

PUBLIC REVIEW DRAFT - CEQA INITIAL STUDY

MITIGATED NEGATIVE DECLARATION

**CRAWFORD CANYON PARK AND CRAWFORD CANYON
ROAD SIDEWALK EXTENSION PROJECT**

IP 21-093

Prepared for:



County of Orange

**OC Parks, Planning & Design Division
13042 Old Myford Road
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**OC Public Works, Infrastructure Programs
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June 2021

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Chapter 1: Introduction

The purpose of this Initial Study is to evaluate the potentially significant environmental impacts associated with implementing the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project. The Initial Study is organized into the following chapters:

- Chapter 1: Introduction
- Chapter 2: Environmental Determination
- Chapter 3: Project Description
- Chapter 4: Environmental Evaluation
- Chapter 5: Mitigation Monitoring and Reporting Program
- Chapter 6: References

1.1 Project Title

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

1.2 Lead Agency Name | Address

County of Orange

OC Parks, Planning & Design Division
13042 Old Myford Road
Irvine, CA 92602

OC Public Works, Infrastructure Programs
601 N. Ross Street
Santa Ana, CA 92703

1.3 Lead Agency Contact Person | Telephone Number | Email

OC Parks, Planning & Design Division
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1.4 Project Location

Regionally, the proposed Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project (Project) is situated in North Tustin, an unincorporated community in the County of Orange (County); refer to **Figure 1, Regional Map**. Locally, the proposed Park (Crawford Canyon Park or Park) is located at the northwest corner of Newport Avenue and Crawford Canyon Road (Park Site) and the proposed Sidewalk Extension with associated roadway improvements (Sidewalk Extension) is located along Crawford Canyon Road and Newport Avenue (Sidewalk Extension Site); refer to **Figure 2, Local Vicinity Map**. For the topography of the Park and Sidewalk Extension Sites and the local vicinity, refer to **Figure 3, Topographic Map**.



SOURCE: ESRI

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

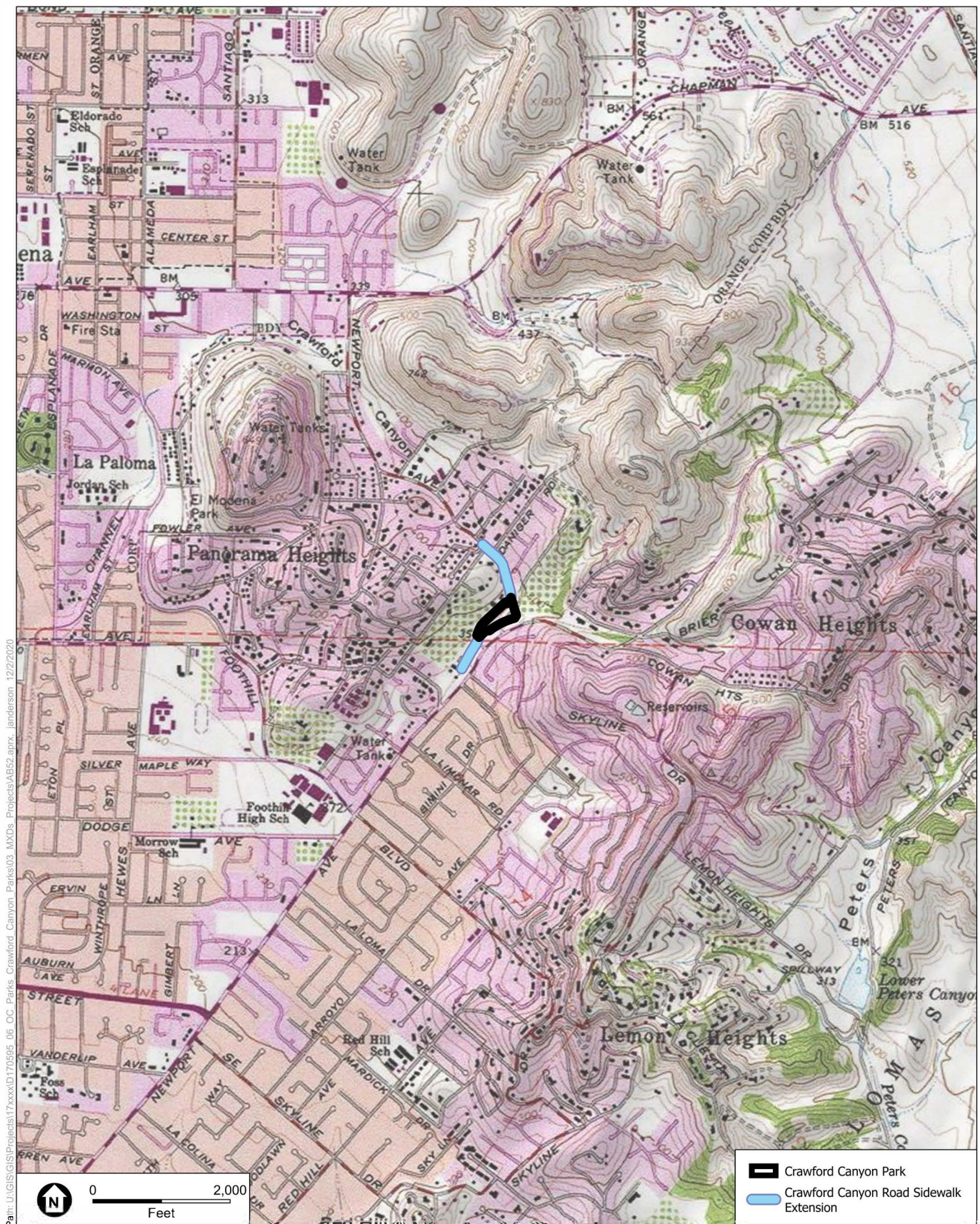
Figure 1
Regional Map



SOURCE: Mapbox, 2020.

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

Figure 2
Local Vicinity Map



SOURCE: USGS Topographic Series (Orange, CA).

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

Figure 3
Topographic Map

1.5 Project Sponsor's Name | Address

County of Orange

OC Parks, Planning & Design Division
13042 Old Myford Road
Irvine, CA 92602

OC Public Works, Infrastructure Programs
601 N. Ross Street
Santa Ana, CA 92703

1.6 General Plan | Specific Plan Designation(s)

County of Orange General Plan Land Use Designation: Suburban Residential (1B)

1.7 Zoning District(s)

County of Orange Zoning Designation: Agricultural Residential (AR) 20,000

1.8 Description of Project

The County is proposing to develop the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project. The proposed Crawford Canyon Park is a 2.5-acre neighborhood park located at the northwest corner of Newport Avenue and Crawford Canyon Road situated in North Tustin, an unincorporated community in the County. Recreational amenities and features of Crawford Canyon Park are anticipated to include a quarter-mile walkway, pathways, foot bridges, two playgrounds/natural play areas for children, exercise stations, picnic tables, benches, a drinking fountain, a bioswale and bioretention basin, landscape berms aligned with trees and natural rolling lawn areas. Crawford Canyon Park would not include barbecues or restroom facilities. A paved surface parking lot with 11 vehicular parking spaces for the Park would be provided onsite with vehicular access from Newport Avenue for both northbound and southbound travel. A deceleration lane would be constructed for southbound travel on Newport Avenue that would allow a right turn into the parking lot of Crawford Canyon Park. The striped center median would be modified to allow a left turn into Crawford Canyon Park. The proposed improvements of the Sidewalk Extension include approximately 630 feet of sidewalk construction along the north side of Newport Avenue beginning across from Hyde Park Drive proceeding easterly and approximately 815 feet of sidewalk construction along the west side of Crawford Canyon Road from the northeasterly end of the Park Site to Country Haven Lane; refer below to Figures 7a and 7b. Additional associated proposed improvements include decomposed granite walkways, pavement reconstruction, driveways, curb ramps, curb/gutter, retaining walls/slough walls, drainage inlet modifications and features, utility relocations and adjustments, traffic pole replacement, pedestrian push button relocation and adjustments to pull boxes at the intersection of Crawford Canyon Road and Newport Avenue. The areas adjacent to the decomposed granite walkways along Crawford Canyon Road will be self-retaining areas.

1.9 Surrounding Land Uses and Setting

The areas immediately to the north, east, south, and west of both the Park and Sidewalk Extension Sites consist of existing single-family residences; refer to Figure 2.

1.10 Other public agencies whose approval is required

Table 1-1, Public Agency Approvals, below provides a list of required and anticipated public agency approvals that are associated with the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project.

Table 1-1: Public Agency Approvals

Body	Action
County of Orange Public Works	The following permits are required: temporary construction easements, grading, demolition, landscape, plumbing, and electrical.
OC Parks Commission	Recommendation for approval of the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project Initial Study/Mitigated Negative Declaration (IS/MND).
Board of Supervisors	Approval and adoption of the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project IS/MND.

Source: ESA, 2021.

1.11 California Native American consultation

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? OC Planning mailed the Assembly Bill 52 (AB 52) initial consultation notification letters on December 28, 2020 to the following California Native American tribes: Gabrieleno Band of Mission Indians – Kizh Nation, Juaneno Band of Mission Indians, San Gabriel Band of Mission Indians, and Soboba Band of Luiseno Indians. Tribal consultation is still ongoing. Consultation with the Gabrieleno Band of Mission Indians – Kizh Nation and the County took place on March, 12, 2021; refer to Section 4.22, *Tribal Cultural Resources* for further discussion.

Chapter 2: Environmental Determination

Based on the analysis conducted in this Initial Study, the County of Orange, OC Parks and OC Public Works, as the Lead Agency, has made the following determination:

Table 2-1: Environmental Determination

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	<input type="checkbox"/>
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 or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	<input checked="" type="checkbox"/>
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	<input type="checkbox"/>
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.	<input type="checkbox"/>
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.	<input type="checkbox"/>
I find that the proposed project has previously been analyzed as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to the State CEQA Guidelines and the County's adopted Local CEQA Guidelines. The proposed project is a component of the whole action analyzed in the previously adopted/certified CEQA document.	<input type="checkbox"/>
I find that the proposed project has previously been analyzed as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to State and County CEQA Guidelines. Minor additions and/or clarifications are needed to make the previous documentation adequate to cover the project which are documented in this addendum to the earlier CEQA document (CEQA §15164).	<input type="checkbox"/>
I find that the proposed project Has previously been analyzed as part of an earlier CEQA document (which either mitigated the project or adopted impacts pursuant to findings) adopted/certified pursuant to State and County CEQA Guidelines. However, there is important new information and/or substantial changes have occurred requiring the preparation of an additional CEQA document (ND or EIR) pursuant to CEQA Guidelines Sections 15162 through 15163.	<input type="checkbox"/>

Andy Salazar
Signature

Date

6/17/2021

Andy Salazar
Printed Name

Chapter 3: Project Description

3.1 Introduction

The County is proposing to develop the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project. The proposed Crawford Canyon Park is a 2.5-acre neighborhood park located at the northwest corner of Newport Avenue and Crawford Canyon Road. Recreational amenities and features of Crawford Canyon Park are anticipated to include a quarter-mile walkway, pathways, foot bridges, two playgrounds/natural play areas for children, exercise stations, picnic tables, benches, a drinking fountain, a bioswale and bioretention basin, landscape berms aligned with trees and natural rolling lawn areas. Crawford Canyon Park would not include barbeques or restroom facilities. A paved surface parking lot with 11 vehicular parking spaces would be provided onsite with vehicular access from Newport Avenue. The proposed improvements of the Sidewalk Extension include approximately 630 feet of sidewalk construction along the north side of Newport Avenue beginning across from Hyde Park Drive proceeding easterly and approximately 815 feet of sidewalk construction along the west side of Crawford Canyon Road from the northeasterly end of the Park Site to Country Haven Lane. Additional associated proposed improvements include decomposed granite walkways, pavement reconstruction, driveways, curb ramps, curb/gutter, retaining walls/slough walls, drainage inlet modifications and features, utility relocations and adjustments, traffic pole replacement, pedestrian push button relocation and adjustments to pull boxes at the intersection of Crawford Canyon Road and Newport Avenue.

Project Objectives:

- Accessibility. Provide safe pedestrian access for residents of North Tustin area including Panorama Elementary School. Provide linkage to surrounding walkways, bikeways and trails.
- Recreation. Serve the recreational needs of the community.
- Safe and Sustainable Design. Provide safe and healthy environment; Maintain law enforcement surveillance views into the Park Site; Eco-friendly materials and low maintenance.
- Improve Aesthetics. Beautify the Park and Sidewalk Extension Sites with the proposed Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project.

3.2 Environmental Setting and Surrounding Land Uses

The surrounding land uses to the Crawford Canyon Park and Sidewalk Extension are described in **Table 3-1, Surrounding Land Uses**.

Table 3-1: Surrounding Land Uses

Direction	Land Use(s)
North	Single-family residences, Panorama Elementary School
East	Crawford Canyon Road, Single-family residences
West	Single-family residences
South	Newport Avenue, Single-family residences

Source: ESA, 2021.

Site Regional Environmental Setting

The Park and Sidewalk Extension Sites are located in North Tustin, an urban unincorporated community in the County; refer to Figure 1. North Tustin is located outside the city limits of Tustin and is the largest census-designated place (i.e., population) within the unincorporated community in the County.

Site Vicinity Environmental Setting

The areas immediately to the north, east, south, and west of the Park and Sidewalk Extension Sites consist of existing single-family residences; refer to Figure 2. An existing drainage culvert and associated cement drainage ditch is located immediately to the southwest of the Park Site. These drainage facilities will not be modified by construction of the Park.

Site Environmental Setting

The Park Site is currently vacant with scattered vegetation. An additional cement drainage ditch exists along Newport Avenue. An existing 60-foot easement designated to the County for public utilities and regional and local trails is located along the northern portion of the Park Site. Underground infrastructure and utilities located within the easement area include a storm drain pipe, sewer, water, gas, and electric lines. Overhead power lines currently exist within the easement area. An approximate 5-foot high retaining wall along a portion of the northern site perimeter currently separates the Park Site from adjacent residences. Chain link fencing exists along the Site perimeter. The Sidewalk Extension Site currently consists of roadway shoulder and a dirt drainage area along Crawford Canyon Road and an asphalt and dirt shoulder along Newport Avenue.

3.3 Site Improvement Characteristics

Project Components

The County is proposing to develop the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project. Recreational amenities and features of Crawford Canyon Park are anticipated to include a quarter-mile walkway, pathways, foot bridges, two playgrounds/natural play areas for children, exercise stations, picnic tables, benches, a drinking fountain, a bioswale and bioretention basin, landscape berms aligned with trees and natural rolling lawn areas; refer to **Figure 4**, *Crawford Canyon Park Conceptual Site Plan*.

The proposed 8-foot wide concrete quarter-mile walkway traverses the central area of the Park Site and near the exterior portions along Newport Avenue and Crawford Canyon Road. The proposed 5-foot wide decomposed granite pathways connect to the interior walkways along the natural rolling lawn areas. The wooden foot bridges cross the proposed dry creek/bed areas comprised of pebbles, stones, and boulders which meander throughout the interior of the Park Site. These dry creek/bed areas are an artificial runoff management feature and not a natural creek. The proposed Crawford Canyon Park includes a bioswale and bioretention basin comprised of riparian plants with natural stone cobbles and boulders located in the western portion of the Park Site adjacent to the proposed parking lot. Since the concrete ditch along Newport Avenue east of the proposed parking lot entry will be removed, stormwater will be diverted to the proposed dry creek/bed areas and bioswale. The centrally located playgrounds/natural play areas for children would include play equipment atop poured-in-place resilient play surfacing rubber materials and sand. The two playgrounds/natural play areas would be designated by recommended age groups; children aged 2 through 5 and children aged 5 through 12. The playground equipment would include a wizard's hideaway playhouse, a log and rope course, rock climber, log pyramid climber, a surfacing half-dome hand holds, log steppers, log benches, a double swing with bird's nest swing, an embankment slide, and a spring rider; refer to **Figure 5**, *Crawford Canyon Park Playground Equipment* and **Figure 6**,

Crawford Canyon Park Site Furnishings. The proposed exercise stations located throughout the Park Site would be situated atop decomposed granite. Exercise equipment would include push-offs, leg-flexes, body-pulls, and body-tucks. The Crawford Canyon Park does not include barbecues or restroom facilities.

The proposed improvements of the Sidewalk Extension include approximately 630 feet of sidewalk construction along the north side of Newport Avenue beginning across from Hyde Park Drive proceeding easterly and approximately 815 feet of sidewalk construction along the west side of Crawford Canyon Road from the northeasterly end of the Park Site to Country Haven Lane; refer to **Figure 7a**, *Crawford Canyon Road Sidewalk Extension Conceptual Plan* and **Figure 7b**, *Crawford Canyon Road Sidewalk Extension Conceptual Plan*. Additional associated proposed improvements include decomposed granite walkways, pavement reconstruction, driveways, curb ramps, curb/gutter, retaining walls/slough walls, drainage inlet modifications and features, utility relocations and adjustments, traffic pole replacement, pedestrian push button relocation and adjustments to pull boxes at the intersection of Crawford Canyon Road and Newport Avenue. The proposed improvements are to be constructed within the existing road right-of-way with no acquisitions anticipated. However, temporary construction easements will be required.

Parking/Access

The Crawford Canyon Park would include a paved surface parking lot comprised of nine standard vehicular spaces, two handicap accessible vehicular spaces and equipped with bicycle racks to be provided onsite with vehicular access from Newport Avenue. The vehicular access is located in the southwestern portion of the Park Site. The Crawford Canyon Park would include a vehicular deceleration lane on Newport Avenue prior to entering the proposed parking lot. A 15-wide maintenance access drive comprised of turf block with grasses would be located along the northern boundary of the Park Site and accessible from the parking lot. A fence up to six feet in height would be installed along the northeastern perimeter of the Park Site to discourage pedestrians from trespassing through private property. Pedestrian access would be provided within the parking lot and from sidewalks along Newport Avenue and Crawford Canyon Road.

Operations

Hours of operation for the Crawford Canyon Park would include 7:00 A.M. to 6:00 P.M. from November 1 through February 28 and 7:00 A.M. to 9:00 P.M. from March 1 through October 31. County sponsored activities or events would not be hosted at the Crawford Canyon Park. Public group reservations for the recreational amenities at the Park Site would not be allowed.

Security Features/Lighting

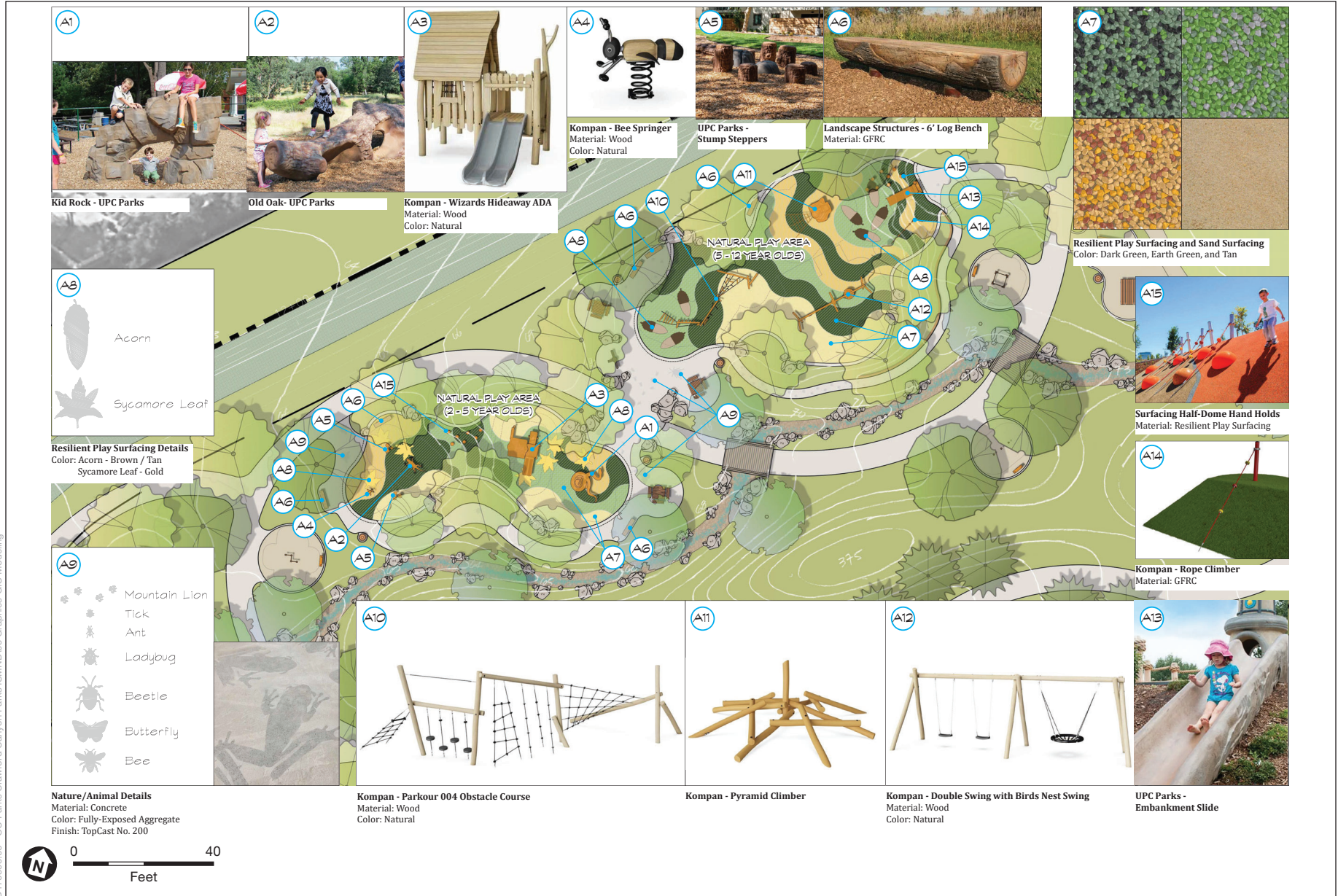
A proposed vehicular gate would be located at the parking lot entrance. The proposed parking lot would be locked every evening and opened every morning. The Park would not be enclosed with fencing or walls. The Park would provide security lighting located along walkways and pathways and within the two playgrounds/natural play areas for children and the parking lot. The proposed down-shield lighting would be timer controlled and remain on through the evening and automatically shut off during the day.



SOURCE: OC Parks, 2020

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

Figure 4
Crawford Canyon Park Conceptual Site Plan

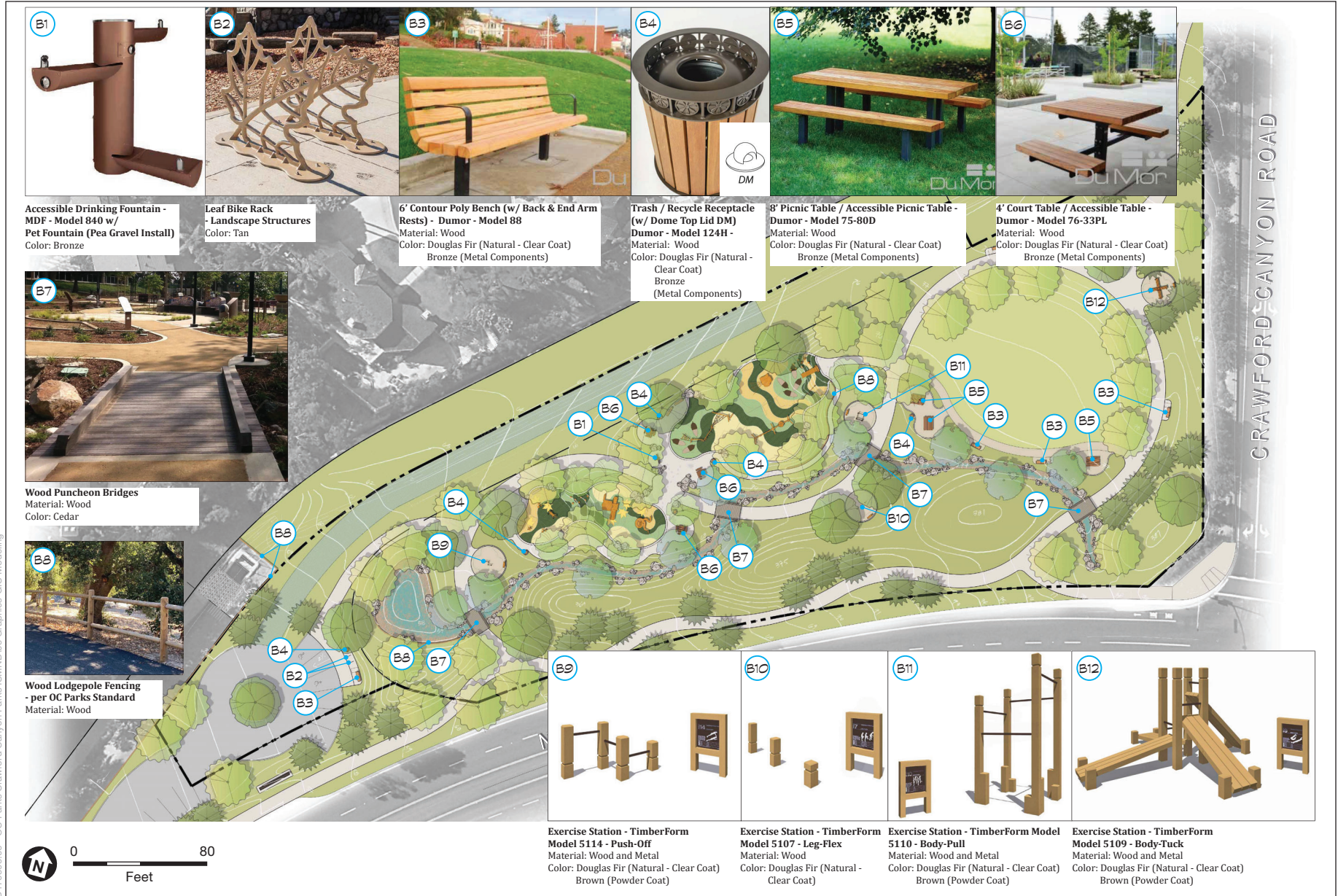


SOURCE: RJM Design Group, 2020

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

Figure 5
Crawford Canyon Park Playground Equipment

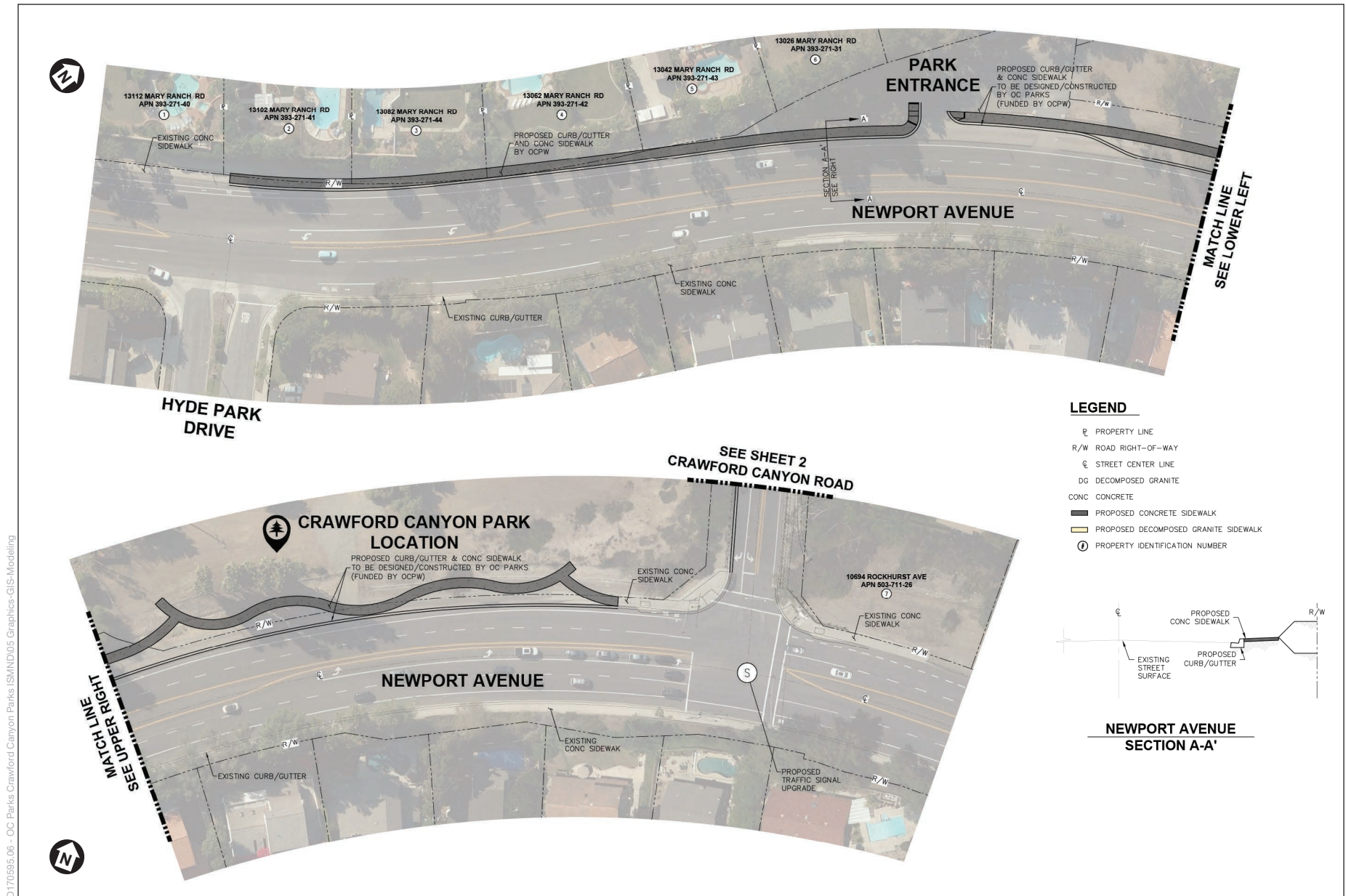




SOURCE: RJM Design Group, 2020

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

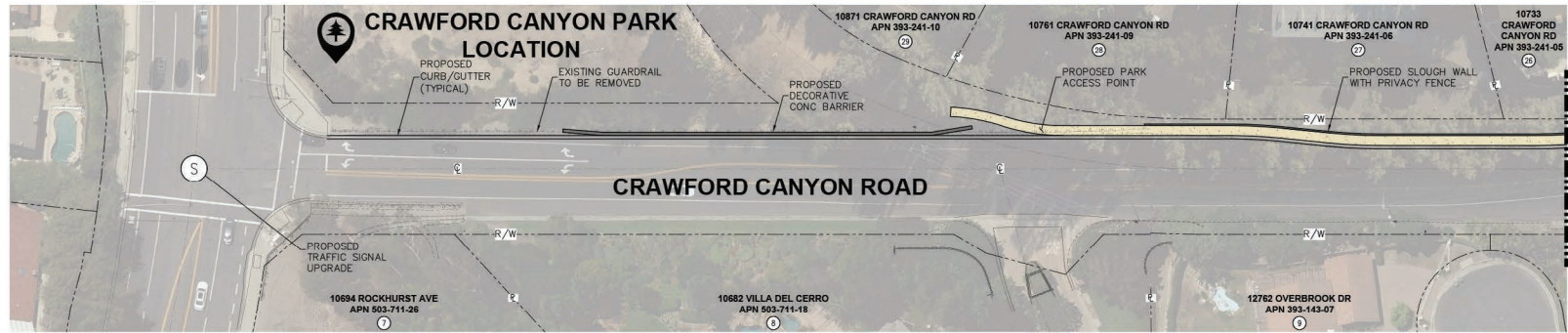
Figure 6
Crawford Canyon Park Site Furnishings



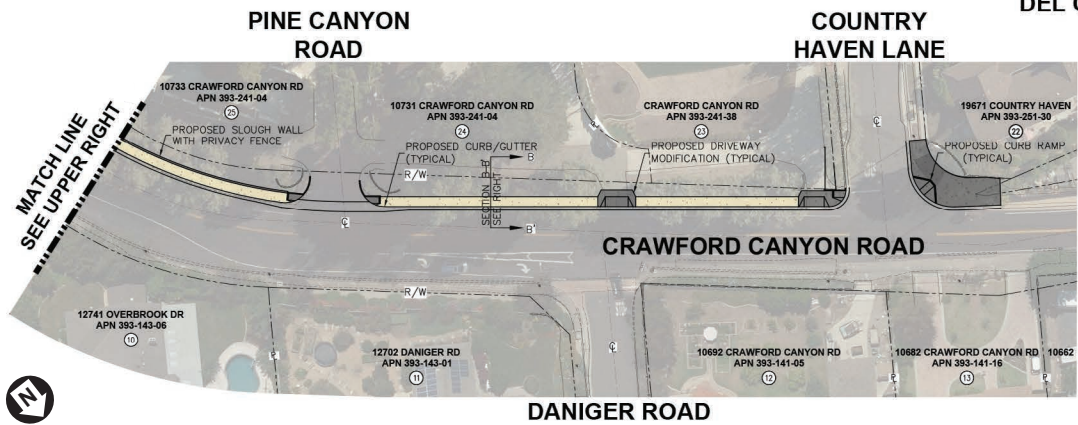
SOURCE: County of Orange, 2020

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

Figure 7a
Crawford Canyon Road Sidewalk Extension Conceptual Plan

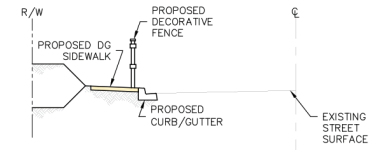


MATCH LINE
SEE MIDDLE LEFT



LEGEND

- P PROPERTY LINE
- R/W ROAD RIGHT-OF-WAY
- CL STREET CENTER LINE
- DG DECOMPOSED GRANITE
- CONC CONCRETE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED DECOMPOSED GRANITE SIDEWALK
- ① PROPERTY IDENTIFICATION NUMBER



CRAWFORD CANYON ROAD SECTION B-B'

SOURCE: County of Orange, 2020

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

Figure 7b
Crawford Canyon Road Sidewalk Extension Conceptual Plan

Maintenance

The anticipated maintenance of Crawford Canyon Park would include weekly landscaping, trash haul up to twice a week, and daily inspection of all-around Park integrity. Trash receptacles would be located throughout the Park Site.

