

the CNPS Inventory of Rare and Endangered Plants,³⁸ and reconnaissance level field surveys. Using information from the CNDDDB, USFWS, CNPS, the literature review, and limited observations in the field, a list of special-status plant and animal species that have the potential to occur in the Plan Area was generated and shown in **Table 3.4-3**.

The “Potential to Occur” category identified in Table 3.4-3 uses the following definitions:

- **Absent:** The Plan Area does not and could not support the particular species.
- **Unlikely:** The Plan Area does not support suitable habitat for a particular species. The Plan Area is outside of the species known range.
- **Low Potential:** The Plan Area only provides limited and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate Plan Area.
- **Medium Potential:** The Plan Area provides suitable habitat for a particular species.
- **High Potential:** The Plan Area provides ideal habitat conditions for a particular species and/or known populations occur in the immediate area or within the potential area of impact.

Of the special-status animals listed in Table 3.4-3, only species classified as having a medium or high potential for occurrence in the Plan Area were considered in the impact analysis.

Special-Status Plants

A number of special-status plants have the potential to occur within the Plan Area, including big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*), dwarf downingia (*Downingia pusilla*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), Ahart’s dwarf rush (*Juncus leiospermus* ssp. *ahartii*), Red Bluff dwarf rush (*Juncus leiospermus* ssp. *leiospermus*), legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), slender Orcutt grass (*Orcuttia tenuis*), and Sanford’s arrowhead (*Sagittaria sanfordii*).³⁹ According to the CNDDDB, some of these special-status species have been documented to occur within five miles of the Plan Area (**Figure 3.4-3**).⁴⁰ Descriptions of these species with potential to occur within the Plan Area and survey results from Area A are provided below, based on the Biological Resources Assessment for the Lincoln Village 5 and SUD-B Specific Plan.⁴¹

³⁸ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). Available: <http://www.rareplants.cnps.org/>. Accessed April 16, 2015.

³⁹ ECORP Consulting, Inc., 2015. Biological Resources Assessment for the Lincoln Village 5 & SUD-B Specific Plan. Prepared for Richland Developers, Inc. March 18, 2015.

⁴⁰ California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁴¹ ECORP Consulting, Inc., 2015. Biological Resources Assessment for the Lincoln Village 5 & SUD-B Specific Plan. Prepared for Richland Developers, Inc. March 18, 2015.

**TABLE 3.4-3.
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PLAN AREA**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description / Blooming Period	Potential to Occur in the Plan Area
Invertebrates			
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE/--/--	Lifecycle restricted to vernal pools.	Unlikely. The Plan Area is unlikely to provide suitable large, turbid vernal pools. This species was not detected during dry season sampling in Area A during 2013. ⁴² The remainder of the Plan Area has not been surveyed. Extensive surveys in the region have not located this species outside of known populations within the Mariner Conservation Bank.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT/--/--	Lifecycle restricted to vernal pools.	High. Suitable habitat is present within the Plan Area, and there are known occurrence of this species within the Plan Area. ⁴³ This species was detected during dry season sampling in Area A during 2013. ⁴⁴ The remainder of the Plan Area has not been surveyed. The northeastern corner of the Plan Area supports critical habitat for this species.
<i>Lepidurus packardii</i> Vernal pool tadpole shrimp	FE/--/--	Found in vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, or ditches.	High. Suitable habitat is present within the Plan Area, and there are known occurrence of this species within the Plan Area. ⁴⁵ This species was not detected during dry season sampling in Area A during 2013. ⁴⁶ The remainder of the Plan Area has not been surveyed.
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT/--/--	Breeds and forages exclusively on blue elderberry (<i>Sambucus nigra</i>) shrubs, below 3,000 feet in elevation.	Medium. The Plan Area provides suitable habitat, although habitat is limited due to agricultural activities. Elderberry shrubs were not observed during 2013 and 2014 surveys in Area A.

⁴² ECORP Consulting, Inc., 2014. Federally listed large brachiopod dry season surveys, Lincoln Village 5, Phase 1 Project. Letter addressed to U.S. Fish and Wildlife Service, Sacramento, CA. December 16, 2014.

⁴³ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

⁴⁴ ECORP Consulting, Inc., 2014. Federally listed large brachiopod dry season surveys, Lincoln Village 5, Phase 1 Project. Letter addressed to U.S. Fish and Wildlife Service, Sacramento, CA. December 16, 2014.

⁴⁵ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

⁴⁶ ECORP Consulting, Inc., 2014. Federally listed large brachiopod dry season surveys, Lincoln Village 5, Phase 1 Project. Letter addressed to U.S. Fish and Wildlife Service, Sacramento, CA. December 16, 2014.

**TABLE 3.4-3 (CONTINUED)
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PLANNING AREA**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description / Blooming Period	Potential to Occur in the Planning Area
Fish			
<i>Hypomesus transpacificus</i> Delta smelt	FT/CE/--	Occurs in the Sacramento-San Joaquin Delta.	Absent. The Plan Area is outside of known range for this species.
<i>Oncorhynchus mykiss irideus</i> Steelhead – Central Valley DPS	FT/--/--	Spawning in Sacramento River and associated tributaries, and in the San Joaquin River tributaries.	High. Suitable habitat is present within the Plan Area from Auburn Ravine upstream to Gold Hill dam, and there are known occurrence of this species within the Plan Area. ⁴⁷ Auburn Ravine is designated critical habitat for this species.
<i>Oncorhynchus tshawytscha</i> Central Valley spring-run ESU Chinook salmon	FT/CT/--	Spawns in Sacramento River and few select tributaries where gravelly substrate and suitable water conditions occur.	Medium. Suitable habitat is present within the Plan Area from Auburn Ravine upstream to Gold Hill Dam, and there are known occurrences of probably non-natal rearing juvenile fish of this species within Auburn Ravine downstream of the Plan Area.
<i>Oncorhynchus tshawytscha</i> Sacramento winter-run ESU Chinook salmon	FE/CE/--	Spawns in Sacramento River and few select tributaries where gravelly substrate and suitable water conditions occur.	Medium. Suitable habitat is present within the Plan Area from Auburn Ravine upstream to Gold Hill dam, and there are known occurrences of probably non-natal rearing juvenile fish of this species within Auburn Ravine downstream of the Plan Area.
<i>Oncorhynchus tshawytscha</i> Central Valley Fall-run Chinook salmon	--/CSC/--	Spawns in Sacramento River and few select tributaries where gravelly substrate and suitable water conditions occur.	High. Suitable habitat is present within the Plan Area from Auburn Ravine upstream to Gold Hill dam, and there are known occurrences of this species within Auburn Ravine downstream of the Plan Area.
Reptiles			
<i>Emys marmorata</i> Western pond turtle	--/CSC/--	Permanent or nearly permanent water in a wide variety of aquatic habitats. Requires basking sites. Nest sites may be found up to 0.5 km from water.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Thamnophis gigas</i> Giant garter snake	FT/CT/--	Generally inhabits marshes, sloughs, ponds, slow-moving streams, ditches, and rice fields which have water from early spring through mid-fall, emergent vegetation (such as cattails and bulrushes), open areas for sunning, and high ground for hibernation and escape cover.	Unlikely. Plan Area is outside the known range of the species.

⁴⁷ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

**TABLE 3.4-3 (CONTINUED)
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PLANNING AREA**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description / Blooming Period	Potential to Occur in the Planning Area
Amphibians			
<i>Ambystoma californiense</i> California tiger salamander	FT/CT,CSC/--	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Needs underground refuges and vernal pools or other seasonal water sources.	Unlikely. Plan Area is outside the known range of the species.
<i>Rana draytonii</i> California red-legged frog	FT/CSC/--	Breeds in slow moving streams with deep pools, ponds, and marshes with emergent vegetation.	Unlikely. Plan Area is outside the known range of the species.
<i>Spea hammondi</i> Western spadefoot toad	--/CSC/--	Occurs seasonally in grasslands, prairies, chaparral, and woodlands, in and around wet sites. Breeds in shallow, temporary pools formed by winter rains. Takes refuge in burrows.	High. Suitable habitat is present in the Plan Area. No surveys have been conducted in the Plan Area.
Birds			
<i>Agelaius tricolor</i> Tricolored blackbird	--/CC/--	Nests in dense stands of tules, cattails or blackberries adjacent to open grasslands or agricultural fields. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Ammodramus savannarum</i> Grasshopper sparrow	--/CSC/--	Prairie, cultivated grasslands, weedy fallow fields, and alfalfa fields. Prefer drier sparse sites, with open or bare ground for feeding. Nests are built on the ground, near clumps of tall grass or at the base of a shrub with overhanging vegetation.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Aquila chrysaetos</i> Golden eagle	BEPA/CFP,WL /--	Forages in open habitats such as grasslands and oak savanna. Nests on cliffs or large trees with substantial horizontal branches for roosting and perching.	Low. Some suitable foraging habitat present, but no suitable nesting is present within the Plan Area.
<i>Ardea alba</i> Great egret (rookery)	--/--/--	Forages in fresh and salt marshes, marshy ponds and tidal flats. Nests in trees or shrubs.	Medium. Suitable habitat for rookeries is present within the Plan Area. No surveys for rookeries of this species have been conducted within the Plan Area. The nearest heron/egret rookery is located within 4 miles of the Plan Area.
<i>Ardea herodias</i> Great blue heron (rookery)	--/--/--	Groves of tall trees, especially near shallow water foraging areas such as marshes, tide-flats, lakes, rivers/streams and wet meadows.	Medium. Suitable habitat for rookeries is present within the Plan Area. No surveys for rookeries of this species have been conducted within the Plan Area. The nearest heron/egret rookery is located within 4 miles of the Plan Area.

**TABLE 3.4-3 (CONTINUED)
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PLANNING AREA**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description / Blooming Period	Potential to Occur in the Planning Area
Birds (cont.)			
<i>Asio flammeus</i> Short-eared owl	--/CSC/--	Found in swamp lands, both fresh and saltwater; lowland meadows; and irrigated alfalfa fields. Tule patches/tall grass is needed for nesting/daytime seclusion. Nests on dry ground in depressions concealed in vegetation.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Athene cunicularia</i> Burrowing owl	--/CSC/--	Nests in small mammal burrows that are in or adjacent to open dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Buteo regalis</i> Ferruginous hawk	--/WL/--	Wintering grounds consist of open grasslands.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Buteo swainsoni</i> Swainson's hawk	--/CT/--	Nests in large riparian trees and forages over open grasslands and agricultural fields.	High. Suitable habitat is present within the Plan Area, and there are known occurrence of this species within the Plan Area. ⁴⁸ No surveys for this species have been conducted within the Plan Area.
<i>Circus cyaneus</i> Northern harrier	--/CSC/--	Forages in meadows, grasslands, and open rangelands; nests on the ground in shrubby vegetation, often near marshes.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FT/CE/--	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often intermixed with cottonwoods, with an understory of blackberry, nettles, or wild grape.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Elanus leucurus</i> White-tailed kite	--/CFP/--	Forages in open plains, grasslands, and prairies; typically nests in trees.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Egretta thula</i> Snowy egret (rookery)	--/--/--	Colonial nester with nest sites situated in protected beds of dense tules. Rookery sites are situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	Medium. Suitable habitat for rookeries is present within the Plan Area. No surveys for rookeries of this species have been conducted within the Plan Area. The nearest heron/egret rookery is located within 4 miles of the Plan Area.

⁴⁸ Ibid.

**TABLE 3.4-3 (CONTINUED)
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PLANNING AREA**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description / Blooming Period	Potential to Occur in the Planning Area
Birds (cont.)			
<i>Falco mexicanus</i> Prairie falcon	--/WL/--	Inhabits dry, open terrain, either level or hilly. Breeding sites are located on cliffs. Forages far afield.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Grus canadensis tabida</i> Greater sandhill crane	--/CT,CFP/--	Found in mudflats around reservoirs, moist meadows and agricultural areas. They forage in grain fields and pastures. During migrations and in winter they prefer open prairie, agricultural fields or river valleys.	Low – Limited and low quality habitat is present within the Plan Area.
<i>Lanius ludovicianus</i> Loggerhead shrike	--/CSC/--	Nests in tall shrubs and dense trees, forages in grasslands, marshes, and ruderal habitats.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Laterallus jamaicensis columiculus</i> California black rail	--/CT,CFP/--	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Unlikely. Suitable habitat is not present within the Plan Area.
<i>Numenius americanus</i> Long-billed curlew	--/WL/--	Breeds in grasslands.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Nycticorax nycticorax</i> Black-crowned night heron (rookery)	--/--/--	Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake marings, mud-bordered bays, marshy spots.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Progne subis</i> Purple martin	--/CSC/--	Inhabits woodlands, low elevation coniferous forest of Douglas-fir (<i>Pseudotsuga menziesii</i>), ponderosa pine (<i>Pinus ponderosa</i>), and Monterey pine (<i>Pinus radiata</i>). Nests primarily in old woodpecker cavities, also in human-made structures. Nest often located in tall, isolated tree/snag.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
Mammals			
<i>Antrozous pallidus</i> Pallid bat	--/CSC/--	Found in deserts, grasslands, scrublands, woodlands and forests. Roosts in rock crevices, buildings, and bridges in arid regions.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.

