge of stormwater to affect the beneficial uses of the receiving waters?			X	
o) Create the potential for significant changes in the flow velocity or volume of stormwater runoff to cause environmental harm?			X	

p) Create significant increases in erosion of the project site or surrounding areas?				X
<p>Impact Analysis</p> <p>4.9.a, 4.9.f, 4.9.k, 4.9.l, 4.9.m, 4.9.n and 4.9.p The proposed project involves grading and excavation, which could result in impacts to water quality.</p> <p><u>Short-Term Construction Impacts</u></p> <p>Project construction would involve demolition, clearing, grading, and excavation, which could result in the transport of sediment into the storm drain system. In addition, construction vehicle tires may be washed to prevent tracking of dust onto City streets, and the construction site may be watered to reduce dust emissions. Construction materials may also be temporarily stockpiled on site until the materials can be used or disposed of offsite. These activities could impact water quality due to erosion of exposed soils and subsequent deposition of particles, sediment, and pollutants on city streets that could be washed into the storm drain system and ultimately to the ocean. Construction has the potential to produce pollutants such as nutrients, heavy metals, toxic chemicals related to construction and cleaning, waste materials including wash water, paints, wood, paper, concrete, food containers and sanitary wastes, fuel and lubricants.</p> <p>The proposed project’s construction activity would be subject to the requirements of the Santa Ana Regional Water Quality Control Board (RWQCB) General Construction Permit. National Pollutant Discharge Elimination System (NPDES) and City construction contract requirements require the contractor to prepare a Storm Water Pollution Prevention Plan (SWPPP), which must be reviewed/approved by the Director of Public Works (or designee) prior to commencement of construction. A copy of the SWPPP must be made available and implemented at the construction site at all times. The SWPPP is required to outline the erosion, sediment, and non-storm water Best Management Practices (BMPs) to avoid or minimize the discharge of pollutants at the construction site to the “maximum extent practicable.” These BMPs typically include measures to prevent sediment from disturbed areas from entering the storm drain system using structural controls (e.g., sand bags at inlets), and cover and contain stockpiled materials to prevent sediment and pollutant transport. Implementation of the BMPs would ensure runoff and discharges during construction would not violate any water quality standards. Compliance with these requirements and <i>Greenbook</i> specifications is enforced by the City’s Project Manager and construction inspector and would reduce short-term construction-related impacts to water quality to a less than significant level.</p> <p><u>Long-Term Operational Impacts</u></p> <p>The proposed project would result in a negligible change in the amount of impervious surfaces and runoff volumes compared to existing conditions. However, the proposed improvements would not change the types of pollutants that would be present, as compared to existing conditions, since the proposed project involves the modification of existing roadways. Typical roadway pollutants include trash and debris, heavy metals, organic compounds (such as petroleum hydrocarbons), sediments, oils and grease. Additionally, runoff from existing and proposed landscaping may involve pollutants such as bacteria/virus, nutrients, pesticides, herbicides, and oxygen-demanding substances.</p> <p>In compliance with NPDES, the County of Orange Drainage Area Management Plan (DAMP), and the City’s Local Implementation Procedures (LIP), a project-specific Water Quality Management Plan (WQMP) must be prepared prior to commencement of construction. The WQMP must identify Structural, Non-Structural, and treatment BMPs, with the goal of minimizing pollutants in site runoff to</p>				

the “Maximum Extent Practicable.” Selection and siting of BMPs are defined based on the evaluation of site constraints, constituents of concern at the receiving waters, soil conditions, and hydraulic conditions. Filterra bioretention units have been identified as the appropriate treatment BMP and have been incorporated into the proposed project design plans. These units have a medium to high removal efficiency for total suspended solids, phosphorous and nitrogen (nutrients), oil and greases, heavy metals, and bacteria. Once completed, the proposed project would become part of the City Municipal Activities Program, which includes weekly street sweeping to minimize trash and debris in the storm drain system.

With these BMPs, the proposed project would not contribute substantially to polluted runoff and would not violate water quality standards or otherwise substantially degrade water quality. The final WQMP is subject to review and approval by the City’s Public Works Department prior to bidding the project for construction, and verified by the construction inspector. BMPs must be constructed concurrent with street improvements. Compliance with WQMP requirements would reduce long-term impacts to water quality to a less than significant level.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None required.

Significance After Mitigation: Less Than Significant Impact.