Landscaping

The Crawford Canyon Park would remove all 49 existing trees and all 27 existing palms onsite; refer to Section 4.8, *Biological Resources*, for potential impacts to trees within the Park Site. The Park would include landscape berms aligned with trees and natural rolling lawn areas; refer to **Figure 8**, *Crawford Canyon Park Conceptual Landscape Plan*. Various size replacement trees would be planted on-site and include native coast live oaks (*Quercus agrifolia*), native sycamores (*Platanus racemosa*), non-native madrones (*Arbutus 'Marina'*), non-native allepo pines (*pinus halepensis*), and non-native California peppers (*Schinus molle*). The Park would provide native and/or drought tolerant landscaping or other low water landscaping to the greatest extent feasible. Foot bridges would cross the dry creek/bed areas comprised of pebbles, stones, and boulders which meander throughout the interior of the Park Site. A bioswale and bioretention basin comprised of riparian plants with natural stone cobbles and boulders is proposed in the western portion of the Park Site adjacent to the proposed parking lot. Development of the Sidewalk Extension could result in removal of one or two existing ornamental or non-native trees along Crawford Canyon Road in the County right-of-way; refer to Section 4.8, *Biological Resources*, for potential impacts to trees within the Sidewalk Extension Site.

Signage

Proposed signage would include a wooden entry monument sign up to 5 feet in height located at the parking lot entrance of the Park Site. Metal way-finding signage with Park regulations up to 6 feet in height would be located throughout the Park Site.

Walls and Fencing

A black, wrought-iron fence up to 6 feet in height would be installed along the northeastern perimeter of the Park Site to discourage pedestrians from trespassing through private property. The Park would not be enclosed with fencing or walls. The Sidewalk Extension would include splitface concrete block retaining walls ranging from 2 feet to 4 feet in height with wrought iron fencing up to 6 feet in height.



SOURCE: RJM Design Group, 2020

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

Figure 8
Crawford Canyon Park Conceptual Landscape Plan

3.4 Building Characteristics

The Crawford Canyon Park and Sidewalk Extension would not include the development of habitable structures, buildings, or restroom facilities. The Park is designed with a nature theme.

3.5 Infrastructure Characteristics

Stormwater

The Crawford Canyon Park is proposing a bioswale and bioretention basin located in the western portion of the Park Site adjacent to the parking lot. Since the concrete ditch along Newport Avenue east of the proposed parking lot entry will be removed, stormwater will be diverted to the proposed dry creek/bed areas and bioswale. Construction of the Park would also include storm drain outfall maintenance, removing the accumulated soil piles to improve site drainage and sediment/erosion control on the Site, and accumulated soil and debris piles on the Park Site. Construction of the Sidewalk Extension would include the removal of the concrete v-ditch along Crawford Canyon Road for the installation of the curb and gutter and the decomposed granite pathway. The Sidewalk Extension includes the construction of a storm drain and catch basin inlet along Crawford Canyon Road.

Utilities/Utility relocation(s)

The Crawford Canyon Park is proposing domestic water for landscape irrigation. The Park would not include restroom facilities or sewer lines. Electricity is needed for the proposed security lighting within the Park. No existing utilities within the Park Site would require relocation. Utilities requiring relocation for construction of the Sidewalk Extension would include an advance Southern California Gas Company meter, traffic signal poles and pedestrian push button.

Site Drainage/Best Management Practices

The parking lot surface flows to an inlet and then into the proposed underground storm drain pipe. Low flows go to a filterra proprietary best management practice (BMP) water quality treatment device then into the proposed underground storm drain pipe. Storm flows bypass the filterra and go directly into the catch basin inlet then into the proposed underground storm drain pipe for the Park. The majority of the Park Site will be treated by the proposed bioretention basin. The remainder of the Park Site employs the use of onsite low impact development (LID) BMPs to address project runoff. These LID BMPs include (1) minimizing impervious area through the incorporation of landscaping and trees, (2) maximizing natural infiltration capacity with the use of pervious drainage swales, (3) preserve existing drainage patterns and time of concentration, (4) disconnect impervious areas by providing landscaping, (5) protect existing vegetation and sensitive areas, and (6) revegetate disturbed areas with the use of xeriscape landscaping.

3.6 Construction Activities

Construction Staging and Lay-Down Area(s)

The construction staging and lay-down area for the Park will be located within the project boundaries of the Park Site. Construction staging and lay-down area for the Sidewalk Extension will be located offsite, potentially within a vacant lot located approximately one-mile south of the Sidewalk Extension Site on Newport Avenue. The final construction staging and lay-down area for the Sidewalk Extension will be determined by the Project contractor. Construction workers will park within the staging and lay-down area.

Temporary roadway or travel lane closures

During construction of the Park, lane closures would occur along Newport Avenue for delivery of construction materials and during installation of the deceleration lane. One of the two southbound travel lanes along Newport Avenue is expected to be closed during construction of the Sidewalk Extension. The travel lane for southbound travel along Newport Avenue is expected

to be closed during construction of the Sidewalk Extension. Along Crawford Canyon Road, travel lanes are expected to be shifted to maintain two-directional travel.

Equipment Roster

A summary of the construction phases, approximate duration of each construction phase (working days assuming Mondays through Fridays), estimated construction workers, and estimated construction equipment for the Crawford Canyon Park and the Sidewalk Extension are shown below:

Crawford Canyon Park

- Clearing and Grubbing (Approximately 20 days consisting of 18 construction workers): Bulldozer, excavator, loader, dump truck, water truck, and sweeper.
- Grading/Excavation (Approximately 60 days consisting of 20 construction workers): Excavator, bulldozer, scraper, water truck, dump truck, and sweeper.
- Paving and Construction (Approximately 80 days consisting of 30 construction workers): Scraper, dump truck, sweeper, asphalt paver, compactor/roller, water truck, excavator, concrete truck, and bulldozer.
- Landscaping (Approximately 90 days consisting of 28 construction workers): Skid steer and backhoe.

Sidewalk Extension

- Site Preparation (Approximately 6 days consisting of 8 construction workers): Grader, tractor, loader, and backhoe.
- Demolition (Approximately 16 days consisting of 10 construction workers): Excavator, concrete/industrial saw, tractor, loader, and backhoe.
- Utility Relocation (Approximately 11 days consisting of 6 construction workers): Utility trucks.
- Storm Drain Construction (Approximately 33 days consisting of 12 construction workers): Excavator, tractor, loader, backhoe, welder, cement and mortar mixer.
- Sidewalk Construction (Newport Avenue) (Approximately 16 days consisting of 8 construction workers): Cementer and mortar mixer, compactor, and concrete/industrial saw.
- Sidewalk Construction (Crawford Canyon Road) (Approximately 16 days consisting of 8 construction workers): Cementer and mortar mixer, compactor, and concrete/industrial saw.
- Traffic Signal Modification (Approximately 11 days consisting of 10 construction workers): Crane, utility truck, and backhoe.
- Paving (Approximately 16 days consisting of 8 construction workers): Cement and mortar mixer, paver, paving equipment, roller, tractor, loader, and backhoe.

Soil Balance

The Crawford Canyon Park is proposing approximately 2,900 cubic yards of cut and 12,900 cubic yards of fill, resulting in approximately 10,000 cubic yards of soil import. The Sidewalk Extension is anticipated to export up to approximately 272 cubic yards of native soil and import up to approximately 265 cubic yards for structure backfill. If the native soil can be used for wall backfill, then the Sidewalk Extension Site would be balanced.

3.7 Project Features

Recreational amenities and features of Crawford Canyon Park are anticipated to include a quarter-mile walkway, pathways, foot bridges, two playgrounds/natural play areas for children, exercise

stations, picnic tables, benches, a drinking fountain, a bioswale and bioretention basin, landscape berms aligned with trees and natural rolling lawn areas; refer to Figures 4 through 6 and Figure 8.

3.8 Offsite Improvements

The Crawford Canyon Park would include a deceleration lane on Newport Avenue prior to entering the proposed parking lot.

3.9 Project Schedule and Phases

The County is proposing to begin construction in fall of 2021 with Crawford Canyon Park opening in summer of 2022. The Crawford Canyon Park would take approximately one year to construct. Construction of the Park would include approximately 250 working days with no overlap of construction phases which includes approximately 20 days for clearing and grubbing; approximately 60 days for grading/excavation; approximately 80 days for paving and construction; and approximately 90 days for landscaping; refer to Table 4.7-1, *Estimated Construction Schedule*.

The County is proposing to begin construction of the Sidewalk Extension in summer of 2022 with completion in fall of 2022. Construction of the Sidewalk Extension would include approximately 120 working days with some overlap of construction phases which includes approximately 7 days for site preparation; 21 days for demolition; approximately 15 days for utility relocations; approximately 45 days for storm drain construction; approximately 21 days for sidewalk construction along Newport Avenue and approximately 21 days for sidewalk construction along Crawford Canyon Road; approximately 15 days for traffic signal modification; and approximately 21 days for paving; refer to Table 4.7-1.

3.10 Change in Land Use Controls

The Crawford Canyon Park Site is designated as Suburban Residential (1B) on the County's General Plan Land Use Element Map (2015). A park is allowed in this land use designation. The Park Site is zoned Agricultural Residential (AR) 20,000 on the County's Zoning Map (2016), which allows outdoor recreational uses. The Crawford Canyon Park and Sidewalk Extension does not include a general plan amendment or zone change.

Chapter 4: Environmental Evaluation

4.1 Analysis Methodology

Analysis of potentially significant impacts of each of the environmental factors identified in **Table 4-1, *Environmental Factors Potentially Affected***, below is based on the project site environmental setting, project description, and the sample questions/thresholds of significance. Potentially significant impacts that are reduced below the level of significance by sample questions/thresholds of significance will detail how the potentially significant impact is reduced. Potentially significant impacts that are unable to be reduced below the level of significance will detail the various mitigation options applied and why none would reduce the impact to less than significant.

The analysis will consider the whole of the actions and include the following:

- Onsite impacts
- Offsite impacts
- Short-term construction impacts
- Long-term operational impacts
- Direct impacts
- Indirect impacts
- Cumulative impacts

4.2 Environmental Factors Evaluated

This document incorporates the Environmental Checklist Form from Appendix G of the CEQA Guidelines as referenced in Section 3.3 of the Orange County 2020 Local CEQA Procedures Manual. Table 4-1 below lists the environmental factors that are evaluated in Sections 4.5 through 4.25 of this document.

Table 4-1: Environmental Factors Evaluated

<input type="checkbox"/> Aesthetics (4.5)	<input type="checkbox"/> Mineral Resources (4.16)
<input type="checkbox"/> Agriculture & Forestry Resources (4.6)	<input type="checkbox"/> Noise (4.17)
<input type="checkbox"/> Air Quality (4.7)	<input type="checkbox"/> Population & Housing (4.18)
<input type="checkbox"/> Biological Resources (4.8)	<input type="checkbox"/> Public Services (4.19)
<input type="checkbox"/> Cultural Resources (4.9)	<input type="checkbox"/> Recreation (4.20)
<input type="checkbox"/> Energy (4.10)	<input type="checkbox"/> Transportation (4.21)
<input type="checkbox"/> Geology and Soils (4.11)	<input type="checkbox"/> Tribal Cultural Resources (4.22)
<input type="checkbox"/> Greenhouse Gas Emissions (4.12)	<input type="checkbox"/> Utilities & Service Systems (4.23)
<input type="checkbox"/> Hazards & Hazardous Materials (4.13)	<input type="checkbox"/> Wildfire (4.24)
<input type="checkbox"/> Hydrology & Water Quality (4.14)	<input type="checkbox"/> Mandatory Findings (4.25)
<input type="checkbox"/> Land Use & Planning (4.15)	

4.3 Thresholds of Significance

Thresholds of significance are identifiable quantitative, qualitative or performance level standards of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by a Lead Agency and compliance with which means the effect will normally be determined to be less than significant (Guidelines §15064.7(a)).

The County relies upon the specific questions relating to the topical environmental factors listed in Appendix G of the State CEQA Guidelines to assist in the determination of a potentially significant impact. The County may, depending on the circumstances of a particular project, use specific thresholds of significance on a case-by-case basis as provided by CEQA Guidelines Section 15064.7(b). In addition, the County of Orange Board of Supervisors adopted County VMT guidelines and thresholds set by the County of Orange *Final Guidelines for Evaluating Vehicle Miles Traveled Under CEQA* (County of Orange, 2020) at its November 17, 2020 meeting.

4.4 Environmental Baseline

To adequately determine the significance of a potential environmental impact, the environmental baseline must be established. Guidelines Section 15125(a) states in pertinent part that the existing environmental setting will normally constitute the baseline physical conditions that will assist the County in a determining if an impact is significant.

Therefore, the environmental baseline for this Project constitutes the existing physical conditions as they exist at the time that the environmental process commenced.

4.5 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Question 4.5a) Have a substantial adverse effect on a scenic vista?**Response to Question 4.5a)**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view or visual setting. A scenic vista can be impacted in two ways: a development project can have visual impacts by either directly diminishing the scenic quality of the vista or by blocking the view corridors or “vista” of the scenic resource. Important factors in determining whether a proposed project would block scenic vistas include the project’s proposed height, mass, and location relative to surrounding land uses and travel corridors.

The Park and Sidewalk Extension Sites are not designated as scenic vistas in Chapter VI, Resources Element, of the County's General Plan (County of Orange, 2013). According to the Scenic Highway Plan, Newport Avenue to the south and east of the Park and Sidewalk Extension Sites is considered a viewscape corridor (County of Orange, 2013). The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. The Sidewalk Extension Site is comprised of the existing road right-of-ways of Newport Avenue and Crawford Canyon Road. The Park and Sidewalk Extension Sites are located in a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Sites comprise of existing single-family residences.

Construction of the Project would require temporary ground disturbance within the Park and Sidewalk Extension Sites. Construction fencing will include screening materials to block the view within the construction site. Post construction, the Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. The Park and Sidewalk Extension would not include above-ground structures that would block or impede views of the viewscape corridor along Newport Avenue or within the vicinity of the Park and Sidewalk Extension Sites. The Project would be compatible and enhance the existing visual character of the Project vicinity. As such, the Project would not result in a substantial adverse effect on a scenic vista or change views of the viewscape corridor along Newport Avenue. Impacts would be less than significant and no mitigation measures are required.

Question 4.5b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Response to Question 4.5b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. The Park and Sidewalk Extension Sites are located in a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Sites comprise of existing single-family residences. According to the Scenic Highway Plan Map, of the County's General Plan, Newport Avenue to the south and east of the Park and Sidewalk Extension Sites is considered a viewscape corridor (County of Orange, 2013). The Park and Sidewalk Extension would not include above-ground structures that would block or impede views or scenic resources within the vicinity of the Park and Sidewalk Extension Sites, including the viewscape corridor along Newport Avenue. The nearest designated scenic highway is the State Route 55 (Santa Ana)/East Anaheim and State Route 55 (near Santa Ana Canyon)/Route 15 (near Corona), located approximately 5.25 miles northwest of the Park and Sidewalk Extension Sites (Caltrans, 2021). The Park and Sidewalk Extension Sites do not contain rock outcroppings. As discussed below in Response 4.9a, based on a recent historical resources survey, no improvements on the Park and Sidewalk Extension Sites are eligible for the National Register, California Register, or Local designation. Therefore, no damage to historical resources would occur with implementation of the Project. The Sidewalk Extension Site is developed and consists of a paved sidewalk, concrete lined v-ditch drainages and vegetation that is either ornamental or non-native. The Crawford Canyon Park would remove all 49 existing trees and all 27 existing palms onsite. The Park would include the planting of more than 76 various size replacement trees as well as shrubs and groundcover within the Park Site; refer to Figure 8. Development of the Sidewalk Extension could

result in removal of one or two ornamental or non-native trees along Crawford Canyon Road in the County right-of-way. Overall, based on the above, the Project would not substantially damage scenic resources located within the vicinity of a scenic highway or the viewscape corridor along Newport Avenue. As such, a less than significant impact would occur and no mitigation measures are required.

Question 4.5c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Response to Question 4.5c)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Park and Sidewalk Extension Sites are located in a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Sites comprise of existing single-family residences. The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. The Sidewalk Extension Site is comprised of the existing road right-of-ways of Newport Avenue and Crawford Canyon Road.

Construction activities associated with the Project would require the use of construction equipment and storage of materials on-site, thus introducing contrasting features into the visual landscape that affect the visual quality of the Park and Sidewalk Extension Sites and the immediate vicinity. Contrasting features would include demolition materials, excavated areas, stockpiled soils, and other materials generated and stored on-site during construction. However, adverse effects to visual character associated with Project construction would be temporary. Post construction, the Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. The Park and Sidewalk Extension would not include above-ground structures that would block or impede views in the vicinity of the Park and Sidewalk Extension Sites. The Project would be compatible and enhance the existing visual character of the Project vicinity.

The Park and Sidewalk Extension Sites are located in an urbanized area. Implementation of the Crawford Canyon Park and Sidewalk Extension Project is consistent with the existing zoning designation of the Sites. The Park Site is zoned Agricultural Residential (AR) 20,000 on the County's Zoning Map (2016). Per Table 7-9-31.2, Land Use Regulations – Single-Family Residential Districts, of the County's Zoning Code, the AR zoning designation permits parks and recreational facilities (non-commercial).

Overall, construction and operation of the Project would not conflict with the applicable zoning or other regulations governing scenic quality. A less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.5d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?**Response to Question 4.5d)**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Park and Sidewalk Extension Sites are located in a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Sites comprise of existing single-family residences. The Project vicinity exhibits considerable ambient nighttime illumination levels due to the densely developed nature of the area and adjacent properties. Artificial light sources from the surrounding properties include interior and exterior lighting for security and incidental landscape lighting. Automobile headlights, streetlights, and stoplights for visibility and safety purposes along Newport Avenue and Crawford Canyon Road contribute to overall ambient lighting levels as well.

Security lighting used during the construction of Crawford Canyon Park and the Sidewalk Extension, if necessary, could introduce new sources of light to the Sites and the immediate vicinity. If security lighting is needed, it would be shielded and directed away from surrounding light-sensitive land uses. Further, construction of Crawford Canyon Park and the Sidewalk Extension would not occur during evening hours. Temporary impacts associated with light during construction activities would be less than significant and no mitigation measures are required.

Post construction, the Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Park would provide security lighting located along walkways and pathways and within the two playgrounds/natural play areas for children and the parking lot. Hours of operation for the Crawford Canyon Park would include 7:00 A.M. to 6:00 P.M. from November 1 through February 28 and 7:00 A.M. to 9:00 P.M. from March 1 through October 31. The proposed down-shield lighting would be timer controlled and remain on through the evening and automatically shut off during the day. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements which would not involve the installation of permanent new outdoor lighting. Although implementation of Crawford Canyon Park would introduce new sources of lighting to the Park Site that are typical of recreational and urban uses, all outdoor lighting would be shielded and oriented downward to reduce light spillage onto adjacent properties. The final lighting plan for the Project would be subject to review and approval by the County as part of the site plan review process. Further, all proposed outdoor lighting would be subject to review by the County. Compliance with these regulations would ensure that operational impacts regarding lighting of Crawford Canyon Park would be less than significant and no mitigation measures are required.

Glare within the Project Site and the surrounding area occurs from sunlight reflected from reflective materials utilized in existing residences along Newport Avenue and Crawford Canyon Road and from vehicle windows and surfaces. Glare-sensitive receptors include motorists on the roadways surrounding the Project Site. As glare is a temporary phenomenon that changes with the movement of the sun, receptors other than motorists are generally less sensitive to glare impacts than to light impacts. Impacts related to glare would be minimal because the Crawford Canyon Park and the Sidewalk Extension would not include the construction of above-ground buildings or structures with highly reflective materials (e.g., windows or glass with mirror-like tints). As such, a less than significant impact would occur in this regard and no mitigation measures are required.

4.6 Agriculture and Forestry Resources

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 forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code 12220 (g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51004(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Question 4.6a) 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?

Response to Question 4.6a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites are located in North Tustin, an urbanized unincorporated community in the County. Accordingly, there is no area in North Tustin that is designated Prime Farmland, Unique Farmland or Farmland of Statewide Importance. The Park and Sidewalk Extension Sites are located in a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Sites comprise of existing single-family residences. The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. The Sidewalk Extension Site is comprised of the existing road right-of-ways of Newport Avenue and Crawford Canyon Road. No agricultural uses or related operations are present within the Park or Sidewalk Extension Sites or in the surrounding urbanized area. Pursuant to the maps of the Farmland Mapping and Monitoring Program, the Park and Sidewalk Extension Sites are designated as Urban and Built-Up Land (CDC, 2020). According to Figure VI-1, Prime Farmland in Orange County, of the County's General Plan, the Park and Sidewalk Extension Sites are not designated as prime farmland (County of Orange, 2013). Therefore, the Sites are not located on designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Since the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not convert farmland to non-agricultural uses, no impact would occur in this regard.

Question 4.6b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?**Response to Question 4.6b)**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites are designated as Suburban Residential (1B) on the County's General Plan Land Use Element Map (2015) and zoned Agricultural Residential (AR) 20,000 on the County's Zoning Map (2016). The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. The Sidewalk Extension Site is comprised of the existing road right-of-ways of Newport Avenue and Crawford Canyon Road. No agricultural zoning is present in North Tustin, and no nearby lands are enrolled under the Williamson Act. According to Figure VI-2, Orange County Agricultural Preserves, of the County's General Plan, the Park and the Sidewalk Extension Sites are not enrolled under the Williamson Act (County of Orange, 2013). As such, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not conflict with existing zoning for agricultural uses or a Williamson Act contract and no impact would occur in this regard.

Question 4.6c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code 12220 (g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51004(g))?**Response to Question 4.6c)**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** North Tustin is urbanized. The Park and Sidewalk Extension Sites are zoned Agricultural Residential (AR) 20,000. The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. The Sidewalk Extension Site is comprised of the existing road right-of-ways of Newport Avenue and Crawford Canyon Road. No forest land or land zoned for timberland production is present within North Tustin. As such, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not conflict with existing zoning for forest land or timberland and no impact would occur in this regard.

Question 4.6d) Result in the loss of forest land or conversion of forest land to non-forest use?**Response to Question 4.6d)**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** North Tustin is urbanized. The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. The Sidewalk Extension Site is comprised of the existing road right-of-ways of Newport Avenue

and Crawford Canyon Road. No forest land exists in North Tustin. As such, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not result in the loss of forest land or conversion of forest land to non-forest use and no impact would occur in this regard.

Question 4.6e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?

Response to Question 4.6e)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** North Tustin is urbanized. There are no agricultural or forest uses or related operations in North Tustin or ear the Park or the Sidewalk Extension Sites, which are located within a highly urbanized area. Therefore, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not involve the conversion of farmland or forest land to other uses, either directly or indirectly. No impacts to agricultural or forest land or uses would occur in this regard.

4.7 Air Quality <i>Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:</i>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the *Air Quality and Greenhouse Gas Modeling* (ESA, 2020a), located in Appendix A, of this Draft IS/MND.

Question 4.7a) Conflict with or obstruct implementation of the applicable air quality plan?

Response to Question 4.7a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Park and Sidewalk Extension Sites are located within the South Coast Air Basin (Basin). Air quality planning for the Basin is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Crawford Canyon Park and Sidewalk Extension would be subject to the SCAQMD's Air Quality Management Plan (AQMP), which contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments (SCAG).

The 2016 AQMP was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy (SCAQMD, 2016). Projects that are consistent with the assumptions used in the AQMP do not interfere with attainment because the growth is included in the projections utilized in the formulation of the AQMP. Thus, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if it would individually exceed the SCAQMD's numeric indicators.

Construction

Construction activities associated with the Project have the potential to generate temporary criteria pollutant emissions through the use of heavy-duty construction equipment and through vehicle trips generated from worker trips, vendor and haul trucks traveling to and from the Park and Sidewalk Extension Sites. In addition, fugitive dust emissions would result from construction activity. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity and equipment, and prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Under this criterion, the SCAQMD recommends that lead agencies demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related) upon which the air quality plan is based. The Project would result in an increase in short-term employment compared to existing conditions. The construction of Crawford Canyon Park would generate up to 30 jobs during the paving and construction phase and the Sidewalk Extension would generate up to 24 jobs during the storm drain construction phase. Being relatively small in number and temporary in nature, construction jobs under the Project would not conflict with the long-term employment projections upon which the AQMP is based.

As described in the sections below, the Project would have less than significant construction emissions of criteria pollutants. Therefore, the Project would be consistent with the AQMP. Additionally, the Project would comply with California Air Resources Board (CARB) requirements to minimize short-term emissions from on-road and off-road diesel equipment. The Project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403, for example, apply water spray/mists or similar suppressant (e.g., SoilSeal) at least 3 times per day on active areas of disturbance and unpaved roads, and limit truck speed to 15 miles per hour or less on unpaved roads to minimize dust on unpaved roads at the construction site.

Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Crawford Canyon Park and Sidewalk Extension would not conflict with the control strategies intended to reduce emissions from construction equipment, the Project would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant and no mitigation measures are required.

Operation

The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public

utilities and regional and local trails, and chain link fencing along the Site perimeter. The Crawford Canyon Park is anticipated to generate 85 weekday trips, 57 Saturday trips, and 49 Sunday trips. The Sidewalk Extension would not generate any operational vehicle trips. As discussed in Section 16, Transportation and Traffic, this Project would not have a significant impact on transportation or traffic. As a park and circulation use, the Project is not anticipated to result in increases in employment. Overall, the Crawford Canyon Park and Sidewalk Extension would not conflict with the growth projections identified in the AQMP and would not conflict with or obstruct implementation of the AQMP's or the County's strategies and policies intended to reduce criteria pollutant emissions. Therefore, impacts would be less than significant and no mitigation measures are required.

The Park and Sidewalk Extension Sites are located within the SCAB, which is characterized by relatively poor air quality (SCAQMD, 2016). State and federal air quality standards are often exceeded in many parts of the Basin. The Project would contribute to local and regional air pollutant emissions during construction (short-term or temporary) and Project occupancy (long-term). However, based on the following analysis, construction and operation of the Crawford Canyon Park and Sidewalk Extension would result in less than significant impacts relative to the daily significance thresholds for criteria air pollutant emissions established by the SCAQMD for construction and operational phases and no mitigation measures are required.

Construction Impacts

Based on criteria set forth in the SCAQMD CEQA Air Quality Handbook (SCAQMD, 1993), a project would have the potential to violate an air quality standard or contribute substantially to an existing violation and result in a significant impact with regard to construction emissions if regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 75 pounds a day for volatile organic compounds (VOCs), (2) 100 pounds per day for (NOX), (3) 550 pounds per day for carbon monoxide (CO), (4) 150 pounds per day for sulfur oxides (SOX), (5) 150 pounds per day for respirable particulate matter (PM10), and (6) 55 pounds per day for fine particulate matter (PM2.5).

Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The emissions have been estimated using the CalEEMod software (version 2016.3.2), an emissions inventory software program recommended by the SCAQMD, and the CARB on-road vehicle EMFAC2017 model. CalEEMod is based on outputs from OFFROAD and EMFAC, which are emissions estimation models developed by CARB and used to calculate emissions from construction activities, including on- and off-road vehicles. On-road emissions have been calculated outside of CalEEMod using the most recent version of EMFAC (2017). The input values used in this analysis were adjusted to be project-specific based on equipment types and the construction schedule. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis to generate criteria pollutant emissions values for each construction activity. This emissions analysis for all construction activities includes compliance with mandatory SCAQMD Rule 403 measures regarding the control of fugitive dust.

Construction of Crawford Canyon Park is estimated to last approximately 12 months, tentatively scheduled to begin September 2021 and conclude August 2022. The Sidewalk Extension is estimated to last approximately four months, tentatively scheduled to begin June 2022 and conclude September 2022. Construction duration by phase is provided in **Table 4.7-1, Estimated**

Construction Schedule. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Site specific construction fleet may vary due to specific Project needs at the time of construction. The duration of construction activity and associated construction equipment was estimated based on consultation with the County.

Table 4.7-1: Estimated Construction Schedule

Activity	Start Date	End Date	Duration (Work Days)
Crawford Canyon Park			
Clearing and Grubbing	9/1/2021	9/28/2021	20
Grading/Excavation	9/29/2021	12/20/2021	60
Paving and Construction	12/21/2021	4/9/2022	80
Landscaping	4/10/2022	8/15/2022	90
Sidewalk Extension			
Site Preparation	6/1/2022	6/8/2022	6
Demolition	6/9/2022	6/29/2022	16
Utility Relocation	6/30/2022	7/14/2022	11
Storm Drain Construction	6/30/2022	8/15/2022	33
Sidewalk Construction (Newport)	6/30/2022	7/21/2022	16
Sidewalk Construction (Crawford)	8/15/2022	9/5/2022	16
Traffic Signal Modification	7/21/2022	8/4/2022	11
Paving	9/6/2022	9/27/2022	16

Source: ESA 2020.

Note: Construction schedule assumes work occurring Mondays through Fridays.

The maximum daily regional emissions from these activities are estimated by construction phase and compared to the SCAQMD significance thresholds. Emissions have been combined for phases that are anticipated to overlap representing a worst-case scenario. As shown in **Table 4.7-2, Maximum Regional Construction Emissions – Without Mitigation (Pounds Per Day)**, emissions resulting from construction of the Project would not exceed any criteria pollutant thresholds established by the SCAQMD. Therefore, impacts would be considered less than significant and no mitigation measures are required.

**Table 4.7-2: Maximum Regional Construction Emissions – Without Mitigation
(pounds per day) ^a**

Source	VOC	NO_x	CO	SO₂	PM₁₀ ^b	PM_{2.5} ^b
Crawford Canyon Park						
Clearing and Grubbing	2.89	27.41	19.02	0.05	3.92	2.53
Grading	3.82	40.54	25.93	0.07	4.50	2.92
Paving and Construction	4.71	46.35	32.87	0.08	2.37	1.96
Landscaping	0.25	2.73	4.49	0.01	0.45	0.20
Sidewalk Extension						
Site Preparation	0.71	8.22	6.10	0.01	0.71	0.37
Demolition	1.24	10.94	15.42	0.03	0.82	0.60
Utility Relocation	1.07	8.09	7.10	0.03	0.43	0.31
Storm Drain Construction	1.10	8.14	10.95	0.02	0.69	0.42
Sidewalk Construction (Newport)	0.53	4.54	5.48	0.01	0.45	0.26
Sidewalk Construction (Crawford)	0.57	4.79	5.69	0.01	0.46	0.27
Traffic Signal Modification	1.13	10.90	8.82	0.03	0.73	0.47
Paving	0.78	7.64	10.30	0.02	0.57	0.41
Overlapping Phases						
Park Landscaping + Sidewalk Extension Site Prep + Sidewalk Extension Demo	2.20	21.90	26.02	0.05	1.98	1.17
Sidewalk Extension Utility Relocation + Sidewalk Extension Storm Drain Construction	2.17	16.23	18.05	0.05	1.12	0.73
Sidewalk Extension Utility Relocation + Sidewalk Extension Storm Drain Construction + Sidewalk Construction (Newport)	2.70	20.77	23.54	0.06	1.57	0.98
Sidewalk Construction (Newport) + Sidewalk Extension Storm Drain Construction + Sidewalk Extension Traffic Signal Mod	2.76	23.58	25.26	0.06	1.87	1.14
Sidewalk Construction (Newport) + Sidewalk Extension Traffic Signal Mod	1.66	15.44	14.31	0.04	1.18	0.72
Maximum Daily Emissions	5	46	33	<1	5	3
SCAQMD Regional Significance Thresholds ^c	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A, of this Draft IS/MND.

^b Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

Source: ESA, 2020.

Operational Impacts

Based on criteria set forth in the SCAQMD CEQA Air Quality Handbook, a project would have the potential to violate an air quality standard or contribute substantially to an existing violation and result in a significant impact with regard to operational emissions if regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 55 pounds a day for VOCs, (2) 55 pounds per day for NOX, (3) 550 pounds per day for CO, (4) 150 pounds per day for SOX, (5) 150 pounds per day for PM10, and (6) 55 pounds per day PM2.5 (SCAQMD, 2019).

