2.18 Animal Species

2.18.1 Regulatory Setting

Many State and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or State Endangered Species Acts. The proposed project is not expected to impact any animal species listed or proposed for listing as threatened or endangered as discussed earlier in the introduction to Chapter 2. All other special-status animal species are discussed here, including CDFW fully protected species and Species of Special Concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- Federal Endangered Species Act
- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Endangered Species Act
- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

2.18.2 Affected Environment

The information in this section is based on the *Natural Environment Study* (May 2017) prepared for the proposed project.

2.18.2.1 Literature Review, Records Search, and Field Visits

A literature review and records search were conducted to identify the presence or potential occurrence of sensitive or special-status animal species within or in the vicinity of the Biological Study Area (BSA). A species list was obtained from the USFWS Information Planning and Conservation System in October 2019, and is

provided in Chapter 4. The following 47 special-status animal species that are not federally- and/or State-listed as endangered or threatened were identified in the literature and records searches as potentially occurring in or near the BSA:

- Crotch bumble bee (*Bombus crotchii*)
- Globose dune beetle (*Coelus globosus*)
- Monarch – California overwintering population (*Danaus plexippus*)
- Western tidal-flat beetle (*Cicindela gabbii*)
- Sandy beach tiger beetle (*Cicindela hirticollis gravida*)
- Western beach tiger beetle (*Cicindela latesignata latesignata*)
- Wandering (=saltmarsh) skipper (*Panoquina errans*)
- Mimic tryonia (=California brackishwater snail) (*Tryonia imitator*)
- Arroyo chub (*Gila orcuttii*)
- Santa Ana speckled dace (*Rhinichthys osculus* ssp.)
- Western pond turtle (*Emys marmorata* (*Actinemys*) *marmorata*)
- Northern leopard frog (*Lithobates pipeans*)
- Western spadefoot (*Spea hammondii*)
- Coast Range newt (*Taricha torosa*)
- Orangethroat whiptail (*Aspidoscelis hyperythra*)
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*)
- Red-diamond rattlesnake (*Crotalus ruber*)
- Coast horned lizard (*Phrynosoma blainvillii* (*coronatum*))
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*)
- Two-striped garter snake (*Thamnophis hammondii*)
- Cooper's hawk (*Accipiter cooperii*)
- Tricolored blackbird (*Agelaius tricolor*)
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)
- Grasshopper sparrow (*Ammodramus savannarum*)
- Great blue heron (*Ardea Herodias*)
- Long-eared owl (*Asio otus*)
- Burrowing owl (*Athene cunicularia*)
- Ferruginous hawk (*Buteo regalis*)
- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)
- White-tailed kite (*Elanus leucurus*)
- California horned lark (*Eremophila alpestris actia*)
- American peregrine falcon (*Falco peregrinus anatum*)

- Bald eagle (*Haliaeetus leucocephalus*)
- Yellow-breasted chat (*Icteria virens*)
- Osprey (*Pandion haliaetus*)
- Yellow warbler (*Setophagia petechial*)
- Pallid bat (*Antrozous pallidus*)
- Mexican long-tongued bat (*Choeronycteris mexicana*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- Western mastiff bat (*Eumops perotis californicus*)
- Hoary bat (*Lasiurus cinereus*)
- Western yellow bat (*Lasiurus xanthinus*)
- Yuma myotis (*Myotis yumanensis*)
- San Diego desert woodrat (*Neotoma lepida intermedia*)
- Big free-tailed bat (*Nyctinomops macrotis*)
- Southern California saltmarsh shrew (*Sorex ornatus salicornicus*)
- American badger (*Taxidea taxus*)

Reconnaissance-level field surveys were conducted on February 11, 17, 18, and 19, 2015, April 6, 2015, and December 2, 2016, to characterize the general biological resources and to ascertain the presence or absence of special-status animal species and the likelihood of their occurrence in and near the BSA.

