Appendix C

Biological Resources Analysis Attachments

Appendix C-1

Compendium of Species Observed or Detected During February 2020 Biological Reconnaissance Survey

Plants

EUDICOTS

VASCULAR SPECIES

FABACEAE – LAGUME FAMILY

Prosopis glandulosa – honey mesquite

GERANIACEAE – GERANIUM FAMILY

California macrophylla – round-leaved filaree

MYRTACEAE – MYRTLE FAMILY

* *Eucalyptus camaldulensis* – river redgum eucalyptus
* *Eucalyptus globulus* – Tasmanian bluegum eucalyptus

GYMNOSPERMS AND GNETOPHYTES

VASCULAR SPECIES

CUPRESSACEAE – CYPRESS FAMILY

* *Cupressus sempervirens* – Italian cypress

MONOCOTS

VASCULAR SPECIES

ARECACEAE – PALM FAMILY

Washingtonia filifera – California fan palm

POACEAE—GRASS FAMILY

* *Bromus rubens* - red brome
* *Cynodon dactylon* - Bermudagrass

* signifies introduced (non-native) species

Wildlife

BIRD

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Spinus psaltria—lesser goldfinch

TERNS AND GULLS

LARIDAE – GULLS, TERNS, AND SKIMMERS

Larus heermanni – Heermann's gull

WRENS

TROGLODYTIDAE - WRENS

Troglodytes aedon – house wren

Appendix C-2

Special-Status Species whose Geographic Ranges Fall within the Vicinity of the General Biological Study Area

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Glendora (3411727) OR Mt. Baldy (3411726) OR Cucamonga Peak (3411725) OR San Dimas (3411717) OR Ontario (3411716) OR Guasti (3411715) OR Yorba Linda (3311787) OR Prado Dam (3311786) OR Corona North (3311785))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Abronia villosa var. aurita chaparral sand-verbena	PDNYC010P1	None	None	G5T2?	S2	1B.1
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
Aimophila ruficeps canescens southern California rufous-crowned sparrow	ABPBX91091	None	None	G5T3	S3	WL
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Anaxyrus californicus arroyo toad	AAABB01230	Endangered	None	G2G3	S2S3	SSC
Anniella stebbinsi Southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Arctostaphylos glandulosa ssp. gabrielensis San Gabriel manzanita	PDERI042P0	None	None	G5T3	S3	1B.2
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Artemisiospiza belli belli Bell's sage sparrow	ABPBX97021	None	None	G5T2T3	S3	WL
Asio otus long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
Aspidoscelis hyperythra orange-throated whiptail	ARACJ02060	None	None	G5	S2S3	WL
Aspidoscelis tigris stejnegeri coastal whiptail	ARACJ02143	None	None	G5T5	S3	SSC
Astragalus brauntonii Braunton's milk-vetch	PDFAB0F1G0	Endangered	None	G2	S2	1B.1
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atractelmis wawona Wawona riffle beetle	IICOL58010	None	None	G3	S1S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Atriplex coulteri Coulter's saltbush	PDCHE040E0	None	None	G3	S1S2	1B.2
Batrachoseps gabrieli San Gabriel slender salamander	AAAAD02110	None	None	G2G3	S2S3	
Berberis nevinii Nevin's barberry	PDBER060A0	Endangered	Endangered	G1	S1	1B.1
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Brodiaea filifolia thread-leaved brodiaea	PMLIL0C050	Threatened	Endangered	G2	S2	1B.1
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
California Walnut Woodland California Walnut Woodland	CTT71210CA	None	None	G2	S2.1	
Callophrys mossii hidakupa San Gabriel Mountains elfin butterfly	IILEPE2206	None	None	G4T1T2	S1S2	
Calochortus clavatus var. gracilis slender mariposa-lily	PMLIL0D096	None	None	G4T2T3	S2S3	1B.2
Calochortus plummerae Plummer's mariposa-lily	PMLIL0D150	None	None	G4	S4	4.2
Calochortus weedii var. intermedius intermediate mariposa-lily	PMLIL0D1J1	None	None	G3G4T2	S2	1B.2
Calystegia felix lucky morning-glory	PDCON040P0	None	None	G1Q	S1	1B.1
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	ABPBG02095	None	None	G5T3Q	S3	SSC
Canyon Live Oak Ravine Forest Canyon Live Oak Ravine Forest	CTT61350CA	None	None	G3	S3.3	
Castilleja gleasoni Mt. Gleason paintbrush	PDSCR0D140	None	Rare	G2	S2	1B.2
Catostomus santaanae Santa Ana sucker	AFCJC02190	Threatened	None	G1	S1	
Centromadia pungens ssp. laevis smooth tarplant	PDAST4R0R4	None	None	G3G4T2	S2	1B.1
Chaetodipus fallax fallax northwestern San Diego pocket mouse	AMAFD05031	None	None	G5T3T4	S3S4	SSC
Chorizanthe parryi var. parryi Parry's spineflower	PDPGN040J2	None	None	G3T2	S2	1B.1
Cladium californicum California saw-grass	PMCYP04010	None	None	G4	S2	2B.2
Claytonia peirsonii ssp. peirsonii Peirson's spring beauty	PDPOR03121	None	None	G2G3T2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Coastal and Valley Freshwater Marsh Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Coleonyx variegatus abbotti San Diego banded gecko	ARACD01031	None	None	G5T3T4	S1S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Crotalus ruber red-diamond rattlesnake	ARADE02090	None	None	G4	S3	SSC
Cypseloides niger black swift	ABNUA01010	None	None	G4	S2	SSC
Diplectrona californica California diplectronan caddisfly	IITRI23010	None	None	G1G2	S1S2	
Dipodomys merriami parvus San Bernardino kangaroo rat	AMAFD03143	Endangered	Candidate Endangered	G5T1	S1	SSC
Dipodomys stephensi Stephens' kangaroo rat	AMAFD03100	Endangered	Threatened	G2	S2	
Dodecahema leptoceras slender-horned spineflower	PDPGN0V010	Endangered	Endangered	G1	S1	1B.1
Dudleya densiflora San Gabriel Mountains dudleya	PDCRA040B0	None	None	G2	S2	1B.1
Dudleya multicaulis many-stemmed dudleya	PDCRA040H0	None	None	G2	S2	1B.2
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Empidonax traillii extimus southwestern willow flycatcher	ABPAE33043	Endangered	Endangered	G5T2	S1	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Ensatina eschscholtzii klauberi large-blotched salamander	AAAAD04013	None	None	G5T2?	S3	WL
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Eriastrum densifolium ssp. sanctorum Santa Ana River woollystar	PDPLM03035	Endangered	Endangered	G4T1	S1	1B.1
Eriogonum microthecum var. johnstonii Johnston's buckwheat	PDPGN083W5	None	None	G5T2	S2	1B.3
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Fimbristylis thermalis hot springs fimbristylis	PMCYP0B0N0	None	None	G4	S1S2	2B.2
Gila orcuttii arroyo chub	AFCJB13120	None	None	G2	S2	SSC
Glyptostoma gabrielense San Gabriel chestnut	IMGASB1010	None	None	G2	S2	
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
Horkelia cuneata var. puberula mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
Icteria virens yellow-breasted chat	ABPBX24010	None	None	G5	S3	SSC
Imperata brevifolia California satintail	PMPOA3D020	None	None	G4	S3	2B.1
Lasiurus cinereus hoary bat	AMACC05030	None	None	G5	S4	
Lasiurus xanthinus western yellow bat	AMACC05070	None	None	G5	S3	SSC
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Lepidium virginicum var. robinsonii Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3
Lepus californicus bennettii San Diego black-tailed jackrabbit	AMAEB03051	None	None	G5T3T4	S3S4	SSC
Lilium parryi lemon lily	PMLIL1A0J0	None	None	G3	S3	1B.2
Linanthus concinnus San Gabriel linanthus	PDPLM090D0	None	None	G2	S2	1B.2
Monardella australis ssp. jokerstii Jokerst's monardella	PDLAM18112	None	None	G4T1?	S1?	1B.1
Monardella macrantha ssp. hallii Hall's monardella	PDLAM180E1	None	None	G5T3	S3	1B.3
Muhlenbergia californica California muhly	PMPOA480A0	None	None	G4	S4	4.3
Muhlenbergia utilis aparejo grass	PMPOA481X0	None	None	G4	S2S3	2B.2
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Navarretia prostrata prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.2
Neolarra alba white cuckoo bee	IIHYM81010	None	None	GH	SH	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Neotoma lepida intermedia San Diego desert woodrat	AMAFF08041	None	None	G5T3T4	S3S4	SSC
Nyctinomops femorosaccus pocketed free-tailed bat	AMACD04010	None	None	G4	S3	SSC
Nyctinomops macrotis big free-tailed bat	AMACD04020	None	None	G5	S3	SSC
Oncorhynchus mykiss irideus pop. 10 steelhead - southern California DPS	AFCHA0209J	Endangered	None	G5T1Q	S1	
Oreonana vestita woolly mountain-parsley	PDAPI1G030	None	None	G3	S3	1B.3
Orobanche valida ssp. valida Rock Creek broomrape	PDORO040G2	None	None	G4T2	S2	1B.2
Ovis canadensis nelsoni desert bighorn sheep	AMALE04013	None	None	G4T4	S3	FP
Perognathus longimembris brevinasus Los Angeles pocket mouse	AMAFD01041	None	None	G5T1T2	S1S2	SSC
Phacelia stellaris Brand's star phacelia	PDHYD0C510	None	None	G1	S1	1B.1
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Polioptila californica californica coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T2Q	S2	SSC
Pseudognaphalium leucocephalum white rabbit-tobacco	PDAST440C0	None	None	G4	S2	2B.2
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
Rana muscosa southern mountain yellow-legged frog	AAABH01330	Endangered	Endangered	G1	S1	WL
Rhaphiomidas terminatus abdominalis Delhi Sands flower-loving fly	IIDIP05021	Endangered	None	G1T1	S1	
Rhinichthys osculus ssp. 3 Santa Ana speckled dace	AFCJB3705K	None	None	G5T1	S1	SSC
Riversidian Alluvial Fan Sage Scrub Riversidian Alluvial Fan Sage Scrub	CTT32720CA	None	None	G1	S1.1	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Salvadora hexalepis virgultea coast patch-nosed snake	ARADB30033	None	None	G5T4	S2S3	SSC
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Setophaga petechia yellow warbler	ABPBX03010	None	None	G5	S3S4	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Sidalcea neomexicana salt spring checkerbloom	PDMAL110J0	None	None	G4	S2	2B.2
Southern California Arroyo Chub/Santa Ana Sucker Stream Southern California Arroyo Chub/Santa Ana Sucker Stream	CARE2330CA	None	None	GNR	SNR	
Southern Coast Live Oak Riparian Forest Southern Coast Live Oak Riparian Forest	CTT61310CA	None	None	G4	S4	
Southern Cottonwood Willow Riparian Forest Southern Cottonwood Willow Riparian Forest	CTT61330CA	None	None	G3	S3.2	
Southern Sycamore Alder Riparian Woodland Southern Sycamore Alder Riparian Woodland	CTT62400CA	None	None	G4	S4	
Southern Willow Scrub Southern Willow Scrub	CTT63320CA	None	None	G3	S2.1	
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC
Streptanthus bernardinus Laguna Mountains jewelflower	PDBRA2G060	None	None	G3G4	S3S4	4.3
Symphyotrichum defoliatum San Bernardino aster	PDASTE80C0	None	None	G2	S2	1B.2
Symphyotrichum greatae Greata's aster	PDASTE80U0	None	None	G2	S2	1B.3
Taricha torosa Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis hammondii two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
Thelypteris puberula var. sonorensis Sonoran maiden fern	PPTHE05192	None	None	G5T3	S2	2B.2
Thysanocarpus rigidus rigid fringepod	PDBRA2Q070	None	None	G1G2	S1	1B.2
Viola pinetorum ssp. grisea grey-leaved violet	PDVIO04431	None	None	G4G5T3	S3	1B.2
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
Walnut Forest Walnut Forest	CTT81600CA	None	None	G1	S1.1	

Record Count: 120

Inventory of Rare and Endangered Plants

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

71 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads **3411727, 3411726, 3411725, 3411717, 3411716, 3411715, 3311787 3311786** and **3311785**;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Abronia villosa var. aurita	chaparral sand-verbena	Nyctaginaceae	annual herb	(Jan)Mar-Sep	1B.1	S2	G5T2?
Acanthoscyphus parishii var. parishii	Parish's oxytheca	Polygonaceae	annual herb	Jun-Sep	4.2	S3S4	G4? T3T4
Amaranthus watsonii	Watson's amaranth	Amaranthaceae	annual herb	Apr-Sep	4.3	S3	G5?
Androsace elongata ssp. acuta	California androsace	Primulaceae	annual herb	Mar-Jun	4.2	S3S4	G5? T3T4
Arctostaphylos glandulosa ssp. gabrielensis	San Gabriel manzanita	Ericaceae	perennial evergreen shrub	Mar	1B.2	S3	G5T3
Asplenium vespertinum	western spleenwort	Aspleniaceae	perennial rhizomatous herb	Feb-Jun	4.2	S4	G4
Astragalus bicristatus	crested milk-vetch	Fabaceae	perennial herb	May-Aug	4.3	S3	G3
Astragalus brauntonii	Braunton's milk-vetch	Fabaceae	perennial herb	Jan-Aug	1B.1	S2	G2
Atriplex coulteri	Coulter's saltbush	Chenopodiaceae	perennial herb	Mar-Oct	1B.2	S1S2	G3
Atriplex serenana var. davidsonii	Davidson's saltscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S1	G5T1
Berberis nevinii	Nevin's barberry	Berberidaceae	perennial evergreen	(Feb)Mar-Jun	1B.1	S1	G1

			shrub				
Brodiaea filifolia	thread-leaved brodiaea	Themidaceae	perennial bulbiferous herb	Mar-Jun	1B.1	S2	G2
Calochortus catalinae	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	(Feb)Mar-Jun	4.2	S3S4	G3G4
Calochortus clavatus var. gracilis	slender mariposa lily	Liliaceae	perennial bulbiferous herb	Mar-Jun(Nov)	1B.2	S2S3	G4T2T3
Calochortus plummerae	Plummer's mariposa lily	Liliaceae	perennial bulbiferous herb	May-Jul	4.2	S4	G4
Calochortus weedii var. intermedius	intermediate mariposa lily	Liliaceae	perennial bulbiferous herb	May-Jul	1B.2	S2	G3G4T2
Calystegia felix	lucky morning-glory	Convolvulaceae	annual rhizomatous herb	Mar-Sep	1B.1	S1	G1Q
Camissoniopsis lewisii	Lewis' evening-primrose	Onagraceae	annual herb	Mar-May(Jun)	3	S4	G4
Castilleja gleasoni	Mt. Gleason paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	May-Jun(Sep)	1B.2	S2	G2
Centromadia parryi ssp. australis	southern tarplant	Asteraceae	annual herb	May-Nov	1B.1	S2	G3T2
Centromadia pungens ssp. laevis	smooth tarplant	Asteraceae	annual herb	Apr-Sep	1B.1	S2	G3G4T2
Chorizanthe leptotheca	Peninsular spineflower	Polygonaceae	annual herb	May-Aug	4.2	S3	G3
Chorizanthe parryi var. parryi	Parry's spineflower	Polygonaceae	annual herb	Apr-Jun	1B.1	S2	G3T2
Cladium californicum	California sawgrass	Cyperaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S2	G4
Claytonia lanceolata var. peirsonii	Peirson's spring beauty	Montiaceae	perennial herb	(Mar)May-Jun	3.1	S1	G5T1Q
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	4.2	S4	G4
Deinandra paniculata	paniculate tarplant	Asteraceae	annual herb	(Mar)Apr-Nov(Dec)	4.2	S4	G4
Dodecahema leptoceras	slender-horned spineflower	Polygonaceae	annual herb	Apr-Jun	1B.1	S1	G1
Dudleya densiflora	San Gabriel	Crassulaceae	perennial herb	Mar-Jun	1B.1	S2	G2