Operation of Crawford Canyon Park has the potential to generate criteria pollutant emissions through vehicle trips traveling to and from the Park Site. In addition, emissions would result electrical generation necessary to provide park lighting and area sources onsite such as landscaping equipment. Operational impacts were assessed for the Project buildout year. The Sidewalk Extension would not generate an increase in operational emissions.

Operational emissions for Crawford Canyon Park were estimated using CalEEMod for a City Park. Mobile source emissions are based on the vehicle emission factors from EMFAC2017 and the default trip length values for the Park land uses in CalEEMod, which are Basin-wide average trip distance values. To estimate the total vehicle miles traveled (VMT) for existing trips, daily trip totals provided in the Transportation Analysis Memorandum (Appendix J, of this Draft IS/MND) were used in combination with CalEEMod default trip distances.

Other sources of emissions from Park operation uses include equipment used to maintain landscaping, such as lawnmowers and trimmers. The CalEEMod tool uses landscaping equipment GHG emission factors from the CARB OFFROAD2011 model and the *CARB Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment* (CARB, 2003). The CalEEMod software estimates that landscaping equipment operate for 250 days per year in the Air Basin. Emissions of VOCs from the use of consumer products and architectural coatings are based on SCAQMD-specific emission factors for land uses in the Air Basin.

Operational-source emissions are summarized in **Table 4.7-3, Maximum Unmitigated Regional Operational Emissions (Pounds Per Day)**. As shown, operational-source emissions of Crawford Canyon Park are below the applicable SCAQMD regional thresholds of significance. Therefore, impacts would be considered less than significant and no mitigation measures are required.

**Table 4.7-3: Maximum Unmitigated Regional Operational Emissions
(pounds per day)^a**

Source	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	0.01	0.00	<1	0.00	0.00	0.00
Energy	<1	<1	<1	<1	<1	<1
Mobile	0.35	0.02	469.86	2.03	1.30	1.82
Total Project Operational Emissions	0.35	0.02	469.86	2.03	1.30	1.82
SCAQMD Significance Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A, of this Draft IS/MND.

Source: ESA, 2020

Question 4.7b) 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?

Response to Question 4.7b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Project would result in the emission of criteria pollutants both during construction and operation for which the Project area is in non-attainment. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. The Air Basin is currently in non-attainment for ozone, PM₁₀, and PM_{2.5}.

The SCAQMD's approach for assessing cumulative impacts related to operations is based on attainment of ambient air quality standards in accordance with the requirements of the Federal and State Clean Air Acts. As discussed earlier, the SCAQMD has developed a comprehensive plan, the 2016 AQMP, which addresses the region's cumulative air quality condition.

A significant impact may occur if a project were to add a cumulatively considerable contribution of a federal or state non-attainment pollutant. The Basin is currently in non-attainment for ozone (federal and state standards), PM₁₀ (state standards only) and PM_{2.5} (federal and state standards); therefore, related projects could cause ambient concentrations to exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and SCAQMD.

In particular, CEQA Guidelines Section 15064(h)(3) provides guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that:

“A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific

requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency..."

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the Project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2016 AQMP. As noted previously under discussion 4.7a), the Project would be consistent with the 2016 AQMP and would not have a cumulatively considerable air quality impact. Although the Project's employment would increase temporarily during construction, this growth would be well within the employment projections for the County.

As the Project is not part of an ongoing regulatory program, the SCAQMD also recommends that Project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As noted previously under discussion 4.7a), peak daily emissions of construction and operation-related pollutants would not exceed SCAQMD regional significance thresholds. By applying SCAQMD's cumulative air quality impact methodology, even though implementation of the Project would result in an addition of criteria pollutants, in conjunction with related projects in the region, cumulatively significant impacts would not occur. In addition, as noted in discussion 4.7c), below, construction of the Project is not expected to result in a cumulatively considerable net increase of any criteria pollutant for which the SCAQMD has established a localized impact threshold. Therefore, the emissions of non-attainment pollutants and precursors generated by the Crawford Canyon Park and Sidewalk Extension would be less than significant and would not result in a cumulatively considerable air quality impact. No mitigation measures are required.

With respect to health impacts, the Project construction health risks would be less than significant and related projects would also be required to implement similarly stringent measures, as necessary under CEQA, to mitigate impacts to less than significant. Compliance with applicable SCAQMD rules would verify Project operational health risks would be less than significant and related projects would also be required to comply with applicable rules as well as implement mitigation measures, as necessary under CEQA, to mitigate impacts to less than significant. As a result, the Project would not result in cumulatively considerable health impacts and no mitigation measures are required.

Compliance with applicable rules would ensure that the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project and related projects would not result in cumulatively considerable odor impacts.

Question 4.7c) Expose sensitive receptors to substantial pollutant concentrations?

Response to Question 4.7c)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. Certain population groups are especially sensitive to air pollution and should be given special consideration when evaluating potential air quality impacts. These population groups include children, the elderly, persons with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. As defined in the SCAQMD CEQA Air Quality

Handbook, a sensitive receptor to air quality is defined as any of the following land use categories: (1) long-term health care facilities; (2) rehabilitation centers; (3) convalescent centers; (4) retirement homes; (5) residences; (6) schools; (7) parks and playgrounds; (8) child care centers; and (9) athletic fields. Sensitive receptors within a quarter-mile radius of the Park boundary and the Sidewalk Extension boundary include adjacent residential land uses in all directions of the Sites.

The localized air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008),¹ which relies on on-site mass emission rate screening tables and project-specific dispersion modeling typically for sites greater than five acres, as appropriate (SCAQMD, 2008). The localized significance thresholds are applicable to NOX, CO, PM10, and PM2.5. For NOX and CO, the thresholds are based on the ambient air quality standards. For PM10 and PM2.5, the thresholds are based on requirements in SCAQMD Rule 403 (Fugitive Dust) for construction and Rule 1303 (New Source Review Requirements) for operations. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the project is located, (2) the size of the project area, and (3) the distance between the project area and the nearest sensitive receptor.

SCAQMD's Methodology clearly states that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." Therefore, for purposes of the LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest existing sensitive receptors to the Park and Sidewalk Extension Sites are single-family residential uses in all directions and the Panorama Elementary School. The localized significance threshold (LST) used for the localized significance impact analysis were based on a two-acre site in the Saddleback Valley Source-Receptor Area with sensitive receptors located adjacent to the Park and Sidewalk Extension Sites (i.e., 25 meters).

Construction Emissions

Table 4.7-4, *Maximum Localized Construction Emissions – Without Mitigation (Pounds Per Day)*, identifies the localized impacts at the nearest receptor location in the vicinity of the Project area without mitigation. The localized emissions during construction activity would not exceed SCAQMD's localized significance thresholds. Therefore, impacts would be less than significant and no mitigation measures are required.

¹ South Coast Air Quality Management District, Localized Significance Thresholds, (2003, revised 2008), <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed October 2020.

Table 4.7-4: Maximum Localized Construction Emissions – without Mitigation (pounds per day)^a

Source	NO_x	CO	PM₁₀^b	PM_{2.5}^b
Crawford Canyon Park				
Clearing and Grubbing	27.37	18.45	3.71	2.47
Grading	36.41	23.47	3.96	2.76
Paving and Construction	46.19	31.86	2.03	1.86
Landscaping	2.60	3.63	0.12	0.11
Sidewalk Extension				
Site Preparation	8.19	5.64	0.53	0.32
Demolition	10.32	14.52	0.54	0.52
Utility Relocation	8.07	6.75	0.29	0.27
Storm Drain Construction	7.12	9.52	0.33	0.32
Sidewalk Construction (Newport)	3.54	4.28	0.18	0.18
Sidewalk Construction (Crawford)	3.79	4.49	0.19	0.19
Traffic Signal Modification	9.89	7.51	0.41	0.38
Paving	7.61	9.84	0.39	0.36
Overlapping Phases				
Park Landscaping + Sidewalk Extension Site Prep + Sidewalk Extension Demo	21.11	23.78	1.20	0.96
Sidewalk Extension Utility Relocation + Sidewalk Extension Storm Drain Construction	15.19	16.27	0.63	0.59
Sidewalk Extension Utility Relocation + Sidewalk Extension Storm Drain Construction + Sidewalk Construction (Newport)	18.73	20.55	0.81	0.77
Sidewalk Construction (Newport) + Sidewalk Extension Storm Drain Construction + Sidewalk Extension Traffic Signal Mod	20.55	21.31	0.92	0.88
Sidewalk Construction (Newport) + Sidewalk Extension Traffic Signal Mod	13.43	11.79	0.59	0.56
Maximum Daily Emissions	46.19	31.86	3.96	2.76
SCAQMD Localized Significance Thresholds^c	131	993	6	4
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A, of this Draft IS/MND.

^b Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

^c Localized Significance Thresholds (LST) were for a 2-acre project site with a 25-meter receptor distance.

Source: ESA, 2020

Operational Emissions

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may queue and idle at the site (e.g., warehouse or transfer facilities). With regard to on-site sources of emissions, the Crawford Canyon Park would not generate emissions resulting from sources such as natural combustion (on-site natural gas consumption for heating, such as natural gas combustion in broilers and water heaters). The Sidewalk Extension would not result in an increase in operational emissions. Therefore, as shown in **Table 4.7-5, Maximum Localized Operational Emissions (Pounds Per Day)**, below, impacts would be less than significant and no mitigation measures are required.

Table 4.7-5: Maximum Localized Operational Emissions (pounds per day)^a

Source	NO_x	CO	PM₁₀	PM_{2.5}
Area	0.00	<1	0.00	0.00
Energy	<1	<1	<1	<1
Total Localized Project Operational Emissions	<1	<1	<1	<1
SCAQMD Thresholds of Significance ^b	46.2	31.9	2	1
Exceeds Thresholds?	No	No	No	No

a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix A, of this Draft IS/MND.

b Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

c Localized Significance Thresholds (LST) were for a 2-acre project site with a 25-meter receptor distance.

Source: ESA, 2020

Carbon Monoxide Hotspot

A carbon monoxide (CO) hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. Projects may worsen air quality if they increase the percentage of vehicles in cold start modes by two percent or more; significantly increase traffic volumes (by five percent or more) over existing volumes; or worsen traffic flow, defined for signalized intersections as increasing average delay at intersections operating at Level of Service (LOS) E or F or causing an intersection that would operate at LOS D or better without the proposed project, to operate at LOS E or F.

CO decreased dramatically in the Basin with the introduction of the automobile catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Basin in recent years and the Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. As discussed below, it is not expected that CO levels at Project-impacted intersections would rise to such a degree as to cause an exceedance of these standards.

Construction

On-road traffic from the construction of Crawford Canyon Park would include a daily maximum of 30 worker vehicles during the paving and construction phase and 16 haul trucks during the grading phase. Daily maximum construction vehicles associated with the construction of the Sidewalk Extension would consist of up to 52 worker vehicles during the overlap of storm drain construction and sidewalk construction and up to 3 haul trucks during demolition. While construction-related traffic on the local roadways would occur during construction, the net increase of construction worker vehicle trips to the existing daily traffic volumes on local roadways would be relatively small and would not result in CO hotspots. Additionally, construction-related vehicle trips would only occur in the short-term and would cease once construction activities have been completed.

Operation

Caltrans CO Protocol requires detailed analysis for intersections with LOS E or F (Caltrans, 1997). The SCAQMD recommends performing a CO hotspot analysis if a project triggers either of the two criteria: 1) increases the volume to capacity ratio by two percent or more for intersections rated at LOS D or worse, or 2) declines an intersection's LOS from C to D. Based on trip generation rates for a "public park", the Crawford Canyon Park is anticipated to generate 85 weekday trips, 57 Saturday trips, and 49 Sunday trips. During the peak hour, the Crawford Canyon Park would generate a maximum of 13 trips Sunday evenings. The Sidewalk Extension would not generate operational trips. Based on this level of trip generation, the Project does not warrant a CO hotspot analysis per the Caltrans and SCAQMD criteria.

Toxic Air Contaminants

Concentrations of toxic air contaminants (TACs), or in federal parlance, hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

Sensitive receptors are located adjacent to the Park and Sidewalk Extension Sites. SCAQMD recommends that construction health risk assessments be conducted for substantial sources of diesel particulate matter (DPM) emissions (e.g., earth-moving construction activities) in proximity to sensitive receptors and has provided guidance for analyzing mobile source diesel emissions. However, localized DPM emissions (strongly correlated with PM_{2.5} emissions) are less than significant. Although the localized analysis does not directly measure health risk impacts, it does provide data that can be used to evaluate the potential to cause health risk impacts. The very low level of PM_{2.5} emissions coupled with the short-term duration of construction activity resulted in an overall low level of DPM concentrations in the Project area. Furthermore, compliance with the CARB ATCM anti-idling measure, which limits idling to no more than five minutes at any location for diesel-fueled commercial vehicles, further minimized DPM emissions in the Project area. Sensitive receptors would be exposed to emissions below thresholds, and construction TAC impacts are less than significant and no mitigation measures are required.

SCAQMD recommends that operational health risk assessments be conducted for substantial sources of DPM emissions (e.g., truck stops and warehouse distribution facilities) in proximity to

sensitive receptors and has provided guidance for analyzing mobile source diesel emissions. The Project is not anticipated to generate a substantial number of daily truck trips. Therefore, based on the limited activity of TAC sources TAC concentrations at off-site sensitive receptors, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not warrant the need for a health risk assessment associated with on-site operational activities, and potential TAC impacts are expected to be less than significant.

Question 4.7d) Result in other emissions (such as those leading to odors) affecting a substantial number of people?

Response to Question 4.7d)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant.** Potential activities that may emit odors during construction activities include the use of architectural coatings and solvents and the combustion of diesel fuel in on- and off-road equipment. SCAQMD Rule 1113 would limit the amount of VOCs in architectural coatings and solvents. In addition, the Project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. Further, construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of construction. Through adherence with mandatory compliance with SCAQMD Rules, no construction activities or materials are expected to create objectionable odors affecting a substantial number of people. Therefore, construction of the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would result in less than significant impacts and no mitigation measures are required.

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 Project does not include any uses identified by SCAQMD as being associated with substantial odors. As a result, the Project is not expected to discharge contaminants into the air in quantities that would cause a nuisance, injury, or annoyance to the public or property pursuant to SCAQMD Rule 402. Therefore, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not create adverse odors affecting a substantial number of people and impacts would be less than significant and no mitigation measures are required.

4.8 Biological Resources*Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following analysis is based in part, on the *Biological Constraints Survey Memorandum for the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project* (Biological Constraints Survey Memorandum) (ESA, 2020b), located in Appendix B, of this Draft IS/MND.

Question 4.8a) 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 Wildlife or U.S. Fish and Wildlife Service?

Response to Question 4.8a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. The Park and Sidewalk Extension Project Sites are located in a residential community in North Tustin. The Park Site consists of a vacant lot comprised of bare ground (e.g. dirt/gravel) and scattered patches of native and non-native vegetation such as lemonade berry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), Peruvian pepper tree (*Schinus molle*) and Mexican fan palm (*Washingtonia robusta*). The existing patches of native vegetation in the Park Site are small and isolated, therefore, they are unlikely to provide suitable habitat to 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 Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS). However, the Mexican fan palms could provide habitat for roosting bat species. Otherwise, the small and isolated native vegetation provides suitable habitat to non-special-status avian species. The Sidewalk Extension Site is developed and consists of a paved sidewalk, concrete lined v-ditch drainages and vegetation that is either ornamental or non-native. Representative vegetation of the Sidewalk Extension Site includes eucalyptus (*Eucalyptus* sp.), tree tobacco (*Nicotiana glauca*), carrotwood (*Cupaniopsis anacardioides*), Chinese elm (*Ulmus parvifolia*), weeping fig (*Ficus benjamina*), variegated pittosporum (*Pittosporum tobira* 'Variegata') and salt cedar (*Tamarix ramosissima*). No special-status plant or wildlife species were observed during surveys, and no suitable habitat exists in either the Park or the Sidewalk Extension Sites. No special-status species are expected to occur on the Project Site. Consequently, Project impacts related to construction or operation would be less than significant for species identified as candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by CDFW and USFWS during Project construction or operations and no mitigation measures are required.

Question 4.8b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Response to Question 4.8b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites do not support riparian habitat or sensitive natural communities. Although the Park Site supports native species such as lemonade berry, laurel sumac, California buckwheat (*Eriogonum fasciculatum*), and California brittlebush (*Encelia californica*), the small and patchy plant assemblage does not constitute a sensitive natural plant community, nor does it serve as a functional native vegetation community. The Park Site also does not support riparian vegetation communities, even though mulefat (*Baccharis salicifolia*), a facultative wetland species, is present but does not constitute riparian habitat, as the isolated occurrence of the species by itself does not constitute riparian habitat. Similarly, the Sidewalk Extension Site is vegetated exclusively by ornamental and non-native trees such as eucalyptus, Peruvian pepper tree, castor bean (*Ricinus communis*), tree tobacco (*Nicotiana glauca*), carrotwood, Chinese elm, variegated pittosporum, and weeping fig. Neither the vegetation present on the Park or Sidewalk Extension Sites constitute a sensitive natural community or a riparian habitat. Therefore, no impacts to riparian habitat or sensitive natural communities identified in local or regional plans, policies, and regulations or by CDFW or USFWS are expected as a consequence of construction or operational activities.

Question 4.8c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Response to Question 4.8c)

Crawford Canyon Park: **No Impact.** The Park Site is situated along a sloped area and evidence of downhill water flow is present onsite in the form of shallow surface erosion channels. In addition, two shallow depressions are present within the Park Site, surrounded by Mexican fan palms, where water can pool after a rain event. These features, however, do not constitute a jurisdictional feature regulated by the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or the CDFW. No state or federally protected wetlands were observed on the Park Site. Therefore, the Project would not impact state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.).

Crawford Canyon Road Sidewalk Extension: **No Impact.** The Sidewalk Extension Site consists of a manufactured drainage with northern and western branches, both of which are situated along sloped areas. Both the north and west portion of the Sidewalk Extension Site have concrete lined v-ditches that lead to box culverts. While these features may have been part of a jurisdictional feature (the National Wetlands Inventory designates a jurisdictional feature upstream of the Sidewalk Extension Site), and subject to regulation by the USACE, RWQCB, no new or additional development is anticipated, and temporary impacts caused by sidewalk construction would not disrupt any hydrologic connections. Therefore, the Project would not impact state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.).

Question 4.8d) 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?

Response to Question 4.8d)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant with Mitigation Incorporated.** The Park and Sidewalk Extension Sites do not have suitable conditions to support a wildlife nursery and are not located within or near an established wildlife corridor. However, vegetation onsite may provide suitable roosting sites for bats (Park Site only), and nesting sites for birds (both Park and Sidewalk Extension Sites). Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of native birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). Additionally, common bats are protected under CDFG Code Section 4150. Activities that could result in a potentially significant impact during breeding season include construction disturbance to avian nesting substrate or bat maternity colony that may cause nest or roost abandonment or direct mortality by habitat removal, noise levels at the nest exceeding 65 dBA, or activities within 100-feet of the nest or roost. With pre-construction nesting birds and bat surveys, monitoring during construction during the breeding season in areas containing active nesting sites, and with implementation of specific restrictions to establish appropriate set-backs to curtail construction near any active bird or bat nest sites, impacts would be less than significant with mitigation incorporated as described in Mitigation Measure BIO-1.

Mitigation Measure:

Mitigation Measure BIO-1: Proposed Project activities that may disturb native and non-native vegetation, or structures where birds or bats may potentially nest, shall occur outside of the avian breeding and maternity bat roosting seasons which extend from February 1 to September 1 (and may begin as early as January 1 for some raptors) in order to avoid potential impacts to nesting birds or their eggs or breeding bats.

If construction activities cannot avoid the avian breeding and maternity bat roosting season, a qualified biologist shall conduct nesting bird and maternity bat roosting surveys not more than 3 days prior to the initiation of Project activities. If a protected native nesting bird or maternity bat roost is found, the County shall delay all Project activities within 100 feet of occupied nesting or roosting habitat (within 300 feet for suitable raptor nesting habitat) until the nest or roost is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting/maternal roosting. Flagging, stakes, or construction fencing shall be used to demarcate the inside boundary of the buffer of 100 feet (or 300 feet) between the Project activities and the nest/roost. A smaller buffer area around an active nest may be recommended by the qualified monitoring biologist based on tolerance behavior of the nesting bird. Project personnel, including all contractors working on site, shall be instructed on the sensitivity of the area. The qualified biologist shall provide the County with the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds and special-status bats.

Question 4.8e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Response to Question 4.8e)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Crawford Canyon Park would remove all 49 existing trees and all 27 existing palms onsite. The Park would include the planting of more than 76 various size replacement trees as well as shrubs and groundcover within the Park Site; refer to Figure 8. The Park and Sidewalk Extension Sites do not conflict with any local policies or ordinances protecting biological resources as the General Plan Resources Element defers to the County of Orange (Central/Coastal) Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP). Please refer to discussion 4.8f), below, for protection of wildlife habitats, and the County Zoning Code contains no ordinances specific for the protection of biological resources.

Question 4.8f) Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Response to Question 4.8f)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites are located within the County of Orange (Central/Coastal) NCCP/HCP and the Orange County Transportation Authority (OCTA) NCCP/HCP. The Park and Sidewalk Extension Sites are located approximately 1.2 miles south of the El Modena Open Space and 1.2 miles southwest of the Peter Canyon Regional Park, both part of the County of Orange Central NCCP Habitat Reserve System. The OCTA NCCP/HCP only covers discrete areas that include thirteen freeway improvement projects. The Park and Sidewalk Extension Sites are not associated with these improvement projects and are therefore not covered by the OCTA NCCP/HCP. In addition, while the Park and Sidewalk Extension Sites are located in the area covered by the County of Orange NCCP/HCP, they are not located in a designated reserve area, and the NCCP mapping identifies the Project site as developed. Therefore, the Project activities would have no impacts in regard to conflicts with provisions of local NCCP/HCPs.

4.9 Cultural Resources*Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following analysis is based in part, on the *Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project, North Tustin, California, Cultural Resources Assessment Report* (Cultural Resources Assessment) (ESA, 2021), located in Appendix C, of this Draft IS/MND.

Question 4.9a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Response to Question 4.9a)

Crawford Canyon Park: **Less than Significant Impact with Mitigation Incorporated.** The Cultural Resources Assessment was conducted for the Crawford Canyon Park in January 2021 (ESA, 2021). The Assessment included a California Historical Resources Information System – South Central Coastal Information Center (SCCIC) records search conducted on June 9, 2020; Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search conducted on April 13, 2020; a pedestrian survey conducted on April 20, 2020; and a subsurface archaeological sensitivity assessment based on a review of historic maps, aerial photographs, geotechnical investigations, and proposed excavation parameters.

The SCCIC records search results indicate that approximately 20 percent of the 0.50-mile records search radius has been included in previous cultural resources surveys; however, the Park Site has not been previously surveyed. The SCCIC records search results also indicate that one cultural resource (CA-ORA-1537; prehistoric archaeological site) has been recorded within the 0.50-mile radius. No cultural resources have been recorded within the Park Site.

The NAHC SLF search returned negative results.

No cultural resources were encountered within the Park Site during the pedestrian survey. Ground surface visibility ranged from approximately 0 to 25 percent across the Park Site due to the presence of leaf litter, vegetation, road base, gravels, and other stockpiled materials which obstructed the ground surface.

The subsurface archaeological sensitivity assessment indicates that although the Park Site contains sedimentary deposits dating to the late Pleistocene and Holocene (11,700 years ago to present), the period for which there is widely accepted evidence for human habitation of Southern California, the nearest body of water (which could have provided fresh water to prehistoric inhabitants) is located a far distance from the Park Site (approximately 0.75 miles away). Additionally, no Native American villages are located in close proximity or in the surrounding vicinity to the Park Site (the nearest village is located approximately six miles away). Moreover, the results of the archival research (through the SCCIC and the NAHC) and the pedestrian survey yielded negative results. Lastly, it appears that a portion of the Park Site (eastern side) was previously disturbed in the past to increase the elevation for the purpose of constructing an asphalt road that once traversed the eastern section. Based on these factors, the Park Site appears to contain a low potential for yielding buried prehistoric archaeological resources.

Per review of the 1960 historic aerial photograph, two small structures once existed in the easternmost portion of the Park Site; however, these structures were later removed by at least 1963 (per the aerial photograph of that year). The pedestrian survey identified remnants of an access road, which existed along the eastern portion of the Park Site (per review of the 1964 historic topographic map). The remnants measured approximately 24-foot-long by 2-foot-wide and were in a dilapidated condition. Given the negative results of the pedestrian survey and the previous disturbances along the eastern portion of the Park Site (fill soils placed to elevate and construct the paved road), the subsurface archaeological assessment indicates that the Park Site appears to contain a low potential for yielding buried historic-period archaeological resources.

Nevertheless, since the construction of Crawford Canyon Park includes ground disturbance up to 6 feet in depth, it is possible that unknown subsurface archaeological resources could be encountered. Impacts to archaeological resources that qualify as historical resources as defined in §15064.5 of the State CEQA Guidelines could result in a significant effect on the environment. With implementation of Mitigation Measure CUL-1, which provides procedures to follow in the event of the discovery of archaeological resources, impacts would be less than significant.

Crawford Canyon Road Sidewalk Extension: Less than Significant Impact with Mitigation Incorporated. The Cultural Resources Assessment was conducted for the Sidewalk Extension in January 2021 (ESA, 2021). The Assessment included an SCCIC records search conducted on June 9, 2020; NAHC SLF search conducted on April 13, 2020; a pedestrian survey conducted on November 11, 2020; and a subsurface archaeological sensitivity assessment based on a review of historic maps, aerial photographs, geotechnical investigations, and proposed excavation parameters.

The SCCIC records search results indicate that approximately 20 percent of the 0.50-mile records search radius has been included in previous cultural resources surveys; however, the Sidewalk Extension Site has not been previously surveyed. The SCCIC records search results also indicate that one cultural resource (CA-ORA-1537; prehistoric archaeological site) has been recorded within the 0.50-mile radius. No cultural resources have been recorded within the Sidewalk Extension Site.

The NAHC SLF search returned negative results.

No cultural resources were encountered within the Sidewalk Extension Site during the pedestrian survey. Ground surface visibility ranged from approximately 0 to 25 percent due to leaf litter, gravels, and a concrete sidewalk.

The subsurface archaeological sensitivity assessment indicates that although the Sidewalk Extension Site contains sedimentary deposits dating to the late Pleistocene and Holocene (11,700 years ago to present), the period for which there is widely accepted evidence for human habitation of Southern California, the nearest body of water is located a far and approximately 0.75 miles away. Additionally, no Native American villages are located in close proximity or in the surrounding vicinity to the Sidewalk Extension Site (the nearest village is located approximately six miles away). Moreover, the results of the archival research (through the SCCIC) and the pedestrian survey yielded negative results. Based on these factors, the Sidewalk Extension Site appears to contain a low potential for yielding buried prehistoric archaeological resources.

The review of historic topographic maps and aerial photographs did not show evidence that historic-period structures once existed within the Sidewalk Extension Site and the pedestrian survey yielded negative results. As a result, it appears that there is a low potential for finding buried historic-period archaeological resources.

Nevertheless, since the Sidewalk Extension includes ground disturbance up to 3 feet in depth, it is possible that unknown subsurface archaeological resources could be encountered. Impacts to archaeological resources that qualify as historical resources as defined in §15064.5 could result in a significant effect on the environment. With implementation of Mitigation Measure CUL-1, which provides procedures to follow in the event of the discovery of archaeological resources, impacts would be less than significant.

Mitigation Measure:

Mitigation Measure CUL-1: In the event that historic (e.g., bottles, foundations, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from within 50 feet of the find and a Qualified Archaeologist (defined as meeting the Secretary of the Interior's Professional Qualification Standards for archaeology) shall be notified. An appropriate buffer area shall be established by the Qualified Archaeologist around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by project construction activities shall be evaluated by the Qualified Archaeologist. The County shall consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond those that are scientifically important, are considered. If a resource is determined by the Qualified Archaeologist to constitute a "historical resource" pursuant to CEQA Guidelines Section 15064.5(a) or a "unique archaeological resource" pursuant to Public Resources Code Section 21083.2(g), the Qualified Archaeologist shall coordinate with the Applicant and the County to develop a formal treatment plan that would serve to reduce impacts to the resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. If preservation in place is not

feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. The treatment plan shall include measures regarding the curation of the recovered resources that may include curation at an accredited public, non-profit institution with a research interest in the materials, such as the Natural History Museums of Los Angeles County, if such an institution agrees to accept the material. If no accredited institution accepts the materials, they may be donated to a local school or historical society in the area for educational purposes. The Qualified Archaeologist shall determine the need for archaeological construction monitoring in the vicinity of the find thereafter.

The Qualified Archaeologist shall prepare a final report and appropriate California Department of Parks and Recreation Site Forms at the conclusion of treatment and/or the any follow-up archaeological construction monitoring. The report shall include a description of resources unearthed, if any, treatment of the resources, results of the artifact processing, analysis, and research, and evaluation of the resources with respect to the California Register of Historical Resources. The report and the Site Forms shall be submitted by the Applicant to the County, the South Central Coastal Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.

Question 4.9b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Response to Question 4.9b)

Crawford Canyon Park: Less than Significant Impact with Mitigation Incorporated.

As noted under discussion 4.9a), the SCCIC records search, SLF search, and pedestrian survey did not identify archaeological resources within the Park Site. Additionally, the subsurface archaeological sensitivity assessment indicated that the Park Site appears to contain a low potential for yielding buried prehistoric archaeological resources.

Nevertheless, since the Crawford Canyon Park includes ground disturbance up to 6 feet in depth, it is possible that unknown subsurface archaeological resources could be encountered. Impacts to archaeological resources could result in a significant effect on the environment. With implementation of Mitigation Measure CUL-1, which provides procedures to follow in the event of the discovery of archaeological resources, impacts would be less than significant.

Crawford Canyon Road Sidewalk Extension: Less than Significant Impact with Mitigation Incorporated.

As noted under discussion 4.9a), the SCCIC records search, SLF search, and pedestrian survey did not identify archaeological resources within the Sidewalk Extension Site. Additionally, the subsurface archaeological sensitivity assessment indicated that the Sidewalk Extension Site appears to contain a low potential for yielding buried prehistoric archaeological resources.

Nevertheless, since the Sidewalk Extension includes ground disturbance up to 3 feet in depth, it is possible that unknown subsurface archaeological resources could be encountered. Impacts to archaeological resources could result in a significant effect on the environment. With implementation of Mitigation Measure CUL-1, which provides procedures to follow in the event of the discovery of archaeological resources, impacts would be less than significant.

Mitigation Measure:

Implementation of Mitigation Measure CUL-1.

Question 4.9c) Disturb any human remains, including those interred outside of dedicated cemeteries?**Response to Question 4.9c)****Crawford Canyon Park: Less than Significant Impact with Mitigation Incorporated.**

The results from the SCCIC records search, SLF search, and pedestrian survey did not identify human remains within the Park Site. Should ground disturbance encounter human remains, disturbance of those remains could result in a significant effect on the environment. With implementation of Mitigation Measure CUL-2, which requires following state laws in the event of a discovery, impacts to human remains would be less than significant.

Crawford Canyon Road Sidewalk Extension: Less than Significant Impact with Mitigation Incorporated. The results from the SCCIC records search, SLF search, and pedestrian survey did not identify human remains within the Sidewalk Extension Site. Should ground disturbance encounter human remains, disturbance of those remains could result in a significant effect on the environment. With implementation of Mitigation Measure CUL-2, which requires following state laws in the event of a discovery, impacts to human remains would be less than significant.

Mitigation Measure:

Mitigation Measure CUL-2: If human remains are encountered unexpectedly during implementation of the project, State Health and Safety Code Section 7050.5 requires that no further excavation or disturbance shall occur to the human remains and any nearby area (within 100 feet) reasonably suspected to overlie adjacent remains until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the land owner, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the land owner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Upon the discovery of the 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 mitigation measure, with the MLD 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.

If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the facility property in a location not subject to further and future subsurface disturbance.

4.10 Energy	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the *Energy Modeling* (ESA, 2020c), located in Appendix D, of this Draft IS/MND.

Question 4.10a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Response to Question 4.10a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would consume energy during construction activities primarily from on- and off-road vehicle fuel consumption in the form of diesel, gasoline, and electricity from water conveyance for dust control. Project operation would consume energy from vehicular traffic and energy use. The analysis below includes the Project's energy requirements and energy use efficiencies by energy type for each stage of the Project (construction and operations).

Construction

The estimated fuel usage for off-road equipment is based on the number and type of equipment that would be used during construction activities, hour usage estimates, the total duration of construction activities, and hourly equipment fuel consumption factors from the CARB OFFROAD model, which was used in the Project's air quality analysis. On-road vehicles would include trucks to haul material to and from the Park and Sidewalk Extension Sites, vendor trucks to deliver supplies necessary for Project construction, and fuel used for employee commute trips. Construction activities typically do not involve the consumption of natural gas. **Table 4.10-1, Summary of Energy Consumption During Project Construction**, summarizes the Project's total fuel and electricity consumption from construction activities.