A habitat suitability assessment for bats was conducted on December 22, 23, and 25, 2016, and January 1 and 4, 2017, to ascertain the potential for bat foraging and roosting activity within the BSA. Potential foraging habitat was assessed throughout the BSA on the basis of vegetation composition, adjacent habitat, and accessibility. Potential roosting sites were identified through the examination of bridges and culvert structures for suitable crevices and roosting habitat. Large trees suitable for foliage-roosting species were noted, but roosting activity at these locations could not be confirmed due to the nature of this roosting behavior.

One special-status animal species, Yuma myotis (*Myotis yumanensis*), was observed or otherwise detected in the BSA during the field surveys. Nine other special-status animal species have the potential to occur in the BSA and are discussed below.

Wildlife species identified in the BSA are characteristic of those found in developed areas in Southern California and include two reptile species, 27 bird species, and three mammal species (a complete list of species observed is provided in Appendix D of the NES).

2.18.2.2 Western Pond Turtle

Western pond turtle (*Emys marmorata*) is a California Species of Special Concern. It is also a Covered Species in the OCTA NCCP/HCP. It is the only remaining native species of freshwater turtle in California. Western pond turtle inhabits ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with abundant vegetation and either rocky or muddy bottoms in woodland, forest, and grassland habitats.

No focused surveys were conducted for western pond turtle; therefore, it is unknown whether this species currently occurs in the BSA. The potential for this species was determined based on an evaluation of the habitat present in the BSA, which identified that suitable habitat is present. There are undocumented reports of the presence of this species in the vicinity of the BSA. The western pond turtle has the potential to occur in Peters Canyon Wash.

2.18.2.3 Nesting Migratory Birds

Based on literature review, records search, and field surveys, suitable habitat is present within the BSA for the following five special-status avian species that are not federally- and/or State-listed as endangered or threatened. These species are also protected under the Migratory Bird Treaty Act (MBTA; 16 United States Code [USC] Sections 703–711) and under Sections 3503 and 3800 of the California Fish and Game Code.

- Cooper's hawk (*Accipiter cooperii*)
- Tricolored blackbird (*Agelaius tricolor*)
- Great blue heron (*Ardea herodias*)
- Ferruginous hawk (*Buteo regalis*)
- White-tailed kite (*Elanus leucurus*)

Suitable foraging and nesting habitat are present within the BSA for Cooper's hawk. Marginal habitat is present in the BSA for the tricolored blackbird; however, sightings of the species are very rare in Orange County, and the likelihood of it occurring within the BSA is extremely low. While suitable foraging habitat is present within the BSA for the great blue heron, no nesting colony habitat exists within the BSA. Great blue herons may be observed in Peters Canyon Wash; however, only individuals are expected and not a nesting colony. Ferruginous hawks are not known to breed in California; however, this species may occur foraging in the winter due to marginally suitable habitat within the BSA. A white-tailed kite was observed foraging

within the BSA in the winter but no suitable nesting habitat is present within the BSA.

Migratory birds are protected under the MBTA. In addition, Sections 3503, 3503.5, and 3800 of the California Fish and Game Code prohibit the take, possession, or destruction of migratory birds, their nests, or their eggs.

2.18.2.4 Special-Status Bridge/Culvert and Crevice-Dwelling Animal Species

Based on literature review, records search, and field surveys, suitable roosting habitat is present within the BSA for the following four special-status bridge/culvert and crevice-dwelling animal species that are not federally and/or State-listed as endangered or threatened:

- Pallid bat (*Antrozous pallidus*)
- Hoary bat (*Lasiurus cinereus*)
- Western yellow bat (*Lasiurus xanthinus*)
- Yuma myotis (*Myotis yumanensis*)

The BSA, including a total of 44 structures, was surveyed for the potential presence of bats. Bat roosting was confirmed through the presence of bats and/or bat sign at nine structures within the BSA, and the probability of roosting is moderate to high at an additional 18 structures. Yuma myotis, a CDFW Special Animal, was observed roosting within two structures in the BSA: Bee Canyon Bridge beneath Interstate 5 (I-5) and Michelle Road Bridge over El Modena-Tustin Channel. Other bat species that may roost in structures within the BSA include Mexican free-tailed bat (*Tadarida brasiliensis*), big brown bat (*Eptesicus fuscus*), and pallid bat (a CDFW Species of Special Concern). Bat species that may roost in trees within the BSA include western yellow bat (a CDFW Species of Special Concern) and hoary bat (a CDFW Special Animal).