	Mountains dudleya						
Dudleya multicaulis	many-stemmed dudleya	Crassulaceae	perennial herb	Apr-Jul	1B.2	S2	G2
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Polemoniaceae	perennial herb	Apr-Sep	1B.1	S1	G4T1
Eriogonum microthecum var. johnstonii	Johnston's buckwheat	Polygonaceae	perennial deciduous shrub	Jul-Sep	1B.3	S2	G5T2
Eriogonum umbellatum var. minus	alpine sulfur-flowered buckwheat	Polygonaceae	perennial herb	Jun-Sep	4.3	S4	G5T4
Fimbristylis thermalis	hot springs fimbristylis	Cyperaceae	perennial rhizomatous herb	Jul-Sep	2B.2	S1S2	G4
Galium angustifolium ssp. gabrielense	San Antonio Canyon bedstraw	Rubiaceae	perennial herb	Apr-Aug	4.3	S3	G5T3
Galium johnstonii	Johnston's bedstraw	Rubiaceae	perennial herb	Jun-Jul	4.3	S4	G4
Heuchera caespitosa	urn-flowered alumroot	Saxifragaceae	perennial rhizomatous herb	May-Aug	4.3	S3	G3
Horkelia cuneata var. puberula	mesa horkelia	Rosaceae	perennial herb	Feb-Jul(Sep)	1B.1	S1	G4T1
Imperata brevifolia	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	2B.1	S3	G4
Juglans californica	Southern California black walnut	Juglandaceae	perennial deciduous tree	Mar-Aug	4.2	S4	G4
Juncus duranii	Duran's rush	Juncaceae	perennial rhizomatous herb	Jul-Aug	4.3	S3	G3
Lepechinia fragrans	fragrant pitcher sage	Lamiaceae	perennial shrub	Mar-Oct	4.2	S3	G3
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	Brassicaceae	annual herb	Jan-Jul	4.3	S3	G5T3
Lilium humboldtii ssp. ocellatum	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	4.2	S4?	G4T4?
Lilium parryi	lemon lily	Liliaceae	perennial bulbiferous herb	Jul-Aug	1B.2	S3	G3
	San Gabriel	Polemoniaceae	annual herb	Apr-Jul	1B.2	S2	G2

Linanthus concinnus	linanthus						
Monardella australis ssp. jokerstii	Jokerst's monardella	Lamiaceae	perennial rhizomatous herb	Jul-Sep	1B.1	S1	G4T1
Monardella macrantha ssp. hallii	Hall's monardella	Lamiaceae	perennial rhizomatous herb	Jun-Oct	1B.3	S3	G5T3
Monardella saxicola	rock monardella	Lamiaceae	perennial rhizomatous herb	Jun-Sep	4.2	S3	G3
Muhlenbergia californica	California muhly	Poaceae	perennial rhizomatous herb	Jun-Sep	4.3	S4	G4
Navarretia prostrata	prostrate vernal pool navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G2
Oreonana vestita	woolly mountain-parsley	Apiaceae	perennial herb	Mar-Sep	1B.3	S3	G3
Orobanche valida ssp. valida	Rock Creek broomrape	Orobanchaceae	perennial herb (parasitic)	May-Sep	1B.2	S2	G4T2
Phacelia hubbyi	Hubby's phacelia	Hydrophyllaceae	annual herb	Apr-Jul	4.2	S4	G4
Phacelia mohavensis	Mojave phacelia	Hydrophyllaceae	annual herb	Apr-Aug	4.3	S4	G4Q
Phacelia stellaris	Brand's star phacelia	Hydrophyllaceae	annual herb	Mar-Jun	1B.1	S1	G1
Pseudognaphalium leucocephalum	white rabbit-tobacco	Asteraceae	perennial herb	(Jul)Aug-Nov(Dec)	2B.2	S2	G4
Quercus durata var. gabrielensis	San Gabriel oak	Fagaceae	perennial evergreen shrub	Apr-May	4.2	S3	G4T3
Quercus engelmannii	Engelmann oak	Fagaceae	perennial deciduous tree	Mar-Jun	4.2	S3	G3
Romneya coulteri	Coulter's matilija poppy	Papaveraceae	perennial rhizomatous herb	Mar-Jul(Aug)	4.2	S4	G4
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
Senecio astephanus	San Gabriel ragwort	Asteraceae	perennial herb	May-Jul	4.3	S3	G3

Sidalcea neomexicana	salt spring checkerbloom	Malvaceae	perennial herb	Mar-Jun	2B.2	S2	G4
Sidotheca caryophylloides	chickweed oxytheca	Polygonaceae	annual herb	Jul-Sep(Oct)	4.3	S4	G4
Streptanthus bernardinus	Laguna Mountains jewelflower	Brassicaceae	perennial herb	May-Aug	4.3	S3S4	G3G4
Symphyotrichum defoliatum	San Bernardino aster	Asteraceae	perennial rhizomatous herb	Jul-Nov(Dec)	1B.2	S2	G2
Symphyotrichum greatae	Greata's aster	Asteraceae	perennial rhizomatous herb	Jun-Oct	1B.3	S2	G2
Thelypteris puberula var. sonorensis	Sonoran maiden fern	Thelypteridaceae	perennial rhizomatous herb	Jan-Sep	2B.2	S2	G5T3
Thysanocarpus rigidus	rigid fringepod	Brassicaceae	annual herb	Feb-May	1B.2	S1	G1G2
Viola pinetorum ssp. grisea	grey-leaved violet	Violaceae	perennial herb	Apr-Jul	1B.2	S3	G4G5T3

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 07 October 2020].

Appendix C-3

Potential for Special-Status Plants and Wildlife to Occur within the Biological Study Area

Special-Status Plant Species

Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
Abronia villosa var. aurita	chaparral sand-verbena	None/None/1B.1	Chaparral, Coastal scrub, Desert dunes; sandy/annual herb/(Jan)Mar–Sep/245–5,245	Not expected to occur. Suitable habitat is not present to support this species.
Acanthoscyphus parishii var. parishii	Parish's oxytheca	None/None/4.2	Chaparral, Lower montane coniferous forest; sandy or gravelly/annual herb/June–Sep/4,000–8,530	Not expected to occur. Suitable habitat is not present to support this species.
Amaranthus watsonii	Watson's amaranth	None/None/4.3	Mojavean desert scrub, Sonoran desert scrub/annual herb/Apr–Sep/65–5,575	Not expected to occur. Suitable habitat is not present to support this species.
Androsace elongata ssp. acuta	California androsace	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland/annual herb/Mar–June/490–4,280	Not expected to occur. Suitable habitat is not present to support this species.
Arctostaphylos glandulosa ssp. gabrielensis	San Gabriel manzanita	None/None/1B.2	Chaparral (rocky)/perennial evergreen shrub/Mar/1,950–4,920	Not expected to occur. Suitable habitat is not present to support this species.
Asplenium vespertinum	western spleenwort	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub; rocky/perennial rhizomatous herb/Feb–June/590–3,280	Not expected to occur. Suitable habitat is not present to support this species.
Astragalus bicristatus	crested milk-vetch	None/None/4.3	Lower montane coniferous forest, Upper montane coniferous forest; sandy or rocky, mostly carbonate/perennial herb/May–Aug/5,575–9,005	Not expected to occur. Suitable habitat is not present to support this species.
Astragalus brauntonii	Braunton's milk-vetch	FE/None/1B.1	Chaparral, Coastal scrub, Valley and foothill grassland; recent burns or disturbed areas, usually sandstone with carbonate layers/perennial herb/Jan–Aug/10–2,095	Not expected to occur. Suitable habitat is not present to support this species.
Atriplex coulteri	Coulter's saltbush	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/5–1,505	Not expected to occur. Suitable habitat is not present to support this species.
Atriplex serenana var. davidsonii	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, Coastal scrub; alkaline/annual herb/Apr–Oct/30–655	Not expected to occur. Suitable habitat is not present to support this species.
Berberis nevinii	Nevin's barberry	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; sandy or gravelly/perennial evergreen shrub/(Feb)Mar–June/225–2,705	Not expected to occur. Suitable habitat is not present to support this species.

Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
Brodiaea filifolia	thread-leaved brodiaea	FT/SE/1B.1	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; often clay/perennial bulbiferous herb/Mar–June/80–3,670	Not expected to occur. Suitable habitat is not present to support this species.
Calochortus catalinae	Catalina mariposa lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/(Feb)Mar–June/45–2,295	Not expected to occur. Suitable habitat is not present to support this species.
Calochortus clavatus var. gracilis	slender mariposa lily	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/Mar–June(Nov)/1,045–3,280	Not expected to occur. Suitable habitat is not present to support this species.
Calochortus plummerae	Plummer's mariposa lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; granitic, rocky/perennial bulbiferous herb/May–July/325–5,575	Not expected to occur. Suitable habitat is not present to support this species.
Calochortus weedii var. intermedius	intermediate mariposa lily	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland; rocky, calcareous/perennial bulbiferous herb/May–July/340–2,805	Not expected to occur. Suitable habitat is not present to support this species.
Calystegia felix	lucky morning-glory	None/None/1B.1	Meadows and seeps (sometimes alkaline), Riparian scrub (alluvial); Historically associated with wetland and marshy places, but possibly in drier situations as well. Possibly silty loam and alkaline/annual rhizomatous herb/Mar–Sep/95–705	Not expected to occur. Suitable habitat is not present to support this species.
Camissoniopsis lewisii	Lewis' evening-primrose	None/None/3	Coastal bluff scrub, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; sandy or clay/annual herb/Mar–May(June)/0–985	Not expected to occur. Suitable habitat is not present to support this species.
Castilleja gleasoni	Mt. Gleason paintbrush	None/SR/1B.2	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; granitic/perennial herb (hemiparasitic)/May–June(Sep)/2,180–7,115	Not expected to occur. Suitable habitat is not present to support this species.
Centromadia parryi ssp. australis	southern tarplant	None/None/1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/0–1,570	Not expected to occur. Suitable habitat is not present to support this species.
Centromadia pungens ssp. laevis	smooth tarplant	None/None/1B.1	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2,095	Not expected to occur. Suitable habitat is not present to support this species.

Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
Chorizanthe leptotheca	Peninsular spineflower	None/None/4.2	Chaparral, Coastal scrub, Lower montane coniferous forest; alluvial fan, granitic/annual herb/May–Aug/980–6,230	Not expected to occur. Suitable habitat is not present to support this species.
Chorizanthe parryi var. parryi	Parry's spineflower	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; sandy or rocky, openings/annual herb/Apr–June/900–4,000	Not expected to occur. Suitable habitat is not present to support this species.
Cladium californicum	California sawgrass	None/None/2B.2	Meadows and seeps, Marshes and swamps Alkaline or Freshwater/perennial rhizomatous herb/June–Sep/195–5,245	Not expected to occur. Suitable habitat is not present to support this species.
Convolvulus simulans	small-flowered morning-glory	None/None/4.2	Chaparral (openings), Coastal scrub, Valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/95–2,425	Not expected to occur. Suitable habitat is not present to support this species.
Deinandra paniculata	paniculate tarplant	None/None/4.2	Coastal scrub, Valley and foothill grassland, Vernal pools; usually vernally mesic, sometimes sandy/annual herb/(Mar)Apr–Nov(Dec)/80–3,080	Not expected to occur. Suitable habitat is not present to support this species.
Dodecahema leptoceras	slender-horned spineflower	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub (alluvial fan); sandy/annual herb/Apr–June/655–2,490	Not expected to occur. Suitable habitat is not present to support this species.
Dudleya densiflora	San Gabriel Mountains dudleya	None/None/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland; granitic, cliffs and canyon walls/perennial herb/Mar–June/800–2,000	Not expected to occur. Suitable habitat is not present to support this species.
Dudleya multicaulis	many-stemmed dudleya	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland; often clay/perennial herb/Apr–July/45–2,590	Not expected to occur. Suitable habitat is not present to support this species.
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	FE/SE/1B.1	Chaparral, Coastal scrub (alluvial fan); sandy or gravelly/perennial herb/Apr–Sep/295–2,000	Not expected to occur. Suitable habitat is not present to support this species.
Eriogonum microthecum var. johnstonii	Johnston's buckwheat	None/None/1B.3	Subalpine coniferous forest, Upper montane coniferous forest; rocky/perennial deciduous shrub/July–Sep/6,000–9,595	Not expected to occur. Suitable habitat is not present to support this species.
Eriogonum umbellatum var. minus	alpine sulfur-flowered buckwheat	None/None/4.3	Subalpine coniferous forest, Upper montane coniferous forest; gravelly/perennial herb/June–Sep/5,905–10,065	Not expected to occur. Suitable habitat is not present to support this species.
Fimbristylis thermalis	hot springs fimbristylis	None/None/2B.2	Meadows and seeps (alkaline, near hot springs)/perennial rhizomatous herb/July–Sep/360–4,395	Not expected to occur. Suitable habitat is not present to support this species.

Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
Galium angustifolium ssp. gabrielense	San Antonio Canyon bedstraw	None/None/4.3	Chaparral, Lower montane coniferous forest; granitic, sandy or rocky/perennial herb/Apr–Aug/3,935–8,690	Not expected to occur. Suitable habitat is not present to support this species.
Galium johnstonii	Johnston's bedstraw	None/None/4.3	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Riparian woodland/perennial herb/June–July/4,000–7,545	Not expected to occur. Suitable habitat is not present to support this species.
Heuchera caespitosa	urn-flowered alumroot	None/None/4.3	Cismontane woodland, Lower montane coniferous forest, Riparian forest (montane), Upper montane coniferous forest; rocky/perennial rhizomatous herb/May–Aug/3,785–8,690	Not expected to occur. Suitable habitat is not present to support this species.
Horkelia cuneata var. puberula	mesa horkelia	None/None/1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb–July(Sep)/225–2,655	Not expected to occur. Suitable habitat is not present to support this species.
Imperata brevifolia	California satintail	None/None/2B.1	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub; mesic/perennial rhizomatous herb/Sep–May/0–3,985	Not expected to occur. Suitable habitat is not present to support this species.
Juglans californica	Southern California black walnut	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; alluvial/perennial deciduous tree/Mar–Aug/160–2,950	Not expected to occur. Suitable habitat is not present to support this species.
Juncus duranii	Duran's rush	None/None/4.3	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; mesic/perennial rhizomatous herb/July–Aug/5,800–9,195	Not expected to occur. Suitable habitat is not present to support this species.
Lepechinia fragrans	fragrant pitcher sage	None/None/4.2	Chaparral/perennial shrub/Mar–Oct/65–4,295	Not expected to occur. Suitable habitat is not present to support this species.
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None/None/4.3	Chaparral, Coastal scrub/annual herb/Jan–July/0–2,900	Not expected to occur. Suitable habitat is not present to support this species.
Lilium humboldtii ssp. ocellatum	ocellated Humboldt lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland; openings/perennial bulbiferous herb/Mar–July(Aug)/95–5,905	Not expected to occur. Suitable habitat is not present to support this species.
Lilium parryi	lemon lily	None/None/1B.2	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest; mesic/perennial bulbiferous herb/July–Aug/4,000–9,005	Not expected to occur. Suitable habitat is not present to support this species.
Linanthus concinnus	San Gabriel linanthus	None/None/1B.2	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; rocky, openings/annual herb/Apr–July/4,985–9,185	Not expected to occur. Suitable habitat is not present to support this species.

Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
Monardella australis ssp. jokerstii	Jokerst's monardella	None/None/1B.1	Chaparral, Lower montane coniferous forest; Steep scree or talus slopes between breccia, secondary alluvial benches along drainages and washes./perennial rhizomatous herb/July–Sep/4,425–5,740	Not expected to occur. Suitable habitat is not present to support this species.
Monardella macrantha ssp. hallii	Hall's monardella	None/None/1B.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/perennial rhizomatous herb/June–Oct/2,395–7,200	Not expected to occur. Suitable habitat is not present to support this species.
Monardella saxicola	rock monardella	None/None/4.2	Closed-cone coniferous forest, Chaparral, Lower montane coniferous forest; rocky, usually serpentinite/perennial rhizomatous herb/June–Sep/1,640–5,905	Not expected to occur. Suitable habitat is not present to support this species.
Muhlenbergia californica	California muhly	None/None/4.3	Chaparral, Coastal scrub, Lower montane coniferous forest, Meadows and seeps; mesic, seeps and streambanks/perennial rhizomatous herb/June–Sep/325–6,560	Not expected to occur. Suitable habitat is not present to support this species.
Muhlenbergia utilis	aparejo grass	None/None/2B.2	Meadows and seeps, marshes and swamps, chaparral, coastal scrub, cismontane woodland; sometimes alkaline, sometimes serpentinite/perennial rhizomatous herb/Mar–Oct/82–7,625	Not expected to occur. Suitable habitat is not present to support this species.
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.2	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools; Mesic/annual herb/Apr–July/5–3,965	Not expected to occur. Suitable habitat is not present to support this species.
Oreonana vestita	woolly mountain-parsley	None/None/1B.3	Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; gravel or talus/perennial herb/Mar–Sep/5,295–11,480	Not expected to occur. Suitable habitat is not present to support this species.
Orobanche valida ssp. valida	Rock Creek broomrape	None/None/1B.2	Chaparral, Pinyon and juniper woodland; granitic/perennial herb (parasitic)/May–Sep/3,375–6,560	Not expected to occur. Suitable habitat is not present to support this species.
Phacelia hubbyi	Hubby's phacelia	None/None/4.2	Chaparral, Coastal scrub, Valley and foothill grassland; gravelly, rocky, talus/annual herb/Apr–July/0–3,280	Not expected to occur. Suitable habitat is not present to support this species.
Phacelia mohavensis	Mojave phacelia	None/None/4.3	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland; sandy or gravelly/annual herb/Apr–Aug/4,590–8,200	Not expected to occur. Suitable habitat is not present to support this species.

Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
Phacelia stellaris	Brand's star phacelia	None/None/1B.1	Coastal dunes, Coastal scrub/annual herb/Mar–June/0–1,310	Not expected to occur. Suitable habitat is not present to support this species.
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; sandy, gravelly/perennial herb/(July)Aug–Nov(Dec)/0–6,885	Not expected to occur. Suitable habitat is not present to support this species.
Quercus durata var. gabrielensis	San Gabriel oak	None/None/4.2	Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–May/1,475–3,280	Not expected to occur. Suitable habitat is not present to support this species.
Quercus engelmannii	Engelmann oak	None/None/4.2	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/perennial deciduous tree/Mar–June/160–4,265	Not expected to occur. Suitable habitat is not present to support this species.
Romneya coulteri	Coulter's matilija poppy	None/None/4.2	Chaparral, Coastal scrub; Often in burns/perennial rhizomatous herb/Mar–July(Aug)/65–3,935	Not expected to occur. Suitable habitat is not present to support this species.
Sagittaria sanfordii	Sanford's arrowhead	None/None/1B.2	Marshes and swamps (assorted shallow freshwater)/perennial rhizomatous herb (emergent)/May–Oct(Nov)/0–2,130	Not expected to occur. Suitable habitat is not present to support this species.
Senecio aphanactis	chaparral ragwort	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub; sometimes alkaline/annual herb/Jan–Apr(May)/45–2,620	Not expected to occur. Suitable habitat is not present to support this species.
Senecio astephanus	San Gabriel ragwort	None/None/4.3	Coastal bluff scrub, Chaparral; rocky slopes/perennial herb/May–July/1,310–4,920	Not expected to occur. Suitable habitat is not present to support this species.
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; alkaline, mesic/perennial herb/Mar–June/45–5,015	Not expected to occur. Suitable habitat is not present to support this species.
Sidotheca caryophylloides	chickweed oxytheca	None/None/4.3	Lower montane coniferous forest (sandy)/annual herb/July–Sep(Oct)/3,650–8,530	Not expected to occur. Suitable habitat is not present to support this species.
Streptanthus bernardinus	Laguna Mountains jewelflower	None/None/4.3	Chaparral, Lower montane coniferous forest/perennial herb/May–Aug/2,195–8,200	Not expected to occur. Suitable habitat is not present to support this species.
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland (vernally mesic); near ditches, streams, springs/perennial rhizomatous herb/July–Nov(Dec)/5–6,690	Not expected to occur. Suitable habitat is not present to support this species.

Scientific Name	Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet amsl)	Potential to Occur
Symphyotrichum greatae	Greata's aster	None/None/1B.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland; mesic/perennial rhizomatous herb/June–Oct/980–6,590	Not expected to occur. Suitable habitat is not present to support this species.
Thelypteris puberula var. sonorensis	Sonoran maiden fern	None/None/2B.2	Meadows and seeps (seeps and streams)/perennial rhizomatous herb/Jan–Sep/160–2,000	Not expected to occur. Suitable habitat is not present to support this species.

Notes: CDFW = California Fish and Wildlife Service,

* Region refers to the USGS 7.5-minute quadrangle in which the project site is located (Ontario) and the six surrounding quadrangles (Glendora, Mt Baldy, Cucamonga Peak, San Dimas, Guasti, Yorba Linda, Prado Dam, Corona North).

Status Legend

Federal

FE: Federally listed as endangered
FT: Federally listed as threatened
FC: Federal candidate for listing as threatened or endangered

State

SE: State listed as endangered
ST: State listed as threatened
SR: State listed as rare

CRPR (California Rare Plant Rank)

CRPR 1A: Plants presumed extinct in California and either rare or extinct elsewhere
CRPR List 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR List 2A: Plants rare, threatened, or endangered in California but common elsewhere
CRPR List 2B: Plants rare, threatened, or endangered in California but more common elsewhere

Threat Rank

.1 Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 Fairly endangered in California (20% to 80% of occurrences threatened/moderate degree and immediacy of threat)
.3 Not very endangered in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

References

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Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
Amphibians				
Batrachoseps gabrieli	San Gabriel slender salamander	None/None	Talus slopes in forested areas, often near streams	Not expected to occur. The project site does not contain suitable habitat for this species.
Rana muscosa	mountain yellow-legged frog	FE/SE, WL	Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral	Not expected to occur. The project site does not contain suitable habitat for this species.
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	Not expected to occur. The project site does not contain suitable habitat for this species.
Reptiles				
Actinemys marmorata	northwestern pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. The project site does not contain suitable habitat for this species.
Anniella stebbinsi	southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Not expected to occur. The project site does not contain suitable habitat for this species.
Arizona elegans occidentalis	California glossy snake	None/SSC	Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Not expected to occur. The project site does not contain suitable habitat for this species.
Aspidoscelis hyperythra	orange-throated whiptail	None/WL	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Not expected to occur. The project site does not contain suitable habitat for this species.
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Not expected to occur. The project site does not contain suitable habitat for this species.
Charina umbratica	southern rubber boa	None/ST	Montane oak–conifer and mixed-conifer forests, montane chaparral, wet meadows; usually in vicinity of streams or wet meadows	Not expected to occur. The project site does not contain suitable habitat for this species.
Coleonyx variegatus abbotti	San Diego banded gecko	None/SSC	Rocky areas within coastal scrub and chaparral	Not expected to occur. The project site does not contain suitable habitat for this species.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
Crotalus ruber	red diamondback rattlesnake	None/SSC	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Not expected to occur. The project site does not contain suitable habitat for this species.
Diadophis punctatus modestus	San Bernardino ring-necked snake	None/None	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland	Not expected to occur. The project site does not contain suitable habitat for this species.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Not expected to occur. The project site does not contain suitable habitat for this species.
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. The project site does not contain suitable habitat for this species.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Not expected to occur. The project site does not contain suitable habitat for this species.
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	Not expected to occur. The project site does not contain suitable habitat for this species.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. The project site does not contain suitable habitat for this species.
Artemisiospiza belli belli	Bell's sage sparrow	BCC/WL	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Not expected to occur. The project site does not contain suitable habitat for this species.
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Low potential to occur. There are 2 documented occurrences within 3 miles of the project site (CDFW 2020). The site has loose, sandy soils, and ground squirrel holes were not observed during the survey; however, there are debris piles at several locations within the project site that could serve as nesting burrows.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
Baeolophus inornatus (nesting)	oak titmouse	BCC/None	Nests and forages in oak woodlands; also open pine forest, pinyon woodland, and riparian and chaparral with oak	Not expected to occur. The project site does not contain suitable habitat for this species.
Buteo swainsoni (nesting)	Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. The project site does not contain suitable habitat for this species.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. The project site does not contain suitable habitat for this species.
Coturnicops noveboracensis	yellow rail	BCC/SSC	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water	Not expected to occur. The project site does not contain suitable habitat for this species.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. The project site does not contain suitable habitat for this species.
Eremophila alpestris actia	California horned lark	None/WL	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	Not expected to occur. The project site does not contain suitable habitat for this species.
Falco columbarius (wintering)	merlin	None/WL	Forages in semi-open areas, including coastline, grassland, agriculture, savanna, woodland, lakes, and wetlands	Not expected to occur. The project site does not contain suitable habitat for this species.
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. The project site does not contain suitable habitat for this species.
Lanius ludovicianus (nesting)	loggerhead shrike	BCC/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Not expected to occur. The project site does not contain suitable habitat for this species.
Laterallus jamaicensis coturniculus	California black rail	BCC/FP, ST	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. The project site does not contain suitable habitat for this species.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. The project site does not contain suitable habitat for this species.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
Setophaga petechia (nesting)	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. The project site does not contain suitable habitat for this species.
Spinus lawrencei (nesting)	Lawrence's goldfinch	BCC/None	Nests and forages in open oak, arid woodlands, and chaparral near water	Not expected to occur. The project site does not contain suitable habitat for this species.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. The project site does not contain suitable habitat for this species.
Fishes				
Catostomus santaanae	Santa Ana sucker	FT/None	Small, shallow, cool, clear streams less than 7 meters (23 feet) in width and a few centimeters to more than a meter (1.5 inches to more than 3 feet) in depth; substrates are generally coarse gravel, rubble, and boulder	Not expected to occur. The project site does not contain suitable water features for this species.
Gila orcuttii	arroyo chub	None/SSC	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Not expected to occur. The project site does not contain suitable water features for this species.
Oncorhynchus mykiss irideus pop. 10	southern steelhead - southern California DPS	FE/None	Clean, clear, cool, well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	Not expected to occur. The project site does not contain suitable water features for this species.
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	None/SSC	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system	Not expected to occur. The project site does not contain suitable water features for this species.
Mammals				
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/SSC	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	Not expected to occur. The project site does not contain suitable habitat for this species.
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	None/SSC	Desert wash, desert scrub, desert succulent scrub, and pinyon–juniper woodland	Not expected to occur. The project site does not contain suitable habitat for this species.
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE/SSC, PSE	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces	Not expected to occur. The project site does not contain suitable habitat for this species.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
Dipodomys stephensi	Stephens' kangaroo rat	FE/ST	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Not expected to occur. The project site does not contain suitable habitat for this species.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. The project site does not contain suitable habitat for this species.
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None/SSC	Coniferous and deciduous forests, including riparian forests	Not expected to occur. The project site does not contain suitable habitat for this species.
Lasiurus xanthinus	western yellow bat	None/SSC	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Not expected to occur. The project site does not contain suitable habitat for this species.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/SSC	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Not expected to occur. The project site does not contain suitable habitat for this species.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. The project site does not contain suitable habitat for this species.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Not expected to occur. The project site does not contain suitable habitat for this species.
Onychomys torridus ramona	southern grasshopper mouse	None/SSC	Grassland and sparse coastal scrub	Not expected to occur. The project site does not contain suitable habitat for this species.
Ovis canadensis nelsoni	Nelson's bighorn sheep	None/FP	Steep slopes and cliffs, rough and rocky topography, sparse vegetation; also canyons, washes, and alluvial fans	Not expected to occur. The project site does not contain suitable habitat for this species.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/SSC	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	Not expected to occur. The project site does not contain suitable habitat for this species.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. The project site does not contain suitable habitat for this species.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur
Invertebrates				
Bombus crotchii	Crotch bumble bee	None/PSE	Open grassland and scrub communities supporting suitable floral resources.	Not expected to occur. The project site does not contain suitable habitat for this species.
Carolella busckana	Busck's gallmoth	None/None	Coastal scrub dunes	Not expected to occur. The project site does not contain suitable habitat for this species.
Ceratochrysis longimala	Desert cuckoo wasp	None/None	(blank)	Not expected to occur. The project site does not contain suitable habitat for this species.
Cicindela tranquebarica viridissima	greenest tiger beetle	None/None	Inhabits the woodlands adjacent to the Santa Ana River basin	Not expected to occur. The project site does not contain suitable habitat for this species.
Euchloe hyantis andrewsi	Andrew's marble butterfly	None/None	Yellow pine forest; host plants are Laguna Mountains jewel-flower (Streptanthus bernardinus) and Holboell's rockcress (Boechera pinetorum (Arabis holboellii var. pinetorum))	Not expected to occur. The project site does not contain suitable habitat for this species.
Euphydryas editha quino	quino checkerspot butterfly	FE/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include Plantago erecta, Antirrhinum coulterianum, and Plantago patagonica (Silverado Occurrence Complex)	Not expected to occur. The project site does not contain suitable habitat for this species.
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	FE/None	Delhi fine sandy soils and dunes, scrub and ruderal vegetation in the sand verbena series with <50% cover	Not expected to occur. There are 2 occurrences recorded within 4 miles of the project site (CDFW 2020); however, the project site does not contain delhi sands, the required substrate for this species.
Streptocephalus woottoni	Riverside fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. The project site does not contain suitable habitat for this species.