**Table 4.10-1: Summary of Energy Consumption
During Project Construction**

Fuel Type	Quantity
Gasoline	gallons
On-Road Construction Trips	5,832
Off-Road Construction Equipment	0
Total Gasoline	5,832
Diesel	Gallons
On-Road Construction Trips	4,229
Off-Road Construction Equipment	56,309
Total Diesel	60,538

Source: ESA, 2020

The energy use summary provided above in Table 4.10-1 represents the amount of energy that could potentially be consumed during Project construction based on a conservative set of assumptions, provided in Appendix D, of this Draft IS/MND. As shown, on- and off-road vehicles would consume an estimated 5,832 gallons of gasoline and approximately 60,538 gallons of diesel fuel. For comparison purposes, the fuel usage during Project construction would represent approximately 0.009 percent of the 2018 annual on-road gasoline-related energy consumption and 0.004 percent of the 2018 annual diesel fuel-related energy consumption in Orange County. Detailed calculations are shown in Appendix D, of this Draft IS/MND.

The Project's construction contractors would comply with applicable CARB regulations governing the accelerated retrofitting, repowering, or replacement of heavy duty diesel on- and off-road equipment. CARB adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling time in order to reduce public exposure to diesel particulate matter and other toxic air contaminants. CARB approved the Truck and Bus regulation to reduce NOX, PM10, and PM2.5 emissions from existing diesel vehicles operating in California. In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models.

While intended to reduce construction criteria pollutant emissions, compliance with the above listed anti-idling and emissions regulations would also result in efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy. According to the CARB staff report that was prepared at the time the anti-idling ATCM was being proposed for adoption in late 2004/early 2005, the regulation was estimated to reduce non-essential idling and associated emissions of diesel particulate matter and NOX emissions by 64 and 78 percent respectively in analysis year 2009.

These reductions in emissions are directly attributable to overall reduced idling times and fuel combustion as a result of compliance with the regulation. Heavy-duty engines continue to become more efficient and reduction amounts may lessen in the future due to this. Although the energy

savings cannot be accurately quantified, the Project would still reduce consumption of diesel fuel under the anti-idling measure. Construction electricity use would be temporary, sporadic, and would cease upon completion of the Project. Electricity for water conveyance would only be used when necessary to prevent fugitive dust and would decrease after completion of excavation and paving phases when the site is paved and has less dust to control. Thus, construction of the Crawford Canyon Park and Sidewalk Extension would use energy necessary to build the Project, but would not result in the wasteful, inefficient, and unnecessary use of energy and impacts would be less than significant and no mitigation measures are required.

Operation

The Sidewalk Extension would not result in an increase in operational energy demand. During operation of the Park Site, energy would be consumed for multiple purposes, including, but not limited to park lighting. Energy would also be consumed during Park operations related to water usage, solid waste disposal, and vehicle trips. The Park would not increase the demand for natural gas resources. The Park would result in a projected consumption of electricity totaling approximately 38,115 kWh per year and represent 0.0002 percent of Southern California Edison's (SCE's) total sales in 2018. Detailed calculations are shown in Appendix D, of this Draft IS/MND. The Park would comply with the applicable provisions of Title 24 and the CALGreen Code in effect at the time of building permit issuance. As such, the Park would minimize energy demand. Therefore, with the incorporation of these features, operation of Crawford Canyon Park would not result in the wasteful, inefficient, and unnecessary consumption of electricity. A less than significant impact would occur and no mitigation measures are required.

Question 4.10b) Conflict or obstruct a state or local plan for renewable energy or energy efficiency?

Response to Question 4.10b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. Construction of the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would result in a temporary increase in demand for electricity, gasoline, and diesel. The Project's energy consumption primarily would result from on- and off-road fuel use from construction related vehicles and electricity from water conveyance for dust control. Natural gas would not be used during Project construction. These activities make up small percentages of total energy supplies and would cease after the 1-year construction period. Thus, construction would not cause a permanent increase in demand and impacts would be less than significant and no mitigation measures are required.

Park operation will increase the demand for electricity resources. While the Park would generate an increase in electricity demand, the demand would be extremely minimal with respect to SCE supplies and it is not anticipated that additional power generation facilities would be required to serve the Park, or that the demand would exceed capacity of energy providers. Impacts would be less than significant and no mitigation measures are required.

Mobile source emissions result from park users and maintenance, use of on-site vehicles, trucks carrying waste to the Park from collection routes, trucks, and truck deliveries and pickups. Mobile source emissions are based on the number of inbound and outbound truck trips to and from the Park. Mobile emissions from these sources were estimated using emission factors from CARB's Motor Vehicle Emissions Inventory EMFAC model. The most recent version is EMFAC 2017,

which “represents [California Air Resources Board’s] current understanding of motor vehicle travel activities and their associated emission levels.” The Park would increase the demand for fuel resources. The Park’s estimated operational gasoline and diesel fuel use is projected to generate an annual demand for gasoline totaling approximately 7,604 gallons per year and generate annual demand for diesel totaling approximately 1,358 gallons. The Park’s fuel consumption accounts for a small percentage of the entire Orange County; with gasoline accounting for approximately 0.01 percent, and 0.0001 percent for diesel. Detailed calculations are shown in Appendix D, of this Draft IS/MND.

Demand for electricity, diesel, or gasoline would not result in an increase that exceeds available supply or distribution infrastructure capabilities; thus impacts would be less than significant and no mitigation measures are required.

4.11 Geology and Soils*Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal system where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the *Geotechnical Investigation Report, Crawford Canyon Park, Northwest Corner of Newport Avenue and Crawford Canyon Road, Orange, California* (Geotechnical Report) (GMU, 2020), located in Appendix E, of this Draft IS/MND.

Question 4.11a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

ai) 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.

Response to Question a-i)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Fault rupture is the displacement that occurs along the surface of a fault during an earthquake. Based on criteria established by the California Geological Survey (CGS), faults may be categorized as active, potentially active, or inactive. Active faults are those which show evidence of surface displacement within the last 11,000 years (Holocene-age). Potentially active faults are those that show evidence of most recent surface displacement within the last 1.6 million years (Quaternary-age). Faults showing no evidence of surface displacement within the last 1.6 million years are considered inactive. In addition, there are buried thrust faults, which are low angle reverse faults with no surface exposure. Due to their buried nature, the existence of buried thrust faults is usually not known until they produce an earthquake.

The CGS has established earthquake fault zones known as Alquist-Priolo Earthquake Fault Zones around the surface traces of active faults to assist cities and counties in planning, zoning, and building regulation functions. These zones, which extend from 200 to 500 feet on each side of a known active fault, identify areas where potential surface rupture along an active fault could prove hazardous and identify where special studies are required to characterize hazards to habitable structures.

The Park and Sidewalk Extension Sites are located in the seismically active Southern California region and could be subject to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. According to Figure IX-11, Fault Map, of the County's General Plan Safety Element (County of Orange, 2013), two potentially hazardous active fault zones run along the coastal and inland edges of the County (County of Orange, 2013). The Newport-Inglewood Fault Zone angles from offshore near Dana Point, inland through the City of Newport Beach, and on to the cities of Long Beach and Torrance. Paralleling this fault zone across the northeasterly edge of the County is the Whittier Fault Zone, a westward continuation of the lengthier Elsinore Fault which trends along the northeast side of the Santa Ana Mountains into Mexico. Additionally, the Elysian Park Blind Thrust Fault and Compton Blind Thrust Fault extend into and underneath northwestern and southwestern County of Orange. According to the Geotechnical Report, the nearest known active faults are the San Joaquin Hills Fault and the Elsinore Fault, which are located approximately 6.3 and 7.9 miles, respectively, from the Park and Sidewalk Extension Sites. Accordingly, no currently known active or potentially active surface faults traverse the Park and Sidewalk Extension Site, and the Sites are not located within a designated Alquist-Priolo Earthquake Fault Zone (GMU, 2020). As such, the potential for surface rupture due to faulting occurring on the Park and Sidewalk Extension Sites during the design life of the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project is considered low. Thus, a less than significant impact would occur in this regard and no mitigation measures are required.

a-ii) Strong seismic ground shaking?

Response to Question a-ii)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. Seismicity is the geographic and historical distribution of earthquakes, including their frequency, intensity, and distribution. The level of ground shaking at a given location depends on many factors, including the size and type of earthquake, distance from the earthquake, and subsurface geologic conditions. The type of construction also affects how particular structures and improvements perform during ground shaking. A common measure of ground motion is the peak ground acceleration (PGA). It is not a measure of total energy of an earthquake, such as the Richter and moment magnitude scales, but rather of how hard the ground shakes in given geographic area. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared.

Several active or potentially active faults are located in the Southern California region. As discussed under Response 4.11 a.i, the nearest known active faults are the San Joaquin Hills Fault and the Elsinore Fault, which are located approximately 6.3 and 7.9 miles, respectively, from the Park and Sidewalk Extension Sites. The San Joaquin Hills Fault and the Elsinore Fault are capable of generating a maximum earthquake magnitude (M_w) of 7.1 and 7.9, respectively. Given the proximity of these faults and numerous other active and potentially active faults located in Southern California, the Park and Sidewalk Extension Sites are subject to earthquake ground

motions in the future (GMU, 2020). The PGA_M (maximum considered earthquake-geometric mean) of 0.64g was calculated for the Park Site in conformance with the 2019 CBC. The PGA_M is primarily dominated by earthquakes with a mean magnitude of 6.6 at a mean distance of 10 miles from the Park Site using the USGS 2014 Interactive Deaggregation Website (GMU, 2020).

The Park and Sidewalk Extension do not propose habitable structures or buildings that would be susceptible to substantial risks associated with an earthquake. The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. The County requires that all new construction meet or exceed the County's Building Code and the latest standards of the 2019 CBC. Further, the Geotechnical Report provides preliminary site-specific design recommendations and parameters regarding clearing and grubbing, grading and earthwork, temporary excavations, surface drainage, bridge and pole foundations, retaining walls, structural concrete and pavement design. Given the low-intensity nature of proposed development, absence of proposed habitable structures and buildings, and compliance with applicable building and safety codes, impacts related to strong seismic ground shaking would be less than significant and no mitigation measures are required.

a-iii) Seismic-related ground failure, including liquefaction?

Response to Question a-iii)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Liquefaction is a phenomenon in which saturated silty to cohesionless soils below the groundwater table are subject to a temporary loss of strength due to the buildup of excess pore pressure during cyclic loading conditions such as those induced by an earthquake. Liquefaction effects include loss of bearing strength, amplified ground oscillations, lateral spreading, and flow failures. Liquefaction typically occurs in areas where groundwater is less than 50 feet from the surface, and where the soils are composed of poorly consolidated, fine to medium-grained sand. In addition to the necessary soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to initiate liquefaction.

Portions of the County are known for liquefaction. According to Figures IX-12, Newport-Inglewood Fault and Figure IX-13, San Andreas Fault, of the County's General Plan Safety Element, the potential for liquefaction within the North Tustin, including the Park and Sidewalk Extension Sites, are considered low (County of Orange, 2013). According to the Geotechnical Report, groundwater was not observed at the Park Site during the exploration to a maximum depth of 26.5 feet below the existing grade. Groundwater conditions may vary across the Park Site due to stratigraphic and hydrologic conditions and may change over time as a consequence of seasonal and meteorological fluctuations or activities by humans at the Park Site or nearby sites. However, groundwater is unlikely to impact the Project (GMU, 2020).

Further, as part of the proposed construction activities, on-site soils would be excavated and processed to remove organic materials, and then recompacted for use as engineered fill for the Park and Sidewalk Extension. The recompacted soil would meet applicable density and shear strength requirements for engineered fill materials consistent with American Society for Testing Materials (ASTM) Test Method D 1557 and ASTM Test Method D 3080, and would not be subject to liquefaction effects (GMU, 2020). Furthermore, the Park and Sidewalk Extension would not include habitable structures or buildings. While the Park and Sidewalk Extension would be required to comply with applicable seismic-related regulatory requirements of the County's

Building Code, and the latest standards of the 2019 CBC, implementation of the preliminary site-specific design recommendations and parameters of the Geotechnical Report would further ensure that seismic-related ground failure impacts, including liquefaction, would be less than significant and no mitigation measures are required.

a-iv) Landslides?

Response to Question a-iv)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The residential areas located immediately to the north of the Park Site are located at elevations up to approximately 10 feet above the Site. An approximate 5-foot high retaining wall along a portion of the northern site perimeter currently separates the Park Site from the residences. The Park and Sidewalk Extensions Sites, which are relatively flat, are located in a highly urbanized area. The probability of a seismically induced landslide affecting the Park and Sidewalk Extensions Sites are considered to be low, due to the lack of significant slopes on the Sites and surrounding areas. Further, no landslides or related features underlie or are adjacent to the Sites (GMU, 2020). A less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.11b) Result in substantial soil erosion or the loss of topsoil?

Response to Question 4.11b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Soil erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in a project area where bare soil is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, and general land uses. Topsoil is used to cover surface areas for the establishment and maintenance of vegetation due to its high concentrations of organic matter and microorganisms.

Project construction would result in ground surface disruption during excavation and grading that would create the potential for erosion to occur. Wind erosion would be minimized through soil stabilization measures required by the SCAQMD Rule 403 (Fugitive Dust) such as daily watering. Potential for water erosion would be reduced by implementation of standard erosion control measures imposed during site preparation and grading activities. As discussed in more detail under Section 4.14a, *Hydrology and Water Quality*, the Park and Sidewalk Extension would be subject to all existing regulations associated with the protection of water quality. Construction activities would be carried out in accordance with applicable County standard erosion control practices required pursuant to the 2019 CBC and the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit No. 2009-2009-DWQ NPDES No. CAS000002 and SAR MS4 Order No. RI-2009-0030, as amended by Order No. R8-2010-0062 NPDES No. CAS 618030 issued by the Santa Ana Regional Water Quality Control Board (SARWQCB), as applicable (SARWQCB, 2017). Consistent with these requirements, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared that incorporates BMPs to control water erosion during the construction of the Park and Sidewalk Extension. Thus, construction and operational impacts due to erosion or the loss of topsoil would be less than

significant with compliance with the applicable regulatory requirements listed above. No mitigation measures are required.

Question 4.11c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Response to Question 4.11c)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. According to the Geotechnical Report, the Park Site is underlain by alluvium deposits (Qal) that are typically comprised of sands and clays. Artificial fill (Qaf) soils were encountered in a majority of the excavations at the Park Site. The fills were encountered to a maximum depth of five feet below the existing grade and generally consist of yellow and dark brown, damp to moist, firm to stiff, sandy clays. The alluvium (Qal) underlay the artificial fill to the maximum depth of the exploratory drill holes (11.5 feet for Drill Hole [DH]-1, DH-4, DH-5 and DH-8; 21.5 feet for DH-2 and DH-3; 3 feet for DH-6; 5 feet for DH-7; 25.5 feet for DH-9); refer to Appendix A of the Geotechnical Report (GMU, 2020). The alluvium consists of brown to dark gray brown to yellow brown, damp to moist, medium dense to very dense, sands and firm to stiff clays (GMU, 2020).

Impacts related to liquefaction and landslides are discussed under Responses 4.11 (a.iii and a.iv). Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to the combination of gravity and earthquake shaking. Such movement can occur on slope gradients of as little as one degree. Lateral spreading typically damages pipelines, utilities, bridges, and structures. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (i.e. retaining wall, slope, or channel) and to a lesser extent on ground surfaces with a very gentle slope. As stated in Response 4.11 (a.iii), the potential for liquefaction within North Tustin, including the Park and Sidewalk Extensions Sites are considered low. Further, due to the absence of any channel, significant slope, or river within or near the Park and Sidewalk Extensions Sites, the potential for lateral spreading occurring on or off the Sites is considered to be negligible. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the Park and Sidewalk Extension Sites. Thus, there appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the Park and Sidewalk Extension Sites.

While Project construction and design would be required to comply with the 2019 CBC, implementation of the preliminary site-specific design recommendations and parameters of the Geotechnical Report regarding clearing and grubbing, grading and earthwork, temporary excavations, surface drainage, bridge and pole foundations, retaining walls, structural concrete and pavement design would ensure that ground and soil stability hazards would be less than significant and no mitigation measures are required.

Question 4.11d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Response to Question 4.11d)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Soils with shrink-swell or expansive properties typically occur in fine-grained sediments and cause damage through volume changes as a result of a wetting and drying process. Structural damage may occur over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. According to the Geotechnical Report, the soils encountered near the ground surface at the Park Site exhibit low to medium expansion potential. If expansive soils were to be found at the Park and Sidewalk Extension Sites, site-specific design criteria (i.e., foundation design parameters, retaining walls) and remedial grading techniques (i.e., primarily removal, moisture conditions and recompaction of unsuitable soils) would be identified and implemented per the County, the 2019 CBC building requirements, and the Geotechnical Report recommendations to minimize the potential for risks due to expansive soils. As such, a less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.11e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal system where sewers are not available for the disposal of waste water?

Response to Question 4.11e)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension do not propose habitable structures or restroom facilities. Therefore, the Park and Sidewalk Extension would not require the use of septic tanks or alternative waste water disposal systems. No impact would occur.

Question 4.11f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Response to Question 4.11f)

Crawford Canyon Park: **Less than Significant Impact with Mitigation Incorporated.** The Cultural Resources Assessment was conducted for the Crawford Canyon Park in January 2021 (ESA, 2020). The Assessment included a paleontological resources database search by the Natural History Museum of Los Angeles County (LACM) conducted on April 27, 2020, geologic map review, and a review of the Geotechnical Investigation Report for the Park Site.

No paleontological resources were identified within the Park Site. However, the geologic map review, the Geotechnical Investigation Report, and the LACM records search revealed that the Park Site has exposures of alluvial fan deposits (Qyf), which are assigned a low-to-high paleontological potential increasing with depth. Given that Park excavations would only reach 6 feet in depth and fossils from nearby older Quaternary alluvium sediments were recovered from 8 to 25 feet below ground surface, the Park Site does not appear to have the potential to disturb or destroy buried paleontological resources. Nevertheless, since construction of the Crawford Canyon Park includes ground disturbance, there remains the possibility that paleontological

resources could be encountered. Directly or indirectly destroying a unique paleontological resource could result in a significant effect on the environment. With implementation of Mitigation Measure PALEO-1, which provides procedures to follow in the event of a discovery, impacts would be less than significant.

Crawford Canyon Road Sidewalk Extension: Less than Significant Impact with Mitigation Incorporated. The Cultural Resources Assessment was conducted for the Sidewalk Extension in January 2021 (ESA, 2021). The Assessment included a paleontological resources database search by the Natural History Museum of Los Angeles County (LACM) conducted on April 27, 2020 and geologic map review.

No paleontological resources were identified within the Sidewalk Extension Site. However, the geologic map review and the LACM records search revealed that the Sidewalk Extension Site has exposures of alluvial fan deposits (Qyf) and the middle Miocene Topanga Formation (Tt). The alluvial fan deposits are assigned a low-to-high paleontological potential increasing with depth. The LACM also mentions that in elevated areas immediately east and southeast of the Sidewalk Extension Site, there are exposures of the Sespe/Vaqueros Formation, undifferentiated (Tvs); however, the LACM has stated that these localities are likely to have originated from the Topanga Formation (Tt). The Sespe/Vaqueros Formation and the Topanga Formation are assigned a high potential. Since excavations would not exceed 3 feet in depth and the known fossil localities² in the vicinity have been discovered from as deep as 8 to 25 feet below ground surface, the Sidewalk Extension Site does not appear to have the potential to disturb or destroy buried paleontological resources.

Nevertheless, since construction of the Sidewalk Extension includes ground disturbance, there remains the possibility that paleontological resources could be encountered. Directly or indirectly destroying a unique paleontological resource could result in a significant effect on the environment. With implementation of Mitigation Measure PALEO-1, which provides procedures to follow in the event of a discovery, impacts would be less than significant.

Mitigation Measure:

Mitigation Measure PALEO-1: If a potential fossil is found, a Qualified Paleontologist (Paleontologist) that meets the professional criteria established by the Society of Vertebrate Paleontology (SVP, 2010) shall be notified. The Paleontologist shall have the authority to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil to facilitate evaluation of the discovery. An appropriate 50-foot buffer area shall be established around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. The Paleontologist shall assess the discovery and make recommendations as to the appropriate treatment. At the Paleontologist's discretion, and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock/sediment samples for initial processing and evaluation. If the fossil is determined to be significant, the Paleontologist shall implement a paleontological salvage program to remove the resource from its location, following the guidelines of the SVP (2010). Any fossils encountered and recovered shall be prepared to the point of identification and catalogued before they are submitted to their final repository. Any fossils collected shall be curated at a public, non-

² Additional fossil localities have been found from the Sespe/Vaqueros Formation (which per the LACM, these likely originated from the Topanga Formation); however, the depths from which they were recovered are unknown.

profit institution with a research interest in the material and with retrievable storage, such as the County of Orange's Paleontology and Archaeology (COPA) collections at the Dr. John D. Cooper Archaeological and Paleontological Center, or Natural History Museums of Los Angeles County, if such an institution agrees to accept the fossils. If no institution accepts the fossil collection, they shall be donated to a local school in the area for educational purposes. Accompanying notes, reports, maps, and photographs shall also be filed at the repository and/or school.

4.12 Greenhouse Gas Emissions	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the *Air Quality and Greenhouse Gas Modeling* (ESA, 2020a), located in Appendix A, of this Draft IS/MND.

Question 4.12a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?

Response to Question 4.12a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern with GHGs is that increases in their concentrations are causing global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long term global temperature increases.

The State of California defines GHGs as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different global warming potentials (GWPs) and CO₂ is the most common reference gas for climate change, GHG emissions are often quantified and reported as

CO₂ equivalents (CO₂e). For example, CH₄ has a GWP of 25 (over a 100-year period); therefore, 1 metric ton (MT) of CH₄ is equivalent to 25 MT of CO₂ equivalents (MTCO₂e). The State uses the GWP ratios available from the United Nations Intergovernmental Panel on Climate Change (IPCC) and published in the *Fourth Assessment Report* (AR4). By applying the GWP ratios, project-related CO₂e emissions can be tabulated in metric tons (MT) per year. Large emission sources are reported in million metric tons (MMT) of CO₂e.

Some of the potential effects of global warming in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more forest fires, and more drought years.³ Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects:⁴

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

California generated 429.4 MMTCO₂e in 2016, the most recent year data are available. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2016, accounting for approximately 39 percent of total GHG emissions in the state. This sector was followed by the industrial sector (21 percent) and the electric power sector (including both in-state and out-of-state sources) (16 percent).

Impacts of GHGs are borne globally, as opposed to localized air quality effects of criteria air pollutants and toxic air contaminants. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; however, it is clear that the quantity is enormous, and no single project would measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

The County of Orange has not adopted a threshold of significance for GHG emissions that would be applicable to the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project. Although SCAQMD has not formally adopted a significance threshold for GHG emissions generated by a project for which SCAQMD is not the lead agency, or a uniform methodology for analyzing impacts related to GHG emissions on global climate change, in the absence of any industry-wide accepted standards, the SCAQMD's significance threshold of 3,000 MTCO₂e per

³ California Air Resources Board (CARB), 2008. Climate Change Scoping Plan. December 2008. Available: https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed October 2020.

⁴ Intergovernmental Panel on Climate Change (IPCC), 2001. Climate Change 2001: Working Group I: The Scientific Basis. Available: <https://www.ipcc.ch/report/ar3/wg1/>. Accessed December 2020.

year for development projects is the most relevant air district-adopted GHG significance threshold and is used as a benchmark for this Project. It should be noted that the SCAQMD's significance threshold of 3,000 MTCO₂e per year is intended for long-term operational GHG emissions. The SCAQMD has developed guidance for the determination of the significance of GHG construction emissions that recommends that total emissions from construction be amortized over an assumed project lifetime of 30 years and added to operational emissions and then compared to the threshold.

The justification for the threshold is provided in SCAQMD's *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* ("SCAQMD Interim GHG Threshold"). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required. As stated by the SCAQMD:

the...screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects...the policy objective of [SCAQMD's] recommended interim GHG significance threshold proposal is to achieve an emission capture rate of 90 percent of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that [SCAQMD] staff estimates that these GHG emissions would account for slightly less than one percent of future 2050 statewide GHG emissions target (85 [MMTCO₂e per year]). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to [Best Available Control Technology (BACT)] for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility.

Thus, based on guidance from the SCAQMD, if a project would emit GHGs less than 3,000 MTCO₂e per year, the project would not be considered a substantial GHG emitter and GHG emission impact would be less than significant, requiring no additional analysis and no mitigation.

CEQA Guidelines 15064.4 (b)(1) states that a lead agency may use a model or methodology to quantify GHGs associated with a project. In September 2016, the SCAQMD in conjunction with California Air Pollution Control Officers Association (CAPCOA) released the latest version of the CalEEMod (Version 2016.3.2). The purpose of this model is to estimate construction-source and operational-source emissions from direct and indirect sources. Accordingly, the latest version of CalEEMod has been used for this Project to estimate the Project's emission impacts.

Construction Emissions

Construction activities associated with the Park and Sidewalk Extension would result in emissions of CO₂ and to a lesser extent methane (CH₄) and nitrous oxide (N₂O). Construction-period GHG emissions were quantified based on the same construction schedule, activities, and equipment list

as noted below in **Table 4.17-2, Construction Equipment**, in Section 4.17, *Noise*. To amortize the emissions over the life of the Park and Sidewalk Extension, the SCAQMD recommends calculating the total GHG emissions attributable to construction activities, dividing it by a 30-year project life, and then adding that number to a project's annual operational-phase GHG emissions. As such, construction emissions were amortized over a 30-year period and included in the Project's annual operational-phase GHG emissions.

Operational Emissions

GHG Emissions

Operational activities associated with the Park and Sidewalk Extension would result in emissions of CO₂ and to a lesser extent CH₄ and N₂O. Operational sources of GHG emissions would include mobile sources from vehicles traveling to and from the Park Site, and indirect GHG emissions from export of electricity.

During operations, a maximum of 85 weekday vehicle trips, 57 Saturday vehicle trips, and 49 vehicle trips is expected from the Park. The Sidewalk Extension would not generate an increase in operational emissions. GHG emissions from mobile sources were calculated based on the trips per day, GHG emission factors for transportation fuels, and trip distances in CalEEMod.

Emissions of GHGs also resulted from electricity demand to power the on-site lighting. Electricity-related GHG emissions are based on the maximum electricity demand for Park lighting, and CO₂ intensity factors for Southern California Edison.

Emissions Summary

The Project's annual GHG emissions are shown in **Table 4.12-1, Annual Project Greenhouse Gas Emissions**. As shown, the Project's total GHG emissions would be below the SCAQMD's proposed screening level of 3,000 MTCO_{2e} per year. The Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would result in a less than significant impact with respect to GHG emissions and no mitigation measures are required.

Table 4.12-1: Annual Project Greenhouse Gas Emissions

Emissions Sources	CO₂e (Metric Tons per Year) ^a
Area	<1
Electricity	12
Natural Gas	0
Mobile	82
Waste	<1
Water	11
Construction ^b	23
Project Total	128
SCAQMD GHG Significance Threshold	3,000
Exceeds Threshold?	No

^a Totals may not add up exactly due to rounding in the modeling calculations.

^b Construction emissions are amortized over 30 years.

Source: ESA 2020

Question 4.12b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Response to Question 4.12b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Project's highest GHG contributors are from mobile sources. This is a highly regulated source by the State of California with measures implemented in the Scoping Plan to reduce GHG emissions. With respect to relevant statewide GHG reduction strategies, in January 2007, the California Governor enacted Executive Order S-01-07, which mandates the following: (1) establish a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) adopt a Low Carbon Fuel Standard (LCFS) for transportation fuels in California. CARB identified the LCFS as one of the nine discrete early actions in the Climate Change Scoping Plan. The LCFS regulations were approved by CARB in 2009 and established a reduction in the carbon intensity of transportation fuels by 10 percent by 2020 with implementation beginning on January 1, 2011. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. In the proposed 2017 Climate Change Scoping Plan Update, CARB's preferred recommendation includes increasing the stringency of the LCFS by reducing the carbon intensity of transportation fuels by 18 percent by 2030, up from the current target of 10 percent by 2020.⁵

⁵ CARB, 2017. The 2017 Climate Change Scoping Plan Update – The Proposed Strategy For Achieving California's 2030 Greenhouse Gas Target. January 2017. Available: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf. Accessed October 2020.

Overall, the Project would not conflict with an applicable plan, policy, or regulation to reduce GHG emissions because it would comply with all construction-related transportation fuel regulations and it would not generate or promote operational mobile emissions. As such, impacts would be considered less than significant and no mitigation measures are required.

4.13 Hazards and Hazardous Materials	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following analysis is based on the *Hazardous Materials Assessment for the North Tustin Park Parcel, Northwest Corner of Newport Avenue and Crawford Canyon Road, Unincorporated Orange County; ROWE I.D. No. 2011-41* (Environmental Resources, 2011), located in Appendix F, of this Draft IS/MND.

Question 4.13a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Response to Question 4.13a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** A hazardous material is defined as any material that due to its quantity, concentration, physical or chemical characteristics, poses a significant present or potential hazard to human health or to the environment if released. Hazardous materials include, but are not limited to, inorganic and organic chemicals, solvents, mercury, lead, asbestos, paints, cleansers, or pesticides.

Hazardous materials that may be used during construction of the Park and Sidewalk Extension include, but are not limited to, fuels (gasoline and diesel), hydraulic fluids, oils and lubricants, grease, solvents, cleaning fluids, paints and paint thinners, adhesives, surface coatings and possibly herbicides and pesticides. Generally, these materials would be used in concentrations that would not pose significant threats during the transport, handling, use, storage, and disposal of such materials. Furthermore, potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable

standards and regulations, including California Occupational Safety and Health Administration (OSHA) requirements, and Title 8 and 22 of the California Code of Regulations. Further, material safety data sheets for all applicable materials present at the Project Site would be made readily available to onsite construction personnel. Accordingly, risks associated with hazards to the public or environment posed by the transport, use or disposal of hazardous materials during construction are considered less than significant due to compliance with applicable and required standards and regulations.

Post construction, the Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. No operational activities are associated with the Sidewalk Extension. The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. Operational activities associated with the Park would include maintenance for landscaping. Maintenance activities related to landscaping include the use of fertilizers and the use of light equipment (such as lawn mowers and edgers). These types of activities use small amounts of hazardous materials such as gasoline, oils and lubricants, and solvents. These hazardous materials are regulated by stringent federal and state laws mandating the proper transport, handling, use, storage, and disposal of hazardous materials in accordance with product labeling. These laws include, but not limited to, the Clean Air Act (CAA), the Superfund Amendments and Reauthorization Act (SARA), the Emergency Planning and Community Right-to-Know Act (EPCRA), the Hazardous Materials Transportation Act (HMTA), the Occupational and Safety Health Act (OSHA), the Resource Conservation and Recovery Act (RCRA), the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, and the Accidental Release Prevention Law. The use and storage of these substances is not considered to present a health risk when used in accordance with manufacturer specifications and with compliance to applicable regulations. Thus, potential impacts from the routine transport, use or disposal of hazardous materials resulting from Project operations would be less than significant and no mitigation measures are required.

Question 4.13b) 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?

Response to Question 4.13b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** It is not anticipated that Project construction could 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. Construction of the Park and Sidewalk Extension could involve the use of some hazardous and flammable substances. Construction vehicles onsite may require routine or emergency maintenance that could result in the release of oil, diesel fuel, transmission fluid, or other materials. However, the materials would be in small quantities and stored in a manner that would pose a less than significant hazard to the public. In the unlikely event of a spill, these petroleum products are relatively easy to clean up, treat, or biodegrade. Operational activities associated with the Park and Sidewalk Extension, such as maintenance for landscaping, would not involve the use of acutely hazardous materials or waste, and the limited use of any hazardous materials would be transported, handled, used, stored, and disposed of in accordance with manufactures' instructions. Due to the limited use of small quantities, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous

materials in to the environment. A less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.13c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Response to Question 4.13c)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The nearest school, Panorama Elementary School at 10512 S. Crawford Canyon Road, Santa Ana, is located approximately 0.40 miles northwest of the Park Site. Construction of the Park and Sidewalk Extension would involve the temporary use of hazardous substances in the form of fuels (gasoline and diesel), hydraulic fluids, oils and lubricants, grease, solvents, cleaning fluids, paints and paint thinners, adhesives, surface coatings and possibly herbicides and pesticides. Operational activities associated with the Park would include maintenance for landscaping which would involve the use of fertilizers and the use of light equipment (such as lawn mowers and edgers). Materials and substances required for construction of the Park and Sidewalk Extension would be located within the project boundaries of the Park Site. All materials would be transported, handled, used, stored, and disposed of in accordance with applicable laws and regulations and manufacturers' instructions. Further, the Project would be required to comply with the stringent federal and state laws and regulations discussed above under Response 4.13a that would avoid or minimize the potential releases of hazardous materials during construction and operation. A less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.13d) 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?