**TABLE 3.4-3 (CONTINUED)
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PLANNING AREA**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description / Blooming Period	Potential to Occur in the Planning Area
Mammals (cont.)			
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	--/CCT,CSC/--	Roosts in the open in large caves, abandoned mines and occasionally buildings. Extremely sensitive to disturbance during roosting, particularly at maternity roosts.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
<i>Taxidea taxus</i> American badger	--/CSC/--	Occurs in a wide variety of open forest, shrub, and grassland habitats that have friable soils for digging.	Medium. Suitable habitat is present within the Plan Area. No surveys for this species have been conducted within the Plan Area.
Plants			
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	--/1B.2	Perennial herb found in chaparral, cismontane woodland, and grasslands, often in serpentine soils, between 90 and 1,555 meters elevation. Blooms March through June.	Medium. Suitable habitat is present within the Plan Area. However, this species was not observed during surveys of Area A conducted in 2013 and 2014. The remainder of the Plan Area has not been surveyed.
<i>Calystegia stebbinsii</i> Stebbins' morning-glory	--/1B.1	Perennial rhizomatous herb found on gabbroic or serpentinite soils in chaparral openings and cismontane woodland. Elevations range from 185 to 1,090 meters. Blooms April through July.	Unlikely. No suitable habitat within or adjacent to the Plan Area.
<i>Ceanothus roderickii</i> Pine Hill ceanothus	FE/CR/1B.1	Evergreen shrub found on serpentine or gabbroic soils within chaparral or cismontane woodland, between 245 and 1,090 meters elevation. Blooms April through June.	Unlikely. No suitable habitat within or adjacent to the Plan Area.
<i>Chloropyron molle</i> subsp. <i>hispidum</i> hispid bird's-beak	--/1B.1	Annual herb found on alkaline soils in meadows, seeps, and playas within valley and foothill grasslands. Blooms from June to September. Found below 155 meters in elevation.	Unlikely. No suitable habitat within or adjacent to the Plan Area.
<i>Downingia pusilla</i> dwarf downingia	--/2B.2	Annual herb occurring in mesic sites in valley and foothill grassland and vernal pools. Blooms from March to May. Found below 445 meters in elevation.	High. Suitable habitat is present within the Plan Area, and there are known occurrence of this species within the Plan Area. ⁴⁹ However, this species was not observed during surveys of Area A conducted in 2013 and 2014. The remainder of the Plan Area has not been surveyed.

⁴⁹ Ibid.

**TABLE 3.4-3 (CONTINUED)
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PLANNING AREA**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description / Blooming Period	Potential to Occur in the Planning Area
Plants (cont.)			
<i>Galium californicum</i> subsp. <i>sierrae</i> El Dorado bedstraw	FE/CR/1B.2	Perennial herb found on gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest. Elevations range from 100 to 585 meters. Blooms May to June.	Unlikely. No suitable habitat within or adjacent to the Plan Area.
<i>Gratiola heterosepala</i> Boggs Lake hedge- hyssop	--/CE/1B.2	Annual herb occurring at the margins of marshes and swamps, and in clay substrate in vernal pools. Found at 10 to 2,375 meters in elevation. Blooms April-August.	Medium. Suitable habitat is present within the Plan Area. However, this species was not observed during surveys of Area A conducted in 2013 and 2014. The remainder of the Plan Area has not been surveyed.
<i>Juncus leiospermus</i> var. <i>ahartii</i> Ahart's dwarf rush	--/1B.2	Annual herb occurring in mesic valley and foothill grasslands. Found between 30 and 229 meters in elevation. Blooms March-May.	Medium. Suitable habitat is present within the Plan Area. However, this species was not observed during surveys of Area A conducted in 2013 and 2014. The remainder of the Plan Area has not been surveyed.
<i>Juncus leiospermus</i> var. <i>leiospermus</i> Red Bluff dwarf rush	--/1B.1	Annual herb occurring in vernal mesic areas in chaparral, cismontane woodland, valley and foothill grassland, meadows and seeps, and vernal pools. Blooms from March to June. Elevation ranges from 35 to 1,250 meters.	Medium. Suitable habitat is present within the Plan Area. However, this species was not observed during surveys of Area A conducted in 2013 and 2014. The remainder of the Plan Area has not been surveyed.
<i>Legenere limosa</i> legenere	--/1B.1	Annual herb occurring in vernal pools. Blooms April to June. Found below 880 meters in elevation.	Medium. Suitable habitat is present within the Plan Area. However, this species was not observed during surveys of Area A conducted in 2013 and 2014. The remainder of the Plan Area has not been surveyed.
<i>Navarretia myersii</i> subsp. <i>myersii</i> pincushion navarretia	--/1B.1	Annual herb occurring in vernal pools, often acidic. Blooms April and May. Found at 20 to 330 meters in elevation.	Medium. Suitable habitat is present within the Plan Area. However, this species was not observed during surveys of Area A conducted in 2013 and 2014. The remainder of the Plan Area has not been surveyed.
<i>Orcuttia tenuis</i> slender Orcutt grass	FT/CE/1B.1	Annual grass occurring in vernal pools, often gravelly. Blooms May to October. Found at 35 to 1,760 meters in elevation.	Medium. Suitable habitat is present within the Plan Area. However, this species was not observed during surveys of Area A conducted in 2013 and 2014. The remainder of the Plan Area has not been surveyed.
<i>Orcuttia viscida</i> Sacramento Orcutt grass	FE/CE/1B.1	Annual grass occurring in vernal pools. Blooms April to September. Found at 30 to 100 meters in elevation.	Unlikely. Suitable habitat is present within the Plan Area. However, this species was not observed during surveys of Area A conducted in 2013 and 2014. There are no documented occurrences of this species in the vicinity, and it is not expected to occur in the Plan Area.

**TABLE 3.4-3 (CONTINUED)
SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PLANNING AREA**

Scientific Name Common Name	Listing Status: Federal/State/ CRPR	Habitat Description / Blooming Period	Potential to Occur in the Planning Area
Plants (cont.)			
<i>Packera layneae</i> Layne's ragwort	FT/CR/1B.2	Perennial herb found on serpentinite or gabbroic, rocky soils, in chaparral and cismontane woodland. Blooms April to August. Elevations range from 200 to 1,085 meters.	Unlikely. No suitable habitat within or adjacent to the Plan Area.
<i>Sagittaria sanfordii</i> Sanford's arrowhead	--/1B.2	Perennial rhizomatous herb found in assorted freshwater habitats including marshes, swamps and seasonal drainages. Blooms May to November. Found below 650 meters in elevation.	Medium. Suitable habitat is present within the Plan Area. However, this species was not observed during surveys of Area A conducted in 2013 and 2014. The remainder of the Plan Area has not been surveyed.

The "Potential for Effect" category is defined as follows:

- Absent: The Plan Area does not and could not support the particular species.
- Unlikely: The Plan Area does not support suitable habitat for a particular species. The Plan Area is outside of the species known range.
- Low Potential: The Plan Area only provides limited and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate Plan Area.
- Medium Potential: The Plan Area provides suitable habitat for a particular species.
- High Potential: The Plan Area provides ideal habitat conditions for a particular species and/or known populations occur in the immediate area or within the potential area of impact.

Species that have moderate or high potential to occur in the Plan Area are shown in boldface type.

STATUS CODES:

FEDERAL (U.S. Fish and Wildlife Service):

- FE = Listed as Endangered by the Federal Government
 FT = Listed as Threatened by the Federal Government
 FPD = Proposed for De-listing
 FPE = Proposed for Listing as Endangered
 FPT = Proposed for Listing as Threatened
 FC = Candidate for Federal listing
 BEPA = Bald Eagle Protection Act

STATE (California Department of Fish and Wildlife):

- CE = Listed as Endangered by the State of California
 CT = Listed as Threatened by the State of California
 CR = Listed as Rare by the State of California (plants only)
 CC = Candidate for State Listing (Threatened or Endangered)
 CCE = Candidate for State Listing (Endangered)
 CCT = Candidate for State Listing (Threatened)
 CSC = California species of special concern
 CFP = California fully protected bird species
 WL = Watch List

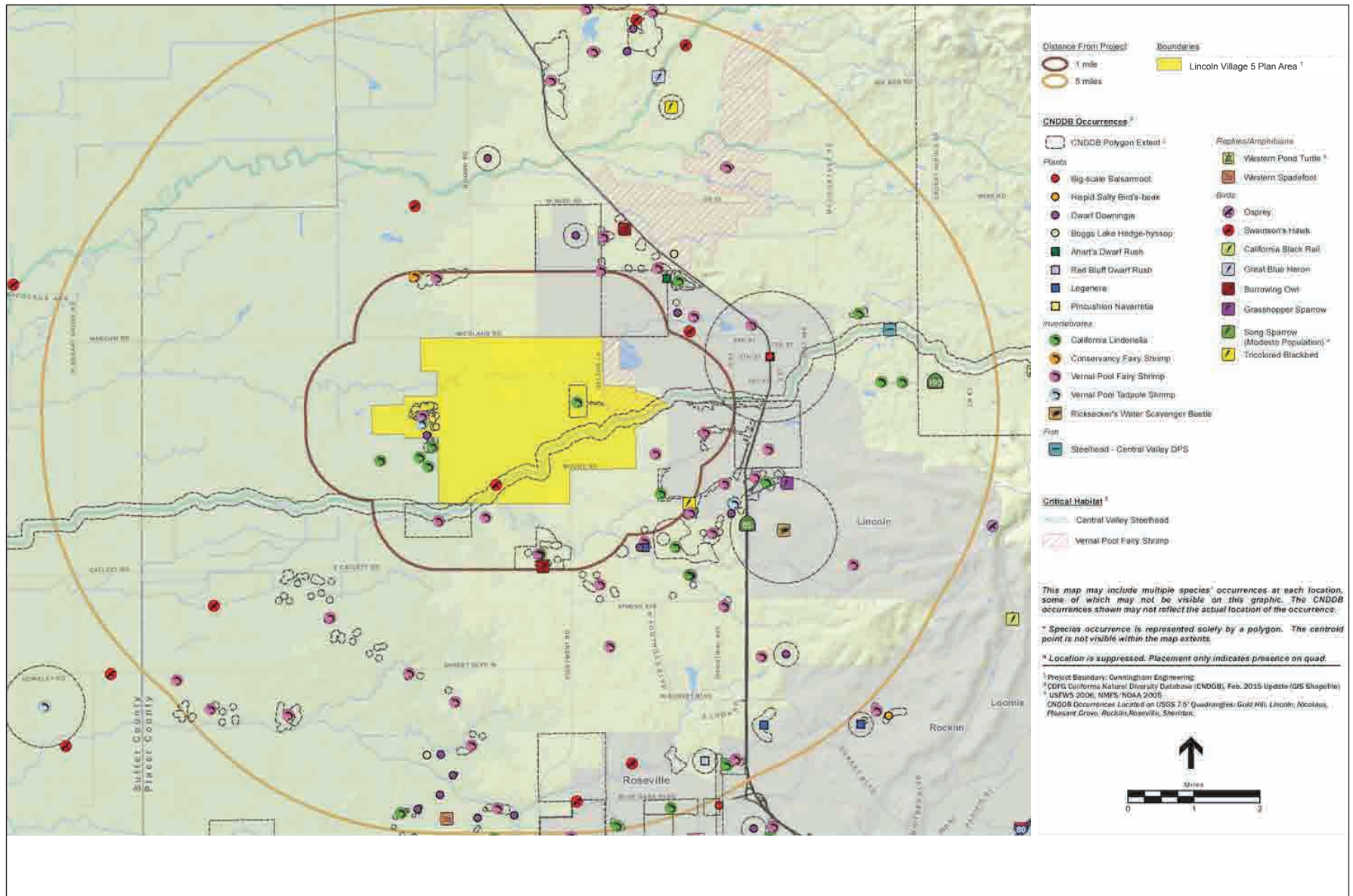
California Rare Plant Rank (California Native Plant Society):

- Rank 1A = Plants presumed extirpated in California and either rare or extinct elsewhere
 Rank 1B = Plants rare, threatened, or endangered in California and elsewhere
 Rank 2A = Plants presumed extirpated in California but common elsewhere
 Rank 2A = Plants rare, threatened, or endangered in California but more common elsewhere
 Rank 3 = Plants about which more information is needed
 Rank 4 = Plants of limited distribution

CRPR Code Extensions

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

SOURCES: U.S. Fish and Wildlife Service, 2015. List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project. Consultation Code: 08ESMF00-2015-SLI-0329. Available: <http://ecos.fws.gov/lpac/>. Accessed April 16, 2015.; California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.; California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). Available: <http://www.rareplants.cnps.org/>. Accessed April 16, 2015.; Environmental Science Associates, 2015.



SOURCE: CNDDDB, 2015; ECORP Consulting, Inc., 2015

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Figure 3.4-3
CNDDDB Occurrences

Adobe navarretia (*Navarretia nigelliformis* ssp. *nigelliformis*), Stebbins morning glory (*Calystegia stebbinsii*), Pine Hill ceanothus (*Ceanothus roderickii*), hispid bird's-beak (*Chloropyron molle* ssp. *hispidum*), El Dorado bedstraw (*Galium californicum* ssp. *sierrae*), and Layne's ragwort (*Packera layneae*) are not expected to occur due to lack of suitable habitat or the Plan Area is outside the known range of the species. These species are not further addressed in this EIR.

Protocol-level special-status plant surveys of Area A were conducted during the 2013 and 2014 growing seasons.⁵⁰ No special-status plants were found within Area A. To date, no special-status plant surveys have been conducted within the remainder of the Plan Area. The PCCP does not provide coverage for the take of special-status plant species. Thus, consultation with the CDFW or USFWS would be required if state- or federally listed plant species are identified during protocol surveys for Areas B through J. Further, if take cannot be avoided, take authorization may be required.