2.18.3 Environmental Consequences

The Build Alternative (including Design Option 3)[1] has been determined to have no effect on any species federally- or State-listed as endangered or threatened identified

[1] Alternative 2B without Design Option 3 has been selected as the Preferred Alternative

as potentially occurring within the vicinity of the Build Alternative (refer to Table 2.18.1).

Table 2.18.1: Listed Animal Species Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Species	Status	General Habitat Description	Activity Period	Habitat Present/Absent	Rationale
INVERTEBRATES					
San Diego fairy shrimp *Branchinecta sandiegonensis*	US: FE CA: SA NCCP: NC	Small, shallow (usually less than 12 inches deep), relatively clear but unpredictable vernal pools on coastal terraces. Pools must retain water for a minimum of 13 days for this species to reproduce (3–8 days for hatching, and 10–20 days to reach reproductive maturity).	Seasonally following rains in late fall, winter and spring	A	No suitable habitat for this species is present in the BSA.
Riverside fairy shrimp *Streptocephalus woottoni*	US: FE CA: SA NCCP: NC	Warm-water vernal pools (i.e., large, deep pools that retain water into the warm season) with low-to-moderate dissolved solids, in annual grassland areas interspersed through chaparral or coastal sage scrub vegetation. Suitable habitat includes some artificially created or enhanced pools, such as some stock ponds that have vernal pool-like hydrology and vegetation.	Seasonally following rains; typically January–April	A	No suitable habitat for this species is present in the BSA.
FISH					
Santa Ana sucker *Catostomus santaanae*	US: FT CA: SSC NCCP: NC	The Santa Ana sucker's historical range includes the Los Angeles, San Gabriel, and Santa Ana River drainage systems located in Southern California. An introduced population also occurs in the Santa Clara River drainage system in Southern California. Found in shallow, cool, running water.	Year-round	A	The BSA is outside of the range for this species.
Tidewater goby *Eucyclogobius newberryi*	US: FE CA: SSC NCCP: NC	Brackish water habitats along the California coast from Agua Hedionda Lagoon (San Diego County) to the mouth of the Smith River (Del Norte County). Found in shallow lagoons and lower stream reaches.	Year-round	A	No suitable habitat for this species is present in the BSA.
Steelhead (Southern California Distinct Population Segment) *Oncorhynchus mykiss irideus*	US: FE CA: SSC NCCP: NC	Occurs in cool water streams; spawns in areas of gravelly substrate in riffles or pool tails. Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.	Year-round	A	The BSA is outside of the range for this species.