Notes: CDFW = California Department of Fish and Wildlife

* Region refers to the USGS 7.5-minute quadrangle in which the project site is located (Ontario) and the six surrounding quadrangles (Glendora, Mt Baldy, Cucamonga Peak, San Dimas, Guasti, Yorba Linda, Prado Dam, Corona North).

Status Legend

Federal

BCC: Bird of Conservation Concern
FC: Candidate for federal listing as threatened or endangered
FDL: Federally delisted; monitored for 5 years
FE: Federally listed endangered
FT: Federally listed as threatened

State

PSE: Proposed state listing as endangered

SDL: State delisted
SSC: Species of Special Concern
FP: California Department of Fish and Wildlife Protected and Fully Protected Species
SE: State listed as endangered
ST: State listed as threatened

References

CDFW. 2020. RareFind 5, Version 5.2.14. California Natural Diversity Database. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed October 2020. https://map.dfg.ca.gov/rarefind/view/RareFind.aspx.

Appendix C-4

Arborist Report for the Mission Ramona Business Park Project prepared by Dudek in March 2020

Arborist Report
for the
Mission Boulevard and Ramona Avenue Business Park Project
City of Montclair, California

Prepared by:

DUDEK

38 Marengo Avenue
Pasadena, California 91101
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MARCH 2020

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
City	City of Montclair
DBH	diameter at breast height
GIS	geographic information system

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1 Introduction

This Arborist Report provides an inventory and evaluation of the protected trees located on the proposed Mission and Ramona Industrial Park Project. The project site is located on privately owned land within the City of Montclair (City), California (Figure 1, Regional Map). As such, this Arborist Report covers the regulations and requirements for the protection and removal of protected trees within the City's jurisdiction.

Per the Montclair Municipal Code, trees located between the property line and the curb or street are designated as "City trees" and the pruning, planting, and removal of City trees are regulated pursuant to the City Tree Policy Manual. An arborist's report should be prepared to determine the significance of on-site trees and, if required, to facilitate the processing of a tree removal permit by City Staff.

As such, Dudek was retained by Mission Boulevard Industrial Owner, L.P. to conduct a tree inventory and assessment of the project site. Dudek's Urban and Community Forestry Division's International Society of Arboriculture-certified arborists performed various functions associated with surveying, inventorying, and evaluating the condition of selected trees on the project site, as described in the following sections.

The purpose of this Arborist Report is to present the physical characteristics, mapped locations, and disposition of the trees on the project site.

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2 Project Location and Description

The proposed project is located in the City of Montclair, California. The City is located in southwestern San Bernardino County (Figure 1). This property is located in the southwest sector of the City at the intersection of Mission Blvd. and Ramona Avenue. The 27.87-acre proposed project site is located north of Mission Boulevard and west of Ramona Avenue (Figure 2, Vicinity Map). The project site is composed of nine Assessor's Parcel Numbers: 101-215-127 (8.93 acres), 101-215-128 (0.29 acres), 101-216-101 (8.47 acres), 101-216-102 (0.90 acres), 101-216-105 (0.00 acres), 101-216-103 (2.79 acres), 101-216-104 (0.00 acres), 101-215-120 (3.30 acres), and 101-215-129 (1.78 acres). The project site can be found on the U.S Geological Survey 7.5-minute Ontario topographic Quadrangle map, Sections 27, Township (T) 1 South (S), and Range(R) 8 West (W).

2.1 Existing Conditions

The project site is currently developed with a drive-in theatre/flea market use. The northern half of the project site is zoned Manufacturing Industrial (MIP), and the southern half of the site is zoned General Commercial (C3).

2.2 Project Description

The proposed project includes the construction of approximately five speculative industrial buildings on 27.87 gross acres of developed land at the northwest quadrant of Ramona Avenue and Mission Avenue. In total, approximately 529,000 square feet of industrial space will be constructed, inclusive of office and mezzanine use. Roughly 630 passenger vehicle parking spaces will be provide on the project site, as well as approximately 42 trailer stalls.

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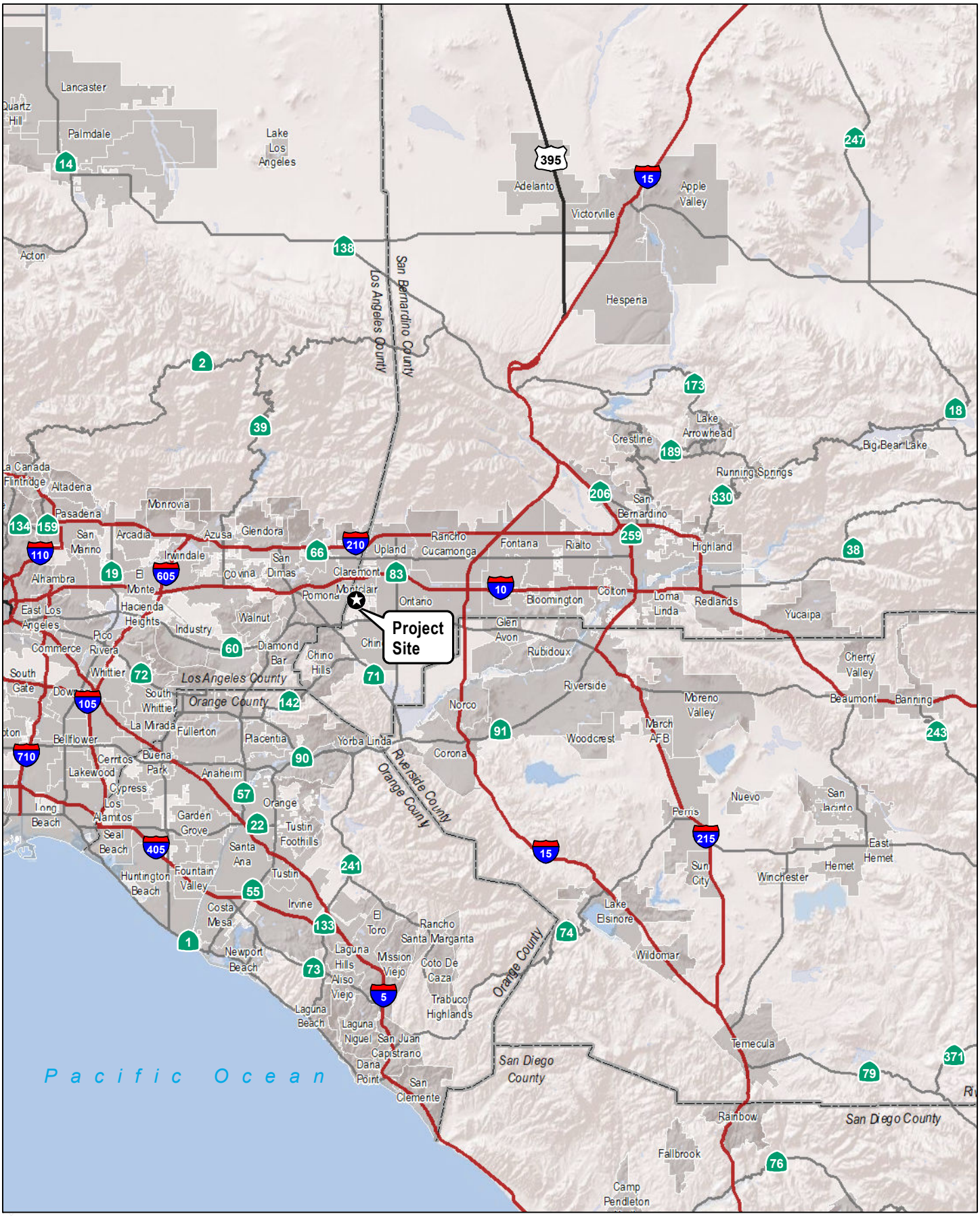

SOURCE: ESRI

FIGURE 1

Regional Map

Arborist Report for the Mission Boulevard and Ramona Avenue Business Park Project

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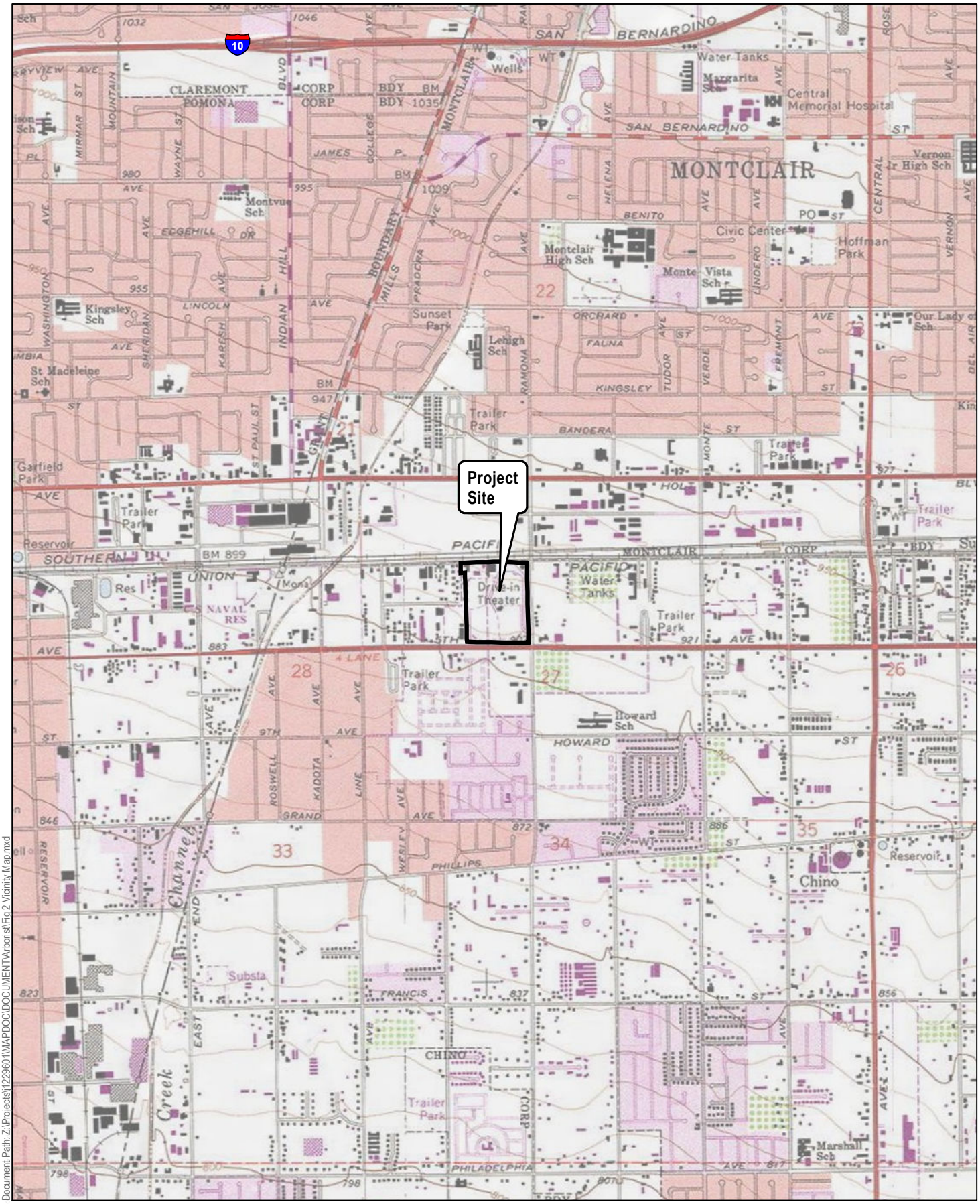

SOURCE: USGS 7.5 MINUTE SERIES, ONTARIO QUADRANGLE
TOWNSHIP 1 SOUTH, RANGE 8 WEST, SECTION 27

DUDEK

0 1,000 2,000 Feet

FIGURE 2
Vicinity Map
Arborist Report for the Mission Boulevard and Ramona Avenue Business Park Project

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3 Methods

Dudek mapped and collected tree attribute information for all trees within and immediately adjacent to the tree survey area meeting the City's definition of a city tree, which includes trees located between the property line and the curb or street. The cumulative diameter of multistemmed trees was calculated using the sum of the squares method (i.e., the cumulative diameter at breast height [DBH] measurement for the multistemmed trees is found by taking the square root of the sum of all squared trunk stem DBHs). The location of each individual native tree was mapped using a Trimble Pathfinder Pro XH GPS receiver, which has a horizontal accuracy of 1-meter (1-sigma) using differential code positioning techniques. Since tree canopies can sometimes cause loss of satellite lock by blocking the line-of-sight to satellites, an electronic compass and reflectorless electronic distance measuring device was also used in mapping tree locations. The electronic distance measuring device/compass combination operates in concert with the Pathfinder GPS system to position offsets, and offset information is automatically attached to the GPS position data string. Protected trees were tagged in the field with an aluminum tree tag bearing a unique identification number. The tags were placed on the trunk of each inventoried tree, and tag numbers correspond with the individual tree data presented in Appendix A, Tree Data Matrix. GPS locations of each tree are presented in Appendix B, Tree Location Exhibit.

Concurrent with tree mapping efforts, Dudek arborists collected tree attribute data, including species, quantity of individual trunks, individual trunk diameters, overall height, canopy extent, and general health and structural conditions. Trunk diameter measurements were collected at 4.6 feet above the ground along the trunk axis. Tree height measurements were ocular estimates made by experienced field arborists. Tree canopy diameters were typically estimated by "pacing-off" the measurement based on the investigator's knowledge of his stride length or by visually estimating the canopy width. The tree crown diameter measurements were made along an imaginary line intersecting the tree trunk that best approximated the average canopy diameter.