Big-Scale Balsamroot

The big-scale balsamroot is not listed pursuant to either the federal Endangered Species Act (FESA) or CESA, but is designated as a California Rare Plant Rank (CRPR) 1B.2 species. This species is an herbaceous perennial that occurs in chaparral, cismontane woodlands, valley and foothill grasslands, and occasionally on serpentine soils.⁵¹ The big-scale balsamroot blooms from March through June and is known to occur at elevations ranging from 295 to 5,100 feet above MSL. The big-scale balsamroot is endemic to California; the current range of this species includes Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, Tuolumne counties.⁵²

One occurrence of big-scale balsamroot has been reported within one mile and one occurrence within five-miles of the Plan Area.⁵³ The annual grasslands throughout the Plan Area support suitable habitat for this species. Big-scale balsamroot was not observed in Area A during surveys in 2013 and 2014.⁵⁴ The remainder of the Plan Area has not been surveyed for this species.

Dwarf Downingia

The dwarf downingia is designated as a CRPR 2B.2 species. This species is a small herbaceous annual that occurs in vernal pools and mesic areas in valley and foothill grasslands. This species also appears to have an affinity for slight disturbance since it has been found in man-made features

⁵⁰ ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014.

⁵¹ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition v7- 13mar 3-14-13). California Native Plant Society. Sacramento California. Available: <http://www.cnps.org/inventory>. Accessed February 25, 2015.

⁵² Ibid.

⁵³ California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁵⁴ ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014.

such as tire ruts, scraped depressions, stock ponds, and roadside ditches.⁵⁵ This species blooms from March through May and is known to occur at elevations ranging from three to 1,460 feet above MSL. The current range of this species in California includes Amador, Fresno, Merced, Napa, Placer, Sacramento, San Joaquin, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties.

One occurrence of dwarf downingia has been reported within the Plan Area (CNDDDB Occurrence 61) as well as 15 additional occurrences within a five-mile radius.⁵⁶ The vernal pools, seasonal wetlands, and seasonal swales throughout the Plan Area support suitable habitat for this species. Dwarf downingia was not observed in Area A during surveys in 2013 and 2014.⁵⁷ The remainder of the Plan Area has not been surveyed for this species.

Boggs Lake Hedge-Hyssop

Boggs Lake hedge-hyssop is listed as endangered pursuant to CESA and is designated as a CRPR 1B.2 species. This species is a small, semi-aquatic, herbaceous annual that occurs on clay soils in vernal pools, marshes, and swamps of lake margins. Boggs Lake hedge-hyssop blooms from April through August and is known to occur at elevations ranging from 32 feet above MSL to 7,792 feet above MSL. The current range of this species in California includes Fresno, Lake, Lassen, Madera, Merced, Modoc, Placer, Sacramento, Shasta, Siskiyou, San Joaquin, Solano, and Tehama counties.⁵⁸

Two occurrences of Boggs Lake hedge-hyssop have been reported within five miles of the site.⁵⁹ The vernal pools, seasonal wetlands, and seasonal swales throughout the Plan Area support suitable habitat for this species. Boggs Lake hedge-hyssop was not observed in Area A during surveys in 2013 and 2014.⁶⁰ The remainder of the Plan Area has not been surveyed for this species.

Ahart's Dwarf Rush

Ahart's dwarf rush is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in mesic areas in valley and foothill grasslands. This species also appears to have an affinity for slight disturbance since it has been found on farmed fields and gopher turnings. Ahart's dwarf rush blooms from March through May and is known to occur at elevations

⁵⁵ U.S. Fish and Wildlife Service, 2005. Recovery plan for vernal pool ecosystems of California and Southern Oregon. Portland, OR. December 15, 2005. Available: http://ecos.fws.gov/docs/recovery_plan/060614.pdf.

⁵⁶ California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁵⁷ ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014.

⁵⁸ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition v7- 13mar 3-14-13). California Native Plant Society. Sacramento California. Available: <http://www.cnps.org/inventory>. Accessed February 25, 2015.

⁵⁹ California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁶⁰ ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014

ranging from 98 to 751 feet above MSL. Ahart's dwarf rush is endemic to California; the current range of this species includes Butte, Calaveras, Placer, Sacramento, Tehama, and Yuba counties.⁶¹

One occurrence of Ahart's dwarf rush has been reported within five miles of the site.⁶² The vernal pools, seasonal wetlands, and seasonal swales throughout the Plan Area support suitable habitat for this species. Ahart's dwarf rush was not observed in Area A during surveys in 2013 and 2014.⁶³ The remainder of the Plan Area has not been surveyed for this species.

Red Bluff Dwarf Rush

Red Bluff dwarf rush is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in vernal mesic areas in chaparral, cismontane woodland, meadows, seeps, valley and foothill grasslands, and vernal pools. Red Bluff dwarf rush blooms from March through June and is known to occur at elevations ranging from 114 to 4001 feet above MSL. Red Bluff dwarf rush is endemic to California; the current range of this species includes Butte, Placer, Shasta, and Tehama counties.⁶⁴

One occurrence of Red Bluff dwarf rush has been reported within five miles of the site.⁶⁵ The vernal pools, seasonal wetlands, and seasonal swales throughout the Plan Area support suitable habitat for this species. Red Bluff dwarf rush was not observed in Area A during surveys in 2013 and 2014.⁶⁶ The remainder of the Plan Area has not been surveyed for this species.

Legenere

Legenere is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in a variety of seasonally inundated environments including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages. Legenere blooms from April through June and is known to occur at elevations ranging from three to 2,624 feet above MSL. Legenere is endemic to California; the current range of this species includes Alameda, Lake, Monterey, Napa, Placer, Sacramento, Santa Clara, San Joaquin, Shasta, San Mateo, Solano,

⁶¹ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition v7- 13mar 3-14-13). California Native Plant Society. Sacramento California. Available: <http://www.cnps.org/inventory>. Accessed February 25, 2015

⁶² California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁶³ ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014

⁶⁴ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition v7- 13mar 3-14-13). California Native Plant Society. Sacramento California. Available: <http://www.cnps.org/inventory>. Accessed February 25, 2015.

⁶⁵ California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁶⁶ ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014.

Sonoma, Stanislaus, Tehama, and Yuba counties and is believed to be extinct in Stanislaus County.⁶⁷

Three occurrences of legenera have been reported within five miles of the site.⁶⁸ The vernal pools, seasonal wetlands, and seasonal swales throughout the Plan Area support suitable habitat for this species. Legenera was not observed in Area A during surveys in 2013 and 2014.⁶⁹ The remainder of the Plan Area has not been surveyed for this species.

Pincushion Navarretia

Pincushion navarretia is not listed pursuant to either FESA or CESA, but is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in vernal pools that are often acidic. Pincushion navarretia blooms in April through May and is known to occur at elevations ranging from 65 to 1,082 feet above MSL. Pincushion navarretia is endemic to California; the current range of this species includes Amador, Calaveras, Merced, Placer, and Sacramento counties.⁷⁰

One occurrence of pincushion navarretia has been reported within one mile of the site.⁷¹ The vernal pools, seasonal wetlands, and seasonal swales throughout the Plan Area support suitable habitat for this species. Pincushion navarretia was not observed in Area A during surveys in 2013 and 2014.⁷² The remainder of the Plan Area has not been surveyed for this species.

Slender Orcutt Grass

Slender Orcutt grass is listed as threatened and endangered pursuant to FESA and CESA, respectively, and is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in vernal pools primarily on substrates of volcanic origin. This species is known to occur in the same type of vernal pool complexes as Sacramento Orcutt grass in Sacramento County; however, these species have not been observed co-existing in the same vernal pool.⁷³ The median

⁶⁷ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition v7- 13mar 3-14-13). California Native Plant Society. Sacramento California. Available: <http://www.cnps.org/inventory>. Accessed February 25, 2015.

⁶⁸ California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁶⁹ ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014.

⁷⁰ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition v7- 13mar 3-14-13). California Native Plant Society. Sacramento California. Available: <http://www.cnps.org/inventory>. Accessed February 25, 2015.

⁷¹ California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁷² ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014.

⁷³ U.S. Fish and Wildlife Service, 2003. Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon; Final Rule. Federal Register 68(151):46684-46867.

area of pools occupied by populations was 1.6 acres and ranged from 0.2 acre to 111.0 acres.⁷⁴ Slender Orcutt grass blooms from May through October and is known to occur at elevations ranging from 115 to 5,775 feet above MSL. Slender Orcutt grass is endemic to California; the current range for this species includes Butte, Lake, Lassen, Modoc, Plumas, Sacramento, Shasta, Siskiyou, and Tehama counties.⁷⁵

While no documented occurrences of slender Orcutt grass have been reported within five miles of the site,⁷⁶ this species was still considered a target species due to the presence of suitable habitat within the site. The vernal pools in the Plan Area support suitable habitat for this species. Slender Orcutt grass was not observed in Area A during surveys in 2013 and 2014.⁷⁷ The remainder of the Plan Area has not been surveyed for this species.

Sanford's Arrowhead

Sanford's arrowhead is not listed pursuant to FESA or CESA, but is designated as a CRPR 1B.2 species. This species is a rhizomatous, herbaceous perennial that occurs in shallow marshes and freshwater swamps.⁷⁸ Sanford's arrowhead blooms from May through October and is known to occur at elevations ranging from sea level to 2,132 feet above MSL. Sanford's arrowhead is endemic to California; the current range of this species includes Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Orange, Placer, Sacramento, San Bernardino, San Joaquin, Shasta, Solano, Tehama, and Ventura counties, but is believed to be extinct in Orange and Ventura counties.⁷⁹

While no documented occurrences of Sanford's arrowhead have been reported within five miles of the site,⁸⁰ this species was still considered a target species due to the presence of suitable habitat within the site. The creek and canals throughout the site support suitable habitat for this species. Sanford's arrowhead was not observed in Area A during surveys in 2013 and 2014.⁸¹ The remainder of the Plan Area has not been surveyed for this species.

⁷⁴ Ibid.

⁷⁵ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition v7- 13mar 3-14-13). California Native Plant Society. Sacramento California. Available: <http://www.cnps.org/inventory>. Accessed February 25, 2015.

⁷⁶ California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁷⁷ ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014.

⁷⁸ California Native Plant Society, 2015. Inventory of Rare and Endangered Plants (online edition v7- 13mar 3-14-13). California Native Plant Society. Sacramento California. Available: <http://www.cnps.org/inventory>. Accessed February 25, 2015.

⁷⁹ Ibid.

⁸⁰ California Department of Fish and Wildlife, 2015. Rarefind Natural Diversity Data Base Program. Version 3.1.1, commercial version dated: January 3, 2014. California Natural Diversity Database. The Resources Agency, Sacramento. Accessed April 16, 2015.

⁸¹ ECORP Consulting, Inc., 2014. Special-Status Plant Survey for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. August 27, 2014.

Special-Status Wildlife

A number of special-status invertebrates, fish, amphibians, reptiles, and birds may occur within the Plan Area (Table 3.4-3). Some of these special-status species have been found during targeted species surveys within Area A.⁸² In addition, according to the CNDDDB, these and other special-status species have been documented to occur within five miles of the Plan Area.⁸³ Based on the Biological Resources Assessment for the Lincoln Village 5 & SUD-B Specific Plan,⁸⁴ species that have been documented within the Plan Area or that could occur within the Plan Area are discussed in more detail below.

Invertebrates

Three listed branchiopod species have the potential to occur within the Plan Area. These are the federally endangered Conservancy fairy shrimp (*Branchinecta conservatio*), the federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*), and the federally endangered vernal pool tadpole shrimp (*Lepidurus packardii*) (collectively “listed large branchiopods”). ECORP conducted dry season surveys in Area A in September and October 2014.⁸⁵ During the survey, eggs belonging to the genus *Branchinecta* were found in two vernal pools surveyed. While eggs of the genus *Branchinecta* cannot be identified to species without DNA analysis, there is no suitable habitat for Conservancy fairy shrimp in Area A. The large turbid vernal pools or playas where this species occurs are absent. It can therefore be assumed that the eggs that were found are of the vernal pool fairy shrimp. Since the pools containing eggs occur in two disjunct areas on the site, further sampling was terminated and the assumption was made that vernal pool fairy shrimp are likely to occur within potentially suitable habitat within Area A. Given the similarity of the Area A conditions to the remainder of the Plan Area, it is expected that federally listed large branchiopods, primarily vernal pool fairy shrimp, may also be present within the Plan Area. Similar to Area A, it is unlikely that suitable habitat for Conservancy fairy shrimp is present within the Plan Area.

Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp is federally listed as threatened under FESA. Fairy shrimp are ephemeral crustaceans. The population remains in the dry basin as cysts (embryonic eggs) when the temporary water bodies that they inhabit dry up. These cysts can withstand harsh conditions (e.g., summer heat, freezing, desiccation) until winter rains fill their basin. After the appropriate

⁸² ECORP Consulting, Inc., 2014. Federally listed large brachiopod dry season surveys, Lincoln Village 5, Phase 1 Project. Letter addressed to U.S. Fish and Wildlife Service, Sacramento, CA. December 16, 2014.

⁸³ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

⁸⁴ ECORP Consulting, Inc., 2015. Biological Resources Assessment for the Lincoln Village 5 & SUD-B Specific Plan. Prepared for Richland Developers, Inc. March 18, 2015.

⁸⁵ ECORP Consulting, Inc., 2014. Federally listed large brachiopod dry season surveys, Lincoln Village 5, Phase 1 Project. Letter addressed to U.S. Fish and Wildlife Service, Sacramento, CA. December 16, 2014.

conditions (e.g., water temperature, water depth) are present, the cysts hatch instars (immature fairy shrimp), that quickly mature and mate to ensure the next generation.