4.9.b The proposed project would not create a demand for water or involve groundwater extraction, nor would the proposed project result in a substantial change in impervious surface area. Therefore, project implementation would not deplete groundwater supplies or interfere with groundwater recharge.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None required.

Significance After Mitigation: Less Than Significant Impact.

4.9.c, 4.9.d, 4.9.e and 4.9.o The topography within the proposed project limits is generally level with a slight slope to the south toward Santiago Creek (approximately three miles to the south). Stormwater from the site is conveyed through the storm drain system along Meats Avenue to a point east of Nordic Street, and ultimately outlets to the Santa Ana River. The proposed intersection improvements would not result in increased tributary areas, nor alter the existing drainage patterns or cause a change in the course of a stream or river.

The proposed project would result in no change in watershed delineation, construction of new buildings/structures, or significant modifications to topography. The proposed project would involve negligible changes in landscaped areas along Tustin Street and Meats Avenue. Thus, a negligible change in the amount of impervious surfaces and volume of stormwater runoff and flow velocity would occur. All storm drain facilities are adequately sized for existing and after project flows. Therefore, there would be no potential for off-site erosion/siltation. Additionally, there would be no potential for on-site erosion/siltation due to required BMPs. All affected drainage facilities are maintained so as to avoid excessive sediment deposition and have no erosive conditions of concern. Therefore, project implementation would not substantially alter the existing drainage pattern of the site or area, or substantially increase the rate or amount of surface runoff such that on- or off-site erosion, sedimentation, or flooding would occur.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None required.

Significance After Mitigation: Less Than Significant Impact.

4.9.g and 4.9.h The proposed project involves improvements to existing roadways and no construction of housing or structures. GPEIR Figure 5.6-2 illustrates the locations of the City’s Flood Hazard Areas and indicates the proposed project site is not located within or adjacent to an area susceptible to flooding. Therefore, project implementation would not place housing or structures within a 100-year flood hazard area.

Significance Determination: No Impact.
Mitigation Measures: None required.
Significance After Mitigation: No Impact.

4.9.i The proposed project site is not located within a 100-year floodplain. Three major dam facilities lie upstream of the City of Orange: Prado Dam; Villa Park Dam; and Santiago Dam. Prado Dam (City of Corona) serves as a major water retention facility for the Santa Ana River. Villa Park Dam and Santiago Dam are located along Santiago Creek in the foothills of East Orange. The proposed project site is not located within the inundation areas for these dams.⁹ Therefore, the potential for inundation of the proposed project site in the event of a dam failure is considered low. Further, the proposed project does not involve construction of new habitable structures or a change in land use that could increase the exposure of people to risk involving flooding over existing conditions, as a result of the failure of dam. Therefore, project implementation would result in a less than significant impact in this regard.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None required.
Significance After Mitigation: Less Than Significant Impact.

4.9.j The proposed project site is not located near the ocean or other large body of water. Moreover, the topography within the proposed project limits and surrounding areas is generally level. Therefore, the proposed project would result in less than significant impacts involving inundation by seiche, tsunami, or mudflow.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None required.
Significance After Mitigation: Less Than Significant Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.10 LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?				X
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?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

⁹ Orange County General Plan Safety Element, Fig. IX-9

Impact Analysis

4.10.a The proposed project involves improvements to existing roadways located within an urbanized commercial area that has been fully developed. Therefore, project implementation would not physically divide an established community.

Significance Determination: No Impact.
Mitigation Measures: None required.
Significance After Mitigation: No Impact.

4.10.b The proposed project's consistency with the policies and regulations of the City of Orange General Plan and Title 17 of the Orange Municipal Code (OMC), *Zoning*, is analyzed below.

City of Orange General Plan¹⁰

Land Use Element

The General Plan land use designation for the three parcels affected by the proposed project is *GC (General Commercial)*. No change to land use designations is proposed as part of the project, therefore no conflicts with land use designations would result.

Circulation and Mobility Element

The Master Plan of Streets and Highways (Figure CM-2 of the General Plan Circulation and Mobility Element) designates Tustin Street as a Major Arterial and Meats Avenue as a Secondary Arterial in the proposed project vicinity. The Tustin Street/Meats Avenue intersection is identified as a "critical intersection" in the City's Critical Intersection Program (Figure CM-2). Critical intersections are intersections with high existing or future anticipated traffic volumes, where improvements are needed to accommodate the volumes. A critical intersection deviates from the established standard intersection design by increasing the number of lanes at the intersection beyond what typically would be required, thereby reducing congestion and delay.