Table 2.18.1: Listed Animal Species Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Species	Status	General Habitat Description	Activity Period	Habitat Present/Absent	Rationale
AMPHIBIANS					
Arroyo toad *Anaxyrus* (*Bufo*) *californicus*	US: FE CA: SSC NCCP: NC	Washes and arroyos with open water; sand or gravel beds; for breeding, pools with sparse overstory vegetation. Coastal and a few desert streams from Santa Barbara County to Baja California.	March–July	A	No suitable habitat for this species is present in the BSA.
BIRDS					
Swainson's hawk *Buteo swainsoni* (nesting)	US: – CA: ST NCCP: NC	Open desert, grassland, or cropland containing scattered, large trees or small groves. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures.	Spring and fall (in migration)	A	Not expected to occur. In Southern California, now mostly limited to spring and fall transient. Formerly abundant in California with wider breeding range.
Western snowy plover *Charadrius alexandrinus nivosus* (nesting)	US: FT (coastal population) CA: SSC NCCP: NC	Sandy coastal beaches, lakes, alkaline playas. Scattered locations along coastal California and Channel Islands, inland at Salton Sea, and at various alkaline lakes.	Coast: Year-round Inland lakes: April–September	A	No suitable habitat for this species is present in the BSA. Not expected to occur.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis* (nesting)	US: FT CA: SE NCCP: NC	Breeds and nests in extensive stands of dense cottonwood/willow riparian forest along broad, lower flood bottoms of larger river systems at scattered locales in western North America; winters in South America.	June–September	A	No suitable habitat for this species is present in the BSA.
Southwestern willow flycatcher *Empidonax traillii extimus*	US: FE CA: SE NCCP: C	Rare and local breeder in extensive riparian areas of dense willows or (rarely) tamarisk, usually with standing water, in the southwestern U.S. and possibly extreme northwestern Mexico. Winters in Central and South America. Below 6,000 ft in elevation.	May–September	A	No suitable habitat for this species is present in the BSA.
California black rail *Laterallus jamaicensis coturniculus*	US: – CA: ST/CFP NCCP: NC	Requires shallow water in salt marshes, freshwater marshes, wet meadows, or flooded grassy vegetation. Prefers areas of moist soil vegetated by fine-stemmed emergent plants, rushes, grasses, or sedges, with scattered small pools.	Year-round	A	No suitable habitat for this species is present in the BSA. Now extirpated from virtually all of coastal Southern California.

Table 2.18.1: Listed Animal Species Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Species	Status	General Habitat Description	Activity Period	Habitat Present/Absent	Rationale
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	US: – CA: SE NCCP: NC	Resident in salt marshes, with rare exception (e.g., Islas Todos Santos, Baja California), of Pacific Coast from Santa Barbara County to Baja California.	Year-round	A	No suitable habitat for this species is present in the BSA.
Coastal California gnatcatcher *Polioptila californica californica*	US: FT CA: SSC NCCP: C	Inhabits coastal sage scrub in low-lying foothills and valleys up to about 1,640 ft in elevation in cismontane southwestern California and Baja California.	Year-round	A	No suitable habitat for this species is present in the BSA.
Light-footed (clapper) Ridgeway's rail *Rallus obsoletus levipes*	US: FE CA: SE/CFP NCCP: NC	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on mollusks and crustaceans.	Year-round, vocalizes at night, dawn, and dusk	A	No suitable habitat for this species is present in the BSA.
Bank swallow *Riparia riparia* (nesting)	US: – CA: ST NCCP: NC	Nesting habitat is vertical banks of fine textured soils, most commonly along streams and rivers. In Southern California, fairly common spring and fall transient in interior; very uncommon spring transient and rare fall transient along coast. Casual in winter.	Variable year-round	A	Not expected to occur due to lack of suitable habitat in the BSA.
California least tern *Sternula antillarum browni* (nesting colony)	US: FE CA: SE/CFP NCCP: NC	Nests along the coast from San Francisco Bay south to northern Baja California. Forages in shallow water. Colonial breeder on bare or sparsely vegetated, flat substrates, sand beaches, alkali flats, landfills, or paved areas.	April–October	A	No suitable habitat for this species is present in the BSA.
Least Bell's vireo *Vireo bellii pusillus*	US: FE CA: SE NCCP: C	Riparian forests and willow thickets. The most critical structural component of least Bell's vireo habitat in California is a dense shrub layer 2 to 10 ft above ground.	April–September	A	No suitable habitat for this species is present in the BSA.

Table 2.18.1: Listed Animal Species Potentially Occurring or Known to Occur in and in the Vicinity of the BSA

Species	Status	General Habitat Description	Activity Period	Habitat Present/Absent	Rationale
MAMMALS					
Pacific pocket mouse *Perognathus longimembris pacificus*	US: FE CA: SSC NCCP: NC	Historically occupied open habitats on sandy soils along the coast from Los Angeles to the Mexican border.	April –September	A	Not expected to occur due to lack of suitable habitat. Now known from only four sites in Orange and San Diego Counties.

Source: *Natural Environment Study* (May 2017).
[1] Months in parentheses are uncommon.