This species has a short average maturation period (18 days), and a short average number of days to reproduction (39 days), which explains its ability to survive in some of the most ephemeral wetland habitats. This species generally cannot withstand warm water (24°C), which may explain why it is typically observed during the cooler months (i.e., January, February, and early March). Vernal pool fairy shrimp are most often observed in vernal pools (79 percent of observations); however, they have also been observed in other natural and artificial habitats, including seasonal wetlands, alkali pools, ephemeral drainages, stock ponds, roadside ditches, railroad ditches, vernal swales, and rock outcrop vernal pools. The species occurs on many geologic formations and landforms. This species is most often found in small (less than 200 meters square) and shallow (five centimeters deep) habitats, although it also can occur in large and deep vernal pools.⁸⁶

Vernal pool fairy shrimp have one of the broadest distributions of the California endemic fairy shrimp species. It occurs most of the length of the Central Valley, from the Millville Plains and Stillwater Plains in Shasta County south to Pixley in Tulare County, and the eastern margin of the central Coast Range from San Benito County south to Ventura County. Disjunct populations occur on the Santa Rosa Plateau and near Rancho Santa Rosa, California in Riverside County. The species also occurs within the Medford area of southern Oregon.^{87,88}

Threats to vernal pool fairy shrimp include agricultural conversion and development that result in habitat loss. Habitat loss also occurs through changes in natural hydrology, incompatible livestock grazing, pollution by storm water, and disturbance from recreational activities.⁸⁹

There are three reported occurrences of the vernal pool fairy shrimp within the Plan Area (CNDDDB Occurrence Nos. 319; 423; and 158) as well as numerous occurrences within a one- and five-mile radius of the Plan Area.⁹⁰ Upon further investigation, it was determined that one of these occurrences is in the western portion of the Plan Area (CNDDDB Occurrence 319). There is also approximately 180 acres of vernal pool fairy shrimp critical habitat on the easternmost portion of the Plan Area.⁹¹

⁸⁶ Helm, B. P. 1998. Biogeography of eight large branchiopods endemic to California. Pages 124-139 in Witham, C. W., E. T. Bauder, D. Belk, W.R. Ferren Jr., and R. Ornduff. (eds.). Ecology, conservation, and management of vernal pool ecosystems – proceeding from a 1996 conference. California Native Plant Society, Sacramento, CA. 285 pp.

⁸⁷ Ibid.

⁸⁸ Helm, B. P., and W.C. Fields. 1998. Aquatic macro-invertebrate assemblages on the Agate Desert and nearby sites in Jackson, Oregon. Prepared for the Oregon Natural Heritage Program, 812 SE 14th Avenue, Portland, OR 97214.

⁸⁹ U.S. Fish and Wildlife Service, 2005. Recovery plan for vernal pool ecosystems of California and Southern Oregon. Portland, OR. December 15, 2005. Available: http://ecos.fws.gov/docs/recovery_plan/060614.pdf.

⁹⁰ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

⁹¹ U.S. Fish and Wildlife Service, 2006. Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants; Final Rule. Federal Register 71(28):7118-7316.

Vernal Pool Tadpole Shrimp

The vernal pool tadpole shrimp is federally listed as endangered under FESA. The vernal pool tadpole occurs in seasonally inundated basins. The species' cysts (embryonic eggs) lie dormant in the basin when basins are dry. After winter rainwater fills the pools, populations of the species re-emerge from their cysts.⁹² Unlike the cysts of many of the fairy shrimp species, the cysts of vernal pool tadpole shrimp do not require a freezing or drying period to hatch. Adult tadpole shrimp can have multiple generations during a single ponding period and are often present in vernal pools until the pools dry up in late spring.⁹³ Vernal pool tadpole shrimp mature slowly and are long lived in comparison to other California endemic branchiopod species.⁹⁴

The vernal pool tadpole shrimp occurs in small (two meters square) to very large (356,253 meters square) vernal pools with a variety of depths and volumes of water during ponding. The species is associated with vernal pools and other seasonally inundated basins on the following geomorphologic surfaces: alluvial fan, basin, basin rim, floodplain, marine terrace, high terrace, stream terrace, very high terrace, low terrace, and volcanic mudflow landforms.

The vernal pool tadpole shrimp has been observed in stock ponds, vernal pools, grass-bottom swales, mud-bottomed pools, roadside ditches, railroad ditches, and other seasonal inundated wetlands. The vernal pool tadpole shrimp has been found with other California endemic branchiopods, including California fairy shrimp, vernal pool fairy shrimp, longhorn fairy shrimp (*Branchinecta longiantenna*), and conservancy fairy shrimp.

The vernal pool tadpole shrimp is found in the Central Valley from Stillwater Plains and Millville Plains in Shasta County, south to Kings County and from one single wetland complex on the San Francisco Bay National Wildlife Refuge in the City of Fremont, Alameda County.⁹⁵

The largest threats to vernal pool tadpole shrimp are loss of habitat through urbanization. Other threats include encroachment of nonnative annual grasses, agricultural conversion, and parasitism by flukes (*Trematoda*) of an undetermined species.⁹⁶ Some populations are also threatened by pesticide drift from adjacent farmlands.

⁹² Ahl, J. S. B. 1991. Factors affecting contributions of the tadpole shrimp, *Lepidurus packardi*, to its overwintering egg reserves. *Hydrobiologia* 212:137-143.

⁹³ Helm, B. P. 1998. Biogeography of eight large branchiopods endemic to California. Pages 124-139 in Witham, C. W., E. T. Bauder, D. Belk, W.R. Ferren Jr., and R. Ornduff. (eds.). *Ecology, conservation, and management of vernal pool ecosystems – proceeding from a 1996 conference*. California Native Plant Society, Sacramento, CA. 285 pp.

⁹⁴ Ahl, J. S. B. 1991. Factors affecting contributions of the tadpole shrimp, *Lepidurus packardi*, to its overwintering egg reserves. *Hydrobiologia* 212:137-143.

⁹⁵ U.S. Fish and Wildlife Service, 1994. *Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Conservancy Fairy Shrimp, Longhorn Fairy Shrimp, and the Vernal Pool Tadpole Shrimp; and Threatened Status for the Vernal Pool Fairy Shrimp*. Portland, Oregon.

⁹⁶ Ahl, J. S. B. 1991. Factors affecting contributions of the tadpole shrimp, *Lepidurus packardi*, to its overwintering egg reserves. *Hydrobiologia* 212:137-143.

There is an occurrence of vernal pool tadpole shrimp within the Plan Area (CNDDDB Occurrence No. 27), as well as numerous additional occurrences within a one- and five-mile radius of the Plan Area.⁹⁷ This occurrence was located in a man-made roadside ditch southwest of the intersection of Pleasant Grove Road and is presumed existing. Many of the seasonal wetlands, seasonal swales, vernal pools, and farmed wetlands within the Plan Area represent potentially suitable habitat for this species and this species is likely present.

Valley Elderberry Longhorn Beetle

The Valley Elderberry Longhorn Beetle ([VELB] *Desmocerus californicus dimorphus*) is listed as threatened in accordance with FESA.⁹⁸ The VELB is completely dependent on its host plant, elderberry (*Sambucus* species), which occurs in riparian and other woodland and scrub communities.⁹⁹ Elderberry plants located within the range of the beetle, with one or more stems measuring 1.0 inch or greater in diameter at ground level are considered to be habitat for the species. The adult flight season extends from late March through June. During that time, the adults feed on foliage and perhaps flowers, mate, and females lay eggs on living elderberry plants. The first instar larvae bore into live elderberry stems, where they develop for one to two years feeding on the pith. The fifth instar larvae create exit holes in the stems and then plug the holes and remain in the stems through pupation.¹⁰⁰ The beetle's current distribution is patchy throughout California's Central Valley, from Shasta County to Kern County, and associated foothills up to an elevation of approximately 3,000 feet.¹⁰¹

Elderberry plant surveys have not been conducted in the entire Plan Area; however surveys have been completed for all of Area A and no elderberry plants were found.¹⁰² The Markham and Auburn Ravines provide suitable habitat for elderberry plants; these areas would be largely preserved by the proposed project.

Fish

Central Valley steelhead (*Oncorhynchus mykiss*), and Chinook salmon including fall-, winter- and spring-run, (*Oncorhynchus tshawytscha*) are reported within the Auburn Ravine, in the southeast portion of the Plan Area. The Plan Area is outside the known distribution of Delta smelt

⁹⁷ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

⁹⁸ U.S. Fish and Wildlife Service, 1980. Listing the Valley Elderberry Longhorn Beetle as a Threatened Species with Critical Habitat. Final Rule. Federal Register 45(155):52803-52807.

⁹⁹ U.S. Fish and Wildlife Service, 1999. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. July 9, 1999.

¹⁰⁰ Barr, C. B. 1991. The distribution, habitat and status of the valley elderberry longhorn beetle *Desmocerus californicus dimorphus*. U.S. Fish and Wildlife Service, Sacramento, California.

¹⁰¹ U.S. Fish and Wildlife Service, 1999. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. July 9, 1999.

¹⁰² ECORP Consulting, Inc., 2014. Results of Elderberry Shrub Surveys for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. March 9, 2015.

and Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*); thus, these species are not further discussed.

Central Valley Steelhead

Central Valley Steelhead is designated as a federally listed threatened species. Existing wild steelhead stocks in the Central Valley are mostly confined to the upper Sacramento River and its tributaries, including Antelope, Deer, and Mill creeks and the Yuba River. Populations may also exist in Big Chico and Butte creeks and a few wild steelhead are produced in the American and Feather rivers.¹⁰³ Recent snorkel surveys (1999 to 2002) indicate that steelhead are also present in Clear Creek.¹⁰⁴ Naturally-spawning populations may also exist in many other streams but have been undetected due to lack of monitoring programs.

The life history of steelhead is similar to that of Chinook salmon with two major exceptions: steelhead do not necessarily die after spawning, and juveniles may spend up to four years in freshwater before migrating to the ocean. Central Valley (Evolutionarily Significant Unit [ESU]) steelhead, the anadromous form of rainbow trout, typically spawn in tributaries to mainstem rivers from December through March, often ascending significant distances. Following spawning, adults normally migrate back to the ocean. Productive steelhead habitat is characterized by complexity, primarily in the form of large and small woody debris. Cover is an important habitat component for juvenile steelhead both as velocity refuge and as a means of avoiding predation.

Steelhead require gravel and cobble substrates (0.6 to 13 centimeter diameter) with limited amounts of fine sediments (sand, silt, and clay) for spawning. In general, water temperatures less than 16.1°C (61°F) are necessary for successful incubation and hatching of steelhead eggs. Fry and older juveniles require adequate instream cover (cobble or boulders, large woody debris, undercut banks, or submerged and overhanging vegetation for protection from predators).

No surveys have been conducted for this species in the Plan Area. This species is reported within the Auburn Ravine within the Plan Area (CNDDDB Occurrence 4).¹⁰⁵ The Auburn Ravine is also designated critical habitat for the Central Valley steelhead and steelhead are expected to be present in the Plan Area.¹⁰⁶

¹⁰³ McEwan, D., and T.A. Jackson. 1996. Steelhead Restoration and Management Plan for California. Department of Fish and Game, Sacramento, California, 234 pp.

¹⁰⁴ Good, T.P., R.S. Waples, and P. Adams (editors). 2005. Updated status of federally listed ESUs of West Coast salmon and steelhead. National Oceanic and Atmospheric Administration Tech. Memo. NMFS-NWFSC-66, 598 pp.

¹⁰⁵ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

¹⁰⁶ National Marine Fisheries Office, 2015. Population boundaries for Central Valley Chinook and Steelhead. Available: http://www.westcoast.fisheries.noaa.gov/maps_data/species_population_boundaries.html. Accessed February 26, 2015.

Chinook salmon

Chinook salmon are an anadromous species which spawn in freshwater rivers but migrate to the ocean to rear.¹⁰⁷ Chinook salmon typically return to their natal stream to spawn. Within the Central Valley there are four races of Chinook salmon: fall-run, late fall-run, winter-run, and spring-run. The timing of spawning of the four races of Chinook salmon in Central Valley rivers is as follows:¹⁰⁸

- Adult fall-run Chinook salmon migrate through the Delta and into Central Valley rivers from July through December and spawn from October through December.
- Adult late-fall-run Chinook salmon migrate through the Delta and into the Sacramento River from October through March or possibly April and spawn from January through April. Peak spawning activity occurs in February and March.
- Adult winter-run Chinook salmon migrate through the Delta from late November through June and into the Sacramento River from December through July. Winter-run Chinook salmon remain in the river up to several months before spawning. Spawning occurs from mid-April through August, with peak spawning activity in May and June.
- Adult spring-run Chinook salmon migrate through the Delta from January through June, enter the Sacramento River and its tributaries from March through September, and remain in the rivers up to several months before spawning. Spawning occurs from late August through October, with peak spawning activity in September.

Chinook rely on suitable water temperature and substrate for successful spawning and incubation. Rearing habitat for juveniles includes riffles, runs, pools, and inundated floodplains. In streams, Chinook are opportunistic feeders. They eat aquatic insects, terrestrial insects and bottom invertebrates. Larger fish tend to eat larger prey. Juvenile Chinook are significantly affected by predatory nonnative fish.¹⁰⁹

Degradation and loss of habitat have contributed substantially to the decline of Chinook salmon. Shasta and other dams have blocked access to much of their historical spawning and rearing habitat. Other factors affecting the species include modified water temperatures, entrainment in diversions, contaminants, and nonnative species.