The proposed addition of a right turn pocket would not conflict with these designations for Tustin Street and Meats Avenue.

City of Orange Municipal Code (OMC)¹¹

Street rights-of-way are "unzoned" on the *Zoning Map*. The three properties adjacent to the proposed project site are zoned *C-TR, Limited Business Tustin Redevelopment Project Area District*. OMC Chapter 17.18, *Commercial Districts*, specifies the development standards for commercial uses and buildings within the C-TR zone. The proposed project includes acquisition of the entire parcel at the southeast corner of the Tustin Street/Meats Avenue intersection and acquisition of tapered slivers of street ROW from the adjacent properties to the east and south.

OMC Section 17.18.030, Permitted Uses

OMC Section 17.18.030 lists uses permitted within the Commercial Districts. The proposed project

¹⁰ http://www.cityoforange.org/depts/commdev/planning/general_plan.asp

¹¹ https://www.municode.com/library/ca/orange/codes/code_of_ordinances

does not propose any change to zoning designations or uses other than the expansion of ROW (designated “unzoned”) to accommodate the right turn lane. Therefore, the proposed project would not conflict with OMC Section 17.18.030.

OMC Section 17.18.130, Yard Requirements

OMC Section 17.18.130 establishes a minimum front setback of 10 feet in the C-TR District. The proposed project would increase ROW width in some locations, however the minimum setback distances between the edge of ROW and buildings would not be reduced, as shown in the following table.

Affected Parcel	Minimum Building Setback from Street ROW (existing)	Minimum Building Setback from Street ROW (with project)
372-131-03 2085 N. Tustin St. (Villa Park Motel)	2.16 ft.	2.16 ft.
372-131-01 2091 N. Tustin St. (Pizza Hut, etc.)	n.a. (building to be demolished)	n.a. (building to be demolished)
372-131-02 1736 E. Meats Ave. (Baskin-Robbins, etc.)	0.10 ft.	0.10 ft.

OMC Section 17.38.060, *Nonconformities Connected With Public Acquisition*, allows for the creation of nonconforming conditions due to property acquisition for a public use. Under this Code Section, if a lot does not comply with a development standard due to acquisition of a portion of the property for a public use, the remainder of the lot is considered a conforming lot. Although two of the subject parcels currently do not meet setback requirements, the proposed project would not create or exacerbate a nonconforming condition, therefore impacts would be less than significant.

17.18.150, Off-Street Parking and Loading

The proposed widening would require acquisition of street ROW from the three adjacent commercially zoned properties. A secondary effect of roadway widening would result in the loss of two parking spaces for the Baskin-Robbins property (APN 372-131-02). A reduction in on-site parking could result in fewer parking spaces than specified in Zoning Code standards. However, OMC Section 17.38.060 allows for the creation of nonconforming conditions due to property acquisition for a public use. Therefore, the proposed project would not create a new nonconforming use or result in a conflict with the OMC and less than significant impacts would occur in this regard.

17.18.160, Landscaping

OMC Chapter 16.50, *Landscaping Requirements*, establishes a requirement for front yard landscaping of the entire setback area or ten feet minimum planter width, whichever is greater on the three affected properties. The proposed project would result in a front yard landscape area less than 10 feet wide for the Villa Park Motel and Baskin-Robbins properties. However, OMC Section 17.38.060 allows for the creation of nonconforming conditions due to property acquisition for a public use. Therefore, the proposed project would not create a new nonconforming use or result in an inconsistency with OMC landscaping standards and less than significant impacts would occur in this regard.

The proposed project would involve the removal and replacement of street trees. The two existing palm

trees along Tustin Street are not native or protected by City Ordinance. These street trees would be replaced in conformance with the City’s Street Tree Master Plan, therefore impacts would be less than significant.

ROW Acquisition

ROW acquisition and negotiations are required to follow the Code of Federal Regulations, Part 24, Section 49, which requires owners of property to be acquired due to a proposed project to be compensated for the fair market value of the property based on an appraisal, including temporary construction easements and damages (if any) to the remaining portions of the property in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 as amended. Compliance with these requirements would reduce impacts to a level that is less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None required.
Significance After Mitigation: Less Than Significant Impact.

4.10.c The proposed project site is not within a habitat conservation plan or a natural communities conservation plan area; therefore, no impacts would result from project implementation.