Pursuant to the Guide for Plant Appraisal (CTLA 2000), tree health and structure were evaluated with respect to five distinct tree components: (1) roots, (2) trunk(s), (3) scaffold branches, (4) small branches, and (5) foliage. Each component of the tree was assessed with regard to health factors such as insect, fungal, or pathogen damage; fire damage; mechanical damage; presence of decay; presence of wilted or dead leaves; and wound closure. Components were graded as good, fair, poor, critical, or dead, with "good" representing no apparent problems, and "dead" representing a dying and/or dead tree. This method of tree condition rating is comprehensive and results in ratings that are useful for determining the status of trees based on common standards. Trees in natural settings have important habitat value, as evidenced by numerous cavity nesters and insects that thrive on and within oak trees, even when they are considered in poor structural or health condition. However, this assessment focuses on tree condition with regards to health and structure for purposes of analyzing potential tree health issues.

Upon completion of field data collection and mapping, raw GPS data was post-processed using GPS Pathfinder Office (v 5.10), and individual tree location data were compiled and updated in a geographic information system (GIS). The digital tree locations were linked to individual tree identification numbers and associated tree attribute data. This data set was then evaluated using ArcGIS (v. 10.3) software to determine the position of individual trees related to the proposed project development areas. Data resulting from this analysis was utilized to evaluate the individual tree impact totals presented in this report.

3.1 Scope of Work Limitations

No root crown excavations or investigations or internal probing were performed during the tree assessment. Therefore, the presence or absence of internal decay or other hidden inferiorities in individual trees could not be confirmed. It is recommended that any large tree proposed for preservation or relocation in an urban setting be thoroughly inspected for internal and subterranean decay by a qualified arborist before finalizing preservation or relocation plans.

4 Regulatory Setting

4.1 Municipal Code

Chapter 9.28.010, Trees, of the City's Municipal Code protects and preserves trees planted within the City rights-of-way and at City facilities. Furthermore, per Chapter 19.16.120, trees located between the property line and the curb or street are designated as City trees and the pruning, planting and removal of City trees are regulated pursuant to the City Tree Policy Manual. Per the City Tree Policy, City trees shall be replaced at a minimum ratio of 1:1 for each tree removed. Furthermore, mitigation may be required for the removal of trees on private property and is at the discretion of the City.

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5 Results

5.1 Tree Inventory Summary

There are 139 trees located within and adjacent to the limits of the proposed project site of none are located within the City right-of-way, and as such, none meet the City definition of protected tree. The site's trees are comprised of 17 tree species, none of which are native to California. Table 1 provides a summary of the 17 species mapped and evaluated within and adjacent to the tree survey area. Appendix B presents the location of the individual trees mapped and assessed for the proposed project. Table 1 provides further details on individual species totals.

Table 1. Summary of Tree Species

Tree Species			
Scientific Name	*Common Name*	*Number of Trees*	*Percentage*
Acacia melanoxylon	Blackwood acacia	1	1%
Ailanthus altissima	Tree-of-heaven	4	3%
Celtis sinensis	Chinese hackberry	2	1%
Corymbia citriodora	Lemon-scented gum	26	19%
Eucalyptus globulus	Blue gum	2	1%
Eucalyptus polyanthemos	Silver-dollar gum	20	14%
Eucalyptus sideroxylon	Red ironbark eucalyptus	30	22%
Ficus carica	Edible fig	1	1%
Ficus elastica	Rubber tree	1	1%
Fraxinus uhdei	Shamel ash	10	7%
Lagerstroemia indica	Crape myrtle	8	6%
Morus alba	White mulberry	5	4%
Phoenix roebelenii	Pygmy date palm	4	3%
Pinus canariensis	Canary island pine	3	2%
Syagrus romanzoffiana	Queen palm	7	5%
Ulmus parvifolia	Chinese elm	1	1%
Washingtonia robusta	Mexican fan palm	14	10%
	Total	**139 (0[a])**	**100% (0%[a])**

Notes:
[a] Number of city trees.

In total, 107 of the trees are single-stemmed, and 32 of the trees are multitrunked. Tree diameters for single-stemmed trees varied, ranging from 2 inches to 38 inches; cumulative trunk diameters for multitrunked trees ranged from 2.4 inches to 38.3 inches. Average tree heights and crown widths ranged from 10 feet to 80 feet tall and extended 7 feet to 55 feet at their widest points. Appendix A provides tree height attribute information for each tree on the project site.

The trees share similar health and structural ratings, the majority of which are in good health and fair structure. As presented in Appendix A, 83% (116 trees) exhibit good health, 14% (19 trees) exhibit fair health, 1% (2 trees) exhibit poor health, and 1% (2 trees) are dead. Structurally, 24% (33 trees) are in good condition, 61% (85 trees) are in fair condition, 14% (19 trees) are in poor condition, and 1% (2 trees) are dead. Fair condition trees are typical, with

few maladies but declining vigor. Poor condition trees exhibit declining vigor, unhealthy foliage, poor branch structure, and/or excessive lean. The most commonly observed maladies included structural decline related to branch dieback and tree decline.

5.2 Mapping

The location of each tree identified on the project site is depicted in Appendix B.

5.3 Tree Removal/Encroachment

For the purposes of this Arborist Report, direct impacts are those associated with tree removal or encroachment within the tree-protected zone (i.e., canopy dripline plus 5 feet or 15 feet from trunk, whichever is greater). Tree removal is expected to be required when the trunk is located inside or within 2 feet of the proposed limits of grading. Encroachment is expected when soil and roots are disturbed within the tree-protected zone. In total, 131 trees will be directly impacted by the project, of which none are City trees. The locations of impacted trees are presented by impact type on the map in Appendix C, Tree Disposition Exhibit. Measures to minimize the extent of impacts to preserved trees are provided in Chapter 7, Tree Protection.

5.4 Candidates Suitable for Preservation and Relocation

In addition to the general tree evaluations that occurred on site, Dudek evaluated all of the potentially disturbed protected trees for their potential preservation in place or relocation. Trees identified as candidates for preservation in place and relocation typically exhibit good health (new growth and vigor) and structure (trunk/branching); have no uncorrectable, outwardly detectable defects; and show no signs or symptoms of serious pest infestation or species-specific pathogens. For the trees to avoid incidental damage during construction or relocation, preservation and protection measures should be provided before, during, and following the construction phase. Measures that should be implemented during these phases are provided in Chapter 7.

Furthermore, trees considered as relocation candidates must meet at least minimal requirements that will increase their chances for survival following the boxing, storage, and replanting process. Minimal requirements include suitable size; smaller trees are more successfully transplanted, because larger trees are more difficult to relocate due to their difficulty compensating and adapting to the loss of significant root volume. Trees with a less than approximately 18-inch trunk diameter perform better following transplant. Typically, the smaller the tree, the greater potential for relocation success and feasibility. In addition, root systems that occur on steep slopes would not lend themselves to being boxed adequately for relocation, thus precluding the trees from potential relocation candidacy.

An additional important consideration for candidate trees for relocation is their health and structural condition. Trees must be in good health and structural condition (unless the species is unique or especially valuable where a fair condition tree may be considered a candidate) and include an accessible location, no observable soil impediments (e.g., rockbound roots, utilities), no overhead utilities, and no observable chronic pest infestations or disease infections.

As such, eight trees will not be disturbed by active construction-related activities and/or grading; therefore, these trees are recommended for preservation. None of the trees within the grading limits are considered relocation trees. These trees are not salvageable based on trunk diameters, fair health, fair to poor structure, and likelihood of high levels of anticipated root damage.

6 Mitigation

The proposed project's mitigation effort will include tree planting mitigation for incurred tree impacts, which will be consistent with the goals and intent of the City.

6.1 Mitigation Plan

The City requires mitigation, at a 1:1 ratio, for the removal of City trees. Based on the proposed site development plan, no City trees are impacted by the proposed project. As such, no mitigation is required. However, mitigation may be required for the removal of the 131 trees on private property. Mitigation for the removal of 131 private trees is at the discretion of the City. As such, to offset the removal of 131 private trees, Dudek recommends that the 131 trees be replaced at a minimum 1:1 ratio with 24-inch box trees. It should be noted that the City may require an alternate mitigation and/or replacement size for the removal of non-City trees. Furthermore, it is recommended that the remaining recommended mitigation trees be reincorporated into the project site's post-development landscape. Based on the site development plans, it is estimated that all replacement trees can be replaced on site.

The specific location of individual mitigation tree plantings on site will be addressed in the mitigation planting plan or landscape design plan prepared for the project site. Dudek estimates that all of the required mitigation trees can be accommodated within the project site's landscape. The mitigation requirement and the approved tree replacement mitigation ratio is at the discretion of the City and subject to a final tree impact analysis. As such, the final tree numbers associated with tree replacement and other mitigation components may vary from those presented in this Arborist Report.

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7 Tree Protection

Of the trees on site, eight will not require removal to accommodate the proposed project. As such, it is recommended that the remaining eight trees be protected in place in accordance with the tree protection standards found in Appendix D.

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8 Conclusion

The project site includes no City trees and 139 non-City trees. In total, the project site may directly impact up to 131 non-City trees. Mitigation for the removal of 131 private trees is at the discretion of the City and may be required. As such, to offset the removal of 131 private trees, Dudek recommends that the 131 trees be replaced at a minimum 1:1 ratio with 24-inch box trees. The City may require an alternate mitigation and/or replacement size for the removal of non-City trees. Furthermore, it is recommended that the mitigation trees be re-incorporated into the project site's post-development landscape. Based on the site development plans, it is estimated that all replacement trees can be replaced on site. The remaining eight trees located throughout the proposed project site are recommended to be preserved in place in accordance with the tree protection recommendations provided in Appendix D. Actual tree impact or encroachment numbers may be lower than anticipated as presented in this report once grading plans are staked in the field and are being implemented. Any adjustments to the number of impacted trees will be documented by the project's arborist.

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9 Arborist's Disclosure

This report provides conclusions and recommendations based only on a visual examination of the trees and surrounding site by an International Society of Arboriculture-certified arborist and reasonable reliance upon the completeness and accuracy of the information provided to the arborist. The examination did not include subterranean or internal examination of the trees.

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized, but not eliminated.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi, weather, and other forces of nature, and conditions that lead to failure are often hidden within trees and below ground. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Arborists cannot predict acts of nature that can cause even an apparently healthy tree to fail, including storms of sufficient strength. Additionally, arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for any specific period of time. A tree's condition could change over a short or long period of time due to climatic, cultural, or environmental conditions. Further, there is no guarantee or certainty that recommendations or efforts to correct unsafe conditions will prevent future breakage or failure of a tree.

To live or work near trees is to accept some degree of risk. Neither the author of this report nor Dudek have assumed any responsibility for, nor will either of them be liable for, any claims, losses or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property.

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10 References Cited

CTLA (Council of Tree and Landscape Appraisers). 2000. *Guide for Plant Appraisal*. 9th ed. Champaign, Illinois: International Society of Arboriculture.

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Appendix A

Tree Data Matrix

Tree No.	Botanical Name	Common Name	No. of Stems	Individual Stem Diameters (in.)						Height (ft.)	Crown Spread (ft.)	Health	Stucture	Tree Disposition	X	Y
				Stem 1	*Stem 2*	*Stem 3*	*Stem 4*	*Stem 5*	*Stem 6*							
1	*Fraxinus uhdei*	Shamel ash	5	3	11	14	16	7	0	35	30	Good	Fair	Removal	-117.708	34.05963
2	*Fraxinus uhdei*	Shamel ash	3	4	9	6	0	0	0	45	30	Good	Poor	Removal	-117.707	34.05913
3	*Fraxinus uhdei*	Shamel ash	1	8	0	0	0	0	0	45	20	Good	Poor	Removal	-117.707	34.05913
4	*Fraxinus uhdei*	Shamel ash	1	7	0	0	0	0	0	40	18	Good	Fair	Removal	-117.707	34.05913
5	*Fraxinus uhdei*	Shamel ash	6	15	4	8	5	3	3	50	40	Good	Fair	Removal	-117.707	34.05913
6	*Fraxinus uhdei*	Shamel ash	3	6	7	11	0	0	0	50	40	Good	Fair	Removal	-117.707	34.05915
7	*Morus alba*	White mulberry	3	13	0	0	0	0	0	30	18	Fair	Poor	Removal	-117.707	34.05915
8	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	32	0	0	0	0	0	60	40	Good	Fair	Removal	-117.708	34.05908
9	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	25	0	0	0	0	0	70	40	Good	Fair	Removal	-117.708	34.05909
10	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	27	0	0	0	0	0	75	50	Good	Fair	Removal	-117.708	34.05914
11	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	15	0	0	0	0	0	65	40	Good	Fair	Removal	-117.708	34.05913
12	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	15	0	0	0	0	0	55	35	Good	Fair	Removal	-117.708	34.05915
13	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	19	0	0	0	0	0	50	35	Good	Fair	Removal	-117.708	34.05915
14	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	17	0	0	0	0	0	45	30	Good	Fair	Removal	-117.708	34.05914
15	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	22	0	0	0	0	0	60	50	Good	Fair	Removal	-117.708	34.05917
16	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	2	22	15	0	0	0	0	75	50	Good	Fair	Removal	-117.708	34.05917
17	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	18	0	0	0	0	0	60	40	Good	Fair	Removal	-117.708	34.05919
18	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	18	0	0	0	0	0	55	30	Good	Fair	Removal	-117.708	34.05921
19	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	26	0	0	0	0	0	60	40	Good	Fair	Removal	-117.708	34.05921
20	*Syagrus romanzoffiana*	Queen palm	1	13	0	0	0	0	0	35	15	Good	Good	Removal	-117.708	34.05919
21	*Syagrus romanzoffiana*	Queen palm	1	11	0	0	0	0	0	25	15	Good	Good	Removal	-117.708	34.05919
22	*Syagrus romanzoffiana*	Queen palm	1	10	0	0	0	0	0	20	15	Good	Good	Removal	-117.708	34.05915
23	*Syagrus romanzoffiana*	Queen palm	1	10	0	0	0	0	0	20	15	Good	Good	Removal	-117.708	34.05916
24	*Corymbia citriodora*	Lemon gum eucalyptus	2	21	17	0	0	0	0	60	30	Good	Poor	Removal	-117.708	34.05922
25	*Corymbia citriodora*	Lemon gum eucalyptus	1	24	0	0	0	0	0	80	50	Good	Fair	Removal	-117.707	34.05906
26	*Syagrus romanzoffiana*	Queen palm	1	2	0	0	0	0	0	11	6	Good	Good	Removal	-117.707	34.05885
27	*Morus alba*	White mulberry	3	3	3	3	0	0	0	16	16	Good	Poor	Removal	-117.707	34.05831
28	*Syagrus romanzoffiana*	Queen palm	1	2	0	0	0	0	0	7	6	Good	Good	Removal	-117.707	34.05824
29	*Ailanthus altissima*	Tree of heaven	36	2	0	0	0	0	0	14	18	Good	Poor	Removal	-117.707	34.0579
30	*Fraxinus uhdei*	Shamel ash	1	27	17	0	0	0	0	80	55	Good	Fair	Removal	-117.707	34.05738
31	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	12	0	0	0	0	0	40	15	Good	Good	Removal	-117.707	34.0573
32	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	20	0	0	0	0	0	60	25	Good	Fair	Removal	-117.707	34.05725
33	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	17	0	0	0	0	0	65	25	Good	Fair	Removal	-117.707	34.0572
34	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	26	0	0	0	0	0	80	40	Good	Good	Removal	-117.707	34.05714
35	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	29	0	0	0	0	0	40	20	Good	Poor	Removal	-117.707	34.05711
36	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	26	0	0	0	0	0	50	35	Good	Fair	Removal	-117.707	34.05699
37	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	22	0	0	0	0	0	50	30	Good	Fair	Removal	-117.707	34.05695
38	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	2	17	16	0	0	0	0	40	25	Good	Fair	Removal	-117.707	34.05688
39	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	28	0	0	0	0	0	50	30	Good	Fair	Removal	-117.707	34.05683