Status:
CE = California Endangered
CFP = California Fully Protected Species
CNPS = California Native Plant Society
CSP = California Special Plant
CT = California Threatened
FC = Federal Candidate
FE = Federal Endangered
FP, FPE, FPT = Federal Proposed
FT = Federal Threatened

CNPS California Rare Plant Ranking Designations:
1A = Plants presumed extinct in California
1B = Plants rare and endangered in California and throughout their range
2 = Plants rare, threatened, or endangered in California but more common elsewhere in their range
3 = Plants needing more information (a review list)
4 = Plants of limited distribution (a watch list)

Habitat Present/Absent:
A = No habitat is present and no further work is needed, or habitat is absent or species was absent in the BSA at the time of the focused survey.
CH = The project footprint is located in a designated critical habitat unit, but appropriate habitat is not necessarily present.
HP = Habitat is or may be present.
O = The species was observed in the BSA at the time of the survey.

BSA = Biological Study Area
C = Species Covered by NCCP/HCP
CC = Species Conditionally Covered by NCCP/HCP
CNPS = California Native Plant Society
ft = foot/feet
NC = Species Not Covered by NCCP/HCP
NCCP = Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) for Orange County Transportation Authority

2.18.3.1 Temporary Impacts

Build Alternative (Alternative 2A and Alternative 2B [Preferred Alternative])

Based on the literature review, records search, and field surveys, suitable habitat for western pond turtle is present in Peters Canyon Wash. The Build Alternative is not anticipated to impact suitable habitat for the western pond turtle located within Peters Canyon Wash, but the preliminary Temporary Construction Easement (TCE) is located adjacent to the habitat as well as upstream. Therefore, locations outside grading limits could be indirectly temporarily impacted by dust, changes in hydrology, erosion, siltation, increased runoff, and invasion by nonnative species introduction and spreading during construction of the Build Alternative. With implementation of Measures BIO-6 through BIO-10, provided below in Section 2.18.4, potential temporary impacts to western pond turtle during project construction would not be adverse.

Construction of the Build Alternative could also temporarily impact nesting birds protected under the MBTA and the California Fish and Game Code either directly as a result of the removal of trees occupied by nesting birds or disturbances to bridge and crevice habitat, or indirectly as a result of disturbances near trees occupied by nesting birds. With implementation of Project Feature PF-BIO-11, potential temporary impacts to nesting birds during project construction would not be adverse.

PF-BIO-11 **Avoidance of Breeding Season.** If Caltrans/OCTA determines that avoidance of the avian breeding season (January 1–September 30) is not feasible, at least two weeks prior to the initiation of the proposed project activities during the nesting bird/raptor season, a qualified Biologist with experience in conducting breeding bird surveys will conduct weekly bird surveys to detect presence/absence of migratory and resident bird species occurring in suitable nesting habitat that would be directly or indirectly disturbed and (as access to adjacent areas allows) any other such habitat within an appropriate buffer distance of the disturbance area. The need for a presence/absence survey prior to initiating activities during the breeding season will be included in the PS&E for the project. Generally, the buffer distance should be 300 ft (500 ft for federally and State-listed bird species and nesting raptors); however, because the proposed project occurs along a noisy freeway, a buffer distance as low as 100 ft for common species and non-raptors could be appropriate. If a narrow buffer distance is warranted, Caltrans/OCTA will have a qualified Biologist identify the appropriate buffer distances for raptors and non-raptors in

consultation with the Caltrans Resident Engineer and will notify CDFW. The surveys will continue on a weekly basis with the last survey being conducted no more than three days prior to the initiation of the proposed project activities. If a nesting bird species is found, Caltrans/OCTA will do the following to avoid and minimize impacts on native birds and the nest or eggs of any birds:

- Implement default 300 ft minimum avoidance buffers for all birds and 500 ft minimum avoidance buffers for all raptor species. The breeding habitat/nest site will be fenced and/or flagged in all directions, and this area will not be disturbed until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by the project.