Significance Determination: No Impact.
Mitigation Measures: None required.
Significance After Mitigation: No Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.11 MINERAL RESOURCES -- 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?				X
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?				X

Impact Analysis

4.11.a and 4.11.b The proposed project site does not contain mineral resources and is not designated as a significant regional or local aggregate resource area by the City’s General Plan. The proposed project is located within an existing urban area developed with commercial uses and would not result in the loss of availability of mineral resources.

Significance Determination: No Impact.
Mitigation Measures: None required.
Significance After Mitigation: No Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.12 NOISE – 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?		X		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
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?				X

The following analysis is based on the technical noise study prepared by Giroux & Associates dated February 17, 2016 (Appendix D).

Impact Analysis

4.12.a, 4.12.c and 4.12.d Noise impacts can result from short-term construction activities and from long-term changes in noise levels. Appendix D presents the results of the technical noise analysis conducted for the proposed project.

Short-Term Noise Impacts from Construction

Construction activities create short-term noise, which can be disturbing to adjacent noise-sensitive uses such as the Villa Park Motel. Other nearby commercial uses are not considered to be noise-sensitive. Temporary construction noise impacts can vary markedly depending on the equipment used and its activity level. Short-term construction noise impacts for roadway improvement projects tend to occur in discrete phases dominated initially by demolition, then by grading and paving. The demolition and earth-moving sources are the noisiest with equipment noise typically ranging from 75 to 90 dB at a distance of 50 feet from the source.

The OMC exempts construction during the hours to 7 a.m. - 8 p.m. on weekdays and Saturdays, and from 9 a.m. to 8 p.m. on Sundays and federal holidays, from City noise regulations. This OMC provision recognizes that short-term construction noise generated during the least noise-sensitive hours of the day is a normal part of development and does not cause a significant impact. This restriction, noted in Mitigation Measure 4.12-1, would reduce potential impacts from construction noise to a level that is less than significant.

Significance Determination: Less Than Significant With Mitigation Incorporated.
Mitigation Measures:

MM 4.12-1 Construction Noise

- The hours of construction operation shall be limited to 7 a.m. - 8 p.m. Monday through Saturday. No construction activity shall occur on Sundays and Federal holidays.

Significance After Mitigation: Less Than Significant Impact.

Long-Term Noise Impacts

The proposed project would not generate any new sources of noise after the completion of construction. No change in traffic volume would be caused by the roadway widening. An incremental increase in noise levels is expected to occur over time due to growth in traffic volumes throughout the area regardless of whether the proposed project is completed.

While no changes are proposed in the location of street centerlines or existing traffic lanes, the addition of a right turn lane would place one lane of traffic approximately 12 feet closer to the adjacent buildings resulting in higher traffic noise at these buildings due to the reduced separation distance. The noise study (Appendix D) analyzed the effect of this change and concluded that traffic noise at the adjacent motel would be expected to increase by 0.4 dB. A change in noise level less than 3.0 dB is not perceptible in most situations, and therefore is less than significant.

In addition to the minor change in noise level due to the new right turn lane, traffic noise at the Baskin-Robbins building would also be affected due to the demolition of the building at the corner of the intersection, which currently provides a buffer from traffic noise on Tustin Street. The combined effect of the new right turn lane and the removal of this buffer is estimated to result in a noise increase of approximately 1.4 dB. This impact is less than the +3.0 dB significance threshold adopted for use in evaluating this project. Noise impacts at the properties further to the east would be even less due to their greater distance from the proposed project site. Long-term project-related noise increases are concluded to be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None required.
Significance After Mitigation: Less Than Significant Impact.

4.12.b Construction activities can generate ground-borne vibration. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the construction site vicinity varies depending on soil type, ground strata, and characteristics of the receiver building. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Ground-borne vibrations from construction activities rarely reach levels that damage structures.

The proposed project would not involve activities that generate excessive vibration, such as blasting or pile-driving. In addition, OMC Section 8.24.070.E exempts all construction activities that are conducted Monday through Saturday between the hours of 7:00 a.m. and 8:00 p.m. from the City's Noise Ordinance provisions. Construction is not permitted on Sundays or federal holidays. This exemption is included in the OMC in recognition that construction activities undertaken during daytime

hours are a part of living in an urban environment and do not cause a significant disruption, since construction is temporary and is limited to the least noise sensitive hours of the day. For these reasons, vibration impacts associated with construction would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None required.
Significance After Mitigation: Less Than Significant Impact.