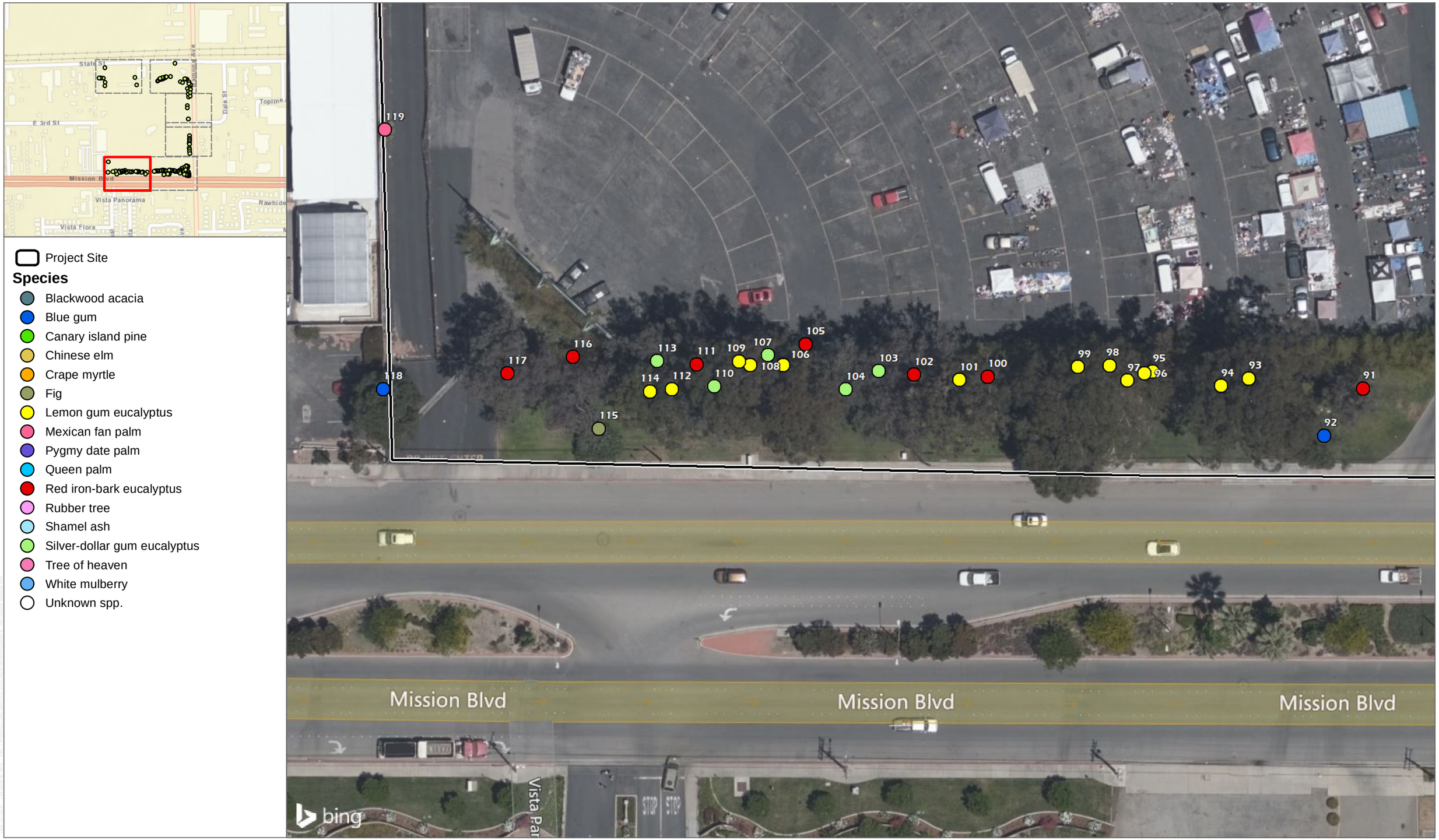
Tree No.	Botanical Name	Common Name	No. of Stems	Individual Stem Diameters (in.)						Height (ft.)	Crown Spread (ft.)	Health	Stucture	Tree Disposition	X	Y
				Stem 1	*Stem 2*	*Stem 3*	*Stem 4*	*Stem 5*	*Stem 6*							
40	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	23	0	0	0	0	0	75	50	Good	Fair	Removal	-117.707	34.05639
41	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	24	0	0	0	0	0	75	50	Good	Fair	Removal	-117.707	34.05643
42	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	17	0	0	0	0	0	70	40	Good	Fair	Removal	-117.707	34.05643
43	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	21	0	0	0	0	0	65	40	Good	Fair	Removal	-117.707	34.05645
44	*Acacia melanoxylon*	Blackwood acacia	1	5	0	0	0	0	0	20	15	Good	Fair	Removal	-117.707	34.05643
45	*Corymbia citriodora*	Lemon gum eucalyptus	1	27	0	0	0	0	0	90	55	Good	Fair	Removal	-117.707	34.05639
46	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	19	0	0	0	0	0	50	40	Good	Fair	Removal	-117.707	34.05635
47	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	16	0	0	0	0	0	45	30	Good	Fair	Removal	-117.707	34.05636
48	*Corymbia citriodora*	Lemon gum eucalyptus	1	17	0	0	0	0	0	90	50	Good	Fair	Removal	-117.707	34.05632
49	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	2	16	17	0	0	0	0	60	30	Good	Fair	Removal	-117.708	34.0563
50	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	22	0	0	0	0	0	55	35	Good	Poor	Removal	-117.708	34.05627
51	*Washingtonia robusta*	Mexican fan palm	1	22	0	0	0	0	0	25	15	Good	Good	Removal	-117.707	34.05628
52	*Washingtonia robusta*	Mexican fan palm	1	17	0	0	0	0	0	50	15	Good	Good	Removal	-117.707	34.05624
53	*Washingtonia robusta*	Mexican fan palm	1	24	0	0	0	0	0	55	15	Good	Good	Removal	-117.707	34.05622
54	*Washingtonia robusta*	Mexican fan palm	1	20	0	0	0	0	0	55	15	Good	Good	Removal	-117.707	34.05624
55	*Washingtonia robusta*	Mexican fan palm	1	20	0	0	0	0	0	55	15	Good	Good	Removal	-117.707	34.05626
56	*Washingtonia robusta*	Mexican fan palm	1	20	0	0	0	0	0	55	15	Good	Good	Removal	-117.707	34.05628
57	*Washingtonia robusta*	Mexican fan palm	1	23	0	0	0	0	0	50	15	Good	Good	Removal	-117.707	34.05632
58	*Lagerstroemia indica*	Crape myrtle	4	2	2	3	5	0	0	16	12	Fair	Fair	Preserve in Place	-117.707	34.05614
59	*Lagerstroemia indica*	Crape myrtle	3	2	2	2	0	0	0	16	9	Fair	Fair	Preserve in Place	-117.707	34.05615
61	*Phoenix roebelenii*	Pygmy date palm	1	8	0	0	0	0	0	10	5	Good	Good	Removal	-117.707	34.05626
62	*Phoenix roebelenii*	Pygmy date palm	2	5	7	0	0	0	0	10	7	Good	Good	Removal	-117.707	34.0562
63	*Washingtonia robusta*	Mexican fan palm	1	9	0	0	0	0	0	15	15	Good	Good	Removal	-117.707	34.05619
64	*Washingtonia robusta*	Mexican fan palm	1	20	0	0	0	0	0	55	15	Good	Good	Removal	-117.707	34.05621
65	*Washingtonia robusta*	Mexican fan palm	2	5	7	0	0	0	0	12	15	Good	Good	Removal	-117.707	34.05616
66	*Washingtonia robusta*	Mexican fan palm	1	21	0	0	0	0	0	55	15	Good	Good	Removal	-117.707	34.05617
67	*Washingtonia robusta*	Mexican fan palm	1	18	0	0	0	0	0	45	15	Good	Good	Removal	-117.707	34.05616
68	*Phoenix roebelenii*	Pygmy date palm	2	8	9	0	0	0	0	10	8	Good	Good	Removal	-117.707	34.05617
69	*Phoenix roebelenii*	Pygmy date palm	1	6	0	0	0	0	0	11	6	Good	Good	Removal	-117.707	34.05619
70	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	28	0	0	0	0	0	65	35	Good	Fair	Removal	-117.708	34.05628
71	*Corymbia citriodora*	Lemon gum eucalyptus	1	9	0	0	0	0	0	55	18	Good	Fair	Removal	-117.708	34.05628
72	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	22	0	0	0	0	0	70	40	Good	Fair	Removal	-117.708	34.05628
73	*Corymbia citriodora*	Lemon gum eucalyptus	1	18	0	0	0	0	0	80	45	Good	Fair	Removal	-117.708	34.0563
74	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	21	0	0	0	0	0	75	40	Good	Poor	Removal	-117.708	34.0563
75	*Corymbia citriodora*	Lemon gum eucalyptus	1	29	0	0	0	0	0	85	50	Fair	Poor	Removal	-117.708	34.05629

Tree No.	Botanical Name	Common Name	No. of Stems	Individual Stem Diameters (in.)						Height (ft.)	Crown Spread (ft.)	Health	Stucture	Tree Disposition	X	Y
				Stem 1	*Stem 2*	*Stem 3*	*Stem 4*	*Stem 5*	*Stem 6*							
76	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	15	0	0	0	0	0	40	15	Dead	Dead	Removal	-117.708	34.05632
77	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	12	0	0	0	0	0	25	5	Dead	Dead	Removal	-117.708	34.05632
78	*Morus alba*	White mulberry	4	10	6	13	6	0	0	25	35	Fair	Poor	Removal	-117.708	34.0562
79	*Fraxinus uhdei*	Shamel ash	1	31	0	0	0	0	0	90	45	Good	Fair	Removal	-117.708	34.0562
80	*Morus alba*	White mulberry	3	10	12	11	0	0	0	40	30	Good	Fair	Removal	-117.708	34.0562
81	*Fraxinus uhdei*	Shamel ash	1	22	0	0	0	0	0	65	45	Good	Fair	Removal	-117.708	34.05618
119	*Morus alba*	White mulberry	2	12	9	0	0	0	0	30	15	Fair	Poor	Removal	-117.708	34.05631
82	*Corymbia citriodora*	Lemon gum eucalyptus	1	9	0	0	0	0	0	45	25	Good	Fair	Removal	-117.708	34.05631
83	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	13	0	0	0	0	0	30	18	Good	Fair	Removal	-117.708	34.05632
84	*Corymbia citriodora*	Lemon gum eucalyptus	1	22	0	0	0	0	0	90	55	Good	Fair	Removal	-117.708	34.0563
85	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	19	0	0	0	0	0	50	40	Good	Fair	Removal	-117.708	34.05629
86	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	22	0	0	0	0	0	60	35	Good	Fair	Removal	-117.708	34.05629
87	*Corymbia citriodora*	Lemon gum eucalyptus	1	19	0	0	0	0	0	100	55	Good	Fair	Removal	-117.708	34.0563
88	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	16	0	0	0	0	0	40	25	Good	Fair	Removal	-117.708	34.05628
89	*Corymbia citriodora*	Lemon gum eucalyptus	1	28	0	0	0	0	0	85	55	Good	Fair	Removal	-117.708	34.05629
90	*Corymbia citriodora*	Lemon gum eucalyptus	1	20	0	0	0	0	0	90	55	Good	Fair	Removal	-117.708	34.05628
91	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	22	0	0	0	0	0	55	25	Poor	Fair	Removal	-117.709	34.05625
92	*Eucalyptus globulus*	Blue gum	1	25	0	0	0	0	0	40	20	Fair	Poor	Removal	-117.709	34.05619
93	*Corymbia citriodora*	Lemon gum eucalyptus	1	35	0	0	0	0	0	100	60	Good	Fair	Removal	-117.709	34.05626
94	*Corymbia citriodora*	Lemon gum eucalyptus	1	10	0	0	0	0	0	40	25	Fair	Fair	Removal	-117.709	34.05625
95	*Corymbia citriodora*	Lemon gum eucalyptus	1	12	0	0	0	0	0	40	12	Poor	Fair	Removal	-117.709	34.05627
96	*Corymbia citriodora*	Lemon gum eucalyptus	1	14	0	0	0	0	0	45	18	Good	Fair	Removal	-117.709	34.05627
97	*Corymbia citriodora*	Lemon gum eucalyptus	1	9	0	0	0	0	0	30	15	Good	Fair	Removal	-117.709	34.05626
98	*Corymbia citriodora*	Lemon gum eucalyptus	1	29	0	0	0	0	0	100	60	Good	Fair	Removal	-117.709	34.05628
99	*Corymbia citriodora*	Lemon gum eucalyptus	1	17	0	0	0	0	0	55	40	Good	Fair	Removal	-117.709	34.05628
100	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	21	0	0	0	0	0	40	30	Good	Fair	Removal	-117.709	34.05626
101	*Corymbia citriodora*	Lemon gum eucalyptus	1	20	0	0	0	0	0	90	40	Good	Fair	Removal	-117.709	34.05626
102	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	3	24	23	19	0	0	0	70	45	Good	Fair	Removal	-117.709	34.05627
103	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	16	0	0	0	0	0	40	25	Good	Fair	Removal	-117.709	34.05627
104	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	13	0	0	0	0	0	40	25	Good	Fair	Removal	-117.709	34.05625
105	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	18	0	0	0	0	0	65	30	Good	Fair	Removal	-117.71	34.05631
106	*Corymbia citriodora*	Lemon gum eucalyptus	1	22	0	0	0	0	0	90	40	Good	Fair	Removal	-117.71	34.05628
107	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	22	0	0	0	0	0	50	30	Good	Fair	Removal	-117.71	34.05629
108	*Corymbia citriodora*	Lemon gum eucalyptus	1	26	0	0	0	0	0	100	50	Good	Fair	Removal	-117.71	34.05628
109	*Corymbia citriodora*	Lemon gum eucalyptus	1	26	0	0	0	0	0	100	50	Good	Fair	Removal	-117.71	34.05628