Response to Question 4.13d)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Government Code Section 65962.5, amended in 1992, requires CalEPA to develop and update annually the Cortese List, which is a list of hazardous waste sites and other contaminated sites. While Government Code Section 65962.5 makes reference to the preparation of a list, many changes have occurred related to web-based information access since 1992 and information regarding the Cortese List is now compiled on the websites of the Department of Toxic Substances Control (DTSC), the State Water Board, and CalEPA. The DTSC maintains the EnviroStor database, which includes sites on the Cortese List and also identifies potentially hazardous sites where cleanup actions (such as a removal action) or extensive investigations are planned or have occurred. The database provides a listing of Federal Superfund sites (National Priorities List); State Response sites; Voluntary Cleanup sites; and School Cleanup sites. Based on a review of the EnviroStor database, the Park and Sidewalk Extension Sites are not identified on any of the above lists (Department of Toxic Substances Control 2020), or CalEPA's list of sites with active Cease and Desist Orders or Cleanup and Abatement Orders or list of contaminated solid waste disposal sites (CalEPA, 2020), or the State Water Board's Geotracker Database, which provides a list of leaking underground storage tank sites that are included on the Cortese List (SWRCB, 2020). According to the previous hazardous materials assessment prepared for the Park Site, no RECs

associated with the Park Site or adjoining sites were identified. The regulatory database identified one mapped listing around the Park Site and nine orphan sites. However, further investigation determined that the target and orphan listings have a low potential for impacting the Park Site (Environmental Resources, 2011). As such, a less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.13e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Response to Question 4.13e)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites are not within an airport land use plan and are not within two miles of a public airport or public use airport. The nearest airport is the John Wayne Airport, Newport Beach, located approximately 7.5 miles southwest of the Park and Sidewalk Extensions Sites. Therefore, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not result in an airport-related safety hazard for people residing or working in the Project area. No impact would occur in this regard.

Question 4.13f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Response to Question 4.13f)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Park and Sidewalk Extension Sites are located in a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Park and Sidewalk Extension Sites comprise of existing single-family residences. While it is expected that the majority of construction activities for the Project would be confined on-site, short-term construction activities may temporarily affect access on portions of adjacent streets during certain periods of the day. Construction activities for the Park will involve temporary lane closures along Newport Avenue for delivery of construction materials and during installation of the deceleration lane. One of the two southbound travel lanes along Newport Avenue is expected to be closed during construction of the Sidewalk Extension. Along Crawford Canyon Road, travel lanes are expected to be shifted to maintain two-directional travel. Construction-related traffic could result in increased travel time due to flagging or traffic to accommodate trucks entering and exiting the Park and Sidewalk Extension Sites during construction. However, the impacts of such construction activity would be temporary and on an intermittent basis. Further, a Construction Management Plan for the Park and Sidewalk Extension would be prepared in order to minimize disruptions to through traffic flow, maintain emergency vehicle access to the Park and Sidewalk Extension Sites and neighboring land uses, and schedule worker and construction equipment delivery to avoid peak traffic hours. As a component of the Construction Management Plan, the times of day and locations of all temporary lane closures would be coordinated so that they do not occur during peak periods of traffic congestion, to the extent feasible. Truck routes for material and equipment deliveries, as well as for soil export and disposal, would require approval by the OC Public Works prior to construction activities. The Construction Management Plan would be

prepared for review and approval prior to commencement of any construction activity. These practices, as well as techniques typically employed by emergency vehicles to clear or circumvent traffic (i.e., lights and sirens), are expected to limit the potential for significant delays in emergency response times during Project construction. As such, construction is not expected to result in inadequate emergency access.

The County is proposing to develop a 2.5-acre neighborhood park consisting of a variety of recreational amenities and features. Park operations would generate traffic to the Park Site and would include a vehicular deceleration lane on Newport Avenue prior to entering the proposed paved surface parking lot with 11 vehicular parking spaces. The proposed improvements of the Sidewalk Extension include approximately 630 feet of sidewalk construction along the north side of Newport Avenue beginning across from Hyde Park Drive proceeding easterly and approximately 815 feet of sidewalk construction along the west side of Crawford Canyon Road from the northeasterly end of the Park Site to Country Haven Lane. Additional associated proposed improvements include, but are not limited to pavement reconstruction, driveways, curb ramps, curb/gutter, and a traffic signal system upgrade at the intersection of Crawford Canyon Road and Newport Avenue. Emergency access to the Park Site and surrounding area would continue to be provided similar to existing conditions. Emergency vehicles and fire access to the Park Site would be provided at-grade from Newport Avenue. Subject to review and approval of Site access and circulation plans by the OCFA, the Project would not impair implementation or physically interfere with adopted emergency response or emergency evacuation plans. Since the Project would not cause significant impediments along any designated emergency evacuation routes, and the proposed use would not impair implementation of the County's emergency response plan, the Project would have a less than significant impact with respect to these issues and no mitigation measures are required.

Question 4.13.g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Response to Question 4.13g)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites are located in North Tustin, an urbanized in unincorporated community in the County. The areas immediately to the north, east, south, and west of the Park and Sidewalk Extension Sites comprise of existing single-family residences. No wildlands are present in the North Tustin or the Project area. Therefore, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not expose people or structures to a significant risk involving wildland fires. No impact would occur in this regard.

4.14 Hydrology and Water Quality	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) result in substantial erosion or siltation on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based in part, on the *Hydrology Analysis for Crawford Canyon Park, S. Crawford Canyon Road & Newport Blvd* (Hydrology Study) (Hunsaker, November 16, 2020), located in Appendix G, of this Draft IS/MND; the *Water Quality Management Plan Crawford Canyon Park* (Water Quality Management Plan) (Hunsaker, November 17, 2020), located in Appendix H, of this Draft IS/MND; and the *Geotechnical Investigation Report, Crawford Canyon Park, Northwest Corner of Newport Avenue and Crawford Canyon Road, Orange, California* (Geotechnical Report) (GMU, 2020), located in Appendix E, of this Draft IS/MND.

Question 4.14a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Response to Question 4.14a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.**

Project construction activities include demolition, clearing and grubbing, site preparation, grading/excavation, utility relocation, paving and construction, and landscaping which could lead to ground disturbance and polluted runoff. Since the Project is anticipated to disturb greater than one acre of land, Project construction activities would be carried out in accordance with applicable County standard erosion control practices required pursuant to the 2019 CBC and the requirements of the Construction General Permit No. 2009-2009-DWQ NPDES No. CAS000002 and SAR MS4 Order No. RI-2009-0030, as amended by Order No. R8-2010-0062 NPDES No. CAS 618030 issued by the SARWQCB, as applicable. Consistent with these requirements, a SWPPP would be prepared that incorporates BMPs to control wind and water erosion during the Project's construction period. Pursuant to the Construction General Permit, prior to terminating permit coverage at the end of the construction phase, the Park and Sidewalk Extension Sites must

be stabilized and not pose any additional sediment discharge risk than it did prior to the commencement of construction activity.

The Park Site is located within the San Diego Creek Watershed. Established total maximum daily loads (TMDL's) for the Park's receiving waters are as follows: Peters Canyon Channel (no TMDL's established); San Diego Creek Reach 1 (nutrients, pesticides, sedimentation/siltation, metals); Upper Newport Bay (indicator bacteria, nutrients, pesticides, sedimentation/siltation, metals); and Lower Newport Bay (indicator bacteria, nutrients, pesticides, metals, siltation). Per the watershed infiltration and hydromodification management (WIHMP) for San Diego Creek, the Crawford Canyon Park is subject to hydromodification impacts as it is tributary to natural reaches of downstream San Diego Creek (Hunsaker, November 17, 2020).

As discussed above, the Park Site is located within the jurisdiction of the SARWQCB and is subject to the requirements of the North Orange County Water Quality Management Plan (WQMP) Technical Guidance Document (TGD), in which hydrology conditions of concern (HCOC's) are considered to exist if the volume for the 2-year runoff event for post-development condition exceeds pre-development condition by more than five percent or the time of concentration is less than the pre-development condition by greater than five percent. The Crawford Canyon Park will increase the amount of existing impervious area located within the Park Site by a negligible amount of 0.5 acres (pre-project conditions 0.37 acres; post-project conditions 0.87 acres); thereby potentially increasing the developed condition runoff volume and rate. As such, the Crawford Canyon Park is subject to the hydromodification requirements prescribed in the TGD for North Orange County (Hunsaker, November 17, 2020). A summary of the analysis is provided in **Table 4.14-1, HCOC Analysis Summary (2-Year Event)**. Based on the Park's hydrology analysis for the 2-year storm, the time of concentration (Tc) to reach peak runoff for the developed condition is reduced by greater than 5 percent. Therefore, the Crawford Canyon Park must implement hydromodification control BMPs to address HCOC impacts (Hunsaker, November 17, 2020).

Table 4.14-1: HCOC Analysis Summary (2-Year Event)

Total Drainage Area ¹	Existing Condition			Proposed Condition			Delta Acres	Delta Q ₂ (cfs)	Delta Tc (min)
	Acres	Q ₂ (cfs)	Tc (min)	Acres	Q ₂ (cfs)	TC (min)			
Overall (onsite plus offsite)	37.1	35.8	12.46	37.1	35.7	10.82	0.0	-0.1	-1.64

¹ Consists of onsite runoff and any offsite run-on areas to selected point of compliance.

Notes: Q₂ = 2-year event; cfs = cubic feet per second; Tc = time of concentration; min = minimum.

Source: Hunsaker, November 17, 2020 (Appendix H, of this Draft IS/MND).

The Crawford Canyon Park will incorporate site design BMPs, hydrologic source control (HSC) BMPs, infiltration BMPs, biotreatment BMPs, and hydromodification control BMPs to address HCOC impacts. The site design BMPs that have been incorporated into the Park include the following: minimize impervious area, maximize natural infiltration capacity; preserve existing drainage patterns and time of concentration; disconnect impervious areas; protect existing vegetation and sensitive areas, and revegetate disturbed areas and xeriscape landscaping.

Hydrologic source controls can be considered to be an integration of site design practices and LID BMPs. The goal of HSC's is to reduce runoff volume for a given drainage area without reducing the site's true impervious area. Where feasible, runoff from the Park's impervious areas and walkways will be directed to adjacent landscaping areas for filtration, evapotranspiration and incidental infiltration of runoff and volume reduction, prior to discharging to the storm drain system. The Park includes the use of infiltration BMPs to address pollutants from project-related runoff. Infiltration BMPs are LID BMPs that capture, store, and infiltrate storm water runoff. These BMPs are engineered to store a specified volume of water and have no design surface discharge (i.e., underdrain or outlet structure) until this volume is exceeded. Examples of infiltration BMPs include infiltration trenches, bioretention without underdrains, drywells, permeable pavement, and underground infiltration galleries. The Park proposes the use of a proprietary biotreatment BMP (i.e., filterra biofiltration or approved equivalent) to address runoff from the proposed parking lot area. Biotreatment BMPs are a class of structural LID BMPs that treat suspended solids and dissolved pollutants in storm water using mechanisms characteristics of biologically active systems. These BMPs are considered treat and release facilities and include treatment mechanisms that employ soil microbes and plants. Additional benefits of these BMPs may include aesthetic enjoyment, recreational use, wildlife habitat and reduction in storm water volume. The Project will incorporate hydromodification control BMPs. The Project's main storm drain line will be upsized and/or detention within the bioretention basin will be utilized to detain the difference in runoff for the 2-year storm event as shown in Table 4.14-1. The Project's main storm drain line in the proposed parking lot area will be upsized to detain the difference in runoff for the 2-year storm event (Hunsaker, November 17, 2020)

Overall, compliance with applicable County standard erosion control practices required pursuant to the 2019 CBC and the requirements of the Construction General Permit No. 2009-2009-DWQ NPDES No. CAS000002 and SAR MS4 Order No. RI-2009-0030, as amended by Order No. R8-2010-0062 NPDES No. CAS 618030 issued by the SARWQCB, and incorporation of the BMPs, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. A less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.14b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Response to Question 4.14b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Project would not decrease groundwater supplies or interfere substantially with groundwater recharge as groundwater extraction is not proposed for the Park or Sidewalk Extension. The Park and Sidewalk Extension Sites would be watered during dry and windy conditions during construction to prevent dust and debris from migrating offsite. The demand for construction watering would be minor and temporary. According to the Geotechnical Report, the groundwater was not observed during the exploration to a maximum depth of 26.5 feet below the existing grade of the Park Site. Groundwater conditions may vary across the Park Site due to stratigraphic and hydrologic conditions and may change over time as a consequence of seasonal and meteorological fluctuations or activities by humans at the Park Site or nearby sites. However, groundwater is unlikely to impact the Project (GMU, 2020). Therefore, the Project would result in less than significant impact to groundwater supplies and no mitigation measures are required.

Question 4.14c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:

c-i) result in substantial erosion or siltation on- or offsite?

c-ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

c-iii): create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial sources of polluted runoff?

Response to Question c-i - c-iii)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Refer above to Response 4.14a.

The Project would include the construction and operation of a 2.5-acre neighborhood park consisting of walkways, trails, foot bridges, two nature play areas for children, exercise stations, picnic tables, benches, landscape berms and natural rolling lawn areas. The Park would not include habitable structures or buildings. A paved surface parking lot with 11 vehicular parking spaces would be provided onsite with vehicular access from Newport Avenue. The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. Construction of the Park would not alter the course of a stream or river.

The proposed improvements of the Sidewalk Extension include approximately 630 feet of sidewalk construction along the north side of Newport Avenue beginning across from Hyde Park Drive proceeding easterly and approximately 815 feet of sidewalk construction along the west side of Crawford Canyon Road from the northeasterly end of the Park Site to Country Haven Lane. Additional associated proposed improvements include decomposed granite walkways, pavement reconstruction, driveways, curb ramps, curb/gutter, retaining walls/slough walls, drainage inlet modifications and features, utility relocations and adjustments, traffic pole replacement, pedestrian push button relocation and adjustments to pull boxes at the intersection of Crawford Canyon Road and Newport Avenue. The Sidewalk Extension Site is comprised of the existing road right-of-ways of Newport Avenue and Crawford Canyon Road. Construction of the Sidewalk Extension would not alter the course of a stream or river because no stream or rivers are located on this portion of the Sidewalk Extension Site.

Earth-moving activities would occur during construction of the Park and Sidewalk Extension that would slightly alter the topography of the Sites. SWPPP erosion control measures would be implemented to reduce surface run-off impacts during construction. Implementation of the Park and Sidewalk Extension would add impervious surfaces that could affect current drainage patterns.

According to the Hydrology Study, there are existing storm drain systems within the Park Site which convey the offsite runoffs from the existing residential uses to the north and east. There is an existing 30-inch storm drain and 36-inch storm drain at the northeast corner of the Park Site for the off-site

flows. There is an existing 48-inch pipe after the confluence of the existing 30-inch and 36-inch RCP pipes. The 48-inch storm drain discharges into an existing energy dissipater and ultimately into the existing trapezoidal earthen/concrete channel. The existing trapezoidal channel joins an existing 42-inch RCP at the southwest corner of the Park Site and ultimately discharges offsite into an existing 60-inch RCP along Newport Avenue. A majority of the runoff within the Park Site, including the west side of Crawford Canyon Road sheet flows from east to west into a depressed area downstream where flows are collected and conveyed into the on-site trapezoidal channel. Existing concrete v-ditches are located along the southern site boundary along Newport Avenue to collect and convey the flows within the Park Site and are discharged into the existing trapezoidal channel downstream via a concrete down drain (Hunsaker, November 16, 2020).

An inlet is proposed within the Park Site for the concrete down drain at the northeastern corner of the Site and will be proposed to join the existing 30-inch reinforced concrete pipe (RCP) below grade. The majority of the on-site runoff will be collected and conveyed by a meandering dry creek swale which traverses the Park Site from east to west. A bioretention basin is proposed at the end of the swale for water quality treatments. The storm runoffs from the bioretention basin discharge to the existing trapezoidal channel. An inlet and filter unit are proposed at the entrance of the proposed parking lot. The storm drain system is proposed to join the existing trapezoidal channel which discharges into by an existing 42-inch RCP and ultimately into an existing 60-inch RCP along Newport Avenue (Hunsaker, November 16, 2020).

According to the Hydrology Study, there is only one drainage area within the studied reach for both the existing condition and proposed condition. There are no available hydrology studies for the existing 30-inch and 36-inch pipes located at the northeastern corner of the Park Site. The Hydrology Study was extended to include the off-site drainage areas. As indicated in **Table 4.14-2, Crawford Canyon Park Overall Hydrology Summary**, the overall peak runoffs are similar to the existing condition after the Park improvements. The overall tributary areas remain the same and the proposed condition flow rate are all less than the existing levels. Overall, it is concluded that development of Crawford Canyon Park would result in no adverse impacts to the existing drainage systems (Hunsaker, November 16, 2020).

Table 4.14-2: Crawford Canyon Park Overall Hydrology Summary

Drainage Area	Existing Condition				Proposed Condition				Delta (Proposed-Existing)			
	Area	2-year	25-year	100-year	Area	2-year	25-year	100-year	Area	2-year	25-year	100-year
	(acre)	(cfs)	(cfs)	(cfs)	(acre)	(cfs)	(cfs)	(cfs)	(acre)	(cfs)	(cfs)	(cfs)
Overall	37.1	35.8	86.4	113.2	37.1	35.7	86.0	112.9	0.0	-0.1	-0.4	-0.3

Source: Hunsaker, November 16, 2020 (Appendix G, of this Draft IS/MND).

Along Crawford Canyon Road, surface water sheet flows off the road towards an earthen swale adjacent to the roadway which drains to a concrete v-ditch that connects to a storm drain inlet. The proposed improvements of the Sidewalk Extension include the installation of a curb and gutter along the Crawford Canyon Road with drainage inlet modifications and features connecting to a new storm drain which will drain into the existing storm drain system. Improvements along Newport Avenue will not alter any drainage patterns.

Overall, a less than significant impact is expected to occur in these regards and no mitigation measures are required.

Question 4.14d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Response to Question 4.14d)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. According to the Geotechnical Report, the majority of the Sites are located within an Area of Minimal Flood Hazard (Zone X). However, the southwestern portion of the Park Site is located within an area of 0.2 percent annual chance for a flood, one percent annual chance for a flood with average depths of less than one foot or within drainage areas less than one square mile, and protected by levees from one percent chance for a flood. The potential for the Sites to be adversely impacted by significant flooding is considered low (GMU, 2020). The Sites are not located on any State of California Tsunami Inundation Map for Emergency Planning (California Department of Conservation, 2021). The potential for the Sites to be adversely impacted by a tsunami are considered to be negligible as the Sites are located approximately 14 miles inland from the Pacific Ocean and at an elevation exceeding the maximum height of potential tsunami inundation (GMU, 2020). The potential for the Sites to be adversely impacted by seiches are considered to be negligible due to the lack of any significant enclosed bodies of water located in the vicinity of the Project Site (GMU, 2020). As such, the Project would not risk release of pollutants within a flood hazard zone, or from inundation of tsunami or seiche and there would be less than a significant impact and no mitigation measures are required.

Question 4.14e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Response to Question 4.14e)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. As discussed above, the Park and Sidewalk Extension would not decrease groundwater supplies or interfere substantially with groundwater recharge. The Park and Sidewalk Extension Sites would be watered during dry and windy conditions during construction to prevent dust and debris from migrating offsite. The demand for construction watering would be minor and temporary. According to the Geotechnical Report, the groundwater was not observed during the exploration to a maximum depth of 26.5 feet below the existing grade of the Park Site. Groundwater conditions may vary across the Park Site due to stratigraphic and hydrologic conditions and may change over time as a consequence of seasonal and meteorological fluctuations or activities by humans at the Park Site or nearby sites. However, groundwater is unlikely to impact the Project (GMU, 2020). The Park and Sidewalk Extension would be subject to all existing regulations associated with the protection of water quality. Construction activities would be carried out in accordance with applicable County standard erosion control practices required pursuant to the 2019 CBC and the requirements of the Construction General Permit No. 2009-2009-DWQ NPDES No. CAS000002 and SAR MS4 Order No. RI-2009-0030, as amended by Order No. R8-2010-0062 NPDES No. CAS 618030 issued by the SARWQCB, as applicable. Consistent with these requirements, a SWPPP would be prepared that incorporates BMPs to control water erosion during the construction of the Park and Sidewalk Extension. Therefore, a less than significant impact would occur in this regard and no mitigation measures are required.

4.15 Land Use and Planning	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Question 4.15a) Physically divide an established community?**Response to Question 4.15a)**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Park and Sidewalk Extension Site are located in North Tustin, an urbanized in unincorporated community in the County. The Park and Sidewalk Extension Site are located in a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Park and Sidewalk Extension Site comprise of existing single-family residences.

The Project would include the construction and operation of a 2.5-acre neighborhood park consisting of walkways, trails, foot bridges, two nature play areas for children, exercise stations, picnic tables, benches, landscape berms and natural rolling lawn areas. The Park would not include habitable structures or buildings. A paved surface parking lot with 11 vehicular parking spaces would be provided onsite with vehicular access from Newport Avenue. The development of the Park would provide recreational uses for the existing neighborhood and community. In 2011, the Orange County Board of Supervisors authorized the OC Public Works Director to pursue acquisition and development of a community park or other recreational opportunities within North Tustin to benefit the residents of North Tustin (OC Board of Supervisors, 2011).

The proposed improvements of the Sidewalk Extension include approximately 630 feet of sidewalk construction along the north side of Newport Avenue beginning across from Hyde Park Drive proceeding easterly and approximately 815 feet of sidewalk construction along the west side of Crawford Canyon Road from the northeasterly end of the Park Site to Country Haven Lane. Additional associated proposed improvements include decomposed granite walkways, pavement reconstruction, driveways, curb ramps, curb/gutter, retaining walls/slough walls, drainage inlet modifications and features, utility relocations and adjustments, traffic pole replacement, pedestrian push button relocation and adjustments to pull boxes at the intersection of Crawford Canyon Road and Newport Avenue.

Overall, given development of the Park would provide needed recreational uses for the existing neighborhood and community and the sidewalk improvements and associated proposed improvements would benefit residents of the Project area, the Project would be an integral part of the community and would not physically divide the existing established community. A less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.15b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Response to Question 4.15b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The County's General Plan designation for the Park Site is Suburban Residential (1B). These areas are characterized by a wide range of housing types, from estates on large lots to attached dwelling units (i.e., townhomes, condominiums, and clustered arrangements). No change to the Park Site's existing general plan designation is proposed or a necessary component of the Project. The Park Site's existing zoning designation is Agricultural Residential (AR) 20,000. Per Table 7-9-31.2, Land Use Regulations – Single-Family Residential Districts, of the County's Zoning Code, the AR zoning designation permits parks and recreational facilities (non-commercial). No change to the Park Site's existing zoning designation is proposed or a necessary component of the Project. Therefore, implementation of the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As such, a less than significant impact would occur in this regard and no mitigation measures are required.

4.16 Mineral Resources	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Question 4.16a) 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?

Response to Question 4.16a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** Minerals are defined as any naturally occurring chemical elements or compounds formed from inorganic processes and organic substances. The California Surface Mining and Reclamation Act of 1975 (SMARA) requires that all cities address significant mineral resources, classified by the State Geologist and designated by the State Mining and Geology Board, in their General Plans.

North Tustin is presently urbanized and covered with impervious surfaces. Valuable mineral resources are not known to exist within the North Tustin, the Project vicinity, or the Park or Sidewalk Extension Site. The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. The Sidewalk Extension Site is comprised of the existing road right-of-ways of Newport Avenue and Crawford Canyon Road. As such, the potential of uncovering mineral resources during Project construction is considered low. According to Figure VI-3, Orange County Mineral Resources, of the County's General Plan, the Park and Sidewalk Extension Sites are not a mineral resource area (County of Orange, 2013). Therefore, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not result in the loss of availability of a known mineral resource delineated on a local general plan, specific plan, or other land use plan as there are no known mineral resources. No impact would occur in this regard.

Question 4.16b) 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?

Response to Question 4.16)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** North Tustin is presently urbanized and covered with impervious surfaces. Valuable mineral resources are not known to exist within North Tustin, the Project vicinity, or the Park or Sidewalk Extension Sites. There are no mineral resource recovery sites located within North Tustin. There is no opportunity to impact any mineral recovery sites. According to Figure VI-3, Orange County Mineral Resources, of the County's General Plan, the Park and Sidewalk Extension Sites are not a mineral resource area. The County's General Plan designation for the Park Site is Suburban Residential (1B). These areas are characterized by a wide range of housing types, from estates on large lots to attached dwelling units (i.e., townhomes, condominiums, and clustered arrangements). The Park and Sidewalk Extension Site are not zoned for mineral extraction. The Park Site is zoned Agricultural Residential (AR) 20,000 on the County's Zoning Map (2016). Per Table 7-9-31.2, Land Use Regulations – Single-Family Residential Districts, of the County's Zoning Code, the AR zoning designation permits parks and recreational facilities (non-commercial). The Park and Sidewalk Extension Sites are located in a highly urbanized area in North Tustin. The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. The Sidewalk Extension Site is comprised of the existing road right-of-ways of Newport Avenue and Crawford Canyon Road. The Project would not result in the loss of availability of a known mineral resource delineated on a local general plan, specific plan, or other land use plan as there are no known mineral resource recovery sites on or near the Park or Sidewalk Extension Sites. No impact would occur in this regard.

4.17 Noise*Would the project result in:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the *Noise Modeling Calculations*, (ESA, 2020d) located in Appendix I, of this Draft IS/MND.

Thresholds of Significance

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of the community in which it is located. The applicable noise standards governing the Park and Sidewalk Extensions Sites are the criteria in the County's Noise Element of the General Plan (County of Orange, 2013) and its Noise Control Ordinance (County of Orange, 1973).

Noise Element of the General Plan

The Noise Element of the County's General Plan has developed noise standards for mobile noise sources. These standards address the impacts of noise from adjacent roadways and airports, including John Wayne Airport (JWA). The County specifies outdoor and indoor noise limits for residential uses,

places of worship, educational facilities, hospitals, hotels/motels, and commercial and other land uses. The noise standard for exterior living areas is 65 A-weighted decibels (dBA) community noise equivalent level (CNEL). The County prohibits new residential land uses within the 65 dBA CNEL contour from any noise sources, including highways and airports. Nonresidential noise-sensitive land uses such as hospitals, rest homes, convalescent hospitals, places of worship, and schools will not be permitted within the 65 dBA CNEL area from any source unless appropriate mitigation measures are included such that the standards contained in the Noise Element and in appropriate State and federal codes are met. The indoor noise standard is 45 dBA CNEL, which is consistent with the standard in the California Noise Insulation Standard. The County also enforces building sound transmission and indoor fresh air ventilation requirements specified in Chapter 35 of the Uniform Building Code.

Outdoor living area is a term used by the County to define spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include backyards, balconies, patio areas, barbecue areas, jacuzzi areas, etc., associated with residential uses; outdoor patient recovery or resting areas, etc., associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship that have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes that may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas). The County does not specify outdoor noise standard for non-outdoor living areas.

Noise Control Ordinance

The County's Standard Conditions of Approval require that all construction vehicles or equipment, fixed or mobile, operated within 1,000 feet of a dwelling shall be equipped with properly operating and maintained mufflers. All operations shall comply with Orange County Codified Ordinance Division 6 (Noise Control). Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings. As specified in the Orange County Codified Ordinance Division 6 (Noise Control), construction activities are generally restricted to between 7:00 A.M. and 8:00 P.M. from Monday through Saturday. No construction activity is permitted on Sundays and federal holidays. Construction noise during the allowed construction time periods are exempted from the noise level provisions in the Noise Control Ordinance.

It is stated in the County's Noise Control Ordinance that exterior noise levels at residential properties within Noise Zone 1 shall not exceed the basic noise standard of 55 dBA between the hours of 7:00 A.M. and 10:00 P.M. and shall not exceed 50 dBA between the hours of 10:00 P.M. and 7:00 A.M., plus the following limits:

- Basic noise level for a cumulative period of not more than 30 minutes in any 1 hour (L_{50}); or
- Basic noise level plus 5 dBA for a cumulative period of not more than 15 minutes in any 1 hour (L_{25}); or
- Basic noise level plus 10 dBA for a cumulative period of not more than 5 minutes in any 1 hour (L_8); or
- Basic noise level plus 15 dBA for a cumulative period of not more than 1 minutes in any 1 hour (L_2); or

- Basic noise level plus 20 dBA for any period of time (L_{max}).

The basic interior noise standard for residential uses are set as 45 dBA between 10:00 P.M. and 7:00 A.M. and 55 dBA between 7:00 A.M. and 10:00 P.M., plus the following limits:

- Basic noise level for a cumulative period of not more than 5 minutes in any 1 hour (L_8); or
- Basic noise level plus 5 dBA for a cumulative period of not more than 1 minutes in any 1 hour (L_2); or
- Basic noise level plus 10 dBA for any period of time (L_{max}).

In the event that the ambient noise level exceeds any of the above noise limits, the cumulative period applicable to that category shall be increased to reflect that ambient noise level. It shall be unlawful for any person at any location within the unincorporated area of the County to create any noise or to allow the creation of any noise that causes the noise level to exceed the residential noise standards stated above. Each of the noise limits above shall be reduced 5 dBA for noise consisting of impact noise, simple tone noise, speech, music, or any combination thereof.

Surrounding Land Uses

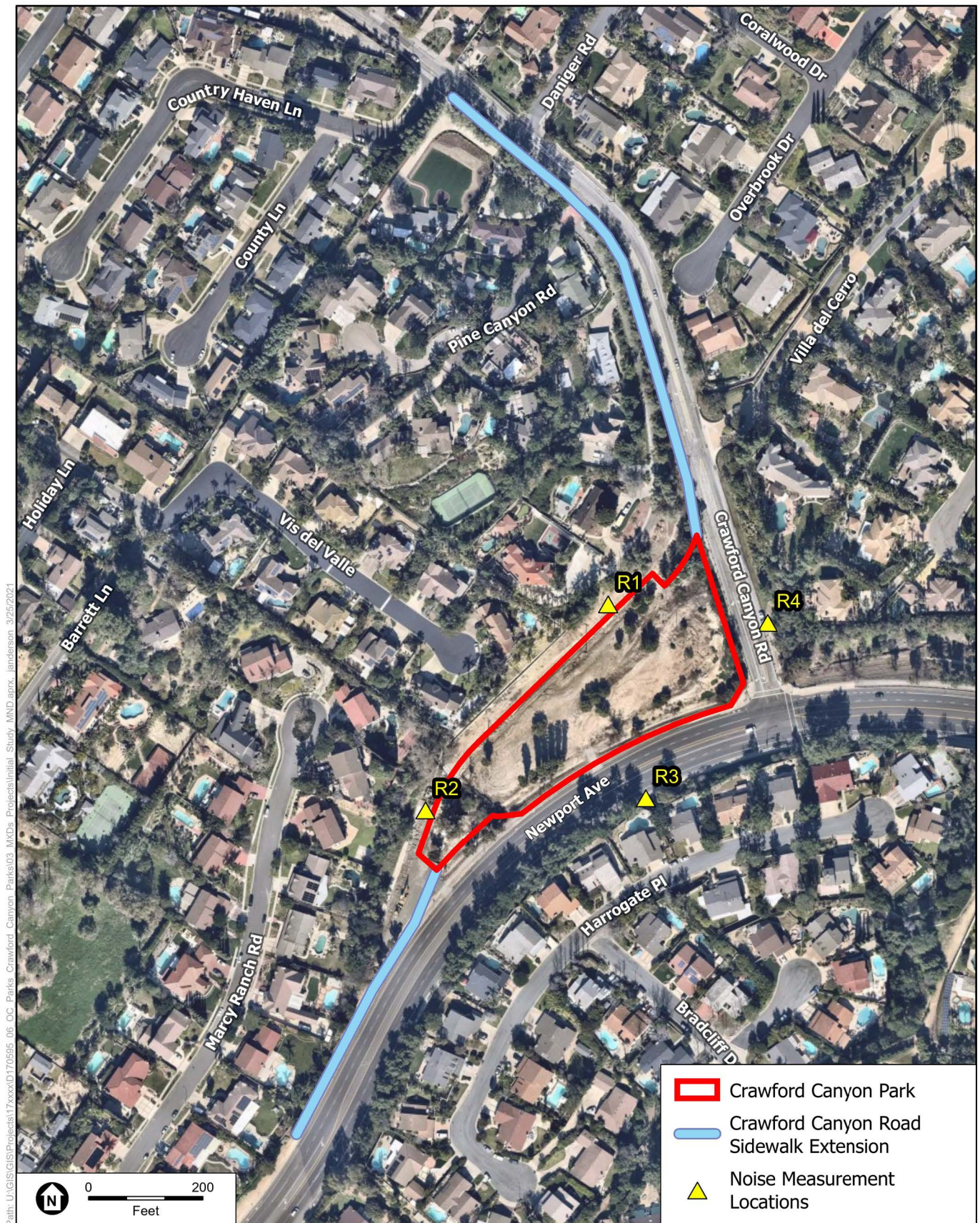
The Park and Sidewalk Extension Sites are located in a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Sites comprised of existing single-family residences.

Ambient Noise and Vibration Levels

Primary noise sources observed in the vicinity of the Park and Sidewalk Extension Sites represent typical noise levels expected in a suburban, mostly residential, environment. The predominant existing noise source is vehicle traffic noise from the roadways surrounding Park and Sidewalk Extensions Sites, Newport Avenue and Crawford Canyon Road. Secondary noise sources include general residential-related activities, such as landscaping and refuse service activities, playground activities at Panorama Elementary School, and intermittent aircraft flyovers.