4.12.e and 4.12.f The proposed project site is not located within an airport land use plan, within two miles of a public airport or within the vicinity of a private airstrip. The nearest facilities are Fullerton Municipal Airport, located approximately 11 miles to the west, and John Wayne Airport, located approximately 12 miles to the south. Therefore, project implementation would not expose people to excessive noise levels.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.13 POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Impact Analysis

4.13.a The proposed project involves improvements to existing streets within a developed, well-established commercial area of the City. The proposed project would not include new homes or extend roadways or other infrastructure into undeveloped areas. Therefore, the proposed project would not induce population growth.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.13.b The proposed project involves roadway improvements and would not displace housing.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.13.c The proposed project involves roadway improvements and would not displace people, necessitating new housing construction elsewhere.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.14 PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, 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?			X	
ii) Police protection?			X	
iii) Schools?				X
iv) Parks?				X
v) Other public facilities?				X

Impact Analysis

4.14.a.i and 4.14.a.ii The proposed project involves improvements to existing streets, which would not increase the City’s employment or population. Therefore, project implementation would not impact police or fire/emergency response. Additionally, the proposed project does not involve changes in land use that could result in a long-term increase in the demand for emergency services over existing conditions. Additionally, project construction would not interfere substantially with emergency response (police and fire), as concluded in Response 4.8.g.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

4.14.a.iii, 4.14.a.iv, 4.14.a.v The proposed project involves improvements to existing streets, which would not increase the City’s population or school enrollment. Therefore, the proposed project would not generate increased demand for school facilities or change existing student/classroom ratios, necessitating expanded schools, parks or recreational facilities. No other public service facilities would be affected by the proposed project.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.15 RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
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?				X
<p>Impact Analysis</p> <p>4.15.a and 4.15.b The proposed project involves improvements to existing streets, which would not increase the City’s employment or population. Therefore, no increase in usage of existing recreational facilities would occur as a result of project implementation. Moreover, the proposed project would not involve construction or expansion of recreational facilities and would not result in the need for new or expanded recreational facilities that could have an adverse effect on the environment.</p> <p>Significance Determination: No Impact. Mitigation Measures: None Required. Significance After Mitigation: No Impact.</p>				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.16 TRANSPORTATION/TRAFFIC –				
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?			X	
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?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities,			X	

or otherwise decrease the performance or safety of such facilities?				
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The following analysis is based on the technical noise study prepared by KOA Corporation dated March 3, 2016 (Appendix E).

Impact Analysis

4.16.a, 4.16.b and 4.16.f A traffic study was prepared for the proposed project to assess how traffic conditions would be affected by the proposed project (see Appendix E). The study included a Synchro analysis to determine the Level of Service (LOS) and a queuing analysis to determine the recommended storage length for the proposed northbound right-turn pocket. The analysis did not consider General Plan long-range conditions since the proposed project would not generate additional traffic or change circulation patterns.

The analysis found that the intersection currently operates at LOS D in both AM and PM peak hours, and that the proposed improvements would result in a slight improvement to the level of service, although conditions would remain at LOS D for both AM and PM, as shown below.

Scenario	AM Peak Hour (Average Delay/LOS)	PM Peak Hour (Average Delay/LOS)
Existing	40.1/D	52.1/D
Existing with Project	39.8/D	48.2/D

The proposed project would provide a right-turn pocket length (from the Villa Park Motel southern property line to the proposed curb return including taper) of approximately 180 feet. Considering the taper length of 60 feet (per Caltrans Highway Design Manual Chapter 400, the bay taper in urban area should be 60 to 90 feet), the available pocket length is approximately 120 feet. This pocket length would provide better than 50th percentile queuing length requirements (85 feet) and is considered adequate based on the available right-of-way.