No surveys have been conducted for this species in the Plan Area, however, fall, spring, and winter run (based on juvenile size at time of survey), were collected downstream of the Plan Area¹¹⁰ and could be present within Auburn Ravine within the Plan Area. The spring-run and

¹⁰⁷ Moyle, Peter B., 2002. *Inland Fishes of California*. University of California Press, Ltd. Berkeley, CA.

¹⁰⁸ Ibid.

¹⁰⁹ Placer County, 2004. *Placer County Natural Resources Report: A Scientific assessment of watersheds, ecosystems, and species of the Phase I Planning Area*. Ch 4 p. 115. Prepared for Placer County Planning Department. Prepared by Jones & Stokes, Sacramento, CA.

¹¹⁰ California Department of Fish and Wildlife, 2014. *Completion of the 2013 Auburn Ravine Rotary Screw Trap Monitoring Report*. Memorandum from Michael Healey to Colin Purdy, July 10, 2014. Rancho Cordova, CA.

winter-run juvenile fish that were collected were probably rearing in Auburn Ravine, but likely hatched in other streams in the Sacramento River watershed. Spring-run and winter-run Chinook salmon are not known to spawn in Auburn Ravine.¹¹¹

Amphibians and Reptiles

The Plan Area may support potentially suitable habitat for one special-status amphibian species and one special-status reptilian species, specifically the Western spadefoot toad (*Spea hammondi*) and Northwestern pond turtle (*Actinemys marmorata*). Surveys for the Western spadefoot toad and northwestern pond turtle have not been performed within the Plan Area.

The Plan Area is not within the current known range of the California tiger salamander (*Ambystoma californiense*), the California red-legged frog (*Rana draytonii*), and giant garter snake (*Thamnophis gigas*). As such, these species are considered absent from the Plan Area and are not discussed further.

Western Spadefoot Toad

The Western spadefoot toad is designated as a CDFW species of special concern. Necessary habitat components of the Western spadefoot toad include suitable underground retreats and breeding ponds. Suitable breeding sites include temporary rain pools such as vernal pools and seasonal wetlands, or pools within portions of intermittent drainages. The Western spadefoot toads spend most of their adult life within underground burrows or other suitable refuge, such as rodent burrows. In California, Western spadefoot toads are known to occur from the Redding area in Shasta County southward to northwestern Baja California, at elevations below 4,475 feet.¹¹²

There is one occurrence of Western spadefoot toad within five miles south of Plan Area.¹¹³ This occurrence included one adult crossing Phillip Road at a bend, approximately 1.5 miles west of the junction of Fiddyment Road and 0.3 miles west where Phillip Road parallels Pleasant Grove Creek. The population is presumed to be existing.

Surveys for this species have not been performed in the Plan Area, but wetlands within these sites may represent potentially suitable habitat.

Northwestern Pond Turtle

The Northwestern pond turtle is designated as a CDFW species of special concern. Northwestern pond turtles occur in a variety of fresh and brackish water habitats including marshes, lakes, ponds, and slow moving streams. This species is primarily aquatic; however, they typically leave

¹¹¹ California Department of Fish and Wildlife, 2014. Completion of the 2013 Auburn Ravine Rotary Screw Trap Monitoring Report. Memorandum from Michael Healey to Colin Purdy, July 10, 2014. Rancho Cordova, CA.

¹¹² Jennings, M.R. and M.P. Hayes, 1994. Amphibians and reptile species of special concern in California. Contract 38023, report to the California Department of Fish and Game, Inland Fisheries Division. Sacramento, CA. 255 pp.

¹¹³ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

aquatic habitats in the fall to reproduce and to overwinter.¹¹⁴ Deep, still water with abundant emergent woody debris, overhanging vegetation, and rock outcrops is optimal for basking and thermoregulation. Although adults are habitat generalists, hatchlings and juveniles require specialized habitat for survival through the first few years. Hatchlings require shallow water habitat with relatively dense submergent or short emergent vegetation in which to forage.

Northwestern pond turtles are typically active between March and November. Mating generally occurs during late April and early May and eggs are deposited between late April and early August. Eggs are deposited within excavated nests in upland areas, with substrates that typically have high clay or silt fractions, usually in the vicinity of aquatic habitats. The majority of nesting sites are located within 650 feet (200 meters) of the aquatic habitat; however, sites have been documented as far as 1,310 feet (400 meters) from the aquatic habitat.¹¹⁵

There are no documented occurrences of Northwestern pond turtle within five miles of the Plan Area.¹¹⁶ Portions of Auburn and Markham Ravines and ponds within the Plan Area may represent Northwestern pond turtle habitat. Surveys for this species have not been performed within the Plan Area.

Birds

The Plan Area may support potentially suitable habitat for special-status bird species as described below.

Tricolored Blackbird

The tricolored blackbird was declared a candidate for listing as threatened or endangered by the California Fish and Game Commission under CESA on December 10, 2015, and is federally protected under the MBTA. This colonial nesting species is distributed widely throughout the Central Valley, Coast Range, and into Oregon, Washington, Nevada, and Baja California.¹¹⁷ Tricolored blackbird nests in colonies that can range from several pairs to several thousand pairs, depending on prey availability, the presence of predators, or level of human disturbance. This nomadic species typically nests in emergent marsh, riparian thickets, and blackberry brambles, usually with some nearby standing water or ground saturation. Open grassland and agricultural fields are typical foraging areas, with nesting generally occurring from April through June.

¹¹⁴ Jennings, M.R. and M.P. Hayes, 1994. Amphibians and reptile species of special concern in California. Contract 38023, report to the California Department of Fish and Game, Inland Fisheries Division. Sacramento, CA. 255 pp.

¹¹⁵ Ibid.

¹¹⁶ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

¹¹⁷ Beedy, E. C., and W. J. Hamilton, III. 1999. Tricolored Blackbird (*Agelaius tricolor*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology. Available: <http://bna.birds.cornell.edu/bna/species/423>.

There is one occurrence of tricolored blackbird within one mile and an additional occurrence within five miles of the Plan Area.¹¹⁸ Tricolored blackbird surveys or habitat assessments have not been performed for the Plan Area but suitable habitat is present.

Grasshopper Sparrow

The grasshopper sparrow (*Ammodramus savannarum*) is designated as a species of special concern by the CDFW. The grasshopper sparrow is an uncommon and local summer resident and breeder along the western edge of the Sierra Nevada and most coastal counties south to Baja California (where resident). This species generally inhabits moderately open grasslands and prairies with patchy bare ground and scattered shrubs. Grasshopper sparrow is more likely to occupy large tracts of habitat than small fragments. Breeding generally occurs from early April to mid-July, with a peak in May and June.¹¹⁹

There is one occurrence of grasshopper sparrow within five miles of the Plan Area.¹²⁰ Grasshopper sparrow surveys or habitat assessments have not been performed for the Plan Area, but the on-site annual grassland community provides potential nesting habitat.

Burrowing Owl

The burrowing owl is designated as a species of special concern by the CDFW. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds. This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as cement culverts or pipes, cement, asphalt, or wood debris piles, or openings beneath cement or asphalt pavement. The breeding season typically occurs 1 February through 31 August.¹²¹

There is one occurrence of burrowing owl within one mile of the Plan Area and additional occurrence within five miles of the Plan Area.¹²² Burrowing owl surveys or habitat assessments have not been performed, but the annual grasslands within the Plan Area represent potential habitat for burrowing owl.

¹¹⁸ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

¹¹⁹ Vickery, P. D. 1996. Grasshopper Sparrow (*Ammodramus savannarum*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online. Available: <http://bna.birds.cornell.edu/bna/species/239>.

¹²⁰ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

¹²¹ California Department of Fish and Wildlife, 2012. Staff Report on Burrowing Owl Mitigation. State of California. Natural Resources Agency, Sacramento.

¹²² California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is listed as a threatened species and is protected pursuant to CESA. This species nests in North America (Canada, western U.S., and Mexico) and typically winters from South America north to Mexico. However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta. In California, the nesting season for Swainson's hawk ranges from mid-March to late August.

Swainson's hawk nests within tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole, California ground squirrel (*Spermophilus beecheyi*), ring-necked pheasant (*Phasianus colchicus*), many passerine birds, and grasshoppers (*Melanoplus* spp.). Swainson's hawks are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, discing, and irrigating.¹²³ The removal of vegetative cover by such farming activities results in more readily available prey items for this species.

There is one occurrence of Swainson's hawk in the Plan Area (CNDDDB occurrence 1484) as well as seven additional records within five miles of the Plan Area.¹²⁴ No Swainson's hawk surveys have been performed; however, potential nesting habitat for Swainson's hawk includes the larger trees along the Auburn and Markham Ravines and associated foraging habitat occurs throughout the Plan Area in fields and agricultural areas, and other grasslands.

Northern Harrier

The Northern harrier is considered to be a species of special concern by the CDFW. This species is known to nest within the Central Valley, along the Pacific Coast, and in northeastern California. The Northern harrier is a ground-nesting species and typically nests in emergent wetland/marsh, open grasslands, or savannah communities usually in areas with dense vegetation. Foraging occurs within a variety of open environments such as marshes, agricultural fields, and grasslands. Nesting occurs during April through September. To date, no surveys for the Northern harrier have been performed in the Plan Area, but potential nesting and foraging habitat for Northern harrier include the annual grasslands on-site.

Western Yellow-billed Cuckoo

The Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is listed as an endangered species pursuant to CESA, and is listed as threatened under FESA. Typical nesting habitat includes dense riparian thicket/woodland. This migratory species arrives from its wintering

¹²³ Estep, J. A. 1989. Biology, movements, and habitat relationships of the Swainson's hawk in the Central Valley of California, 1986-1987. California Department of Fish and Game, Nongame Bird and Mammal Section Report.

¹²⁴ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

grounds in South America during June and departs from California during September. In northern California, current nesting populations occur along the upper Sacramento River (Tehama, Butte, Colusa, Glenn and Sutter counties), Feather River, and the Butte Sink (Sutter and Butte counties). No habitat assessment or surveys have been conducted for the Western yellow-billed cuckoo in riparian corridors along the Auburn and Markham Ravines. While these locations may contain suitable habitat, no nesting sites are known from Placer County. However, this does not preclude the potential for the rare occurrence of a migrant Western yellow-billed cuckoo.

White-tailed Kite

The white-tailed kite has been fully protected in California under Section 3511 of the California Fish and Game Code since 1957. This species is a resident in the Central Valley and along the entire length of the California coast. In northern California, the white-tailed kite typically nests from March through June. Nesting occurs in trees within riparian, oak woodland, savannah, and agricultural communities that are found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands. While no surveys for the white-tailed kite have been conducted, potential nesting habitat includes the trees along Auburn and Markham Ravines, and the annual grassland represents potential foraging habitat.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is considered a species of special concern by the CDFW. Loggerhead shrikes nest throughout California except the northwestern corner, montane forests, and high deserts. Loggerhead shrikes nest in small trees and shrubs in open country with short vegetation such as pastures, old orchards, mowed roadsides, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands.¹²⁵ The nesting season extends from March through June. Although no surveys for the loggerhead shrike have been performed, potential nesting habitat includes the smaller trees along Markham and Auburn Ravines.

Purple Martin

The purple martin (*Progne subis*) is a CDFW species of special concern. It occurs within the foothills of the Sierra Nevada and the Coast Range to the Pacific Coast, with several small sub-populations occurring within the city limits of Sacramento. The purple martin typically nests in woodlands where tree cavities are utilized to raise broods. To date, surveys for the purple martin have not been performed within the Plan Area, but potential nesting habitat includes the smaller trees along Markham and Auburn Ravines.

Heron/Egret Rookeries

The great egret (*Ardea alba*), great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), and black-crowned night heron (*Nycticorax nycticorax*) are colonial nesting birds that typically nest in

¹²⁵ Yosef, R. 1996. Loggerhead Shrike (*Lanius ludovicianus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online. Available: <http://bna.birds.cornell.edu/bna/species/231>.

trees and/or riparian areas. While these species are not formally listed and protected pursuant to either CESA or FESA, their rookeries are of interest to CDFW and are subject to CEQA review. The nearest recorded rookery site is within four miles of the Plan Area, and potential habitat exists within the Plan Area.¹²⁶

Wintering Special-Status Birds

Several special-status birds may forage within the Plan Area during the non-nesting season. These include golden eagle (*Aquila chrysaetos*), short-eared owl (*Asio flammeus*), ferruginous hawk, prairie falcon (*Falco mexicanus*), and long-billed curlew (*Numenius americanus*). These species do not nest in the Central Valley, but may occur as post-breeding dispersers, migrants, or winter residents.

Mammals

The annual grassland community found within the Plan Area represents marginally suitable habitat for regionally occurring special-status mammals, including American badger (*Taxidea taxus*) and two bat species: pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*).

American Badger

The American badger is designated as a species of special concern by the CDFW. In California, American badgers ranged throughout the state except for the humid coastal forests of northwestern California in Del Norte County and the northwestern portion of Humboldt County. No current data exist on the status of American badger populations in California, but they have declined or disappeared in large sections of the state. American badgers occupy diverse habitats. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground, and they prefer grasslands, savannas, and mountain meadows near timberline. Badgers prey primarily on burrowing rodents. American badgers dig burrows in friable soil for cover and frequently reuse old burrows, although some may dig a new den each night, especially in summer.