Tree No.	Botanical Name	Common Name	No. of Stems	Individual Stem Diameters (in.)						Height (ft.)	Crown Spread (ft.)	Health	Stucture	Tree Disposition	X	Y
				Stem 1	*Stem 2*	*Stem 3*	*Stem 4*	*Stem 5*	*Stem 6*							
110	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	1	25	0	0	0	0	0	40	30	Good	Fair	Removal	-117.71	34.05625
111	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	27	0	0	0	0	0	70	45	Good	Fair	Removal	-117.71	34.05628
112	*Corymbia citriodora*	Lemon gum eucalyptus	1	18	0	0	0	0	0	85	35	Good	Fair	Removal	-117.71	34.05625
113	*Eucalyptus polyanthemos*	Silver-dollar gum eucalyptus	3	13	9	15	0	0	0	50	30	Good	Poor	Removal	-117.71	34.05628
114	*Corymbia citriodora*	Lemon gum eucalyptus	1	18	0	0	0	0	0	70	30	Good	Fair	Removal	-117.71	34.05625
115	*Ficus species*	Fig	4	3	4	5	10	0	0	18	16	Good	Fair	Removal	-117.71	34.0562
116	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	27	0	0	0	0	0	60	40	Good	Fair	Removal	-117.71	34.05629
117	*Eucalyptus sideroxylon*	Red iron-bark eucalyptus	1	28	0	0	0	0	0	55	45	Good	Fair	Removal	-117.71	34.05627
118	*Eucalyptus globulus*	Blue gum	1	38	0	0	0	0	0	30	30	Fair	Poor	Removal	-117.71	34.05625
119	*Washingtonia robusta*	Mexican fan palm	1	12	0	0	0	0	0	15	10	Good	Fair	Removal	-117.71	34.05657
120	*Ailanthus altissima*	Tree of heaven	10	2	3	3	2	2	2	17	10	Good	Poor	Removal	-117.71	34.05892
121	*Unknown spp.*	Unknown spp.	4	2	2	2	1	0	0	17	10	Good	Poor	Removal	-117.71	34.05907
122	*Ulmus parvifolia*	Chinese elm	6	4	4	5	3	3	3	25	20	Fair	Poor	Removal	-117.71	34.05917
123	*Unknown spp.*	Unknown spp.	10	6	4	3	6	4	4	25	20	Fair	Poor	Removal	-117.71	34.05918
124	*Fraxinus uhdei*	Shamel ash	1	5	0	0	0	0	0	20	10	Good	Fair	Removal	-117.71	34.05919
125	*Ficus elastica*	Rubber tree	20	4	4	5	5	6	4	20	10	Good	Fair	Removal	-117.71	34.0595
126	*Washingtonia robusta*	Mexican fan palm	1	20	0	0	0	0	0	25	15	Good	Good	Removal	-117.709	34.0592
127	*Syagrus romanzoffiana*	Queen palm	1	13	0	0	0	0	0	27	18	Good	Good	Removal	-117.709	34.05896
128	*Corymbia citriodora*	Lemon gum eucalyptus	1	18	0	0	0	0	0	80	35	Good	Good	Removal	-117.707	34.05903
129	*Lagerstroemia indica*	Crape myrtle	1	3	0	0	0	0	0	15	10	Fair	Good	Removal	-117.707	34.05858
130	*Lagerstroemia indica*	Crape myrtle	1	3	0	0	0	0	0	15	10	Fair	Good	Removal	-117.707	34.05867
131	*Lagerstroemia indica*	Crape myrtle	1	3	0	0	0	0	0	15	10	Fair	Good	Removal	-117.707	34.05877
137	*Ailanthus altissima*	Tree of heaven	8	2	2	2	2	2	2	14	12	Fair	Fair	Preserve in Place	-117.707	34.05888
138	*Ailanthus altissima*	Tree of heaven	3	3	4	3	0	0	0	15	10	Fair	Fair	Preserve in Place	-117.707	34.05897
135	*Lagerstroemia indica*	Crape myrtle	3	2	2	2	0	0	0	12	9	Fair	Fair	Removal	-117.707	34.05905
136	*Lagerstroemia indica*	Crape myrtle	3	2	2	2	0	0	0	15	9	Fair	Fair	Removal	-117.707	34.059
134	*Pinus canariensis*	Canary island pine	1	8	0	0	0	0	0	25	10	Good	Good	Preserve in Place	-117.707	34.05882
133	*Pinus canariensis*	Canary island pine	1	6	0	0	0	0	0	20	10	Good	Good	Preserve in Place	-117.707	34.05872
132	*Pinus canariensis*	Canary island pine	1	6	0	0	0	0	0	20	10	Good	Good	Preserve in Place	-117.707	34.05861
60	*Lagerstroemia indica*	Crape myrtle	7	4	5	3	5	3	4	16	12	Fair	Fair	Preserve in Place	-117.707	34.05614

Appendix B

Tree Location Exhibit



SOURCE: AERIAL-BING MAPPING SERVICE

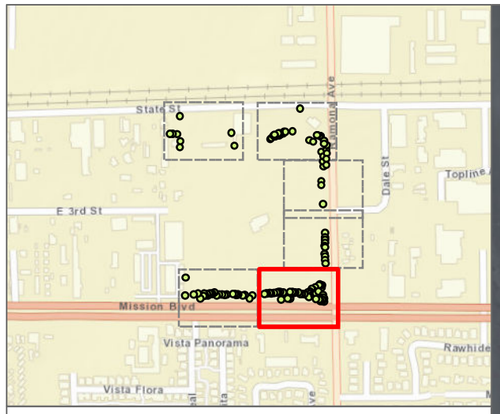
DUDEK

0 20 40 Feet

APPENDIX B - VIEW 1

Tree Location Exhibit

Arborist Report for the Mission and Ramona Industrial Park Project



Project Site

Species

- Blackwood acacia
- Blue gum
- Canary island pine
- Chinese elm
- Crape myrtle
- Fig
- Lemon gum eucalyptus
- Mexican fan palm
- Pygmy date palm
- Queen palm
- Red iron-bark eucalyptus
- Rubber tree
- Shamel ash
- Silver-dollar gum eucalyptus
- Tree of heaven
- White mulberry
- Unknown spp.

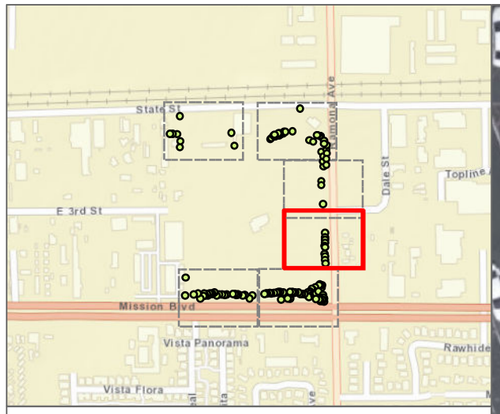
SOURCE: AERIAL-BING MAPPING SERVICE

DUDEK 0 20 40 Feet

APPENDIX B - VIEW 2

Tree Location Exhibit

Arborist Report for the Mission and Ramona Industrial Park Project



Project Site

Species

- Blackwood acacia
- Blue gum
- Canary island pine
- Chinese elm
- Crape myrtle
- Fig
- Lemon gum eucalyptus
- Mexican fan palm
- Pygmy date palm
- Queen palm
- Red iron-bark eucalyptus
- Rubber tree
- Shamel ash
- Silver-dollar gum eucalyptus
- Tree of heaven
- White mulberry
- Unknown spp.

SOURCE: AERIAL-BING MAPPING SERVICE

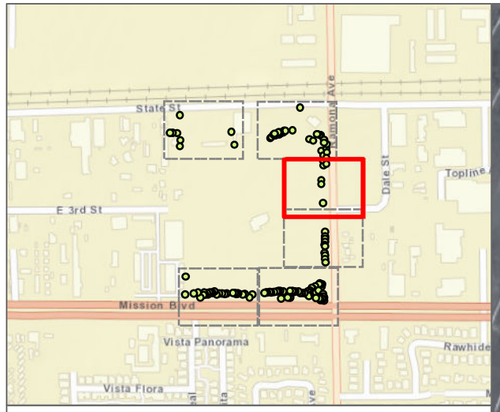
DUDEK

0 20 40 Feet

APPENDIX B - VIEW 3

Tree Location Exhibit

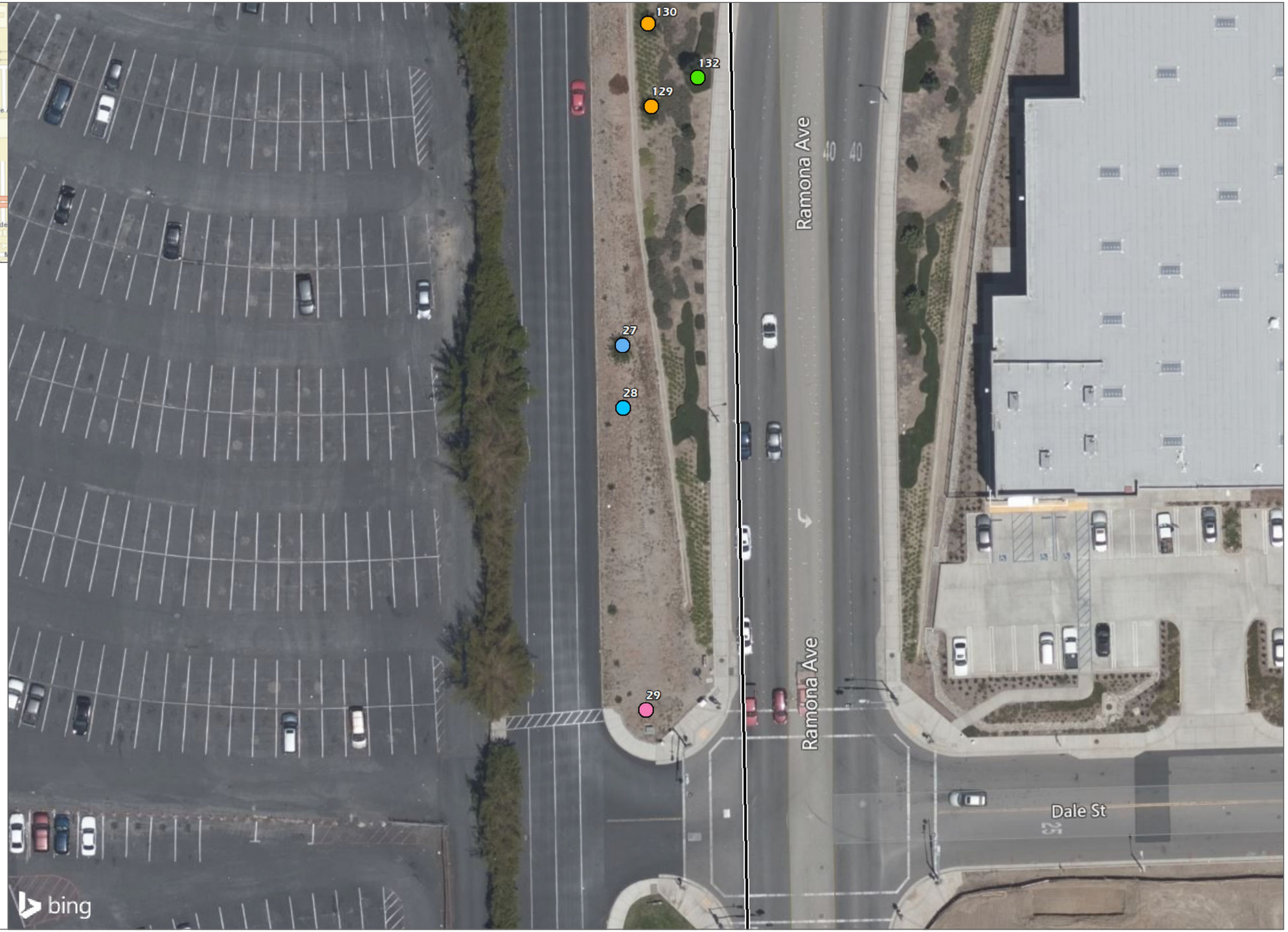
Arborist Report for the Mission and Ramona Industrial Park Project



Project Site

Species

- Blackwood acacia
- Blue gum
- Canary island pine
- Chinese elm
- Crape myrtle
- Fig
- Lemon gum eucalyptus
- Mexican fan palm
- Pygmy date palm
- Queen palm
- Red iron-bark eucalyptus
- Rubber tree
- Shamel ash
- Silver-dollar gum eucalyptus
- Tree of heaven
- White mulberry
- Unknown spp.



SOURCE: AERIAL-BING MAPPING SERVICE

DUDEK

0 20 40 Feet

APPENDIX B - VIEW 4

Tree Location Exhibit

Arborist Report for the Mission and Ramona Industrial Park Project

Project Site

Species

- Blackwood acacia
- Blue gum
- Canary island pine
- Chinese elm
- Crape myrtle
- Fig
- Lemon gum eucalyptus
- Mexican fan palm
- Pygmy date palm
- Queen palm
- Red iron-bark eucalyptus
- Rubber tree
- Shamel ash
- Silver-dollar gum eucalyptus
- Tree of heaven
- White mulberry
- Unknown spp.

SOURCE: AERIAL-BING MAPPING SERVICE

DUDEK

0 20 40 Feet

APPENDIX B - VIEW 5

Tree Location Exhibit

Arborist Report for the Mission and Ramona Industrial Park Project

Project Site

Species

- Blackwood acacia
- Blue gum
- Canary island pine
- Chinese elm
- Crape myrtle
- Fig
- Lemon gum eucalyptus
- Mexican fan palm
- Pygmy date palm
- Queen palm
- Red iron-bark eucalyptus
- Rubber tree
- Shamel ash
- Silver-dollar gum eucalyptus
- Tree of heaven
- White mulberry
- Unknown spp.