The proposed project would maintain sidewalks and pedestrian access along both street frontages and also would reduce conflicts between busses and vehicle traffic by providing a bus bay at the existing bus stop on Meats Avenue east of the intersection.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

4.16.c There are no airports located within or adjacent to the proposed project site. The proposed project involves improvements to an existing roadway and would have no impact on air traffic patterns.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.16.d The proposed project would not result in the creation of a traffic hazard resulting from a design feature or proposed incompatible use. The purpose of the proposed project is to improve the operation of the intersection through the addition of a dedicated right turn lane and bus turnout, which would reduce delay and potential vehicle conflicts due to vehicle turning movements and buses blocking travel lanes. No curves or other substantial changes to the roadway alignment are proposed, and no new

uses are proposed. Therefore, the proposed project would not result in incompatible uses or traffic hazards.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

4.16.e During construction, temporary lane closures on Tustin Street and Meats Avenue would be required. These temporary lane closures could physically interfere with emergency access. However, the City’s standard specifications for public works construction require that “emergency vehicles shall be permitted to pass through the work area without delay at all times.” All construction contractors are required to comply with this requirement. The City would maintain a minimum of two traffic lanes in each direction on Tustin Street, and one lane in each direction on Meats Avenue, within the construction area, so that reasonable two way traffic flow through the intersection is maintained at all times. In addition, the City’s construction contractors are required to implement traffic control measures to ensure traffic safety during construction. Traffic control measures would be identified in a Traffic Control Plan prepared by a California-licensed Traffic Engineer and approved by the City Engineer prior to the start of construction. Traffic control may involve signage, use of delineators, flashing arrow signs, and/or temporary lane lines at the discretion of the City Engineer. All traffic control would conform to the provisions of the Work Area Traffic Control Handbook. These standard requirements would reduce impacts to a level that is less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.17 UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
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?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
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?				X

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	
h) Have significant effects on energy resources as described in Appendix F of the State CEQA Guidelines?				

Impact Analysis

4.17.a, 4.17.b, 4.17.d and 4.17.e The proposed project would not result in additional water use, wastewater generation, increases in wastewater flows or increases in water consumption that could affect wastewater treatment capacity. No new or expanded wastewater treatment facilities would be constructed or required as a result of the proposed project.

Significance Determination: No Impact.
Mitigation Measures: None Required.
Significance After Mitigation: No Impact.

4.17.c The proposed project involves widening existing roadways. Changes to impervious surfaces and stormwater runoff would be negligible since existing landscaped areas would be relocated as part of the proposed project. Adequate stormwater conveyance infrastructure (i.e., curb, gutter, storm drain inlets, and storm drains) is already in place at the proposed project site and would be relocated to accommodate stormwater flows. The proposed project would relocate the curb and gutter to the new roadway limits and would accommodate the same volume of street flow, as existing conditions. No changes to the drainage pattern or the course of surface runoff would result from project implementation. Therefore, no new or expanded stormwater conveyance facilities that could result in significant environmental effects are proposed or required as a result of the proposed project.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

4.17.f and 4.17.g The City of Orange Public Works Department coordinates solid waste disposal in the City. Solid waste is typically disposed of at the Olinda Alpha Landfill located in the City of Brea. Improvements to existing transportation infrastructure would not involve construction of habitable structures, an increase in the City’s population, or an intensification of land use that could increase demand for solid waste disposal facilities. No long-term generation of solid waste would result from the proposed project.

During construction, debris would be generated and disposed of at an approved landfill. Solid waste would include demolition debris and concrete/asphalt that would be removed. As a standard practice, the City requires the contractor to recycle all usable asphalt, which substantially reduces waste disposal volumes. Adequate landfill capacity exists to accommodate the proposed project’s solid waste, and the proposed project would not cause area landfills to exceed permitted capacity.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

4.17.h Energy conservation is an important factor in reducing greenhouse gas emissions that contribute to climate change. The proposed project would require short-term energy use by equipment during project construction; however, this impact would be mitigated by existing state air quality regulations on off-road construction equipment (e.g., limits on idling, requirements for upgrading to Tier 3 or Tier 4 engines), which also have the effect of reducing energy use. These control measures and the small scale and limited duration of construction activities would reduce impacts to a level that is less than significant.