To establish baseline noise conditions representing the nearby noise sensitive land uses in the vicinity of the Park and Sidewalk Extension Sites, existing ambient noise levels measurements were conducted at four locations (refer to **Figure 9, Noise Measurement Locations**), labeled as R1 through R4 as described as follows:

- R1 - on the northeastern boundary of the Park Site, approximately 80 feet from residential uses north of the Park Site;
- R2 - on the northwestern boundary of the Park Site, approximately 70 feet from residential uses north of the Park Site;
- R3 – on the south side of Newport Avenue south of the Park Site, approximately 100 feet south of the Park boundary;
- R4 – on the east side of Crawford Canyon Road east of the Park Site, approximately 75 feet east of the Park boundary.



SOURCE: Mapbox, 2020.

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project

Figure 9
Noise Measurement Locations

Short-term (15-minute) noise measurements were conducted at locations R1 through R4. Measured noise levels at the Park Site and adjacent to the Park Site represent typical noise levels expected in a suburban, mostly residential, environment. The short-term noise measurements were conducted between 8:49 A.M. and 10:02 A.M. on Thursday, September 10, 2020, to characterize the existing noise environment in the vicinity of the Park Site. **Table 4.17-1, Summary of Short-Term Ambient Noise Measurements**, lists the measured ambient noise levels.

The ambient noise measurements were conducted using Larson Davis's model 820 Precision Integrated Sound Level Meter (SLM), which is a Type 1 standard instrument, as defined in the American National Standard Institute S1.4. The SLM was within its annual factory calibration, field calibrated prior to conducting measurements, and operated according to the applicable manufacturer specification. The microphone of the SLM was placed at a height of five feet above the local grade, representing an average height of the human ear.

Table 4.17-1: Summary of Short-Term Ambient Noise Measurements

Measurement Locations Date (Time of Day)	Noise Level (dBA L_{eq})^a
R1	
9/10/20 (8:49 AM - 9:04 AM)	52.2
R2	
9/10/20 (9:07 AM - 9:22 AM)	55.6
R3	
9/10/20 (9:24 AM - 9:39 AM)	68.0
R4	
9/10/20 (9:47 AM - 10:02 AM)	61.9

^a Detailed measured noise data is included in Appendix I, of this Draft IS/MND.

Source: ESA, 2020.

Ambient vibration levels are typically not measured in areas, such as the Park Site, where background vibration velocity levels would be limited to heavy truck traffic on surrounding roadways. Vibratory motion is commonly described by identifying the peak particle velocity (PPV). Typically, rubber-tired vehicles traveling at a distance of 50 feet typically generate groundborne vibration velocity levels of approximately 63 vibration decibels (VdB) which equates to approximately 0.006 inches per second PPV). This level of vibration is well below the threshold level of human annoyance of 72 VdB (0.015 PPV) (Federal Transit Administration, 2006). Observed noise and activity levels at and surrounding the Park Site did not identify uncharacteristically high sources of vibration (e.g., impact construction activity, adjacent freeways).

Question 4.17a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Response to Question 4.17a)

Crawford Canyon Park: **Less than Significant Impact.**

Construction Noise

The Project would include the construction of a 2.5-acre neighborhood park consisting of walkways, trails, foot bridges, two nature play areas for children, exercise stations, picnic tables, benches, landscape berms and natural rolling lawn areas. A paved surface parking lot with 11 vehicular parking spaces would be provided onsite. A list of the construction equipment that would be used during each phase of construction is provided in **Table 4.17-2, Construction Equipment**. Table 4.17-2 also provides the construction phases assuming a one-year construction schedule is 250 working days. The noise from construction equipment would generate both steady-state and episodic noise that could be heard within and adjacent to the Park Site. Construction noise levels fluctuate throughout a given workday as construction equipment move from one location to another within a project site. When construction equipment would be in use further away from a sensitive receptor location, construction noise levels would be lower than the calculated values provided herein, which assumes construction equipment would be in use nearest to a sensitive receptor location. Exposure to fluctuating construction noise levels that would at times be lower than the noise levels shown in the analysis below would not rise to the level (greater than 120 dBA) that would result in hearing loss or adverse health impacts.

Individual pieces of construction equipment that would be used for construction of the Park would produce maximum noise levels of 76 dBA to 84 dBA at a reference distance of 50 feet from the noise source, as shown in **Table 4.17-3, Construction Equipment Noise Reference Levels and Usage Factors**. The construction equipment noise levels at 50 feet distance (Referenced Maximum Noise Levels) are based on the FHWA RCNM User's Guide⁶, which is a technical report containing actual measured noise data for construction equipment.

⁶ FHWA, Roadway Construction Noise Model, 2006.

Table 4.17-2: Construction Equipment

Construction Phase	Equipment	Duration
Clearing and Grubbing	Excavator Sweeper Loader Bulldozer Dump Truck Water Truck	20 days
Grading/Excavation	Excavator Dump Truck Scraper Bulldozer Water Truck Sweeper	60 days
Paving and Construction	Scraper Dump Truck Sweeper Asphalt Paver Compactor/Roller Water Truck Excavator Concrete Truck Bulldozer	80 days
Landscaping	Skid Steer Backhoe	90 days

Source: Hunsaker & Associates Irvine Inc., September 28, 2020.

Table 4.17-3: Construction Equipment Noise Reference Levels and Usage Factors

Type of Equipment	Acoustical Usage Factor ^a (%)	Reference Maximum Noise Levels at 50 Feet, ^{a,b} L _{max} (dBA)
Air Compressor	40	78
Backhoe	40	78
Cement and Mortar Mixer	50	80
Compactor (ground)	20	83
Concrete Mixer Truck	40	79
Concrete Saw	20	90
Crane	16	81
Dozer	40	82
Drill Rig	20	84
Excavator	40	81
Forklift	20	75
Generator	50	81
Grader	40	85
Dump/Haul Truck	40	76
Jackhammer	20	89
Front End Loader	40	79
Pump	50	81
Roller	20	80
Water Truck	40	76
Scraper	40	84
Tractor	40	80
Asphalt Paver	50	77
Vacuum Street Sweeper	10	82
Welders	40	74

^a The usage factor is the percentage of time during a construction noise operation that a piece of construction is operating at full power.

^b Construction equipment noise levels are based on the FHWA RCNM.

Source: FHWA, Roadway Construction Noise Model User's Guide, 2006, Table 1.

These maximum noise levels would occur when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on construction sites often operates under less than full power conditions or part power. To more accurately characterize construction-period noise levels, the average (hourly Leq) noise level associated with each construction phase is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction phase⁷. These noise levels are typically associated with multiple pieces of equipment operating simultaneously. **Table 4.17-4, *Construction Noise in Different Phases***, lists the potential construction noise levels at 50 feet from the active construction source(s), factoring in the number and type of construction equipment that would be in operation during the same period of time, and their individual utilization factors. A sample calculation is included in the footnote of the table that shows how the sound energy is combined into a logarithmic scale and summed up in the time period (Leq) during which the equipment operates.

Table 4.17-4 shows that during each construction phase, depending on the number of pieces of construction equipment and individual utilization factor, the noise level at a distance of 50 feet from an active construction area on the Park Site ranges from 77 to 85 dBA Leq. This scenario assumed that the equipment listed during each construction phase would be operating during the same period of time (with individual utilization factor included) and is located in close range that can be viewed as a point source from a distance of 50 feet. In reality, it is not practical to have all these pieces of equipment operating in a small area at the same time. It is assumed this way to obtain the worst case possible noise exposure for receivers in the vicinity of the Park. If the equipment is spread out over the entire Park Site, even though some pieces of equipment may be closer to an adjacent receiver, other pieces of equipment would be located at a longer distance from the same receiver, and the overall combined noise level would not be greater than the one estimated using the worst case scenario.

⁷ Pursuant to the FHWA *Roadway Construction Noise Model User's Guide*, 2005, the usage factor is the percentage of time during a construction noise operation that a piece of construction is operating at full power.

Table 4.17-4: Construction Noise in Different Phases

Construction Phase	Equipment (noise level, Lmax, at 50 feet) (UF)^a	Noise Level at 50 feet from Active Construction Area, dBA Leq
Clearing and Grubbing	Excavator (81 dBA) (40) Sweeper (82 dBA) (10) Loader (79 dBA) (40) Bulldozer (82 dBA) (40) Dump Truck (76 dBA) (40) Water Truck (76 dBA) (40)	83 ^b
Grading/Excavation	Excavator (81 dBA) (40) Dump Truck (76 dBA) (40) Scraper (84 dBA) (40) Bulldozer (82 dBA) (40) Water Truck (76 dBA) (40) Sweeper (82 dBA) (10)	84
Paving and Construction	Scraper (84 dBA) (40) Dump Truck (76 dBA) (40) Sweeper (82 dBA) (10) Asphalt Paver (77 dBA) (50) Compactor/Roller (83 dBA) (20) Water Truck (76 dBA) (40) Excavator (81 dBA) (40) Concrete Truck (79 dBA) (40) Bulldozer (82 dBA) (40)	85
Landscaping	Skid Steer (78 dBA) (40) Backhoe (78 dBA) (40)	77

^a UF: Utilization factor.

^b $Leq = 10 \log [(10^{8.1} + 10^{7.9} + 10^{8.2} + 10^{7.6} + 10^{7.6}) \times 0.4 + 10^{8.2} \times 0.1] = 10 \log [193223409] = 10 \times 8.286 = 83 \text{ dBA}$

Source: Hunsaker & Associates Irvine Inc. & ESA, 2020.

Construction Noise Impact

There are residential uses surrounding the Park Site to the west, east, north, and south. These residences would be potentially exposed to relatively high noise levels during Project construction. Residences to the north and west of the Park Site are the nearest off-site sensitive receivers that would be affected by construction noise. Some of these off-site residences are as close as 50 feet from the Park Site, and may be exposed to construction noise levels reaching 85

dBA Leq for a period of time during paving and construction phase. For residences to the east across Crawford Canyon Road and residences to the south across Newport Avenue, they are both approximately 90 feet from the Park Site construction boundary, and will receive 5 dBA in noise attenuation compared to the noise level measured at 50 feet. Therefore, when construction occurs near the eastern or southern boundary of the Park Site, these off-site residences would be exposed to construction noise levels reaching 80 dBA Leq during the noisiest construction phase.

As specified in the Orange County Codified Ordinance Division 6 (Noise Control), construction activities are generally restricted to between 7:00 A.M. and 8:00 P.M. from Monday through Saturday. No construction activity is permitted on Sundays and federal holidays. Construction noise during the allowed construction time periods are exempted from the noise level provisions in the Noise Control Ordinance. The Park Site will comply with the permitted construction hours as identified in the Orange County Codified Ordinance Division 6. Because construction of the Park will be temporary and short term, no significant noise impacts would occur. The following Best Management Practice Measures would help reduce construction noise impacts of Crawford Canyon Park.

Best Management Practice Measures:

- BMP-N.1 Noise sources associated with construction, repairs, remodeling, or the grading of any real property, shall be conducted from 7:00 A.M. to 8:00 P.M. on Monday through Saturday. Construction is prohibited at any time on Sunday or a Federal holiday.
- BMP-N.2 Equipment will use available noise suppression devices and properly maintained mufflers. Construction noise will be reduced by using quiet or “new technology”, equipment, particularly the quieting of exhaust noises by use of improved mufflers where feasible. All internal combustion engines used at the Project site will be equipped with the type of muffler recommended by the vehicle manufacturer. In addition, all equipment will be maintained in good mechanical condition so as to minimize noise created by faulty or poorly maintained engine, drive-train and other components.
- BMP-N.3 During all site preparation, grading and construction, contractors shall minimize the staging of construction equipment and unnecessary idling of equipment in the vicinity of noise sensitive land uses.
- BMP-N.4 The equipment staging area will be situated so as to provide the greatest distance separation between construction-related noise sources and noise-sensitive receptors nearest the Park Site during all construction.

Operational Noise

Recreational amenities and features of Crawford Canyon Park are anticipated to include walkways, trails, footbridges, two nature play areas for children, exercise stations, picnic tables, benches, landscape berms and natural rolling lawn areas. A paved surface parking lot with 11 vehicular parking spaces would be provided onsite with vehicular access from Newport Avenue. Most of these amenities (walkways, trails, foot bridges, exercise stations, picnic tables, benches, landscape berms and natural rolling lawn areas) would not generate any substantial noise. The proposed two nature play areas for children may generate relatively high noise levels compared

to the other amenities. However, they are designed for small children (2 to 5 years old and 5 to 12 years old) in relative small centralized areas. Ambient noise from traffic on Newport Avenue and Crawford Canyon Road would be comparable to and provide masking effect to the play area noise.

Existing roadway CNEL noise levels were calculated using the Federal Highway Administration's (FHWA's) Highway Traffic Noise Model (FHWA TNM)⁸ and traffic volumes at the study intersections reported in the Transportation Analysis Memorandum (Appendix J, of this Draft IS/MND). The TNM model calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions. The noise levels along these roadway segments are presented in **Table 4.17-5, Existing Vehicular Traffic Noise Levels**.

Table 4.17-5: Existing Vehicular Traffic Noise Levels

Roadway Segment	Traffic Noise Level 100 feet from Roadway Centerline, dBA CNEL		Increase in Noise Levels dBA
	Existing	Existing plus Project	
1. Crawford Canyon Road	67.8	68.2	0.4
2. Newport Avenue	73.5	73.8	0.3

Source: ESA, 2020.

Table 4.17-5 shows that Park Site-related traffic noise level increases would be 0.4 dBA or less, which is not perceptible to the human ear in an outdoor environment. Therefore, no long term traffic noise impacts would occur from the implementation of the Park. Long term operational noise impacts associated with the Crawford Canyon Park would be less than significant and no mitigation measures are required.

Crawford Canyon Road Sidewalk Extension: Less than Significant Impact.

Construction Noise

A summary of the construction phases and estimated pieces of equipment for the Sidewalk Extension is shown below in **Table 4.17-6, Construction Equipment**. Table 4.17-6 also lists the number of equipment and employees in each construction phase. **Table 4.17-7, Construction Noise in Different Phases**, shows that during each construction phase, depending on the number of pieces of construction equipment and individual utilization factor, the noise level at a distance of 50 feet from an active construction area on the Sidewalk Extension Site ranges from 72 to 84 dBA Leq. This scenario assumed that the equipment listed during each construction phase would be operating during the same period of time (with individual utilization factor included) and is located in close range that can be viewed as a point source from a distance of 50 feet. In reality, it is not practical to have all these piece of equipment operating in a small area at the same time. It is assumed this way to obtain the worst case possible noise exposure for receivers in the project vicinity. If the equipment is spread out over the entire Sidewalk Extension Site, even though some

⁸The traffic noise model which was developed based on calculation methodologies provided in the Caltrans TeNS document and traffic data provided in the Transportation Analysis Memorandum provided in Appendix J, of this Draft IS/MND. This methodology, considered an industry standard, allows for the definition of roadway configurations, barrier information (if any), and receiver locations.

pieces of equipment may be closer to an adjacent receiver, other pieces of equipment would be located at a longer distance from the same receiver, and the overall combined noise level would not be greater than the one estimated using the worst case scenario.

Table 4.17-6: Construction Equipment

Construction Phase	Equipment	Number of Equipment/Employee
Site preparation	Graders tractors/loaders/backhoes	3/8
Demolition	Excavator concrete/industrial saws tractors/loaders/backhoes	5/10
Utility Relocation	Utility trucks	2/6
Storm Drain Construction	Excavator tractors/loaders/backhoes welders cement and mortar mixers	5/12
Sidewalk Construction	Cement and mortar mixers compactor concrete/industrial saws	4/8
Traffic Signal Modification	Crane utility truck backhoe	3/10
Paving	Cement and mortar mixers pavers paving equipment rollers tractors/loaders/backhoes	5/8

Source: Orange County Public Works, November 2020; ESA, November 2020.

Table 4.17-7: Construction Noise in Different Phases

Construction Phase	Equipment (noise level, Lmax, at 50 feet) (UF)^a	Noise Level at 50 feet from Active Construction Area, dBA Leq
Site preparation	Graders (85 dBA) (40) tractors/loaders/backhoes (79 dBA) (40)	82
Demolition	Excavator (81 dBA) (40) concrete/industrial saws (90 dBA) (20) tractors/loaders/backhoes (79 dBA) (40)	84 ^b
Utility Relocation	Utility trucks (76 dBA) (40)	72
Storm Drain Construction	Excavator (81 dBA) (40) tractors/loaders/backhoes (79 dBA) (40) welders (74 dBA) (40) cement and mortar mixers (80 dBA) (20)	81
Sidewalk Construction	Cement and mortar mixers (80 dBA) (20) Compactor (83 dBA) (20) concrete/industrial saws (90 dBA) (40)	84
Traffic Signal Modification	Crane (81 dBA) (16) utility truck (76 dBA) (40) backhoe (81 dBA) (40)	79
Paving	Cement and mortar mixers (80 dBA) (20) pavers (80 dBA) (20) paving equipment (77 dBA) (50) rollers (75 dBA) (40) tractors/loaders/backhoes (81 dBA) (40)	81

^a UF: Utilization factor.^b $Leq = 10 \log [(10^{8.1} + 10^{7.9}) \times 0.4 + 10^{9.0} \times 0.2] = 10 \log [282130146] = 10 \times 8.45 = 84 \text{ dBA}$

Source: Orange County Public Works and ESA, November 2020.

Construction Noise Impact

There are residential uses surrounding the Sidewalk Extension Site to the east and south. These residences would be potentially exposed to relatively high noise levels during the construction of the Sidewalk Extension. Residences to the east of the Sidewalk Extension Site are the nearest off-site sensitive receivers that would be affected by construction noise. Some of these off-site residences are as close as 50 feet from the boundary of the Sidewalk Extension Site, and may be exposed to construction noise levels reaching 84 dBA Leq for a period of time during demolition

and sidewalk construction phases. For residences to the south across Newport Avenue, they are approximately 90 feet from the Sidewalk Extension Site construction boundary, and will receive 5 dBA in noise attenuation compared to the noise level measured at 50 feet. Therefore, when construction occurs near the southern boundary of the Sidewalk Extension Site, these off-site residences would be exposed to construction noise levels reaching 79 dBA Leq during the noisiest (demolition and sidewalk construction) construction phases.

As specified in the Orange County Codified Ordinance Division 6 (Noise Control), construction activities are generally restricted to between 7:00 A.M. and 8:00 P.M. from Monday through Saturday. No construction activity is permitted on Sundays and federal holidays. Construction noise during the allowed construction time periods are exempted from the noise level provisions in the Noise Control Ordinance. The Sidewalk Extension will comply with the permitted construction hours as identified in the Orange County Codified Ordinance Division 6. Because construction of the Sidewalk Extension will be temporary and short term, no significant noise impacts would occur. The following Best Management Practice Measures would help reduce the potential construction noise impacts of the Sidewalk Extension.

Best Management Practice Measures:

- BMP-N.1 Noise sources associated with construction, repairs, remodeling, or the grading of any real property, shall be conducted from 7:00 A.M. to 8:00 P.M. on Monday through Saturday. Construction is prohibited at any time on Sunday or a Federal holiday.
- BMP-N.2 Equipment will use available noise suppression devices and properly maintained mufflers. Construction noise will be reduced by using quiet or “new technology”, equipment, particularly the quieting of exhaust noises by use of improved mufflers where feasible. All internal combustion engines used at the Project site will be equipped with the type of muffler recommended by the vehicle manufacturer. In addition, all equipment will be maintained in good mechanical condition so as to minimize noise created by faulty or poorly maintained engine, drive-train and other components.
- BMP-N.3 During all site preparation, grading and construction, contractors shall minimize the staging of construction equipment and unnecessary idling of equipment in the vicinity of noise sensitive land uses.
- BMP-N.4 The equipment staging area will be situated so as to provide the greatest distance separation between construction-related noise sources and noise-sensitive receptors nearest the Sidewalk Extension Site during all construction.

Once the construction is complete, the Sidewalk Extension would not result in any noticeable noise changes. Operational noise impacts would be less than significant and no mitigation measures are required.

Question 4.17b) Generation of excessive groundborne vibration or groundborne noise levels?**Response to Question 4.17b)**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Vibration impacts due to construction activities would occur when a large machine would be operated near fragile structures or vibration sensitive uses within a building. The amounts of construction and demolition required for the Park is not anticipated to generate excessive groundborne vibrations or noise levels. Construction of the Park is not anticipated to include pile driving activities. Table 4.17-8 presents vibration source levels for equipment required for the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension. Residential structures are located approximately 50 feet from the Park and Sidewalk Extension Sites. Construction activities would produce vibration velocities of up to approximately 0.074 inches per second (in/sec) peak particle velocity (PPV) at those off-site residential structures when construction equipment operates within approximately 50 feet. This value would not exceed the 0.2 in/sec PPV significance threshold for potential building damage, therefore, ground borne vibration would result in less than significant impacts and no mitigation measures are required. Also, refer to discussion 4.17a), above.

Table 4.17-8: Vibration Source Levels for Construction Equipment

Equipment	Approximate PPV (in/sec) at 50 feet
Roller	0.074
Large Bulldozer/ Drill Rig	0.031
Loaded Trucks	0.027
Small Bulldozer	0.001

Source: Federal Transit Administration, 2018.

The primary source of transient vibration would include passenger vehicle circulation along the local roadway network, which is consistent with existing conditions and uses in the vicinity of the Park and Sidewalk Extension Sites. Ground-borne vibration generated by such activity would not generate vibration velocities that would exceed the FTA's structural damage threshold (0.2 PPV) for non-engineered timber and masonry buildings (Federal Transit Administration, 2006). As such, vibration impacts associated with Project operation would be below the significance threshold and impacts would be less than significant and no mitigation measures are required.

Question 4.17c) For a project located within the vicinity of a private airstrip or 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?

Response to Question 4.17c)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Park and Sidewalk Extension Sites are not within an airport land use plan and are not within two miles of a public airport or public use airport. The nearest airport is the John Wayne Airport, Newport Beach, located approximately 7.5 miles southeast of the Park and Sidewalk Extension Sites. The Park and Sidewalk Extension Sites are not located within the 65 dBA CNEL impact zone of the John Wayne Airport. However, the Park and Sidewalk Extension Sites are near the approach flight path of the John Wayne Airport as the jets turn from eastbound to southwest-bound and is exposed to intermittent aircraft overflight noise. The range of aircraft overflight noise levels would not exceed any noise standards and would be much lower than the levels considered hazardous for human health. Therefore, this impact is less than significant and no mitigation measures are required.

4.18 Population and Housing	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Question 4.18a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Response to Question 4.18a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Project does not propose new housing or businesses. The Project would include the construction and operation of a 2.5-acre neighborhood park consisting of walkways, trails, foot bridges, two nature play areas for children, exercise stations, picnic tables, benches, landscape berms and natural rolling lawn areas. A paved surface parking lot with 11 vehicular parking spaces would be provided onsite with vehicular access from Newport Avenue. The Sidewalk Extension would include the construction of sidewalk extensions and associated improvements. The construction of the Park and Sidewalk Extension would temporarily increase construction employees. However, due to the relatively short duration of construction (i.e., 12 months for the Park and 4 months for the Sidewalk Extension), Project construction activities would not induce employees to move to the Project vicinity and would not induce population growth or the need for housing. In addition, operation of the Park and Sidewalk Extension would not increase employment and therefore, no inducement of population or housing would occur. The provision of new domestic water lines for landscape irrigation, stormwater infrastructure, and electricity for security lighting would only serve the Park Site and would not induce further on- or off-site population growth. Given the limited intensity of the proposed development, growth would not result from the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project. The Project would result in no impact related to growth inducement.

Question 4.18b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Response to Question 4.18b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park Site is currently vacant with scattered vegetation, a drainage culvert and associated drainage ditches, overhead power lines, an existing County easement designated for public utilities and regional and local trails, and chain link fencing along the Site perimeter. The Sidewalk Extension Site is comprised of the existing road rights of way of Newport Avenue and Crawford Canyon Road. No dwelling units exist on the Park or Sidewalk Extension Sites. Thus, the Park and Sidewalk Extension would not result in the displacement of existing people or demolition of existing housing units. The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. Since no existing housing would be displaced, there would be no need for the construction of replacement housing elsewhere. No impact would occur in this regard.

4.19 Public Services*Would the project:*

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a-i) Fire protection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a-ii) Police protection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a-iii) Schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a-iv) Parks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a-v) Other public facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Question 4.19a) 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:

a-i) Fire protection?

Response to Question a-i)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Fire protection and emergency medical services for North Tustin and the Park and Sidewalk Extension Sites are provided by the Orange County Fire Authority (OCFA). The OCFA provides traditional fire and life safety services to over 1,984,758 residents in 24 cities in the County and all unincorporated areas of the County. OCFA is comprised of seven divisions and eleven battalions which include 79 fire stations located throughout the County (OCFA, 2020). OCFA has three fire stations located within approximately 2 miles of the Park and Sidewalk Extension Sites: Fire Station No. 8, located at 10631 Skyline Drive, Santa Ana 92705, approximately 0.57 miles east of the Park and Sidewalk Extension Sites; Fire Station No. 43, located 11490 Pioneer Way, Tustin, 92782, located approximately 1.97 miles southeast of the Park and Sidewalk Extension Sites; and Fire Station No. 21, located at 1241 Irvine Boulevard, Tustin, 92780, approximately 2.04 miles south of the Park and Sidewalk Extension Sites (OCFA, 2020).

Construction

The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. Construction activities associated with the

Park and Sidewalk Extension may temporarily increase the demand for fire protection and emergency medical services, and may cause the occasional exposure of combustible materials, such as wood, plastics, sawdust, coverings and coatings, to heat sources including machinery and equipment sparking, exposed electrical lines, welding activities, and chemical reactions in combustible materials and coatings. However, in compliance with the requirements of Cal-OSHA, all construction managers and personnel would be trained in fire prevention and emergency response. Further, fire suppression equipment specific to construction would be maintained on the Park and Sidewalk Extension Sites. As applicable, construction activities would be required to comply with the 2019 CBC, the 2019 California Fire Code (CFC), and the Title 3, Public Morals, Safety and Welfare, Division 3, Fire Protection and Explosives, of the County's Fire Code (County's Fire Code).

Construction activities for the Park would involve temporary lane closures along Newport Avenue for delivery of construction materials and during installation of the deceleration lane. One of the two southbound travel lanes along Newport Avenue is expected to be closed during construction of the Sidewalk Extension. Along Crawford Road, travel lanes are expected to be shifted to maintain two-directional travel. As such, construction activities could increase response times for emergency vehicles to local business and/or residences within the vicinity of the Park and Sidewalk Extension Sites, due to travel time delays to through traffic. However, the impacts of such construction activity would be temporary and on an intermittent basis. Further, a Construction Management Plan for the Park and Sidewalk Extension would be prepared in order to minimize disruptions to through traffic flow, maintain emergency vehicle access to the Park and Sidewalk Extensions Sites and neighboring land uses, and schedule working and construction equipment delivery to avoid peak traffic hours. As a component of the Construction Management Plan, the times of day and locations of all temporary lane closures would be coordinated so that they do not occur during peak periods of traffic congestion, to the extent feasible. Such events would be coordinated with neighboring construction projects, as necessary. Truck routes for material and equipment deliveries, as well as for soil export and disposal, would require approval by OC Public Works prior to construction activities. These practices, as well as techniques typically employed by emergency vehicles to clear or circumvent traffic (i.e., lights and sirens), are expected to limit the potential for significant delays in emergency response times during construction of the Park and Sidewalk Extension. Therefore, impacts regarding emergency response times and emergency access during construction would be less than significant and no mitigation measures are required.

Overall, with compliance to the applicable requirements of the 2019 CBC, the 2019 CFC, and County's Fire Code, and due to the temporary nature of the necessary construction activities, construction impacts on fire protection and emergency medical services would be less than significant and no mitigation measures are required.

Operation

Operational activities associated with the Crawford Canyon Park could increase the demand for fire protection and emergency medical services as a vacant lot is being developed with park and recreation uses which would draw daytime visitors. As mentioned above, OCFA has three fire stations located within approximately 2 miles of the Park and Sidewalk Extension Sites. Due to the close proximity of the three fire stations, including the nearest station located 0.57 miles from the Park and Sidewalk Extension Sites, service calls are anticipated to be responded to within the OCFA's desired response times of 5 to 7 minutes for engines to arrive on the scene after a 9-1-1 call has been placed (OCFA, 2020). Emergency vehicles and fire access for the Park Site would be

provided at-grade access from Newport Avenue and from at-grade access from both Newport Avenue and Crawford Canyon for the Sidewalk Extension Site. The Park and Sidewalk Extension would be designed, constructed and maintained in accordance with OCFA's development and construction requirements to minimize the risks associated with fires. The Park and Sidewalk Extension would be subject to compliance with fire protection design standards, as applicable, per the 2019 CBC, the 2019 CFC, and the County's Fire Code, to ensure adequate fire protection. Further, the Park and Sidewalk Extension would not result in an increase of above-ground habitable structures, buildings, employees or population. Accordingly, the OCFA's response times would not be substantially changed such that response time objectives are compromised in any significant manner. Further, new or expanded fire stations to be constructed or the need to hire additional staffing to the fire protection facilities servicing the Site as a result of Project implementation are not required. A less than significant impact would occur in this regard and no mitigation measures are required.

a-ii) Police protection?

Response to Question a-ii)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Sheriff protection services for North Tustin and the Park and Sidewalk Extension Sites are provided by the Orange County Sheriff-Coroner Department (OCSCD). OCSCD is a multi-faceted law enforcement agency served by approximately 3,800 sworn personnel and professional staff members and over 800 reserve personnel. OCSCD consists of five organization commands comprised of 21 separate divisions and provides land and sea based patrol, and investigative services to contract and task force partners at the city and county level and to the unincorporated areas of the County. (OCSCD, 2020). The Park and Sidewalk Extension Sites are patrolled by the North Operations Division, which is based at the Sheriff's Headquarters located at 550 N. Flower Street, Santa Ana, 92703, approximately six miles east of the Park and Sidewalk Extension Sites.

Construction

During construction, equipment and building materials could be temporarily stored on-site and on the temporary, offsite lay-down area, which could result in theft, graffiti, and vandalism. The construction sites would be fenced along the perimeter, with the height and fence materials subject to review and approval by OC Public Works. Further, as discussed above, a Construction Management Plan for the Park and Sidewalk Extension would be prepared in order to minimize disruptions to through traffic flow, maintain emergency vehicle access to the Park and Sidewalk Extension Sites and neighboring land uses, and schedule worker and construction equipment delivery to avoid peak traffic hours. Given the visibility of the Park and Sidewalk Extension Sites from adjacent roadways and surrounding properties, existing sheriff presence in North Tustin, maintained emergency access, and construction fencing, the Park and Sidewalk Extension are not expected to increase demand on existing sheriff services. As such, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would have a less than significant temporary impact on sheriff protection during the construction phases and no mitigation measures are required.

Operation

Operational activities associated with Crawford Canyon Park could increase the demand for police protection services. The Project would include the development of a 2.5-acre neighborhood park

consisting of walkways, trails, foot bridges, two nature play areas for children, exercise stations, picnic tables, benches, landscape berms and natural rolling lawn areas. A paved surface parking lot with 11 vehicular parking spaces would be provided onsite with vehicular access from Newport Avenue. Hours of operation for the Crawford Canyon Park would include 7:00 AM to 6:00 PM November 1 through February 28 and 7:00 AM to 9:00 PM March 1 through October 31. County sponsored activities or events would not be hosted at Crawford Canyon Park. Public group reservations for the recreational amenities at the Park Site would not be allowed. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements and is not anticipated to provide operational activities that would increase the demand for police protection services.

Features of the Crawford Canyon Park include a proposed vehicular gate to be located at the parking lot entrance. The proposed parking lot would be locked every evening and opened every morning. The Park would not be enclosed with fencing or walls. Crawford Canyon Park would provide security lighting located along walkways and trails and within the play areas and parking lot.

Similar to all building applications within the County, the OCSCD would be provided the opportunity to review and comment upon development plans in order to facilitate opportunities for improved emergency access and response; ensure the consideration of design strategies that facilitate public safety and police surveillance; and other specific design recommendations to enhance public safety and reduce potential demands upon police protection services. Further, the Park and Sidewalk Extension would not result in new homes or business or an increase in employees or population. Accordingly, the OCSCD's response times would not be substantially changed such that response time objectives are compromised in any significant manner. Further, new or expanded police facilities to be constructed or the need to hire additional staffing to the police protection facilities servicing the Park and Sidewalk Extension Sites as a result of Project implementation are not anticipated. Therefore, a less than significant impact would occur in this regard and no mitigation measures are required.

a-iii) Schools?

Response to Question a-iii)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. As the Project would not include housing or generate new residents, employees, or school-aged children, no impacts would occur in this regard.

a-iv) Parks?

Response to Question a-iv)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension would not result in a population increase that would necessitate additional parks, recreational facilities, or alteration of existing facilities, and Project operation would not adversely affect the use or condition of existing facilities. The Project involves the construction and operation of a 2.5-acre neighborhood park consisting of walkways, trails, foot bridges, two nature play areas for children, exercise stations, picnic tables, benches, landscape

berms and natural rolling lawn areas. The Project would provide increased recreational opportunities for the community. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. As the Park and Sidewalk Extension would not include housing or generate new residents or employees, no impacts would occur in this regard.

a-v) Other public facilities?