SOURCE: AERIAL-BING MAPPING SERVICE

DUDEK

0 20 40 Feet

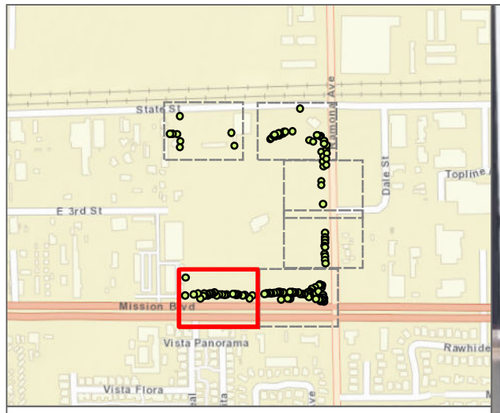
APPENDIX B - VIEW 6

Tree Location Exhibit

Arborist Report for the Mission and Ramona Industrial Park Project

Appendix C

Tree Disposition Exhibit



Project Site

Disposition

- Preserve in Place
- Removal

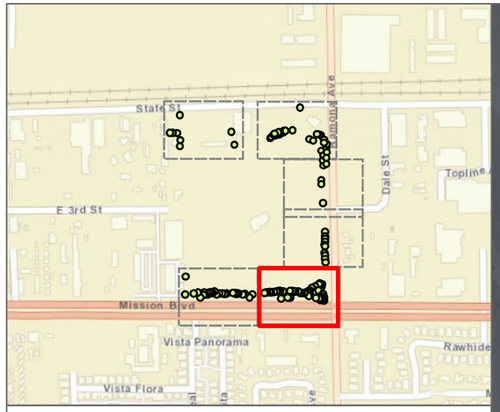
SOURCE: AERIAL-BING MAPPING SERVICE

DUDEK 0 20 40 Feet

APPENDIX C - VIEW 1

Tree Disposition Exhibit

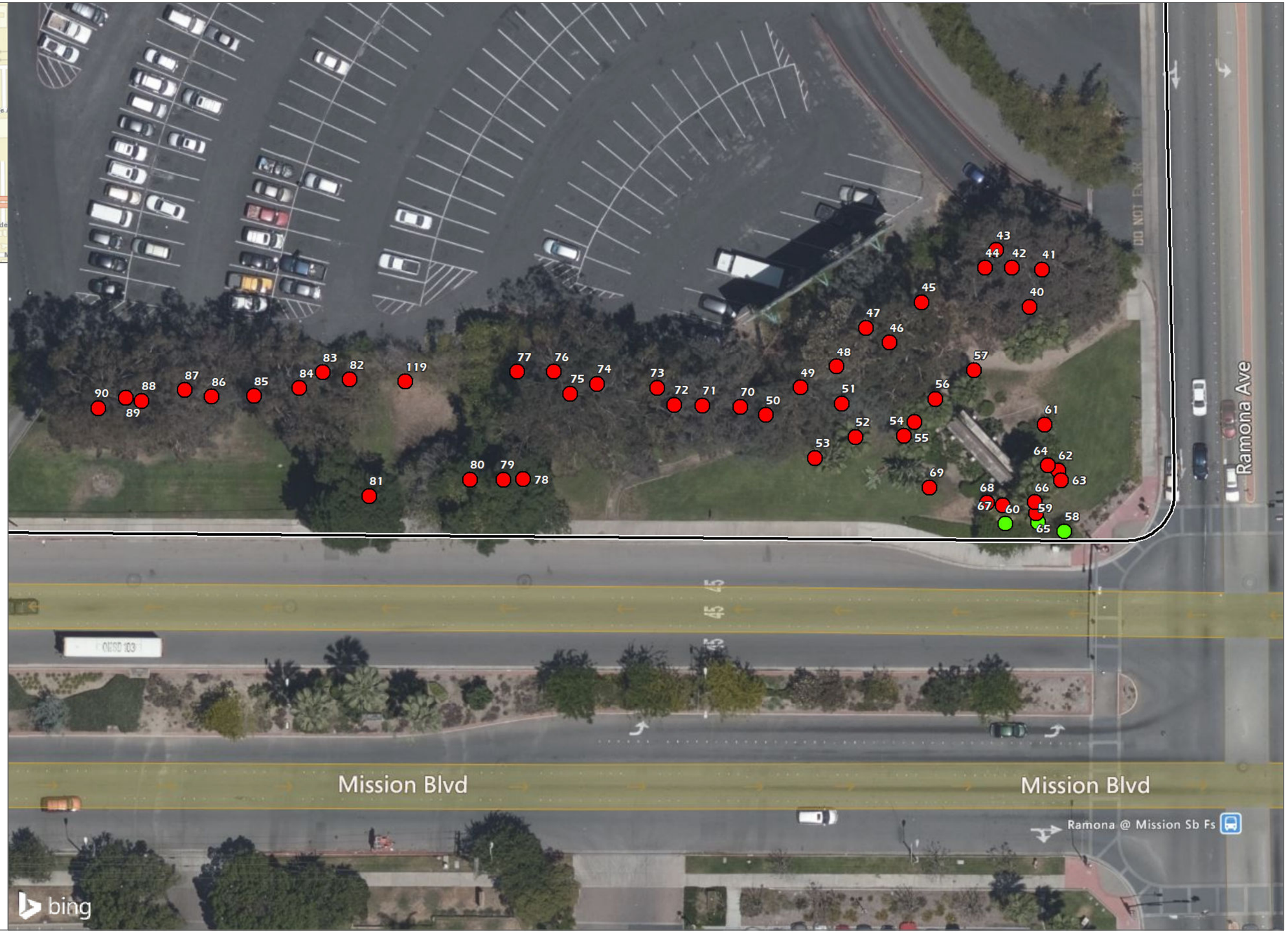
Arborist Report for the Mission and Ramona Industrial Park Project



Project Site

Disposition

- Preserve in Place
- Removal



SOURCE: AERIAL-BING MAPPING SERVICE

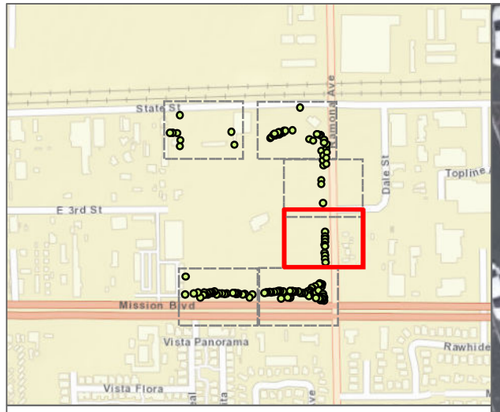
DUDEK

0 20 40 Feet

APPENDIX C - VIEW 2

Tree Disposition Exhibit

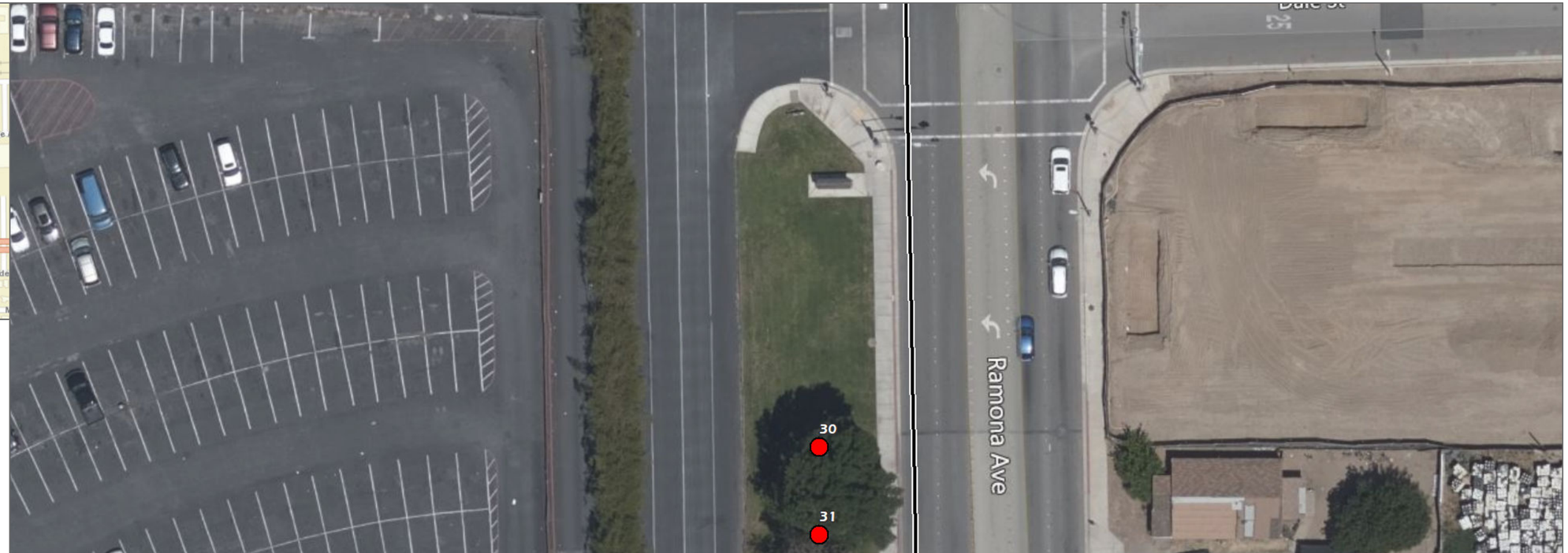
Arborist Report for the Mission and Ramona Industrial Park Project



Project Site

Disposition

- Preserve in Place
- Removal



SOURCE: AERIAL-BING MAPPING SERVICE

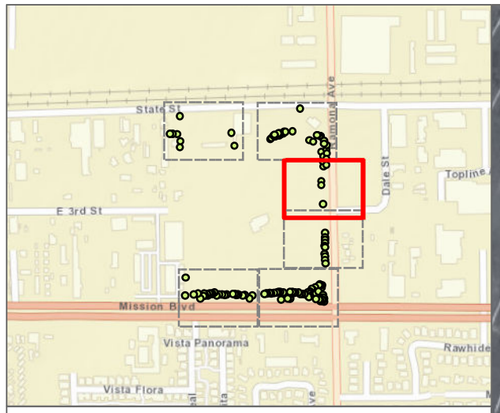
DUDEK

0 20 40 Feet

APPENDIX C - VIEW 3

Tree Disposition Exhibit

Arborist Report for the Mission and Ramona Industrial Park Project



Project Site

Disposition

- Preserve in Place
- Removal

SOURCE: AERIAL-BING MAPPING SERVICE

DUDEK

0 20 40 Feet

APPENDIX C - VIEW 4

Tree Disposition Exhibit

Arborist Report for the Mission and Ramona Industrial Park Project

Project Site

Disposition

- Preserve in Place
- Removal

SOURCE: AERIAL-BING MAPPING SERVICE

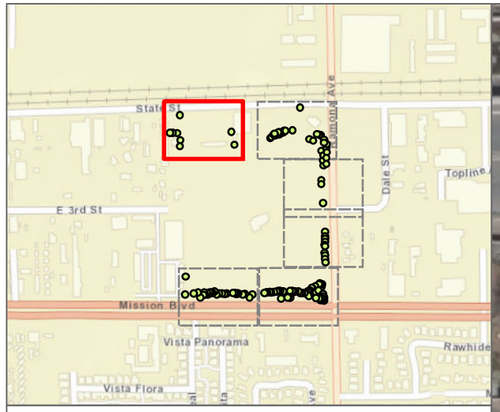
DUDEK

0 20 40 Feet

APPENDIX C - VIEW 5

Tree Disposition Exhibit

Arborist Report for the Mission and Ramona Industrial Park Project



Project Site

Disposition

- Preserve in Place
- Removal

SOURCE: AERIAL-BING MAPPING SERVICE

DUDEK

0 20 40 Feet

APPENDIX C - VIEW 6

Tree Disposition Exhibit

Arborist Report for the Mission and Ramona Industrial Park Project

Appendix D

Tree Protection Measures

Appendix D – Tree Protection Measures

The following sections are included as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.

Tree Protection Measures Prior to Construction

Fencing: All remaining trees that will not be relocated or removed should be preserved and protected in place. Trees within approximately 15 feet of proposed construction activity should be temporarily fenced with chain link or other material satisfactory to City planning staff throughout grading and construction activities. The fencing should be installed 3 feet outside of the dripline of each tree (or edge of canopy for cluster of trees), be 4 feet tall, and staked every 6 feet. The fenced area should be considered the tree protection zone (TPZ) unless proximate construction required temporary removal.

Pre-Construction Meeting: A pre-construction meeting should be held between all contractors (including grading, tree removal/pruning, builders, etc.) and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, should provide written acknowledgement of their receiving tree protection training. This training should include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

Protection and Maintenance During Construction

Once construction activities have begun the following measures should be adhered to:

Equipment Operation and Storage: Avoid heavy equipment operation around the trees. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles should, at minimum, stay out of the fenced TPZ, unless where specifically approved in writing and under the supervision of a Certified Arborist or as provided by the approved landscape plan.

Storage and Disposal: Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the protection zone. Remove all foreign debris within the protection zone; it is important to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked at least 50 feet away from retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

Grade Changes: Grade changes, including adding fill, are not permitted within the TPZ without special written authorization and under the supervision of a Certified Arborist or as provided by the approved landscape plan. Lowering the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around the tree (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red ribbon. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using International Society of Arboriculture (ISA) standards.

Root Pruning: Except where specifically approved in writing or as provided in Attachment 3, all trenching should be outside of the fenced protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary.

Irrigation: Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first 12 months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every 2 to 4 weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced protection zone ***but never soaking the area located within 6 feet of the tree trunk, especially during warmer months***.

Pruning: Do not prune any of the trees until all construction is completed. This will help protect the tree canopies from damage. All pruning should be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only dead wood should be removed from tree canopies.

Washing: During construction in summer and autumn months, wash foliage of trees adjacent to the construction sites with a strong water stream every two weeks in early hours before 10:00 a.m. to control mite and insect populations.

Inspection: An ISA Certified Arborist should inspect the impacted preserved trees on a monthly basis during construction. A report comparing tree health and condition to the original, pre-construction baseline should be submitted following each inspection. Photographs of representative trees are to be included in the report on a minimum annual basis.

Maintenance After Construction

Once construction is complete the fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

Mulch: Provide a 4-inch mulch layer under the canopy of trees. Mulch should include clean, organic mulch that will provide long-term soil conditioning, soil moisture retention, and soil temperature control.

Pruning: The trees will not require regular pruning. Pruning should *only* be done to maintain clearance and remove broken, dead or diseased branches. Pruning should only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 20% of the canopy should be removed at any one time. All pruning should conform to ISA standards.

Watering: The natural trees that are not disturbed should not require regular irrigation, other than the 12 months following substantial root pruning. However, soil probing will be necessary to accurately monitor moisture levels. Especially in years with low winter rainfall, supplemental irrigation for the trees that sustained root pruning and any newly planted trees may be necessary. The trees should be irrigated *only* during the winter and spring months.

Watering Adjacent Plant Material: All plants near the trees should be compatible with water requirements of said trees. The surrounding plants should be watered infrequently with deep soaks and allowed to dry out in-between, rather than frequent light irrigation. The soil should not be allowed to become saturated or stay continually wet. Irrigation spray should not hit the trunk of any tree. A 60-inch dry-zone should be maintained around all tree trunks. An aboveground micro-spray irrigation system is recommended over typical underground pop-up sprays.

Washing: Periodic washing of the foliage is recommended during construction but no more than once every 2 weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

Spraying: If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

Inspection: All trees that were impacted during construction within the TPZ should be monitored by an ISA Certified Arborist for the first 5 years after construction completion. The Arborist should submit an annual report, photograph each tree and compare tree health and condition to the original, pre-construction baseline.