No change to long-term energy use would result from the proposed project since no new buildings or other activities are proposed that would consume energy on-site or generate additional traffic or other energy-consuming activities off-site; therefore, long-term impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None Required.
Significance After Mitigation: Less Than Significant Impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
4.18. MANDATORY FINDINGS OF SIGNIFICANCE				
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?			X	
<p>4.18.a As concluded in Response 4.4.a, the proposed project would not directly affect any sensitive habitat or wildlife populations. Project construction would occur within an existing roadway, adjacent to commercially developed properties. The landscaping impacted by the proposed project consists of turf, ornamental shrubs, and street trees (small palms). No sensitive habitats are located within the construction area. No impact to biological resources would occur.</p> <p>There are no listed historical structures or known archeological or paleontological resources within the proposed project site. Compliance with existing regulations during construction would reduce impacts, if any, to as yet unidentified buried cultural resources to less than significant levels.</p> <p>Significance Determination: Less Than Significant Impact.</p>				
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)?			X	
<p>4.18.b Cumulative impacts occur as a result of the combined impacts of two or more projects within the same impact area, which individually do not cause significant environmental impacts, but could cause a significant impact when considered together. There are no known planned or entitled cumulative projects in the vicinity of the Tustin Street/Meats Avenue intersection. As concluded in the discussion above, the proposed project would not result in impacts that are either individually significant or cumulatively considerable.</p>				

Significance Determination: Less Than Significant Impact.				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		
<p>4.18.c The proposed project would result in short-term adverse environmental impacts that would affect humans both directly and indirectly. However, with the implementation of project design features, and compliance with existing regulations and/or mitigation measures related to construction emissions, construction noise, construction erosion, water quality, hazards and hazardous materials, impacts would be less than significant.</p> <p style="text-align: center;">Significance Determination: Less Than Significant Impact with Mitigation Incorporated.</p>				

5.0 REFERENCES

5.1 DOCUMENTS REFERENCED

California Environmental Quality Act Guidelines, as amended.

California Health and Safety Code.

California Public Resources Code.

City of Orange, General Plan, 2010.

City of Orange, General Plan Program Environmental Impact Report, 2010.

Giroux & Associates, Air Quality and Greenhouse Gas Analysis - Tustin/Meats Intersection Right Turn Lane, April 6, 2016

Giroux & Associates, Noise Impact Analysis - Tustin/Meats Intersection Right Turn Lane, February 17, 2016

Harrington Geotechnical Engineering, Inc., Material Report for Construction of Northbound Right Turn Pocket at Tustin Street and Meats Avenue, Orange, CA, January 8, 2016

KOA Corporation, Traffic Study for the Tustin & Meats Intersection Right-Turn Lane Improvements Project, March 3, 2016

Public Works Standards, Inc., Standard Specifications for Public Works Construction (“Greenbook”), 2015.

SCS Engineers, Phase I Environmental Site Assessment, Assessor’s Parcel Number 372-131-01, 2091 to 2097 North Tustin Street, Orange, California, March 29, 2016

South Coast Air Quality Management District, CEQA Handbook for Air Quality Analysis, 1993.

United States Department of Agriculture Soil Conservation Service and Forest Service, Soil Survey of Orange and Western Part of Riverside County, California, 1978.

5.2 AGENCIES, ORGANIZATIONS AND PERSONS CONSULTED

Mr. Paul Tran, P.E., Project Engineer, City of Orange.

Ms. Jennifer McDonald Le, Principal Planner/Environmental Review Coordinator, City of Orange.

Ms. Collette Morse, AICP, Consulting Planner, City of Orange.

SECTION 6.0 MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATED NEGATIVE DECLARATION NO. ENV 1850-16
TUSTIN STREET/MEATS AVENUE RIGHT TURN LANE

Mitigation Measure No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
Air Quality						
4.3-1	<p>During construction, the Contractor shall implement the following fugitive dust emissions reduction measures:</p> <ul style="list-style-type: none"> • Replace groundcover in disturbed areas as quickly as possible. • Apply water to disturbed areas every three hours (three times per day) including prior to and during any earth movement. • All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain 2 feet of freeboard. • Prohibit pavement demolition and grading, and cover storage piles during high wind conditions (i.e. when wind speeds exceed 25 miles per hour). <p>These measures shall be included in project plans and specifications, and enforced by the City’s construction inspector.</p>	During construction	City construction inspector			
Hazards and Hazardous Materials						
4.8-1	<p>Prior to commencement of construction, the City shall retain an environmental consultant with Phase II/site characterization experience to sample the project site to determine whether existing and/or past uses have contaminated soil that underlies the project site. Sampling shall be conducted in the manner recommended by the Phase I Environmental Site Assessment (Appendix B).</p>	Prior to and during construction.	City Project Manager			