Response to Question a-v)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. As the Project would not include housing or generate new residents or employees, the Project would have no impact on other public facilities such as libraries or roads.

4.20 Recreation	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Question 4.20a) 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?

Response to Question 4.20a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact**. The Project involves the construction and operation of a 2.5-acre neighborhood park consisting of walkways, trails, foot bridges, two nature play areas for children, exercise stations, picnic tables, benches, landscape berms and natural rolling lawn areas. The Project would provide increased recreational opportunities for the community. The Project would draw residents to the new park and therefore would not 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. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. No impacts would occur in this regard.

Question 4.20b) 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?

Response to Question 4.20b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact**. The Project would provide new recreational opportunities in the area, and the construction and operation of the proposed neighborhood park would not result in

adverse physical impacts to the environment. The Project is not a component of a separate project. The proposed construction impacts have been considered throughout the discussion of environmental impacts in this document. Therefore, with implementation of the mitigation measures as described herein, recreation-related impacts would be less than significant and no mitigation measures are required.

4.21 Transportation	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following analysis is based on the *Crawford Canyon Park, Transportation Analysis Memorandum* (Traffic Memorandum) (Translutions, 2020), located in Appendix J, of this Draft IS/MND.

Question 4.21a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Response to Impact Question 4.21a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.**

Transportation Safety (Project Trip Generation/Levels of Service)

The County of Orange Chapter IV. Transportation Element, includes a goal (Goal 3) to provide a circulation plan that facilitates the safe, convenient and efficient movement of people and goods throughout unincorporated areas of the County. Following is a discussion of transportation safety.

Project Trip Generation

The trip generation rate for Crawford Canyon Park is based on rates for Land Use 411 - "Public Park" from the Institute of Transportation Engineers (ITE) *Trip Generation (10th Edition)*, as this project is a public park owned and operated by the County. The parks surveyed vary widely as to location, type, and number of facilities, including boating or swimming facilities, beaches, hiking trails, ball fields, soccer fields, campsites, and picnic facilities. The sites surveyed varied from 4 acres to 1,154 acres. Since the trip generation rate varies substantially based on size, the rates used in this evaluation are based on the data for a 4-acre park. **Table 4.21-1, Project Trip Generation**, shows the trip generation for the Crawford Canyon Park.

Table 4.21-1: Project Trip Generation

Land Use			Units			Peak Hour						Daily
						AM Peak Hour			PM Peak Hour			
						In	Out	Total	In	Out	Total	
Weekday			2.5	Acre	2.655	1.845	4.500	1.925	1.575	3.500	34.000	
Inbound/Outbound Splits					59%	41%	100%	55%	45%	100%	50%/50%	
Weekday Trip Generation					7	4	11	5	4	9	85	
Saturday ²			2.5	Acre				2.475	2.025	4.500	22.750	
Inbound/Outbound Splits								55%	45%	100%	50%/50%	
Saturday Trip Generation								6	5	11	57	
Sunday ²			2.5	Acre				1.950	3.050	5.000	19.500	
Inbound/Outbound Splits								39%	61%	100%	50%/50%	
Sunday Trip Generation								5	8	13	49	

Notes:

¹ Rates based on 4-acre park for Land Use 411 - "Public Park" from Institute of Transportation Engineers (ITE) *Trip Generation (10th Ed.)*.² Peak hour rates for generator

Source: Translutions, 2020

As seen in Table 4.21-1, the Crawford Canyon Park is forecast to generate approximately 85 daily trips on weekdays, 57 trips on Saturdays, and 49 trips on Sundays. During the weekday peak hours of adjacent street traffic, the Crawford Canyon Park is forecast to generate approximately 11 trips during the A.M. peak hour and 9 trips during the P.M. peak hour. On weekends, the Park is forecast to generate 11 peak hour trips on Saturday and 13 peak hour trips on Sunday.

Access Analysis

While the trips generated by the Crawford Canyon Park are less than the threshold requiring a traffic study based on County requirements, an evaluation of Project access was conducted to evaluate traffic operations. Due to the proximity of the intersection of Crawford Canyon Road and

Newport Avenue to the proposed driveway, the analysis also includes the intersection of Crawford Canyon Road and Newport Avenue. This analysis was conducted for weekday peak hours only since traffic on adjacent streets are typically highest on weekday peak hours.

Project Trips. Forecast project trips were calculated at the study intersections. The trip distribution for the Crawford Canyon Park was forecast based on the location of the Park in relation to residential uses in the area. The trip generation was applied to the trip distribution to obtain project trip assignment.

Traffic Volumes. Due to the current pandemic, new traffic counts could not be obtained at the intersections as current traffic counts would be atypical because schools are closed, and many residents are working from home. Therefore, traffic counts at the intersection of Crawford Canyon Road and Newport Avenue from 2014 were obtained from OCTA. A growth rate of 2 percent per annum was applied to these counts to obtain 2020 traffic volumes.

Traffic Operations and Delay. The evaluation of the Project entry was conducted based on traffic delay. Delay ranges are generally expressed LOS. There is a strong correlation between delay and safety. Research has shown that accidents increase as LOS worsens, especially at unsignalized intersections. For example, a driver is likely to take unnecessary risks to make a turn after waiting beyond a certain amount of time to make that turn. The Highway Capacity Manual (HCM) accounts for this psychological factor and uses different delay metrics for stop controlled and signalized intersections. Therefore, this analysis was based on HCM methodologies using Synchro software. The County of Orange uses LOS D as the threshold for acceptable operations.

Table 4.21-2, *Existing Levels of Service*, shows the levels of service at the analysis intersections. As seen on Table 4.21-2, both intersections operate at acceptable levels of service. At the Project driveway, there are minimal delays in making turns in and out of the Project driveway. Further, the Project is unlikely to significantly increase traffic delays at other intersections.

Congestion Management Program

The congestion management program (CMP) is a State-mandated program enacted by the State legislature to address the impacts that urban congestion has on local communities and the region as a whole. The OCTA is the local agency responsible for implementing the requirements of the CMP. New projects located in the County must comply with the requirements set forth in the OCTA's CMP. The nearest OCTA CMP intersection to the Park and Sidewalk Extension Sites is Jamboree Road/Irvine Boulevard, located approximately 3.3 miles to the southeast (OCTA, 2019). As such, implementation of the Project would not conflict with OCTA's CMP.

Bus Routes

The nearest OC bus transit route runs along Newport Avenue to Foothill Boulevard, approximately 0.55 miles south of the Park and Sidewalk Extension Sites (OC Bus, 2021). As such, implementation of the Project would not conflict with OCTA's bus routes.

Bicycle Facilities

An existing Class II bikeway facility along Newport Avenue and a proposed Class II bikeway facility along Crawford Canyon Road are located adjacent to the Park and Sidewalk Extension Sites. Class II bikeway facilities consist of on-streets striped and signed bicycle lanes (County of

Orange, 2013). Implementation of the Project would not conflict with existing or proposed County bicycle facilities.

Overall, given the limited intensity of the proposed development, implementation of the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not conflict with transportation safety, the CMP, OCTA's bus routes, or the County bicycle facilities. As such, a less than significant impact would occur in this regard and no mitigation measures are required.

Table 4.21-2: Existing Levels of Service

		Intersection	LOS Std.	Control	Without Project				With Project			
					AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
					Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	.	Project Driveway/Newport Avenue	D	TWSC	Future Intersection				13.1	B	11.4	B
2	.	Crawford Canyon Road/ Newport Avenue	D	Signal	28.3	C	27.3	C	28.4	C	27.4	C

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case movement.

LOS = Level of Service

Source: Translutions, 2020

Question 4.21b) Would the project conflict or be inconsistent with CEQA section 15064.3, subdivision (b)?**Response to Impact Question 4.21b)**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Senate Bill 743 (SB743) which was codified in Public Resources Code section 21099, was signed by the Governor in 2013 and directed the Governor’s Office of Planning and Research (OPR) to identify alternative metrics for evaluating transportation impacts under CEQA. Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” Recently adopted changes to the CEQA Guidelines in response to Section 21099 include a new section (15064.3) that specifies that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts. A separate Technical Advisory issued by OPR provides additional technical details on calculating VMT and assessing transportation impacts for various types of projects.

The County of Orange Board of Supervisors adopted County VMT guidelines at its November 17, 2020 meeting. The Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project is exempt from a VMT analysis per Orange County’s Guidelines for Evaluating Vehicle Miles Traveled Under CEQA. Section 3.1 identifies Land Development Projects with certain attributes may be presumed to create a less than significant on transportation and circulation. The Project qualifies as a Small Project attribute because it generates fewer than 500 average daily trips. The Project also qualifies as a Public Facility attribute because it is a government facility that supports community health, safety, or welfare. Therefore, based on the thresholds set by the County of Orange *Final Guidelines for Evaluating Vehicle Miles Traveled Under CEQA* (County of Orange, 2020) less than significant impacts would occur in this regard and no mitigation measures are required.

Question 4.21c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**Response to Impact Question 4.21c)**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** A Construction Management Plan for the Park and Sidewalk Extension would be prepared in order to minimize disruptions to through traffic flow, maintain emergency vehicle access to the Park and Sidewalk Extension Sites and neighboring land uses, and schedule worker and construction equipment delivery to avoid peak traffic hours. As a component of the Construction Management Plan, the times of day and locations of all temporary lane closures would be coordinated so that they do not occur during peak periods of traffic congestion, to the extent feasible. Truck routes for material and equipment deliveries, as well as for soil export and disposal, would require approval by the OC Public Works prior to construction activities.

The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Crawford Canyon Park would include a vehicular deceleration lane designed to County standards, including standards for sight distance, on Newport Avenue prior to entering the proposed parking lot. The proposed improvements of the

Sidewalk Extension include approximately 630 feet of sidewalk construction along the north side of Newport Avenue beginning across from Hyde Park Drive proceeding easterly and approximately 815 feet of sidewalk construction along the west side of Crawford Canyon Road from the northeasterly end of the Park Site to Country Haven Lane. Additional associated proposed improvements include decomposed granite walkways, pavement reconstruction, driveways, curb ramps, curb/gutter, retaining walls/slough walls, drainage inlet modifications and features, utility relocations and adjustments, traffic pole replacement, pedestrian push button relocation and adjustments to pull boxes at the intersection of Crawford Canyon Road and Newport Avenue. There are no existing hazardous design features such as sharp curves or dangerous intersections on-site or within the vicinity of the Park and Sidewalk Extension Sites. The Project would not alter existing street patterns in the vicinity. A less than significant impact would occur in this regard and no mitigation measures are required.

Question to 4.21d) Result in inadequate emergency access?

Response to Impact Question 4.21d)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** The Park and Sidewalk Extension Sites are located in a highly urbanized area of North Tustin that is well served by the surrounding roadway network. While construction activities for the Project would be confined on-site, the construction staging and lay-down area for the Park will be located within the project boundaries of the Park Site. Construction staging and lay-down area for the Sidewalk Extension will be located offsite, potentially within a vacant lot located approximately one-mile south of the Sidewalk Extension Site on Newport Avenue. The final construction staging and lay-down area for the Sidewalk Extension will be determined by the Project contractor. Construction workers will park within the staging and lay-down area. However, through-access for drivers, including emergency personnel, along all roads would still be provided. In these instances, the Project would implement traffic control measures (e.g., construction flagmen, signage, etc.) to maintain flow and access. Further, in accordance with OC Public Works, the Park and Sidewalk Extension would develop a Construction Management Plan which includes designation of haul routes, to ensure that adequate emergency access is maintained during construction. Therefore, construction is not expected to result in inadequate emergency access. A less than significant construction impact would occur and no mitigation measures are required.

Post construction, the Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The proposed parking lot would provide emergency access to the Park Site for emergency personnel. As discussed under Response 4.21a, Crawford Canyon Park is anticipated to generate approximately 85 daily trips on weekdays, 57 trips on Saturday, and 49 trips on Sundays. During the weekday peak hours of adjacent street traffic, the project is forecast to generate approximately 11 trips during the A.M. peak hour and 9 trips during the P.M. peak hour. On weekends, the Park is forecast to generate 11 peak hour trips on Saturday and 13 peak hour trips on Sunday. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. As such, Project operation would not generate substantial traffic in the Project vicinity. Therefore, operation of the Project would result in a less than significant impact and no mitigation measures are required.

4.22 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following analysis is based on the County's consultation with California Native American tribes pursuant to AB 52 to identify tribal cultural resources in or near the Park and Sidewalk Extension Sites, located in Appendix K, of this Draft IS/MND.

Question 4.22a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

Question 4.22b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Response to Question 4.22a-b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The SCCIC records search, pedestrian survey (ESA, 2021) and NAHC SLF search did not identify potential tribal cultural resources in the Park Site or Sidewalk Extension Site. The County conducted consultation with California Native American tribes pursuant to AB 52 to identify tribal cultural resources in or near the Park and Sidewalk Extension Sites. On December 28, 2020, the County sent notification letters via certified mail with return receipt requested to the designated representatives of four California Native American tribes, including the Gabrieleno Band of Mission Indians – Kizh Nation, Juaneno Band of Mission Indians, San Gabriel Band of Mission Indians, and Soboba Band of Luiseno Indians. The letters provide a brief description of the Park and Sidewalk Extension and their locations, with maps, the lead agency's contact information, and a notification that the tribe has 30 days to request consultation⁹ pursuant to Public Resources Code section 21080.3.1.

On January 21, 2021, the County received a letter via email from Mr. Andrew Salas, Chairman of the Gabrieleno Band of Mission Indians - Kizh Nation that requested formal AB 52 consultation with the County for the Project. The County consulted with the Kizh Nation on February 25, 2021 via conference call. During the call, the County provided an overview of the Project and the Kizh Nation provided their knowledge of the Project Site vicinity, including information about the natural environment and general history of the area, and known villages and trade routes/trails in the area. The Kizh Nation indicated that there could be archaeological resources and human remains related to prehistoric travel along trade routes, such as burials of those who may have died while on the trail, and that these resources could be found in artificial fill soils. They also suggested that the Project Site is located within and around the sacred village of Pasbengna. After the conference call, the Kizh Nation submitted an email to the County on March 2, 2021 that included similar information that they provided in the call, including maps and other documentation, and a request to understand the origin of the soil stockpiles and other onsite soils located at the Project Site. The maps and documentation do not provide information that indicates a known tribal cultural resource is located within the Project Site.

As a follow-up to the Tribe's request for additional information on the existing fill materials, additional research was conducted to determine the previous land use of the project site and immediate vicinity and determine the nature of the onsite soil materials. to the extent practicable

⁹ However, the letter also indicated that this deadline may be affected by various Executive Orders issued by the Governor.

and provided a follow-up letter to the Kihz Nation on May 6, 2021. An extensive evaluation of historic maps and aerial photos to determine the historic land use of the project site and immediate vicinity was conducted. Historic topographic maps and aerial photographs were examined to provide historical information about the previous land uses of the Park Site and Sidewalk Extension Site. Available topographic maps include the 1896 and 1901 Anaheim 15-minute quadrangles, the 1964 Orange 7.5-minute quadrangles (Topo View, 2020). Historic aerial photographs were available for the years 1927, 1931, 1939, 1952, 1960, 1977 (Frame Finder, 2020), 1980, 1994, 2002, 2003, 2004, 2005, 2009, 2010, 2012, 2014, 2016 (Historicaerials.com, 2020), and 2020 (Bing Maps, 2020). The Park Site has undergone disturbance from prior land uses including orchards, access roads, homesteading activities, and ornamental trees.

While the Kizh Nation did not identify any known tribal cultural resources (as defined in PRC Section 21074) within the Project Site during consultation with the County, they have indicated that the Project Site has a high potential to encounter tribal cultural resources during construction given the Project Site's location near sacred villages (including the village of *Pasbengna*), water courses, major traditional trade routes, and its location within a cultural landscape. As a result, the Kizh Nation recommended Native American monitoring during construction of the Project. However, they suggested that their concerns for proposed construction monitoring would be reduced if the County could show that the soil stockpiles and other onsite soils had been removed and replaced with clean or engineered fill soils that were imported. As mentioned earlier, the origin of the soil stockpiles and other onsite soils at the Project Site is currently unknown.

The Project Site has undergone disturbance from prior land uses including orchards, access roads, homesteading activities, and ornamental trees. Results of ESA's pedestrian survey in 2020 revealed that a large majority of the ground surface at the Park Site was obstructed by large soil stockpiles of unknown origin. In particular, it is unknown whether these soils originated at the Park Site or another location. Given the past land use activities that have likely displaced resources, the negative results of the pedestrian survey and record searches, and since the proposed excavations are anticipated to be shallow (up to 6 feet in depth), the potential to encounter buried tribal cultural resources during construction is considered low.

The AB 52 Native American notification letters and Mr. Salas' initial response letter are provided in the Native American Tribal Correspondence references materials to this IS/MND. To date, no other responses from the Native American community have been received as part of the AB 52 tribal consultation effort. As a result of the County's consultation efforts, no known tribal cultural resources have been identified within the Project Site or vicinity and therefore no impact to known tribal cultural resources would occur.

Although the project area is not in an area of previously identified archaeological sensitivity, the possibility exists that undiscovered cultural resources may be encountered during ground-disturbing activities associated with the proposed project. Implementation of **Standard Condition SC-TCR-1** would provide consulting Native American groups the opportunity to examine inadvertently discovered prehistoric cultural resources and consult on the identification, evaluation, and protection of TCRs if they are discovered during construction.

SC-TCR-1: Unanticipated Discovery of Archaeological Resources. If unanticipated archaeological resources or deposits are discovered during ground disturbing activities, OCPW will implement the following measures. All work will halt within a 50-foot radius of the discovery. OCPW will have a qualified professional archaeologist with knowledge of Native American resources to assess the significance of the find. If the resources are Native American in origin, the

County shall coordinate with the Tribe regarding evaluation, treatment, curation, and preservation of these resources. The archaeologist will have the authority to modify the no-work radius as appropriate, using professional judgment in consultation with OCPW. Work will not continue within the no-work radius until the archaeologist conducts sufficient research and evidence and data collection to establish that the resource is either: (1) not cultural in origin; or (2) not potentially eligible for listing on the CRHR. If a potentially eligible resource is encountered, then the archaeologist and OCPW, as lead agency, in consultation with the Tribe, will arrange for either: (1) avoidance of the resource, if possible; or (2) test excavations to evaluate eligibility, and if eligible, an attempt to resolve adverse effects to determine appropriate mitigation. The assessment of eligibility will be formally documented in writing as verification that the provisions in CEQA for managing unanticipated discoveries and PRC Section 5024 have been met.

4.23 Utilities and Service Systems	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Question 4.23a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Response to Question 4.23a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.**

Construction

Water service is provided to North Tustin and the Park and Sidewalk Extension Sites by the East Orange County Water District (EOCWD) (OCWD, 2020; OC LAFCO, 2020). During construction activities, there would be a temporary, intermittent demand for water for such activities as soil watering for site preparation, fugitive dust control, concrete preparation, painting, cleanup, and other short-term activities. Construction-related water usage is not expected to have an adverse impact on available water supplies or the existing water distribution system, and impacts would be less than significant and no mitigation measures are required.

Wastewater service is provided to the Park and Sidewalk Extension Sites by the Orange County Sanitation District (OCSd) (OCSd, 2020). During construction, a negligible amount of wastewater would be generated by construction workers. Portable toilets would be provided on the Project Site by a private company and the waste disposed off-site to two treatment facilities jointly owned by OCSd in Fountain Valley. Therefore, construction impacts to the local wastewater conveyance and treatment would be less than significant and no mitigation measures are required.

Operation

Water use during the operation of the Project would be used for landscaping throughout Crawford Canyon Park. Water use will not occur during operation of the Sidewalk Extension. The Park would provide drought tolerant landscaping or other low water landscaping to the greatest extent feasible. The Park and Sidewalk Extension do not propose habitable structures or restroom facilities. As such, Project operations would not generate wastewater. Therefore, the Project would result in a less than significant impact on water and wastewater services and facilities and no mitigation measures are required.

Existing development within North Tustin is currently serviced by a stormwater drainage system designed to accept area runoff. The Park Site is currently zoned for development within a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Park and Sidewalk Extension Sites comprise of existing single-family residences. An existing drainage culvert and associated cement drainage ditch is located within the southwestern portion of the Park Site. An additional cement drainage ditch exists along Newport Avenue. As such, the drainage system of North Tustin has been designed with sufficient capacity to accommodate development on the Park and Sidewalk Extension Sites that would include the Site's impervious surfaces in its capacity. The Park Site would include the construction and operation of a 2.5-acre neighborhood park consisting of walkways, trails, foot bridges, two nature play areas for children, exercise stations, picnic tables, benches, landscape berms and natural rolling lawn areas. The Park

Site's limited impervious surfaces would include a paved surface parking lot with 11 vehicular parking spaces. In addition, the Park is proposing a bioretention basin located in the western portion of the Site adjacent to the proposed parking lot. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. There is an existing drainage system and Project implementation would improve the system and not induce the need for additional capacity. The stormwater system will be improved with the removal of the concrete ditch along Newport Avenue, and stormwater will be diverted to a bioswale leading to a bioretention basin. A less than significant impact would occur in this regard and no mitigation measures are required.

The anticipated electricity needed for the proposed security lighting located along walkways and trails and within the play areas and parking lot of the Park Site is negligible in the context of overall daily use of electricity within North Tustin as discussed in Section 4.10(a). Construction and operation of the Park and Sidewalk Extension would not require the use of natural gas or telecommunication facilities.

Overall, due to the negligible demand for water and wastewater services and facilities, stormwater drainage, electric power, natural gas, and telecommunication facilities, the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would not require or result in the construction of new facilities or expansion of existing facilities. Therefore, water and wastewater infrastructure, stormwater drainage, electric power, natural gas, and telecommunication facility impacts associated with construction and operation of the Park and Sidewalk Extension would be less than significant and no mitigation measures are required.

Question 4.23b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Response to Question 4.23b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact. As discussed above, North Tustin and the Park and Sidewalk Extension Sites are located within the water service area of the EOCWD. The EOCWD encompasses an area of approximately 10,000 acres and is a member of the Municipal Water District of Orange County (MWD OC) which is a member of the Metropolitan Water District (MWD) and therefore entitled to receive Colorado River and Northern California imported water through the distribution facilities of the Metropolitan system (EOCWD, 2020; OC LAFCO, 2020).

Construction and operation of the Park and Sidewalk Extension would result in the demand for water supplies. Water used during construction activities would be used for soil watering for site preparation, fugitive dust control, concrete preparation, painting, cleanup, and other short-term activities. Water use during the operation of the Park would be used for landscaping throughout Crawford Canyon Park. Water use will not occur during operation of the Sidewalk Extension.

The Park would provide drought tolerant landscaping or other low water landscaping to the greatest extent feasible. The Park and Sidewalk Extension do not propose habitable structures or restroom facilities. Due to the negligible amount of water anticipated to be used by the Park and Sidewalk Extension, the existing water entitlements and water resources of North Tustin would be sufficient to serve the Project. A less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.23c) 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?

Response to Question 4.23c)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** As discussed above, North Tustin and the Park and Sidewalk Extension Sites are located within the wastewater service area of Orange County Sanitation District (OCSD). OCSD is responsible for safely collecting, treating and disposing the wastewater generated by approximately 2.6 million residents within a 479-square mile area of central and northwest County of Orange (OCSD, 2020).

During construction of the Park and Sidewalk Extension, a negligible amount of wastewater would be generated by construction workers. Portable toilets would be provided by a private company and the waste disposed off-site to two treatment facilities jointly owned by OCSD in Fountain Valley. The Park and Sidewalk Extension do not propose habitable structures or restroom facilities. As such, operations of the Park and Sidewalk Extension would not generate wastewater. Therefore, the Project would result in a less than significant impact on wastewater services and facilities and no mitigation measures are required.

Question 4.23d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Response to Question 4.23d)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** Trash, recyclables, and green waste within the North Tustin are collected by Waste Management of Orange County. The County of Orange provides three active landfills: Olinda Alpha Landfill, Brea, CA; Frank R. Bowerman Landfill, Irvine, CA; and Prima Deshecha Landfill, San Juan Capistrano. Solid waste generated from the Project Site is anticipated to be disposed of at the Frank R. Bowerman Landfill. The Frank R. Bowerman Landfill, a Class III municipal solid waste landfill, is one of the largest landfills in California and the ninth largest landfill in the United States. This landfill is permitted for 11,500 tons per day (TPD) maximum with an 8,500 TPD annual average. The Frank R. Bowerman Landfill has capacity to serve the County of Orange through year 2053 (OC Waste, 2020).

Construction of the Park and Sidewalk Extension would result in generation of solid waste such as scarp, lumber, concrete, packing materials, and plastics which could require disposal of construction associated debris. Construction related solid waste is anticipated to be nominal. Further, it is anticipated that a large amount of the construction debris would be recycled. Disposal and recycling of the construction debris would be required to comply with all federal, State, and local regulations. Operation of the Park is anticipated to generate a negligible amount of solid waste. The Park will have seven 31-gallon trash receptacles emptied weekly. Maintenance of the landscaped areas throughout the Crawford Canyon Park is anticipated to generate a small amount of trash and debris, including green waste. Operation of the Sidewalk Extension would not generate solid waste. Construction and operational waste is anticipated to be disposed of at

the Frank R. Bowerman Landfill. Due to the small amount of solid waste generated by the Park and Sidewalk Extension, it is anticipated the Frank R. Bowerman Landfill could accommodate the Project's solid waste generation. As such, a less than significant impact would occur in this regard and no mitigation measures are required.

Question 4.23e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Response to Question 4.23e)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant Impact.** All local governments, including the County, are required under Assembly Bill 939 (AB 939), the Integrated Waste Management Act of 1989, to develop source reduction, reuse, recycling, and composting programs to reduce tonnage of solid waste going to landfills. The waste generated by the Park and Sidewalk Extension would be incorporated into the waste stream of the County, and diversion rates would not be substantially altered. The Project does not include any component that would conflict with state laws governing construction or operational solid waste diversion and would comply pursuant to local implementation requirements. As such, a less than significant impact would occur in this regard and no mitigation measures are required.

4.24 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Question 4.24a) Substantially impair an adopted emergency response plan or emergency evacuation plan?**Response to Question 4.24a**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites are not located within or near an area designated as a state responsibility area nor is it classified as a very high fire hazard severity zone (VHFHSZ) or located near a VHFHSZ (Cal Fire, 2011). The Park and Sidewalk Extension Sites are mapped as Non-VHFHSZ per the California Department of Forestry and Fire Protection (Cal Fire) Fire Hazard Severity Zone Maps prepared under the Fire and Resource Assessment Program (FRAP) (County of Orange, 2013). Further, according to Figure IX-1, Fire Hazard Severity Zones, of the County's General Plan Safety Element, the Park and Sidewalk Extension Sites are not located in a fire hazard severity zone (County of Orange, 2013). As such, the Park and Sidewalk Extension would not substantially impair an adopted emergency response plan or emergency evacuation plan. No impact would occur in this regard.

Question 4.24b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**Response to Question 4.24b**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites are not located within or near an area designated as a state responsibility area nor is it classified as a VHFHSZ or located near a VHFHSZ (Cal Fire, 2011). The Park and Sidewalk Extension Sites are mapped as Non-VHFHSZ per the California Department of Forestry and Fire Protection (Cal Fire) Fire Hazard Severity Zone Maps prepared under the FRAP (County of Orange, 2013). Further, according to Figure IX-1, Fire Hazard Severity Zones, of the County's General Plan Safety Element, the Park and Sidewalk Extension Sites are not located in a fire hazard severity zone (County of Orange, 2013). As such, due to slope, no impact would occur in this regard.

Question 4.24c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**Response to Question 4.24c**

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites are not located within or near an area designated as a state responsibility area nor is it classified as a very high fire hazard severity zone (VHFHSZ) or located near a VHFHSZ (Cal Fire, 2011). The Park and Sidewalk Extension Sites are mapped as Non-VHFHSZ per the California Department of Forestry and Fire Protection (Cal Fire) Fire Hazard Severity Zone Maps prepared under the Fire and Resource Assessment Program (FRAP) (County of Orange, 2013). Further, according to Figure IX-1, Fire Hazard Severity Zones, of the County's General Plan Safety Element, the Park and Sidewalk Extension Sites are not located in a fire

hazard severity zone (County of Orange, 2013). As such, the Park and Sidewalk Extension would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. No impact would occur in this regard.

Question 4.24d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Response to Question 4.24d

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **No Impact.** The Park and Sidewalk Extension Sites are not located within or near an area designated as a state responsibility area nor is it classified as a very high fire hazard severity zone (VHFHSZ) or located near a VHFHSZ (Cal Fire, 2011). The Park and Sidewalk Extension Sites are mapped as Non-VHFHSZ per the California Department of Forestry and Fire Protection (Cal Fire) Fire Hazard Severity Zone Maps prepared under the Fire and Resource Assessment Program (FRAP) (County of Orange, 2013). Further, according to Figure IX-1, Fire Hazard Severity Zones, of the County's General Plan Safety Element, the Park and Sidewalk Extension Sites are not located in a fire hazard severity zone (County of Orange, 2013). As such, the Park and Sidewalk Extension would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur in this regard.

4.25 Mandatory Findings of Significance	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Question 4.25a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Response to Question 4.25a)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: **Less than Significant with Mitigation Incorporated.** Based on the discussion under Section 4.8, *Biological Resources*, the onsite Mexican fan palms could provide habitat for roosting bats species (Park Site only), and active nesting sites for birds (both Park and Sidewalk Extension Sites). Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of native birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). Additionally, common bats are protected under CDFG Code Section 4150. Disturbance to potential nesting substrate or bat maternity colony could result in a potentially significant impact. With pre-construction nesting bird surveys, bat surveys and monitoring prior to and during construction during the breeding season in areas containing potential nesting sites and with implementation of specific restrictions to establish appropriate set-backs to curtail construction near any active bird or bat nest sites, as described in Mitigation Measure BIO-1, impacts would be less than significant

Based on the discussion under Section 4.9, *Cultural Resources*, since the construction of Crawford Canyon Park and Sidewalk Extension includes ground disturbance up to 6 feet in depth and 3 feet in depth, respectively, it is possible that unknown subsurface archaeological resources could be encountered. Impacts to archaeological resources that qualify as historical resources as defined in §15064.5 could result in a significant effect on the environment. With implementation of Mitigation Measure CUL-1, which provides procedures to follow in the event of the discovery of archaeological resources, impacts would be less than significant. The results from the SCCIC records search, SLF search, and pedestrian survey did not identify human remains within the Park or Sidewalk Extension Site. Should ground disturbance encounter human remains, disturbance of those remains could result in a significant effect on the environment. With implementation of Mitigation Measure CUL-2, which requires following state laws in the event of a discovery, impacts to human remains would be less than significant.

No paleontological resources were identified within the Park or Sidewalk Extension Site as discussed in Section 4.11, *Geology and Soils*. However, the geologic map review, the Geotechnical Investigation Report, and the LACM records search revealed that the Park Site has exposures of alluvial fan deposits (Qyf), which are assigned a low-to-high paleontological potential increasing with depth. The geologic map review and the LACM records search revealed that the Sidewalk Extension Site has exposures of alluvial fan deposits (Qyf) and the middle Miocene Topanga Formation (Tt). The alluvial fan deposits are assigned a low-to-high paleontological potential increasing with depth. The LACM also mentions that in elevated areas immediately east and southeast of the Sidewalk Extension Site, there are exposures of the Sespe/Vaqueros Formation, undifferentiated (Tvs); however, the LACM has stated that these localities are likely to have

originated from the Topanga Formation (Tt). The Sespe/Vaqueros Formation and the Topanga Formation are assigned a high potential. Given that Park excavations would only reach 6 feet in depth and fossils from nearby older Quaternary alluvium sediments were recovered from 8 to 25 feet below ground surface, the Park Site does not appear to have the potential to disturb or destroy buried paleontological resources. Since excavations would not exceed 3 feet in depth and the known fossil localities¹⁰ in the vicinity have been discovered from as deep as 8 to 25 feet below ground surface, the Sidewalk Extension Site does not appear to have the potential to disturb or destroy buried paleontological resources. Nevertheless, since construction of the Park and Sidewalk Extension includes ground disturbance, there remains the possibility that paleontological resources could be encountered. Directly or indirectly destroying a unique paleontological resource could result in a significant effect on the environment. With implementation of Mitigation Measure PALEO-1, which provides procedures to follow in the event of a discovery, impacts would be less than significant. As such, the Park and Sidewalk Extension would not have the potential to degrade the quality of the environment, substantially reduce the habitat of 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, and impacts in this regard would be less than significant with mitigation incorporated, as necessary.

Mitigation Measures:

Implementation of Mitigation Measures BIO-1, CUL-1 and CUL-2, and PALEO-1.

Question 4.26b) 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)?

Response to Question 4.26b)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact with Mitigation Incorporated. A cumulative impact could occur if the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project would result in an incrementally considerable contribution to a significant cumulative impact in consideration of past, present and reasonably foreseeable future projects for each resource area. Because the Project impacts are generally construction related, the cumulative study area is generally confined to the immediate vicinity or within a mile radius. **Table 4.26-1, Related Projects**, provides a summary of related projects in the vicinity of the Park and Sidewalk Extension Sites, which are used in the cumulative impact analysis.