- If a narrower buffer distance is determined appropriate by the qualified biologist, then Caltrans/OCTA will develop a project specific Nesting Bird Management Plan. The site specific nest protection plan will be developed collaboratively with the Wildlife Agencies and submitted to the Wildlife Agencies, although the Wildlife Agencies will not be responsible for approving the narrower buffer distance and the Nesting Bird Management Plan. The Plan should include detailed methodologies and definitions to enable a qualified avian biologist to monitor and implement nest specific buffers based on topography, vegetation, species, and individual bird behavior. This Nesting Bird Management Plan will be supported by a Nest Log that tracks each nest and its outcome. The Nest Log will be submitted to the Wildlife Agencies at the end of each week.

- Caltrans/OCTA may propose an alternative plan for avoidance and nesting birds for the Wildlife Agencies' review and approval.

- Flagging, stakes, and/or construction fencing will be used to demarcate the inside boundary of the buffer between the proposed project activities and the nest. Caltrans/OCTA personnel, including all contractors working on site, will be instructed on the sensitivity of the area. Caltrans/OCTA will document the results of the recommended protective measures described

above to demonstrate compliance with applicable State and federal laws pertaining to the protection of native birds.

- The Biological Monitor will be present on site during all grubbing and clearing of vegetation to ensure that these activities remain within the proposed project footprint (i.e., outside the demarcated buffer); to ensure that the flagging/stakes/fencing is being maintained; and to minimize the likelihood that active nests are abandoned or fail due to the proposed project activities. The Biological Monitor will send weekly monitoring reports to Caltrans/OCTA and the OCTA NCCP Administrator during the grubbing and clearing of vegetation and will notify Caltrans/OCTA and the OCTA NCCP Administrator immediately if the proposed project activities take, possess, or needlessly destroy the nest or eggs of any bird, any bird-of-prey, or any active bird nests or eggs. Within 48 hours of damage to an active nest or eggs or observed death or injury of birds protected under State law or the Migratory Bird Treaty Act (MBTA), Caltrans/OCTA will notify the USFWS/CDFW.

Bridge or culvert widening or replacement activities associated with construction of the Build Alternative could result in potential effects to roosting bats and maternity colonies of roosting bats. During construction activities, indirect temporary impacts to bats or bat-roosting habitat could include impacts from dust, noise, and vibration in the vicinity of roost sites. Direct temporary impacts could include destruction or loss of roosting habitat through demolition or removal of a structure or portions of a structure that contain roost features (under Alterative 2A only) or tree trimming or removal. Bat maternity colonies, which consist of female bats and flightless young, are particularly vulnerable to these impacts. Humane eviction and exclusion of bats from a roost would be considered a temporary impact if alternative habitat is provided and if the bats are permitted to recolonize the original roost site following construction. With implementation of Measures BIO-12 through BIO-18, provided below in Section 2.18.4, potential temporary impacts to bats and bridge- and crevice-nesting species during project construction would not be adverse.

No Build Alternative (Alternative 1)

The No Build Alternative would not include construction of any of the Build Alternative improvements and thus would not result in the removal of any structures, trees/vegetation, or result in the generation of any dust, noise, vibration, or erosion. Therefore, the No Build

Alternative would not result in temporary impacts to special-status animal species in the BSA, including western pond turtle, nesting birds, and bats.

2.18.3.2 Permanent Impacts

Build Alternative (Alternative 2A and Alternative 2B [Preferred Alternative])

The Build Alternative would not result in permanent impacts to western pond turtle located within Peters Canyon Wash.

The Build Alternative would not result in any permanent direct impacts on nesting birds. Indirect noise impacts on nesting birds from traffic on I-5 and area streets would be expected to be the same as existing conditions.

Humane eviction and exclusion of bats from a roost would be considered a permanent impact if the roost site remained sealed. Indirect noise impacts to bat species from traffic on I-5 and area streets would be expected to be the same as from existing conditions.