There are no documented occurrences of American badger in the project vicinity. This species has a low potential to occur within the Plan Area. To date, no surveys for this species or its burrows have been performed for the Plan Area.

Bats

The pallid bat is a CDFW species of special concern; Townsend's big-eared bat is both a CDFW species of special concern and a candidate species proposed for listing under CESA. Targeted surveys for bats have not occurred and these bat species have a moderate potential to occur within the Plan Area. Potential roosting habitat within the Plan Area includes the larger trees along

¹²⁶ California Department of Fish and Wildlife, 2015. California Natural Diversity Database (CNDDDB) RareFind 4 personal computer program. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed April 16, 2015.

Markham and Auburn Ravines and the rural residence-associated dilapidated barn and trees in the Plan Area.

Wildlife Movement/Corridors

Wildlife movement corridors are considered an important ecological resource by various agencies (CDFW and USFWS) and under CEQA. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range. Topography and other natural factors, in combination with urbanization, can fragment or separate large open-space areas. Areas of human disturbance or urban development can fragment wildlife habitats and impede wildlife movement between areas of suitable habitat. This fragmentation creates isolated “islands” of vegetation that may not provide sufficient area to accommodate sustainable populations, and can adversely affect genetic and species diversity. Movement corridors mitigate the effects of this fragmentation by allowing animals to move between remaining habitats, which in turn allows depleted populations to be replenished and promotes genetic exchange between separate populations.

The Plan Area is located in an undeveloped landscape with irrigated pastures and annual grassland (non-irrigated) and used for livestock grazing (primarily cattle) and actively farmed wheat and rice fields. The annual grassland community in this region has been documented as an important resource for wintering raptors.¹²⁷ The Plan Area has the potential to support ephemeral wetlands and intermittent drainages that likely support wildlife (e.g., waterfowl, waders, and shorebirds) movement during the wet season and less so during the dry summer/fall months. The flooded rice fields support waterfowl, waders, and shorebirds during the flooded periods and raptor foraging habitat during the drier harvest and post-harvest period. The adjacent Markham and Auburn Ravines also support wildlife movement throughout the year. The proposed V5SP identifies extensive open space preserves, including both Markham and Auburn Ravines. These ravines are the highest quality and most intact linear habitats currently available for wildlife dispersal and connectivity in the area, and would continue to function in this capacity following development of the V5SP project.

3.4.2 Regulatory Setting

This section provides a discussion of applicable federal, state, and local regulations as they pertain to biological resources.

¹²⁷ Jones & Stokes. 2003. Important Migrant and Wintering Bird Concentration Areas of Western Placer County. Prepared for the Placer County Planning Department.

Federal

Federal Endangered Species Act

FESA (16 U.S. Code Section 1531 et seq.) protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways. The first pathway is a Section 10(a) incidental take permit, which applies to situations where a non-federal government entity must resolve potential adverse impacts to species protected under the FESA. The proposed PCCP, discussed below, is an example of this first path. The second pathway involves Section 7 consultation, which applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval such as a Section 404 permit under the CWA, or receiving federal funding.

FESA defines an endangered species as “any species or subspecies that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” The term “take” means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect or to attempt to engage in any such conduct.”

Critical Habitat

Under Section 7 of FESA, federal agencies are required to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. This is achieved through consultation with USFWS and the National Marine Fisheries Service (NMFS).

“Critical habitat” is defined as those specific areas, within the areas occupied by the endangered species, at the time of listing, which contain physical or biological features that (1) are essential to the conservation of the species, or (2) require special management considerations or protection (16 U.S. Code, Section 1532(5)(A)). Except in limited circumstances, critical habitat does not include all of the area occupied by the species.

In designating critical habitat, USFWS and NMFS are required to focus their analysis on the “principal biological or physical constituent elements” available in the area. These primary constituent elements (“PCEs”) must be included in the proposed and final critical habitat designation descriptions.

The Plan Area contains designated critical habitat for the vernal pool fairy shrimp and Central Valley steelhead.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Code Section 703-712) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds.

It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs. Most actions that result in a taking or in permanent or temporary possession of a protected species constitute violations of the MBTA. Examples of permitted actions that do not violate the MBTA are the possession of a hunting license to pursue specific game birds, legitimate research activities, display in zoological gardens, bird banding, and other similar activities. USFWS is responsible for overseeing compliance with the MBTA.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S. Code Section 668), enforced by the USFWS, makes it illegal to import, export, take (which includes molest or disturb), sell, purchase, or barter any bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*) or parts thereof.

Clean Water Act

The federal CWA (33 U.S. Code Section 1251 et seq.) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the U.S. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

Section 404

Section 404 of the CWA regulates the discharge of dredged and fill materials into waters of the U.S. "Waters of the U.S." refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands. Applicants must obtain a permit from the USACE for all discharges of dredged or fill material into waters of the U.S., including wetlands, before proceeding with a proposed activity. Waters of the U.S. are under the jurisdiction of the USACE and the U.S. EPA. The term "waters" includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the CFR. All three of the identified technical criteria must be met for an area to be identified as a wetland under USACE jurisdiction, unless the area has been modified by human activity. In general, a permit must be obtained before fill can be placed in or removed from wetlands or other waters of the U.S. The type of permit required depends on the amount of acreage and the purpose of the proposed fill, subject to discretion of the USACE, and the U.S. EPA.

Certain activities in wetlands or "other waters" are automatically authorized, or granted a nationwide permit that allows filling where impacts are considered minor. Eligibility for a nationwide permit simplifies the permit review process. Nationwide permits cover construction and fill of waters of the U.S. for a variety of routine activities such as minor road crossings, utility line crossings, streambank protection, recreational facilities and outfall structures. To qualify for a nationwide permit, a project must demonstrate that it has no more than a minimal adverse effect on the aquatic ecosystem, including species listed under the FESA.

The USACE retains discretionary approval over proposed projects where impacts are considered significant, requiring adequate mitigation and permit approval. To provide compliance with the U.S. EPA's Section 404(b)(1) Guidelines, an applicant must demonstrate that the proposed discharge is unavoidable and is the least environmentally damaging practicable alternative that will achieve the overall project purpose. Compliance with CWA Section 404 also requires

compliance with several other environmental laws and regulations. The USACE cannot issue an individual permit or verify the use of a general nationwide permit until the requirements of FESA and the National Historic Preservation Act (NHPA) have been met. In addition, the USACE cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued by the applicable California Water Quality Control Board pursuant to CWA Section 401.

Section 401

Under CWA Section 401, applicants for a federal license or permit to conduct activities which may result in the discharge of a pollutant into waters of the U.S. must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401. In California, the nine Regional Water Quality Control Boards are tasked with issuing Section 401 certifications for projects within their jurisdiction. The State Water Resources Control Board issues 401 certifications for state or federal projects in California.

State

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) (together “Boards”) are the principal state agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (California Water Code Section 13000 et seq.), the Legislature declared that the “state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation...” (California Water Code Section 13000). The Porter-Cologne Act grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the state. Waters of the state determined to be jurisdictional would require, if impacted, waste discharge permitting and/or a CWA Section 401 certification (in the case of the required USACE permit). The enforcement of the state's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., the CDFW) also have the ability to enforce certain water quality provisions in state law.

California Endangered Species Act

Under CESA (California Fish and Game Code Section 2050-2098), CDFW has the responsibility for maintaining a list of endangered and threatened species (Fish and Game Code Section 2070). Sections 2050 through 2098 of the Fish and Game Code outline the protection provided to California’s rare, endangered, and threatened species. Section 2080 of the Fish and Game Code prohibits the taking of plants and animals listed under the CESA. CESA defines take as “any action or attempt to hunt, pursue, catch, capture, or kill any listed species.” The CESA definition of take does not include “harm” or “harass” as is included in the federal ESA. Section 2081

established an Incidental Take Permit program for State-listed species. CDFW maintains a list of “candidate species” which are species that CDFW formally notices as being under review for addition to the list of endangered or threatened species.

Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project study area and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. “Take” of protected species incidental to otherwise lawful management activities may be authorized under Fish and Game Code Section 206.591. Authorization from CDFW would be in the form of an Incidental Take Permit under Section 2801.

California Fish and Game Code

Fully Protected Species

Certain species are considered *fully protected*, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals. Except as provided in Sections 2081.7 or 2835, fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the species for the protection of livestock.

Protection of Birds and Their Nests

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, while other specified birds are protected under Section 3505.

Stream and Lake Protection

CDFW has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Section 1600 et seq. through administration of lake or streambed alteration agreements. Such an agreement is not a permit, but rather a mutual accord between CDFW and the project proponent. Section 1600 et seq. was repealed and replaced in October of 2003 with the new Sections 1600–1616 which took effect on January 1, 2004 (Senate Bill No. 418 Sher). Under the new code provisions, CDFW has the authority to regulate work that will “substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river lake or stream.” CDFW enters into a streambed alteration

agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources. Because CDFW includes under its jurisdiction streamside habitats that may not qualify as wetlands under the federal CWA definition, CDFW jurisdiction may be broader than USACE jurisdiction.

A project proponent must submit a notification of streambed alteration to CDFW before construction commences. The notification requires an application fee for streambed alteration agreements, with a specific fee schedule to be determined by CDFW. CDFW can enter into programmatic agreements that cover recurring operation and maintenance activities and regional plans. These agreements are sometimes referred to as Master Streambed Alteration Agreements (MSAAs).

Under Fish and Game Code Section 1602 (Streambed Alteration Agreements), CDFW takes jurisdiction over the stream zone which is defined top of bank or outside extent of riparian vegetation, whichever is the greatest. Within the stream zone, waters of the State of California are typically delineated to include the streambed to the top of the bank and adjacent areas that would meet any one of the three wetland parameters in the USACE definition (i.e., vegetation, hydrology, and/or soils). Whereas federal jurisdiction requires meeting all three parameters, in practice meeting one parameter, or even the presence (rather than dominance) of wetland plants in an area associated with a jurisdictional streambed would qualify an area as waters of the State of California. CDFW jurisdiction does not include isolated wetlands and wetlands that are not associated with a streambed.

Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900-1913), which directed the CDFW to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. CESA expanded on the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered.

California Rare Plant Rank

CDFW in collaboration with CNPS maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California as a system of CRPRs. Potential impacts to populations of CNPS-listed plants may receive consideration under CEQA review. The following identifies the definitions of the CRPR listings:

- Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.
- Rank 2A: Plants presumed extirpated in California, but more common elsewhere.

Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere.

Rank 3: Plants about which more information is needed - A Review List.

Rank 4: Plants of limited distribution - A Watch List.

In general, CRPR¹²⁸ 1A, 1B, 2A, or 2B plants are considered to meet the criteria of CEQA Guidelines Section 15380 and impacts to these species are considered “significant” in this EIR.

Species of Special Concern

CDFW maintains lists for candidate-endangered species and candidate-threatened species. California candidate species are afforded the same level of protection as listed species. California also designates species of special concern, which are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species or fully protected species, but may be added to official lists in the future. CDFW intends the species of special concern list to be a management tool for consideration in future land use decisions.

CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria.

CEQA also specifies the protection of other locally or regionally significant resources, including natural communities or habitats. Although natural communities do not presently have legal protection, CEQA requires an assessment of such communities and potential project impacts. Natural communities that are identified as sensitive in the CNDDDB are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents such as general and area plans often identify natural communities.

Local

City of Lincoln General Plan

The goals of the Open Space and Conservation Element of the City of Lincoln General Plan pertinent to the proposed project are:

- Goal OSC-1. To designate, protect, and encourage natural resources, open space, and recreation lands in the city, protect and enhance a significant system of interconnected natural habitat areas, and provide opportunities for recreation activities to meet citizen needs.**

¹²⁸ CRPRs also include Code Extensions which add detail to individual rankings as defined below:

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

Policies

- OSC-1.1 The City shall strive to protect natural resource areas, fish and wildlife habitat areas, scenic areas, open space areas and parks from encroachment or destruction by incompatible development.
- OSC-1.3 In new development areas, the City shall encourage the use of open space or recreational buffers between incompatible land uses.
- OSC-1.6 The City shall require new development to implement measures that minimize soil erosion from wind and water related to construction. Measures may include, but not be limited to the following:
- Grading requirements that limit grading to the amount necessary to provide stable areas for structural foundations, street rights-of-way, parking facilities, or other intended uses; and/or
 - Construction techniques that utilize site preparation, grading, and best management practices that provide erosion and sediment control to prevent construction-related contaminants from leaving development sites and polluting local waterways.
- OSC-1.7 The City shall require all development to minimize soil erosion by maintaining compatible land uses suitable building designs and appropriate construction techniques. Contour grading, where appropriate, and revegetation shall be required to mitigate the appearance of engineered slopes and to control erosion.

Goal OSC-4. To preserve and enhance local streams, creeks, and aquifers.**Goal OSC-5. To preserve and protect existing biological resources including both wildlife and vegetative habitat.**Policies

- OSC-5.1 The City shall support the preservation of heritage oaks and threatened or endangered vegetative habitat from destruction. A heritage oak shall be defined as a tree with a diameter of 36 inches measured at a point 4.5 feet above grade level (i.e., diameter at breast height or DBH).
- OSC-5.2 The City shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats. Such communities shall be restored or expanded, where possible and as appropriate.
- OSC-5.3 The City will continue to coordinate with Placer County and the Placer Legacy Open Space and Conservation Program to protect habitat areas that support endangered species and other special-status species.
- OSC-5.4 The City shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained.
- OSC-5.5 The City shall require that new development in areas that are known to have particular value for biological resources be carefully planned and where possible avoided so that the value of existing sensitive vegetation and wildlife habitat can be maintained.
- OSC-5.6 The City will maintain a policy of no net loss of wetlands on a project-by project basis, which may include an entire specific plan area. For the purpose of identifying such wetlands, the City will accept a map delineating wetlands which has been accepted by the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act of 1972. The term “no net loss” may include mitigation implemented through site mitigation bank or similar mitigation mechanism acceptable to the City and permitting agencies.
- OSC-5.7 The City may require project proponents to obtain 404 Permits, and prepare mitigation plans for, or provide for the avoidance, preservation, and maintenance of identified wetlands prior to submitting applications for land use entitlements.