¹⁰ Additional fossil localities have been found from the Sespe/Vaqueros Formation (which per the LACM, these likely originated from the Topanga Formation); however, the depths from which they were recovered are unknown.

Table 4.26-1: Related Projects

Project	Location	Description
County of Orange		
Annual County Road Preservation: Asphalt Overlay of Newport Avenue	Newport Avenue from Hyde Park Drive to 400 feet south of Kings Bridge Road	Grind and overlay with GlasPave25. Project completed April 2020.
Crawford Canyon Road Sidewalk Extension (Phase II) ¹	Crawford Canyon Road from Newport Avenue to Stroller Lane	Sidewalk improvements with drainage inlet modifications and features. Construction anticipated Fall 2023.
East Orange County Water District: Sewer Main Installation	Crawford Canyon Road from Brae Glen to Stroller Lane	Replace 600 feet of sewer main. Construction anticipated Summer 2022.
New single family dwelling with improvements in County right-of-way	10713 Crawford Canyon Road	New single family dwelling. Driveway improvements extend into County right-of-way. County Grading Permit #GRD20-0056 and encroachment permit #20-0354. Construction anticipated for Spring 2021.
Cowan Ranch Residential Project	S. Newport Ave & Kings Briar Road	16-Lot, SFD subdivision

Source: OC Public Works, OC Planning, February 2021.

Note:

¹ The Crawford Canyon Road Sidewalk Extension (Phase II) is a separate project and unrelated to the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project.

Aesthetics

Development of the Park and Sidewalk Extension in conjunction with the related projects would result in an incremental intensification of land uses in a highly urbanized area of North Tustin. Similar to the Park and Sidewalk Extension Sites, the related projects are not located within scenic vistas or within the vicinity of a state-designated scenic highway. The related project sites do not contain rock outcroppings or historical resources. Similar to the Park and Sidewalk Extension, the related projects would be compatible with the existing visual character of the surrounding area. Cumulative light and glare effects would be consistent with the existing urban environment, which is characterized by high ambient light levels. Therefore, no cumulative impacts on aesthetics would occur.

Agriculture and Forestry Resources

As with the Park and Sidewalk Extension, related projects are located within developed, urbanized areas generally zoned for residential uses and do not support farming, agricultural, or forest-related operations. Development of the Park and Sidewalk Extension in combination with the related

projects would not result in the conversion of State-designated agricultural land from agricultural use to a non-agricultural use, nor result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no cumulative impacts on agricultural or forest resources would occur.

Air Quality

There are related projects in the area of the Park and Sidewalk Sites that have not yet been built or are currently under construction. As such, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be speculative. The SCAQMD recommends that Project-specific construction air quality impacts be used to determine the potential cumulative impacts to regional air quality.

With regard to Project operations, the SCAQMD's approach for assessing cumulative impacts related to operations or long-term implementation is based on attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. As discussed earlier, the SCAQMD has developed a comprehensive plan, the AQMP, which addresses the region's cumulative air quality condition

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the Project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2016 AQMP. The Park and Sidewalk Extension would not conflict with or obstruct implementation of AQMP and would be consistent with the growth projections in the AQMP. Nonetheless, SCAQMD no longer recommends relying solely upon consistency with the AQMP as an appropriate methodology for assessing cumulative air quality impacts. The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As shown in Tables 4.7-2 through 4.7-5, emissions calculated for construction and operations of the Park and Sidewalk Extension are less than the applicable SCAQMD significance thresholds, which are designed to assist the region in attaining the applicable State and national ambient air quality standard. These standards apply to both primary (criteria and precursor) and secondary pollutants (ozone). The emissions associated with the Park and Sidewalk Extension would not be cumulatively considerable as the emissions would fall below the SCAQMD significance thresholds. In addition, the Park and Sidewalk Extension would be consistent with the AQMP, which is intended to bring the Basin into attainment for all criteria pollutants. Therefore, cumulative impacts on air quality would be less than significant and no mitigation measures are required.

Biological Resources

With regard to cumulative biological impacts, the Park and Sidewalk Extension Sites are located in a highly urbanized area. The related projects would mostly occur on previously disturbed, urbanized land. The Park and Sidewalk Extension Sites do not contain sensitive biological resources or habitat, including wetlands, and is not part of a wildlife corridor, and therefore, could not contribute to a cumulative effect in these regards. With pre-construction nesting bird surveys, bat surveys and monitoring prior to and during construction during the breeding season in areas containing potential nesting sites and with implementation of specific restrictions to establish appropriate set-backs to curtail construction near any active bird or bat nest sites, as described in Mitigation Measure BIO-1, impacts would be less than significant. Related projects would also be required to implement mitigation for impacts to bats and nesting birds. Therefore, cumulative impacts to biological resources would be less than significant.

Cultural Resources

Impacts related to cultural resources are site-specific and as such, are assessed on a site-by-site basis. As discussed previously, Mitigation Measure CUL-1 would ensure the Park and Sidewalk Extension do not cause a substantial adverse change in the significance of an archaeological resource. With implementation of Mitigation Measure CUL-2, which requires following state laws in the event of a discovery, impacts to human remains would be less than significant.

It is anticipated that comparable implementation of similar mitigation measures, such as archaeological, and/or compliance with existing regulations would be incorporated into the approval of each related project. Further, the historic setting in the area around the Park and Sidewalk Extension Sites are already eroded by contemporary development. Based on the above, the Park and Sidewalk Extension would not contribute to cumulatively considerable cultural resources impacts.

Energy

Similar to the Park and Sidewalk Extension, related projects would consume energy during construction activities primarily from on- and off-road vehicle fuel consumption in the form of diesel, gasoline, and electricity from water conveyance for dust control. Operation of related projects, similar to the Project, would consume energy from vehicular traffic and energy use. The construction contractors of the related projects would comply with applicable CARB regulations governing the accelerated retrofitting, repowering, or replacement of heavy duty diesel on- and off-road equipment. Similar to the Project, related projects would use energy necessary to build the development but would not result in the wasteful, inefficient, and unnecessary use of energy. Related projects would be required to comply with the applicable provisions of Title 24 and the CALGreen Code in effect at the time of building permit issuance. Based on the above, the Park and Sidewalk Extension would not contribute to cumulative considerable energy impacts.

Geology and Soils

Geological and geotechnical impacts are defined by site-specific conditions for the Park and Sidewalk Extensions Sites and related projects and are, therefore, typically confined to contiguous properties or to a localized area in which concurrent construction projects in close proximity could be subject to the same fault rupture system or other geologic hazard, or exacerbate erosion impacts. The Park and Sidewalk Extension Sites are not underlain by an active earthquake fault and, thus, would not contribute to cumulative seismic rupture impacts. Although seismic shaking would occur on the Park and Sidewalk Extension Sites as well as related project sites, applicable regulatory requirements require consideration of seismic loads in structural design for all related projects. As such, cumulative impacts associated with ground shaking would be less than significant. According to Figures IX-12, Newport-Inglewood Fault and Figure IX-13, San Andreas Fault, of the County's General Plan, the potential for liquefaction within the North Tustin, including the Park and Sidewalk Extension Sites, are considered low (County of Orange, 2013). However, the Geotechnical Assessment concluded that liquefaction should not pose a significant hazard to the Park and Sidewalk Extension Sites. The probability of a seismically induced landslide affecting the Park and Sidewalk Extensions Sites are considered to be low, due to the lack of significant slopes on the Sites and surrounding areas. Further, no landslides or related features underlie or are adjacent to the Sites (GMU, 2020). As such, the Park and Sidewalk Extension would not cumulatively contribute to liquefaction or landslide impacts. While the loss of topsoil among the Park and Sidewalk Extension and related projects during construction could

result in cumulative erosion impacts, the Project and related projects would be required to implement applicable local, regional and State regulations for grading and excavations during construction, including SWPPP requirements. Because the Park and Sidewalk Extension would be required to comply with approved geotechnical recommendations, the Project's contribution to potential cumulative impacts from lateral spreading, subsidence, liquefaction, or collapse would also be less than significant. In addition, the Park and Sidewalk Extension Sites and related project sites are located in a highly urbanized area and would connect to existing wastewater infrastructure. Thus, the Park and Sidewalk Extension and related projects would not need to use septic tanks or alternative waste disposal systems and, as such, cumulative impacts relative to waste disposal capacity would be negligible. No paleontological resources were identified within the Park or Sidewalk Extension Site. With implementation of Mitigation Measure PALEO-1, which provides procedures to follow in the event of a discovery, impacts would be less than significant. It is anticipated that comparable paleontological construction monitoring and/or compliance with existing regulations would be incorporated into the approval of each related project. Because the Park and Sidewalk Extension would not contribute considerably to geology and soils impacts, the Project's cumulative geology and soil impacts would be less than significant and no mitigation measures are required.

Greenhouse Gas Emissions

Greenhouse gas emission impacts are cumulative. As such, the impact discussion included in Section 4.12, *Greenhouse Gas Emissions*, address the Project's potential to result in a cumulatively considerable GHG impact. As discussed therein, impacts would be less than significant and no mitigation measures are required.

Hazards and Hazardous Materials

Many of the related projects would use, handle, store, and/or transport hazardous materials or require demolition containing such materials. As with the Park and Sidewalk Extension, related projects would be required to use and store all potentially hazardous materials in accordance with the manufacturers' instructions and handle materials in accordance with Federal, State, and local health and safety standards and regulations. Compliance with existing standards and regulations would ensure that the related projects would not result in significant impacts to the public or the environment through the routine transport, storage, use, disposal, or handling of hazardous materials. Some of the related projects may be on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. However, each related project would be required to comply with existing Federal, State, and local regulations related to hazardous materials sites, including cleanup sites, and hazardous materials generators. Cumulative impacts would therefore be less than significant in this regard and no mitigation measures are required.

Some of the related projects may also include the use of hazardous materials and, as with the Park and Sidewalk Extension, be located within one-quarter mile of a school. However, related projects would be subject to environmental review to evaluate potential impacts from hazardous materials releases within one-quarter mile of a school. The Park and Sidewalk Extension would not have a considerable contribution related to the use or release of hazardous materials. With the implementation of existing regulations, cumulative impacts with respect to impacts on schools would be less than significant and no mitigation measures are required.

Hydrology and Water Quality

The related projects would potentially increase the volume of stormwater runoff and contribute to pollutant loading in stormwater runoff within the local vicinity of the Park and Sidewalk Extension Sites. However, as with the Park and Sidewalk Extension, the related projects are located within the highly urbanized areas, which are largely characterized by existing buildings and paved surfaces with limited landscaped areas. Accordingly, the potential to generate a notable amount of new impermeable surfaces is limited. Related projects would be required to capture and treat runoff flow during storm events similar to the Park and Sidewalk Extension. Further, the related projects would be subject to NPDES permit requirements for both construction and operation. Each project greater than one-acre in size would be required to develop a SWPPP and would be evaluated individually to determine appropriate BMPs and treatment measures to avoid or minimize impacts to water quality. In addition, OC Public Works reviews all construction projects on a case-by-case basis to ensure that sufficient local and regional drainage capacity is available. Thus, compliance with applicable regulatory requirements would avoid significant impacts on drainage/flooding conditions and the quality of water reaching the public drainage system. Cumulative impacts to hydrology and water quality would be less than significant and no mitigation measures are required.

Land Use and Planning

As with the Park and Sidewalk Extension, related projects would be located within highly urbanized areas. Overall, given the types of uses in the Project area, the need for additional recreational facilities in the Project vicinity, the need for sidewalk extensions and associated roadway improvements, and the infill character of the Project, the Project would not physically divide an established community. Similar to the Park and Sidewalk Extension, the related projects would provide roadway and infrastructure improvements or residential uses and would not physically divide an established community. Because it is anticipated that development of the related projects would be consistent with the objectives of the County's General Plan and other plans that support intensification and improvements and residential uses, cumulative land use impacts would be less than significant and no mitigation measures are required.

Mineral Resources

North Tustin is presently urbanized and covered with impervious surfaces. Valuable mineral resources are not known to exist within the North Tustin, the Project vicinity, or the Park or Sidewalk Extension Site. According to Figure VI-3, Orange County Mineral Resources, of the County's General Plan, the Park and Sidewalk Extension Sites and related project sites are not a mineral resource area (County of Orange, 2013). Because the Park and Sidewalk Extension would have no incremental contribution to the potential cumulative impact on mineral resources, the Project would have no cumulative impact on such resources.

Noise

The geographic context for the analysis of cumulative noise impacts depends on the impact being analyzed. Noise is by definition a localized phenomenon, and sound reduces significantly in magnitude as the distance from the source increases. As such, only projects expected to occur in the immediate area of the Park and Sidewalk Extension likely would contribute to cumulative noise impacts.

Because the timing of the construction activities for all related projects cannot be defined and are beyond the control of the County, quantitative analysis that assumes multiple, concurrent construction projects would be speculative. The cumulative noise levels would be intermittent, temporary and would cease at the end of the respective construction periods. It is not likely that maximum construction noise impacts from the related projects would occur simultaneously, as sound levels vary from day to day depending on the construction activity performed that day and its location on the development site. Due to distance attenuation and intervening structures, construction noise from one site would not result in a noticeable increase in noise at sensitive receptors near the Park and Sidewalk Extension Sites, which would preclude a cumulative noise impact. Furthermore, related projects would be required to comply with County noise standards and implement mitigation measures for identified significant impacts, as required under CEQA, similar to the Park and Sidewalk Extension. As such, cumulative impacts associated with construction noise would be less than significant and no mitigation measures are required.

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to the Park and Sidewalk Extension and other related projects in the Project vicinity. Therefore, cumulative traffic-generated noise impacts have been assessed in the analysis above based on the contribution of the Park and to the future cumulative base traffic volumes in the Project vicinity. Table 4.17-5 shows that Park Site-related traffic noise level increases would be 0.4 dBA or less, which is not perceptible to the human ear in an outdoor environment. As such, with respect to roadway noise, there is no potential for the Park to result in a cumulatively considerable contribution when considered together with the related project.

Most of the recreational amenities and features of Crawford Canyon Park would not generate any substantial noise. The proposed two nature play areas for children may generate relatively high noise levels compared to the other amenities. However, they are designed for small children (2 to 5 years old and 5 to 12 years old) in relative small centralized areas that would not generate high play noise. Ambient noise from traffic on Newport Avenue and Crawford Canyon Road would be comparable to and provide masking effect to the play area noise. Once the construction is complete, the Sidewalk Extension would not result in any noticeable noise changes. As the Park and Sidewalk Extension's composite stationary-source and operational impacts would be less than significant, composite stationary-source and operational noise impacts attributable to the proposed single residential dwelling unit related project would also be less than significant and no mitigation measures are required.

Vibration

Due to the rapid attenuation characteristics of ground-borne vibration and distance of the related projects to the Park and Sidewalk Extension Sites, there is no potential for the Project to result in a cumulatively considerable contribution, when considered together with the related projects, to result in cumulatively significant construction-related or operational impacts. No mitigation measures are required.

Population and Housing

The Project would not involve new housing or businesses. The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. The increase in area population and employment resulting from the proposed single residential dwelling unit related project would have a less than significant cumulative

impact as this negligible increase is anticipated to be within SCAG and County's growth forecasts. Related projects in combination with the Park and Sidewalk Extension would not result in the cumulative loss or reduction of housing. Therefore, cumulative impacts with respect to population and housing are considered to be less than significant and no mitigation measures are required.

Public Services

Fire Protection

The related projects would cumulatively generate, in conjunction with the Park and Sidewalk Extension, the need for additional fire protection and emergency medical services. Although there would be cumulative demand on fire protection services, cumulative impacts on fire protection and medical services would be reduced through regulatory compliance and site specific design and safety requirements, similar to the Park and Sidewalk Extension. All related projects would be subject to review by the OCFA for compliance with Fire Code and Building Code regulations related to emergency response, emergency access, fire flow, and fire safety. Further, project-by-project traffic mitigation, multiple fire station response, and other requirements imposed by the OCFA are expected to help support adequate response times. As such, the Park and Sidewalk Extension would not result in a cumulatively considerable contribution to cumulative impacts associated with the construction of new fire facilities. No mitigation measures are required.

Police Protection

The related projects would cumulatively generate, in conjunction with the Park and Sidewalk Extension, the need for additional police protection services. It is expected that the related projects would be subject to review by the OCSCD on a project-by-project basis to ensure that sufficient security measures are implemented to reduce potential impacts to police protection services. As such, the Park and Sidewalk Extension would not result in a cumulatively considerable contribution to cumulative impacts associated with the construction of new police facilities. No mitigation measures are required.

Schools

The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. The Project would not include housing or generate new residents, employees, or school-aged children. The proposed single residential dwelling unit related project would generate school-aged children. Pursuant to California Government Code Section 65995, the payment of developer fees under the provisions of SB 50 address the impacts of new development on school facilities serving that development. Compliance with the provisions of Section 65995 is deemed to provide full and complete mitigation of school facilities impacts. The related projects would be required to pay these fees as applicable. Therefore, the full payment of all applicable school fees would reduce potential cumulative impacts to schools to less than significant levels and no mitigation measures are required.

Parks

The Park and Sidewalk Extension would not result in a population increase that would necessitate additional parks or recreational facilities, and Project operation would not adversely affect the use

or condition of existing facilities. The Project would provide increased recreational opportunities for the community. The proposed single residential dwelling unit related project would generate negligible need for park services and facilities. As such, related projects are not anticipated to result in substantial physical deterioration or accelerated deterioration of recreational and parks facilities. Cumulative impacts to parks would be less than significant and no mitigation measures are required.

Other Public Facilities

The Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. As the Project would not include housing or generate new residents or employees, the Project would have no impact on other public facilities such as libraries. The proposed single residential dwelling unit related project would generate negligible use of library services or roads. The related project would pay applicable development fees. The full payment of all applicable development fees would reduce potential cumulative impacts to libraries and to less than significant levels and no mitigation measures are required.

Recreation

Less than significant impact and no mitigation measures are required. Refer to discussion under Park, above.

Transportation

Cumulative impacts on traffic associated with construction (e.g., an intermittent reduction in street and intersection operating capacity) are typically considered short-term adverse, but not significant impacts.

The Park and Sidewalk Extension would result in a less than significant traffic impact during construction with the implementation of a Construction Management Plan that would incorporate notification and safety procedures and controls. Each related project would be required to comply with County requirements regarding haul routes and would implement project characteristics such as traffic controls and safety procedures as part of a Construction Management Plan, to reduce potential traffic impacts during construction. No mitigation measures are required.

Post construction, the Park Site would be developed with a 2.5-acre neighborhood park consisting a variety of recreational amenities and features. The Sidewalk Extension Site would be developed with sidewalk extensions and associated improvements. As discussed under Response 4.21a in Table 4.12-1, Crawford Canyon Park is anticipated to generate approximately 85 daily trips on weekdays, 57 trips on Saturday, and 49 trips on Sundays. During the weekday peak hours of adjacent street traffic, the project is forecast to generate approximately 11 trips during the A.M. peak hour and 9 trips during the P.M. peak hour. On weekends, the Park is forecast to generate 11 peak hour trips on Saturday and 13 peak hour trips on Sunday. As such, Project operation would not generate substantial traffic in the Project vicinity. Therefore, operation of the Project would result in a less than significant impact and no mitigation measures are required. As seen on Table 4.21-2, both intersections operate at acceptable levels of service. At the Project driveway, there are minimal delays in making turns in and out of the Project driveway. Further, the Project is unlikely to significantly increase traffic delays at other intersections.

The Park and Sidewalk Extension Site are exempt from a VMT analysis based on the thresholds set by the County of Orange *Final Guidelines for Evaluating Vehicle Miles Traveled Under CEQA* (County of Orange, 2020) based on the size of the Project and the fact that the Crawford Canyon Park is a public facility. No impact would occur in this regard.

There are no existing hazardous design features such as sharp curves or dangerous intersections on-site or within the vicinity of the Park and Sidewalk Extension Sites. The Project would not alter existing street patterns in the vicinity. The Park and Sidewalk Extension Sites are located in a highly urbanized area of North Tustin. The areas immediately to the north, east, south, and west of the Sites comprise of existing single-family residences. The Project uses would be compatible with the surrounding uses and Project vicinity. A less than significant impact would occur in this regard and no mitigation measures are required.

Overall, the Park and Sidewalk Extension Site would not contribute to a significant cumulative impact with regard to these issues.

Tribal Cultural Resources

The AB 52 Native American notification letters and Mr. Salas' initial response letter are provided in the Native American Tribal Correspondence references materials to this IS/MND. To date, no other responses from the Native American community have been received as part of the AB 52 tribal consultation effort. As a result of the County's consultation efforts, no known tribal cultural resources have been identified within the Project Site or vicinity and therefore no impact to known tribal cultural resources would occur. As such, no impacts to tribal cultural resources from cumulative development would occur and thus, the Project would not contribute to a cumulatively tribal cultural resources impact.

Utilities and Service Systems

Water Supply

Development of the Park and Sidewalk Extension Sites in conjunction with the related projects would cumulatively increase negligible water demand on the existing water infrastructure system. However, each related project would be subject to review by the EOCWD to assure that the existing public utility facilities would be adequate to meet the domestic and fire water demands of each related project. Therefore, cumulative impacts on the water infrastructure system would be less than significant and no mitigation measures are required.

Wastewater

Development of the Park and Sidewalk Extension Sites in conjunction with the related projects would cumulative increase generation of wastewater. However, each related project would be subject to review by the OCSD to assure that existing facilities would be adequate to treat the demands of each related project. Therefore, cumulative impacts on the wastewater infrastructure system would be less than significant and no mitigation measures are required.

Solid Waste

Construction and operation of the Park and Sidewalk Extension would result in negligible generation of solid waste. Construction and operational waste is anticipated to be disposed of at the Frank R. Bowerman Landfill. Due to the negligible solid waste generated by the Park, Sidewalk Extension, and related projects, it is anticipated the Frank R. Bowerman Landfill could accommodate the Project. As such, impacts to the solid waste system from cumulative development would be less than significant and no mitigation measures are required and thus, the Project would not contribute to a cumulatively solid waste impact.

Wildfire

The Park and Sidewalk Extension Sites and related projects are not located within or near an area designated as a state responsibility area nor are the sites classified as a VHFHSZ. The Park and Sidewalk Extension Sites and related project sites are mapped as Non-VHFHSZ per the Cal Fire Hazard Severity Zone Maps prepared under the FRAP. Further, according to Figure IX-1, Fire Hazard Severity Zones, of the County's General Plan, the Park and Sidewalk Extension Sites and related project sites are not located in a fire hazard severity zone. As such, impacts to wildfire from cumulative development would be less than significant and no mitigation measures are required and thus, the Project would not contribute to a cumulatively wildfire impact.

Mitigation Measures:

Implementation of Mitigation Measures BIO-1, CUL-1 and CUL-2, and PALEO-1

Question 4.25c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

Response to Question 4.25c)

Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension: Less than Significant Impact with Mitigation Incorporated. Based on the analysis of the Project's impacts in Responses 4.5 through 4.24, there is no indication that the Project could result in substantial adverse effects on human beings. While there would be a variety of effects related to biological resources, cultural resources, and paleontological resources, these impacts would be less than significant with mitigation incorporated, as necessary. The analysis herein concludes that direct and indirect environmental effects will, at most, require mitigation to reduce potentially significant impacts to less than significant levels. Generally, environmental effects will result in less than significant impacts. Based on the analysis in this Draft IS/MND, the County finds that direct and indirect impacts to human beings will be less than significant with mitigation incorporated, as necessary.

Mitigation Measures:

Implementation of Mitigation Measures BIO-1, CUL-1 and CUL-2, and PALEO-1.

Chapter 5: Mitigation Monitoring Reporting Program

The following is a Mitigation Monitoring and Reporting Program (MMRP) for the County of Orange for the Crawford Canyon Park and Crawford Canyon Road Sidewalk Extension Project, which has been prepared pursuant to Section 15097 of the CEQA Guidelines and Section 21081.6 of the Public Resources Code. This MMRP lists all applicable mitigation measures from the IS/MND. The appropriate timing of implementation and responsible party are identified to ensure proper enforcement of the mitigation measures from the IS/MND to reduce Project impacts to less than significant levels. Mitigation measures are presented in the same order as they occur in the IS/MND.

The columns in the **Table 5-1, Mitigation Monitoring Reporting Program**, provide the following information:

- **Mitigation Measure(s):** The action(s) that will be taken to reduce the impact to less than significant.
- **Implementation Action:** The action(s) listed out, according to the identified mitigation measure, that would be implemented by the responsible agency.
- **Responsible Implementation Agency:** The agency or private entity responsible for ensuring implementation of the mitigation measure. For the Project, the County of Orange, as the CEQA Lead Agency, remains responsible for ensuring that implementation of the mitigation measures occur in accordance with the MMRP (CEQA Guidelines, Section 15097(a)).
- **Timing of Verification:** The general timing for implementing each mitigation measure.
- **Verification Date:** The date in which the mitigation measure has been completed.

The MMRP will kept on file at the following addresses:

OC Parks, Planning & Design Division
13042 Old Myford Road
Irvine, CA 92602

OC Public Works, Infrastructure Programs
601 N. Ross Street
Santa Ana, CA 92703

Table 5-1: Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Action	Responsible Implementation Agency/Party	Timing of Verification	Verification Date
Biological Resources				
<p>Mitigation Measure BIO-1: Proposed Project activities that may disturb native and non-native vegetation, or structures where birds or bats may potentially nest, shall occur outside of the avian breeding and maternity bat roosting seasons which extend from February 1 to September 1 (and may begin as early as January 1 for some raptors) in order to avoid potential impacts to nesting birds or their eggs or breeding bats.</p> <p>If construction activities cannot avoid the avian breeding and maternity bat roosting season, a qualified biologist shall conduct nesting bird and maternity bat roosting surveys not more than 3 days prior to the initiation of Project activities. If a protected native nesting bird or maternity bat roost is found, the County shall delay all Project activities within 100 feet of occupied nesting or roosting habitat (within 300 feet for suitable raptor nesting habitat) until the nest or roost is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting/maternal roosting. Flagging, stakes, or construction fencing shall be used to demarcate the inside boundary of the buffer of 100 feet (or 300 feet) between the Project activities and the nest/roost. A smaller buffer area around an active nest may be recommended by the qualified monitoring biologist based on tolerance behavior of the nesting bird. Project personnel, including all contractors working on site, shall be instructed on the sensitivity of the area. The qualified biologist shall provide the County with the results of the recommended protective measures described</p>	<p>If a protected native nesting bird or maternity bat roost is found during the survey, the County shall delay all Project activities within 100 feet of occupied nesting or roosting habitat (within 300 feet for suitable raptor nesting habitat) until the nest or roost is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting/maternal roosting.</p>	<p>County of Orange Qualified Biologist Project Contractor</p>	<p>Prior to and during grading and/or construction</p>	

Mitigation Measure	Implementation Action	Responsible Implementation Agency/Party	Timing of Verification	Verification Date
above to document compliance with applicable State and Federal laws pertaining to the protection of native birds and special-status bats.				
Cultural Resources				
<p>Mitigation Measure CUL-1: In the event that historic (e.g., bottles, foundations, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from within 50 feet of the find and a Qualified Archaeologist (defined as meeting the Secretary of the Interior's Professional Qualification Standards for archaeology) shall be notified. An appropriate buffer area shall be established by the Qualified Archaeologist around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by project construction activities shall be evaluated by the Qualified Archaeologist. The County shall consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond those that are scientifically important, are considered. If a resource is determined by the Qualified Archaeologist to constitute a "historical resource" pursuant to CEQA Guidelines Section 15064.5(a) or a "unique archaeological resource" pursuant to Public Resources Code Section 21083.2(g), the Qualified Archaeologist shall coordinate with the Applicant and the County to develop a formal treatment plan that would serve to reduce impacts to the resources. The treatment plan established for the resources</p>	<p>If historic archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from within 50 feet of the find and a Qualified Archaeologist shall be notified.</p>	<p>County of Orange Qualified Archaeologist Project Contractor</p>	<p>Prior to and during grading and/or construction</p>	

Mitigation Measure	Implementation Action	Responsible Implementation Agency/Party	Timing of Verification	Verification Date
<p>shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. The treatment plan shall include measures regarding the curation of the recovered resources that may include curation at an accredited public, non-profit institution with a research interest in the materials, such as the Natural History Museums of Los Angeles County, if such an institution agrees to accept the material. If no accredited institution accepts the materials, they may be donated to a local school or historical society in the area for educational purposes. The Qualified Archaeologist shall determine the need for archaeological construction monitoring in the vicinity of the find thereafter.</p> <p>The Qualified Archaeologist shall prepare a final report and appropriate California Department of Parks and Recreation Site Forms at the conclusion of treatment and/or the any follow-up archaeological construction monitoring. The report shall include a description of resources unearthed, if any, treatment of the resources, results of the artifact processing, analysis, and research, and evaluation of the resources with respect to the California Register of Historical Resources. The report and the Site Forms shall be submitted by the Applicant to the County, the South Central Coastal Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.</p>				

Mitigation Measure	Implementation Action	Responsible Implementation Agency/Party	Timing of Verification	Verification Date
<p>Mitigation Measure CUL-2: If human remains are encountered unexpectedly during implementation of the project, State Health and Safety Code Section 7050.5 requires that no further excavation or disturbance shall occur to the human remains and any nearby area (within 100 feet) reasonably suspected to overlie adjacent remains until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the land owner, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the land owner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Upon the discovery of the 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 mitigation measure, with the MLD regarding their</p>	<p>If human remains are encountered unexpectedly during implementation of the project, State Health and Safety Code Section 7050.5 requires that no further excavation or disturbance shall occur to the human remains and any nearby area reasonably suspected to overlie adjacent remains until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98.</p>	<p>County of Orange Qualified Archaeologist Project Contractor</p>	<p>Prior to and during grading and/or construction</p>	

Mitigation Measure	Implementation Action	Responsible Implementation Agency/Party	Timing of Verification	Verification Date
<p>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.</p> <p>If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the facility property in a location not subject to further and future subsurface disturbance.</p>				
Geology and Soils				
<p>Mitigation Measure PALEO-1: If a potential fossil is found, a Qualified Paleontologist (Paleontologist) that meets the professional criteria established by the Society of Vertebrate Paleontology (SVP, 2010) shall be notified. The Paleontologist shall have the authority to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil to facilitate evaluation of the discovery. An appropriate 50-foot buffer area shall be established around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. The Paleontologist shall assess the discovery and make recommendations as to the appropriate treatment. At the Paleontologist's discretion, and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock/sediment samples for initial processing and evaluation. If the</p>	<p>If a potential fossil is found, a Qualified Paleontologist (Paleontologist) that meets the professional criteria established by the Society of Vertebrate Paleontology (SVP, 2010) shall be notified.</p>	<p>County of Orange Qualified Archaeologist Project Contractor</p>	<p>Prior to and during grading and/or construction</p>	

Mitigation Measure	Implementation Action	Responsible Implementation Agency/Party	Timing of Verification	Verification Date
<p>fossil is determined to be significant, the Paleontologist shall implement a paleontological salvage program to remove the resource from its location, following the guidelines of the SVP (2010). Any fossils encountered and recovered shall be prepared to the point of identification and catalogued before they are submitted to their final repository. Any fossils collected shall be curated at a public, non-profit institution with a research interest in the material and with retrievable storage, such as the County of Orange's Paleontology and Archaeology (COPA) collections at the Dr. John D. Cooper Archaeological and Paleontological Center, or Natural History Museums of Los Angeles County, if such an institution agrees to accept the fossils. If no institution accepts the fossil collection, they shall be donated to a local school in the area for educational purposes. Accompanying notes, reports, maps, and photographs shall also be filed at the repository and/or school.</p>				
Tribal Cultural Resources				
<p>Standard Conditions TCR-1: Unanticipated Discovery of Archaeological Resources. If unanticipated archaeological resources or deposits are discovered during ground disturbing activities, OCPW will implement the following measures. All work will halt within a 50-foot radius of the discovery. OCPW will have a qualified professional archaeologist with knowledge of Native American resources to assess the significance of the find. If the resources are Native American in origin, the County shall coordinate with the Tribe regarding evaluation, treatment, curation, and preservation of these resources. The archaeologist will have the authority to modify the no-work radius as appropriate, using professional judgment in consultation with OCPW.</p>	<p>If unanticipated archaeological resources or deposits are discovered during ground disturbing activities.</p>	<p>OC Parks Department – Qualified Archaeologist</p>	<p>During construction</p>	

Mitigation Measure	Implementation Action	Responsible Implementation Agency/Party	Timing of Verification	Verification Date
Work will not continue within the no-work radius until the archaeologist conducts sufficient research and evidence and data collection to establish that the resource is either: (1) not cultural in origin; or (2) not potentially eligible for listing on the CRHR. If a potentially eligible resource is encountered, then the archaeologist and OCPW, as lead agency, in consultation with the Tribe, will arrange for either: (1) avoidance of the resource, if possible; or (2) test excavations to evaluate eligibility, and if eligible, an attempt to resolve adverse effects to determine appropriate mitigation. The assessment of eligibility will be formally documented in writing as verification that the provisions in CEQA for managing unanticipated discoveries and PRC Section 5024 have been met.				

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