With implementation of Project Feature PF-BIO-11 along with Measures BIO-6 through BIO-10 and BIO-12 through BIO-18 provided below in Section 2.18.4, potential indirect permanent impacts to western pond turtle, nesting birds, and bats and bridge- and crevice-nesting species resulting from implementation of the Build Alternative would not be adverse.

No Build Alternative (Alternative 1)

The No Build Alternative would not include operation of any of the Build Alternative improvements. Therefore, the No Build Alternative would not result in permanent impacts to special-status animal species in the BSA, including western pond turtle, nesting birds, and bats.

2.18.4 Avoidance and Minimization Measures

The following measures would avoid and/or minimize potential impacts to western pond turtle during construction of the Build Alternative:

BIO-6 **Western Pond Turtle Avoidance and Minimization Plan.** As a condition of the Orange County Transportation Authority (OCTA) Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) and to avoid take, Caltrans/OCTA will prepare a Western Pond Turtle Avoidance and Minimization Plan for review and approval by the CDFW. This Plan will describe: (1) the methodology for pre-construction surveys based on the

planned start of construction (i.e., within or outside the season when western pond turtles are active); (2) exclusionary measures that will be installed around the construction impact area to exclude turtles; (3) the methodology for relocation of western pond turtles outside the construction impact area; (4) identification of a relocation site at a nearby location in the same watershed as the proposed project; (5) biological monitoring requirements during construction; and (6) avoidance measures to be implemented during construction to avoid and minimize impacts on the western pond turtle. The Avoidance and Minimization Plan will be incorporated into the Plans, Specifications, and Estimates (PS&E) for the project.

BIO-7 **Western Pond Turtle Pre-Construction Surveys.** Two weeks prior to ground-disturbing activities (including placement of heavy equipment) in or near aquatic habitats, Caltrans/OCTA will ensure that a pre-construction survey is conducted for western pond turtle as described in the Western Pond Turtle Avoidance and Minimization Plan. The pre-construction surveys will be conducted by a CDFW-approved qualified Biologist (i.e., one with western pond turtle trapping/handling experience and who holds a CDFW Scientific Collecting Permit to carry out these activities) to determine their presence or absence within the construction footprint. The pre-construction survey will include a trapping effort that will be consistent with United States Geological Survey (USGS) trapping protocols. If nonnative species are captured during the trapping effort, they will be removed. The trapping effort will be combined with a visual survey; the Wildlife Agency-approved/qualified Biologist will walk the impact area to search for any potential breeding areas and existing nests. To the extent possible, pre-construction surveys will be conducted under weather conditions when western pond turtles are expected to be active. If construction begins under conditions that would not be conducive to western pond turtle activity, pre-construction surveys may be conducted more than two weeks prior or would use alternative methodology to detect aestivating turtles as described in the Western Pond Turtle Avoidance and Minimization Plan and approved by the Wildlife Agencies. A report documenting the pre-construction survey results and measures that will be required during construction as described in the Western Pond Turtle Avoidance and Minimization Plan will be provided to Caltrans/OCTA/

Wildlife Agencies prior to commencing construction or within two weeks of completion of field surveys, whichever is earlier. If western pond turtles are found within the construction footprint, the occupied habitat and an appropriate buffer (as determined by a qualified Biologist) will be avoided to the maximum extent practicable. The pre-construction survey requirements will be incorporated into the PS&E for the project.

BIO-8 **Western Pond Turtle Exclusion and Relocation.** If western pond turtles are present in the Biological Study Area (BSA) during pre-construction surveys, the exclusion and relocation of western pond turtles will be implemented as described in the Western Pond Turtle Avoidance and Minimization Plan and approved by the CDFW. The Avoidance and Minimization Plan will be incorporated into the PS&E for the project.

BIO-9 **Biological Monitoring in Western Pond Turtle Occupied Habitat.** Biological monitoring will occur as described in the Western Pond Turtle Avoidance and Minimization Plan. Exclusionary fencing will be used to ensure western pond turtles are kept out of the construction area as described in the Western Pond Turtle Avoidance and Minimization Plan. Exclusionary fencing will be maintained throughout the duration of construction. The Avoidance and Minimization Plan will be incorporated into the PS&E for the project.