- OSC-5.8 The City may, but need not, accept a Corps of Engineers disclaimer of any jurisdiction over the project of a Corps of Engineers 404 permit as the City's own plan for the achievement of a project's no net loss of wetlands.
- OSC-5.9 All preserved wetlands shall be dedicated to the City or a non-profit organization acceptable to the City and preserved through perpetual covenants enforceable by the City or other appropriate agencies, to ensure their maintenance and survival. With respect to areas dedicated to the City, acceptance shall be conditioned upon establishment of a lighting and landscaping district or other public or private funding mechanisms acceptable to the City.
- OSC-5.11 Prior to project (i.e., specific plan or individual project) approval, the City shall require a biological study to be prepared by a qualified biologist for any proposed development within areas that contain a moderate to high potential for sensitive habitat. As appropriate, the study shall include the following activities: (1) inventory species listed in the CNPS Manual of California Vegetation, (2) inventory species identified by the USFWS and CDFG, (3) inventory special status species listed in the California NDDDB, and (4) field survey of the project site by a qualified biologist.
- OSC-5.12 The City shall consider using appropriate mitigation measures for future projects (i.e., specific plans or individual projects) based on mitigation standards or protocols adopted by the applicable statute or agency (e.g., USFWS, CDFG, etc.) with jurisdiction over any affected sensitive habitats or special status species.
- OSC-5.13 The City shall ensure that lighting in residential areas and along roadways shall be designed to prevent artificial lighting from reflecting into adjacent natural or open space areas.

The relationship of these 2050 General Plan policies to the V5SP is included in Chapter 5, General Plan Consistency.

Placer County Conservation Plan

For over a decade, Placer County has been leading an effort to prepare and adopt a comprehensive plan for the conservation of natural resources in western Placer County. The proposed PCCP is envisioned as a landscape-level plan that would allow individual projects to be issued permits based on how they contribute to the County's natural, social, and economic health now and in the future. As currently being discussed, the proposed PCCP would cover approximately 201,000 acres of western Placer County and would seek to establish a conservation reserve program made up of existing reserve areas, desired acquisitions, and areas for future development. This conservation reserve system would preserve many acres of vernal pool habitat (approximately 50 percent of the County's remaining vernal pool ecosystems). These areas occur in the unincorporated County, the City of Lincoln, and other jurisdictions in the region.

The proposed PCCP would be both a Habitat Conservation Plan (HCP) under FESA and a Natural Community Conservation Plan (NCCP) under the California Natural Community Conservation Planning Act. Pursuant to section 10(a)(1)(B) of the FESA, HCPs provide for partnerships with non-federal parties to conserve the ecosystems upon which listed species depend, ultimately contributing to their recovery. HCPs are planning documents required as part of an application for an incidental take permit. They describe the anticipated effects of the proposed taking; how those impacts will be minimized and mitigated; and how the HCP is to be funded. HCPs can apply to both listed and non-listed species, including those that are candidates or have been proposed for listing. Conserving species before they are in danger of extinction or are likely to become so can also provide early benefits and prevent the need for listing.

The proposed PCCP is a landscape-level plan and emphasizes the conservation of ecosystems, natural communities and ecological processes in western Placer County. The natural communities within western Placer County require large, contiguous blocks of intact habitat to maintain their biological function. Rather than the piecemeal approach of project-level mitigation, which often results in small blocks of avoided and preserved habitat both within project sites and at off-site mitigation areas, the proposed PCCP focuses on configuring a large, contiguous reserve system. Both natural communities as well as agricultural uses benefit from this approach, as larger preserves reduce edge effects, minimize human intrusion, allow adequate buffers from incompatible land uses, reduce the risk of invasive species introductions, result in significant buffers around wetlands and other regional waterways, and allow for largely unobstructed movement of plant and wildlife populations resulting in gene flow as well as opportunities for dispersal. Management of contiguous blocks of preserve land within a contiguous reserve system also results in economies of scale associated with acquisition and maximizes management efficiency, reducing long-term implementation costs. Under the proposed PCCP, preserve lands would be acquired from willing sellers outside of (and in some cases, within) the potential future growth areas. The land may be acquired and protected in perpetuity by some combination of fee-title ownership, conservation easements, or deed restrictions.

A key component of the conservation strategy is based on land cover mitigation. In addition to wetland mitigation, impacts to specific land cover types (e.g., annual grassland, agriculture, etc.) would be tracked, and in-kind mitigation would occur at ratios of 1:1.25, 1:1.35 or 1.5, depending on the land cover. This land cover approach would mitigate for the habitat loss associated with individual development projects within the proposed PCCP area, including habitat for the 14 covered species. This mitigation strategy would protect and enhance both natural communities and agricultural lands within the proposed PCCP area, resulting in the establishment of a sustainable reserve system in conjunction with the development of the future growth area.

Based on the County's most current discussions with the federal and state resource agencies, the species to be covered by the proposed PCCP would include:

Birds

- Swainson's hawk
- California black rail
- Western burrowing owl
- Tricolored blackbird

Reptiles

- Giant garter snake
- Northwestern pond turtle

Amphibians

- Foothill yellow-legged frog
- California red-legged frog

Fish

- Central Valley Steelhead
- Chinook salmon

Invertebrates

- Valley elderberry longhorn beetle
- Conservancy fairy shrimp
- Vernal pool fairy shrimp
- Vernal pool tadpole shrimp

Of these species, two (vernal pool fairy shrimp and Central Valley steelhead) have designated critical habitat within the Plan Area. The proposed PCCP would *not* cover special-status state or federally-listed plants.

As currently discussed, the proposed PCCP would include a County Aquatic Resources Program (CARP) that would serve as an implementation program supporting the issuance of permits under the federal CWA and the California Fish and Game Code. It is anticipated that the proposed PCCP would provide a streamlined process that would provide clarity and certainty around conservation of habitats for sensitive species in western Placer County, and would reduce costs and uncertainties for project permitting, allowing project proponents to obtain state and federal permits through the local planning entitlement process. The approval of local projects would be subject to the requirements of the proposed PCCP, but generally authorized and monitored locally.

The proposed PCCP is being developed through coordination of Placer County, the USACE, U.S. EPA, USFWS, NMFS, and CDFW with partners in preparation of the plan including the Placer County Water Agency (PCWA), the South Placer Regional Transportation Authority (SPRTA), and the City of Lincoln. A working draft of the PCCP is available for review by participating agencies, however a public draft of the PCCP has not yet been released and ultimate adoption of the PCCP is as of yet uncertain.

3.4.3 Analysis, Impacts, and Mitigation

Significance Criteria

For the purposes of this analysis, this EIR uses the criteria presented in Appendix G of the CEQA Guidelines to determine impact significance. Significant impacts would occur if the proposed project would:

- Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Substantially reduce the habitat of a fish or wildlife species;
- Cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal or community;
- Substantially reduce the number or restrict the range of an endangered, rare or threatened species;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

- Have a substantial adverse effect on federally protected wetlands defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or by other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with the provisions of approved local, regional or state policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

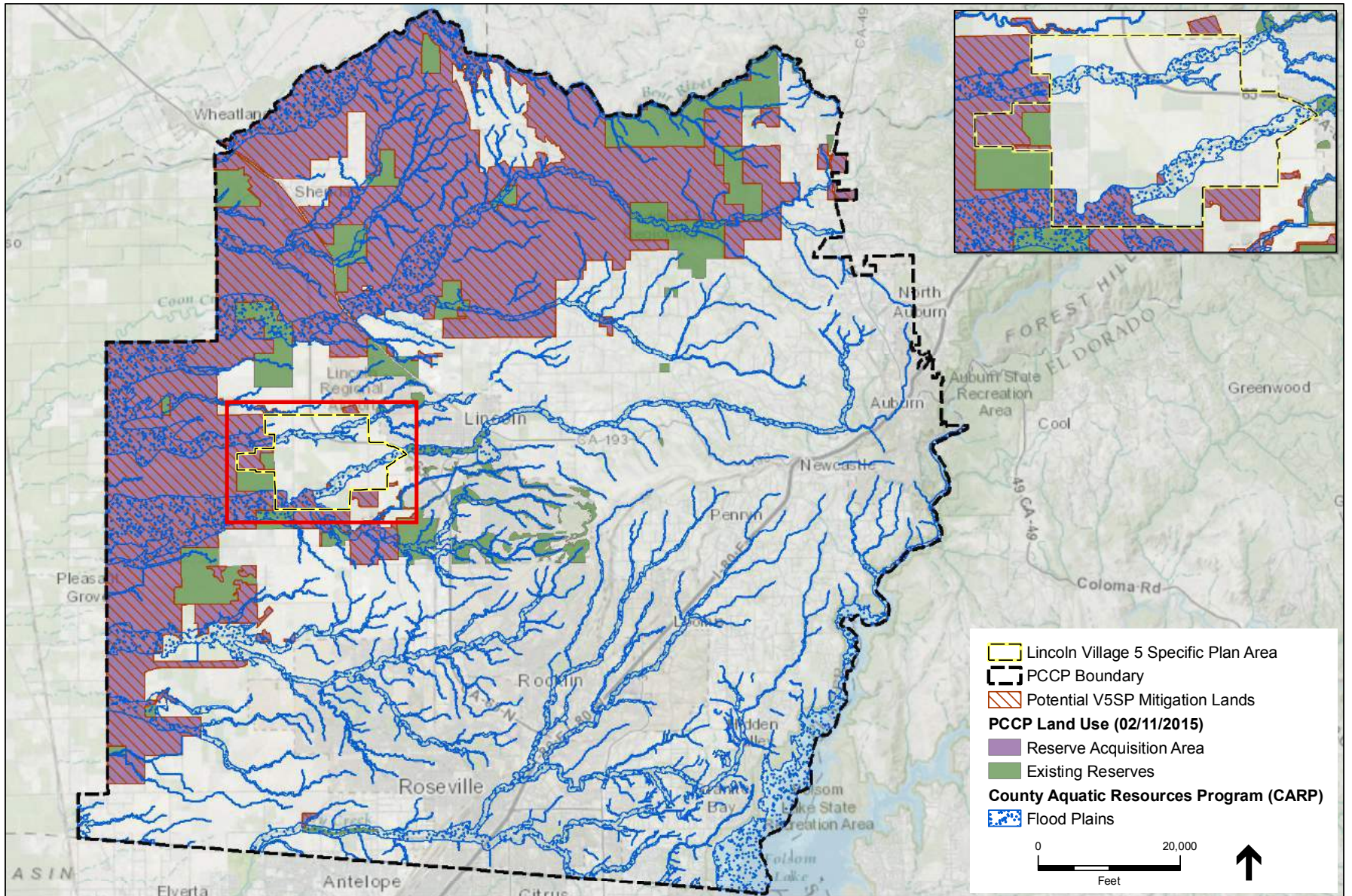
Methodology and Assumptions

The impact analysis focuses on foreseeable changes to the baseline condition of the Plan Area in the context of the significance criteria presented above. In conducting the following impact analysis, three principal components of the Guidelines outlined above were considered:

- Magnitude of the impact (e.g., substantial/not substantial);
- Uniqueness of the affected resource (i.e., rarity of the resource); and
- Susceptibility of the affected resource to perturbation (i.e., sensitivity of the resource).

The evaluation of the significance of the following impacts considered the interrelationship of these three components. For example, a relatively small magnitude impact to a state or federally listed species would be considered significant because the species is very rare and is believed to be very susceptible to disturbance. Conversely, a plant community such as nonnative annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be required to result in a significant impact.