Mitigation Measure No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
	Results of sampling shall indicate the level of remediation efforts required, if necessary. At a minimum, if contaminated soil is present, the City’s Project Manager shall notify the Orange County Health Care Agency (OCHCA) and Orange Fire Department (OFD) and the material shall be contained, removed, and disposed of at a permitted landfill facility by a qualified remediation contractor in accordance with existing regulations (including the Orange County Health Care Agency requirements governing soil remediation). Additionally, if contaminated soil is present, the construction contractor shall manage soils as hazardous waste, including removing, covering, and transporting to an approved disposal facility, in conformance with OCHCA and OFD requirements. These requirements shall be included in the construction contract and enforced by the City’s Project Manager and construction inspector.					
4.8-2	Prior to commencement of construction, soil vapor assessments shall be conducted under the supervision of a qualified professional experienced in soil vapor investigations as recommended by the Phase I Environmental Site Assessment. The results shall be evaluated by a Certified Industrial Hygienist to determine what, if any, precautions would be necessary during construction activities to ensure worker health and safety and to minimize deleterious impacts to public health. The City’s Project Manager shall ensure that the Certified Industrial Hygenist’s recommendations are incorporated into the construction contract specifications and enforced by the City’s construction inspector.	Prior to commencement of construction	City Project Manager; City Construction Inspector			

Mitigation Measure No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
4.8-3	The construction contractor shall continuously monitor air quality within excavations and trenches during construction activities, and provide appropriate worker health and safety equipment for potential soil vapors to workers. This measure shall be implemented, even if a soil vapor assessment detected no vapor concentrations of concern. This requirement shall be included in the construction contract and enforced by the City’s Project Manager and construction inspector.	During construction	City Project Manager; City Construction Inspector			
4.8-4	If unknown wastes or suspect materials are discovered during construction by the contractor, which he/she believes may involve hazardous waste/materials, the contractor shall be required to complete the following: <ul style="list-style-type: none"> • Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area; • Notify the City’s Project Manager; • Secure the areas as directed by the City’s Project Manager; and • Notify the Orange Fire Department and OCHCA Hazardous Waste/Materials Coordinator. This requirement shall be included in the construction contract and enforced by the City’s Project Manager and construction inspector.	During construction	City Project Manager; City Construction Inspector			
4.8-5	Prior to commencement of construction, the City shall coordinate with Southern California Edison (SCE) to determine whether removal/relocation of pad- and pole- mounted transformers is necessary for the project. If determined necessary, the City’s Project Manager and the contractor shall coordinate	Prior to and during construction	City Project Manager; City Construction Inspector			

Mitigation Measure No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
	with SCE to ensure that work is done consistent with handling procedures for PCBs for the transformers. This requirement shall be included in the construction contract and enforced by the City's Project Manager and construction inspector.					
4.8-6	During construction, the contractor shall ensure that any ground asphalt containing yellow paint or thermoplastic traffic stripes is recycled at a facility for reuse in asphalt products in accordance with the OMC Construction Waste Ordinance. This requirement shall be included in the construction contract and enforced by the City's Project Manager and construction inspector.	During construction	City Project Manager; City Construction Inspector			
4.8-7	If striping is removed and disposed of, prior to disposal the contractor shall test representative samples of striping paint. If lead is found, the material shall be disposed of to an appropriate, permitted disposal facility that accepts lead-impacted construction waste. Prior to soil disturbance, a qualified contractor shall test soil adjacent to the roadway for lead and other heavy metals in accordance with existing regulations. If lead is found in the soil, the removed soil shall be contained, covered, and disposed of at a permitted facility. This requirement shall be included in the construction contract and enforced by the City's Project Manager and construction inspector.	Prior to soil disturbance	City Project Manager			
4.8-8	Prior to commencement of construction, the City's Project Manager shall ensure that an environmental consultant with Phase II/site characterization experience conducts an investigation of the project site to determine whether asbestos or lead-based paint are present. Sampling shall be conducted in the	Prior to demolition or construction	City Project Manager			

Mitigation Measure No.	Mitigation Measure	Timeframe for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
	manner recommended by the Phase I Environmental Site Assessment (Appendix B). If asbestos or lead is found to be present, the City’s Project Manager shall ensure that such materials are properly stabilized and disposed of by a qualified hazardous materials contractor prior to commencement of demolition work.					
Noise						
4.12-1	<p>Construction Noise</p> <ul style="list-style-type: none"> The hours of construction operation shall be limited to 7 a.m. - 8 p.m. Monday through Saturday. No construction activity shall occur on Sundays and Federal holidays. 	During construction.	City Project Manager; City Construction Inspector			

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