BIO-10 **Avoidance and Minimization of Western Pond Turtle Habitat.** Construction will avoid work in ponded or flowing water within 1,500 feet (ft) of known turtle locations unless alternative avoidance and minimization measures described in the Western Pond Turtle Avoidance and Minimization Plan are approved by the Wildlife Agencies. The Avoidance and Minimization Plan will be incorporated into the PS&E for the project.

The following measures would avoid and/or minimize potential impacts to bats and bridge- and crevice-nesting species during construction of the Build Alternative:

BIO-12 **Pre-Construction Roosting Bat Surveys.** Nighttime exit counts and acoustic surveys shall be performed by a qualified Bat Biologist at all structures that may be subject to proposed project-related impacts. These surveys shall be performed during the bat maternity season (April 1–August 31) well in

advance of construction in order to provide adequate time for mitigation planning. The need for pre-construction roosting bat surveys will be included in the PS&E for the project.

BIO-13 **Avoidance of Maternity Roosts.** Within 500 ft of structures where maternity roosting is confirmed, demolition and pile-driving activities shall avoid the recognized bat maternity season (April 1–August 31) to prevent potential mortality of flightless young bats. The avoidance of maternity roosts will be included in the PS&E for the project.

BIO-14 **Biological Monitoring by a Bat Specialist.** Construction activities at structures housing maternity colonies shall be coordinated with a qualified Bat Biologist and the CDFW. The need for monitoring by a bat specialist will be included in the PS&E for the project.

BIO-15 **Bat Evictions.** If direct impacts to bat-roosting habitat are anticipated, humane evictions and exclusions of roosting bats should be performed under the supervision of a qualified Bat Biologist in the fall (September or October) prior to any work activities that would result in direct impacts or direct mortality to roosting bats. This action will be performed in coordination with the CDFW. To avoid potential mortality of flightless juvenile bats, evictions and exclusions of bats cannot be performed during the maternity season (April 1–August 31). Winter months are also inappropriate for bat eviction because not all individuals in a roost will emerge on any given night. In addition, long-distance movements to other roost sites are more difficult during the winter when prey availability is scarce, resulting in high mortality rates of evicted bats. The requirements described above for bat eviction will be included in the PS&E for the project.

BIO-16 **Alternate Bat-Roosting Habitat.** Alternate bat-roosting habitat structures should be installed on the structure prior to the eviction/exclusion of bats from that structure. The design, numbers, and locations of these roost structures should be determined in consultation with a qualified Bat Biologist. If permanent direct impacts to bat-roosting habitat are anticipated and a humane eviction/exclusion is performed, alternate roosting habitat shall be provided to ensure no net loss of bat-roosting habitat. This action shall be coordinated

with the CDFW and a qualified Bat Biologist to ensure that the installed habitat will provide adequate mitigation for impacts. The requirements described above for alternative bat-roosting habitat will be included in the PS&E for the project.

BIO-17 **Night Lighting During Construction.** At structures where night roosting is confirmed, work shall be limited to the daylight hours to the greatest extent feasible to avoid potential disruption of foraging. If night work cannot be avoided, night lighting shall be focused only on the area of direct work, airspace access to and from the roost features of the structure shall not be obstructed, and light spillover into the adjacent foraging areas shall be minimized to the greatest extent feasible. Limitations on night lighting will be included in the PS&E for the project.

BIO-18 **Avoidance of Foliage-Roosting Bats.** To the greatest extent feasible, tree trimming/removal activities shall be performed outside the bat maternity season, which occurs from April 1 through August 31, to avoid direct impacts to nonvolant (flightless) young that may roost in trees within the Study Area. This period also coincides with the bird nesting season (February 1–September 30). If trimming or removal of trees during the bat maternity season (April 1–August 31) cannot be avoided, a qualified Biologist will monitor tree removal. Activities to avoid effects to foliage-roosting bats described above will be included in the PS&E for the project.