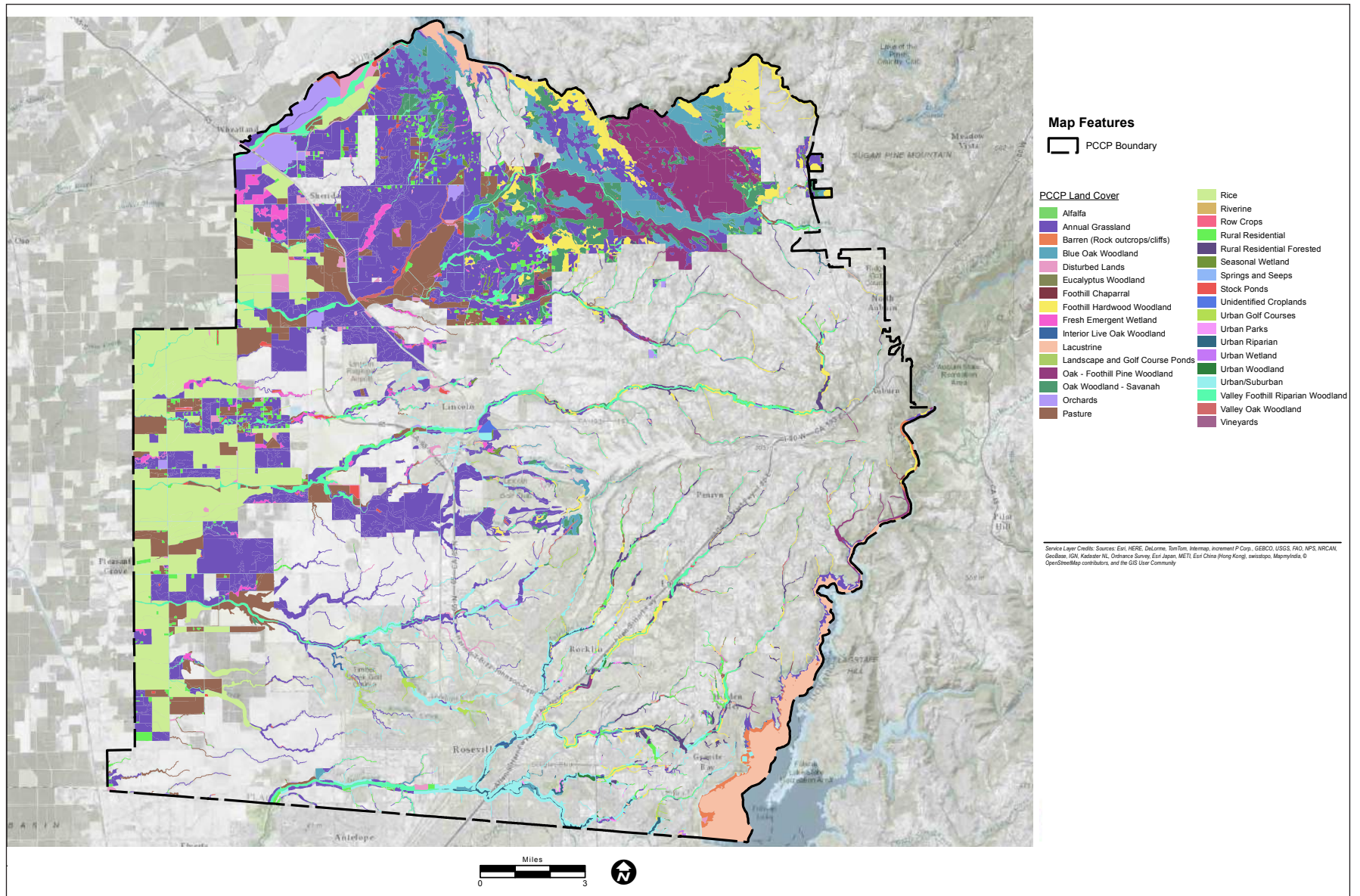
The proposed project would be a covered activity under the draft PCCP if it is adopted by the County and the City of Lincoln and approved by the regulatory agencies. In anticipation of its adoption and approval, mitigation measures for potential impacts on biological resources presented in this EIR were developed to be consistent with the current Working Draft version of the PCCP. Any mitigation measures in this EIR that would be required to avoid or minimize impacts were based on avoidance and minimization measures in the current Working Draft version of the PCCP. If required, any compensatory mitigation in the form of habitat preservation, wetland mitigation, (i.e., the protection in perpetuity of existing habitat), or habitat restoration (i.e., the creation, enhancement or rehabilitation of habitat) would occur in the PCCP Reserve Acquisition Area (RAA), in an agency-approved mitigation bank, or elsewhere as determined appropriate by the regulatory agencies for areas less than 200 acres in size (**Figure 3.4-4**). Mitigation lands would therefore be preserved and/or restored by utilizing a larger landscape-level approach. Performance standards and monitoring requirements for mitigation lands would be consistent with the PCCP. Land cover of the PCCP RAA is shown in **Figure 3.4-5**.



SOURCE: ECORP, 2016; Placer County, 2015; ESA, 2016

Lincoln Village 5 . 130368

Figure 3.4-4
Proposed Mitigation Lands



SOURCE: ECORP Consulting, Inc., 2016

Lincoln Village 5 EIR . 130368

Figure . .
 PCCP Land Cover Types of the PCCP Reservoir Acquisition Areas
 and the County Aesthetic Resources Program Floodplain Areas

Assuming the PCCP is adopted by the County, the City, and approved by the state and federal regulatory agencies, the management and monitoring of the mitigation lands would become the responsibility of the Placer Conservation Authority (PCA), the implementing entity of the PCCP. The amount of preservation and restoration required to mitigate impacts to a less-than-significant level would be consistent with the ratio of habitat impacted to habitat preserved and restored under the Conservation Strategy of the current Working Draft version of the PCCP.

If the PCCP has not been adopted prior to entitlement and buildout of the V5SP, or prior to certain phases of the V5SP, project-level permitting would be required to fulfill legal obligations associated with the laws and regulations described in Section 3.4.2 above (such as the CWA and state and federal ESAs).

Impacts and Mitigation Measures

Impact 3.4-1: Implementation of the proposed project could have a substantial adverse effect on federally protected wetlands defined by Section 404 of the Clean Water Act through direct removal, placement of fill, hydrological interruption, or by other means and would result in fill of jurisdictional wetlands or other protected waters.

Full Specific Plan (Except Area A and Windsor Cove)

Development of the full specific plan would result in the fill of jurisdictional wetlands, other waters of the U.S., or waters of the State. Wetland delineations have not been conducted for the properties that comprise the majority of the Plan Area. Estimates of wetlands and waters of the U.S. based on a review of aerial photography followed by a reconnaissance-level visit to the site indicate that a variety of potentially jurisdictional wetlands and other waters are present. As shown in Table 3.4-1, approximately 30 acres of potential wetland habitat could be impacted by the V5SP.

The proposed project has been designed to avoid many wetland features by designating over 40 percent of the entire Plan Area as open space areas and wildlife corridors such as Auburn and Markham Ravines. Within these areas, habitats would be preserved and enhanced. The open space corridors, which are consistent with the proposed PCCP and a part of the future Reserve Acquisition Area and CARP, include both Markham and Auburn Ravines and their associated floodplains. The channels of these ravines, as well as the extensive wetlands located within their floodplains, are some of the highest quality wetlands and habitat remaining in western Placer County. In addition, these open space corridors provide important connectivity corridors for wildlife, as well as potential spawning and rearing habitat for anadromous fish. The remaining wetlands in the Plan Area located in areas designated for development would be lost due to filling, grading, or other activities related to development. Many of the wetland resources to be filled are farmed wetlands (occurring within areas of active agriculture and often highly disturbed) or agricultural irrigation ditches or canals; however, some areas of relatively intact vernal pool and seasonal wetland complexes would be impacted. Construction related impacts could include increased turbidity and deposition of sediment into wetlands and waters. Project operations post-construction could also impact wetlands through runoff from irrigated landscapes

that could include the introduction of nutrients from fertilizers or other pollutants into wetlands and waters. The loss of wetlands or other waters of the U.S. as a result of grading and other ground disturbance, or the degradation of waters during construction and operation of the proposed full specific plan would be considered a **potentially significant impact**.

Area A

A wetland delineation has been conducted for Area A; a total of 94.90 acres of potentially jurisdictional wetlands and other waters of the U.S. occurs in Area A. GIS analysis of wetland mapping data,¹²⁹ implementation of the V5SP would result in the loss of up to 20.78 acres of wetlands and other waters due to urban development in Area A. This would be considered a **potentially significant impact**.

Windsor Cove

The wetlands and other waters of the U.S. on the 80-acre Windsor Cove site were delineated in 2014. The site supports 7.68 acres of potentially jurisdictional wetlands and other water of the U.S. Implementation of the V5SP would result in the loss of up to approximately 7.68 acres of waters and other wetlands due to urban development at the Windsor Cove site. This would be considered a **potentially significant impact**.

Mitigation Measures

In practice, certain wetland types are not easily distinguished and often intergrade. The mitigation strategy below minimizes the effect of field interpretation by applying the same ratios for all wetland types and by allowing broad latitude for out-of-kind mitigation. For the purposes of applying mitigation requirements, the definition of “vernal pool complex” includes vernal pools and depressional areas within vernal swales, and other seasonal wetlands.

Mitigation Measure 3.4-1 (Full Specific Plan, Area A, and Windsor Cove)

- a) *If the PCCP is adopted and approved by the agencies, participation in the PCCP shall satisfy all mitigation requirements under CEQA.*
- b) *If the PCCP has not been adopted and approved by the agencies at the time the project applicants wish to proceed with permitting, they shall comply with the following mitigation measures:*
 - 1) *The project applicant for each project phase shall retain a qualified biologist to delineate all wetlands and waters of the U.S. or other protected waters within the proposed development. The delineation(s) shall be submitted to the USACE for verification as part of the formal Section 404 wetland delineation*

¹²⁹ ECORP Consulting, Inc., 2015. Wetland Delineation for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. June 2, 2015. Verified by the USACE June 5, 2015.

process. If no wetlands are determined to be present, or if wetlands would be avoided, no further mitigation would be required. Prior to fill of any wetlands, or hydrologic interruption of the wetland, the applicant must obtain a Section 404 permit and obtain Section 401 certification from the Central Valley Regional Water Quality Control Board.

- 2) *For each 1.0 wetted acre of vernal pools impacted, 1.35 acres of vernal pools shall be preserved. For purposes of calculating impact and mitigation requirements, seasonal depressional wetlands shall be considered vernal pools. For each 1.0 acres of impact of any other wetland type, the preservation requirement may be met by preserving 1.35 acres of any wetland type without regard for in-kind mitigation. The preservation requirement for open water may be met through preservation of 1.0 acres of open water or any wetland type for each 1.0 acres of impact. The total amount of required wetland preservation under this strategy will be automatically reduced by any and all wetland preservation required by any permitting agency.*

For each 1.0 acres of vernal pool impact, 1.25 acres of compensatory wetlands shall be restored, enhanced or created including a minimum of 0.75 acres of vernal pool and no more than 0.5 acres of other wetlands. For each 1.0 acres of impact of any other wetland type, the restoration, enhancement, or creation requirement may be met by restoring, enhancing, and/or creating 1.25 acres of any wetland type without regard for in-kind mitigation. The compensatory requirement for open-water may be met through restoration, enhancement, and/or creation of 1.25 acres of open water or any wetland type for each 1.0 acres of impact. The total amount of required compensatory wetland restoration, enhancement, or creation under this measure will be automatically reduced by any and all wetland restoration, enhancement, and creation required by any permitting agency as well as any wetland preservation required by a permitting agency greater than the wetland preservation amount required by this mitigation. The compensatory requirement shall not be reduced below 1.0 by excess preservation.

Approximately 715 acres of land within the PCCP Reserve Acquisition Area that would serve as suitable mitigation land for impacts on habitat within Area A have been identified and acquired by the applicant. All mitigation lands would be located within the Upper Coon-Upper Auburn watershed north of Auburn Ravine. Soil types at these mitigation lands would consist primarily of San Joaquin-Cometa sandy loams soils, with some occasionally flooded Xerofluvents soils, frequently flooded Xerofluvents soils, Cometa sandy loam soils, and Cometa-Fiddymont complex soils. Some of these soils have impervious soil layers and support vernal pool complexes or could be restored

to vernal pool or seasonal swale habitats. If the entire mitigation area is not needed for mitigation of Area A impacts, impacts to vernal pool habitats and species within other areas could be mitigated on these lands.

The mitigation lands are currently used as mostly grassland/pasture and fallow/idle cropland, with some areas used to grow winter wheat, hay/non-alfalfa, and other crops. The mitigation lands are largely surrounded by fallow/idle cropland, rice fields, hay/non-alfalfa fields, and active cropland used for growing clover/wildflowers, rye, corn, and other rotational crops. Management of the mitigation lands could be modified to provide greater benefit to special-status plant and wildlife species.

- 3) *Wetland preservation, restoration, enhancement and creation shall be accompanied by the associated uplands and hydrology necessary to sustain long-term viability in a natural or restored environmental setting.*
- 4) *It is anticipated that most wetland preservation, restoration, enhancement and creation may be accomplished on land conserved to meet the land cover mitigation requirement and will be subject to the required conservation easements and management plans. If additional lands are conserved to meet the wetland mitigation requirement, the same requirements for conservation easements and management plans shall apply.*
- 5) *Project applicants may use credits from approved conservation or mitigation banks to meet all or a part of the wetland mitigation required by this strategy.*
- 6) *The density of wetlands on land conserved to meet the land cover mitigation requirement in some projects within the V5SP may provide wetland mitigation in excess of the acreage required by this strategy. Excess mitigation may be freely assigned by private agreement between projects within the City of Lincoln and Lincoln Sphere of Influence. Such assignment shall be documented and tracked by the City. Project applicants may apply excess mitigation assigned from other projects in the Plan Area to meet all or a part of the wetland mitigation required by this measure provided proof of assignment can be demonstrated to the satisfaction of the City.*
- 7) *The City may allow mitigation located outside of Placer County that advances the City's conservation goals and meets the biological intent of this mitigation strategy. In addition, the City may accept credits from out-of-county conservation or mitigation banks towards full or partial compliance with this strategy if the project is within the agency-approved service area for the credits.*

Avoidance and Minimization Measures

- 8) *Prior to any construction activities that could impact protected waters, a protective fence shall be erected around the boundaries of avoided wetlands, including a protective buffer as dictated in the 401, 404, or 1600 permits as described in section 9) below. This fence shall remain in place until all construction activity in the immediate area is completed. No activity shall be permitted within the protected areas except for those expressly permitted by the USACE and/or CDFW.*
- 9) *A construction buffer shall be provided along all avoided wetlands in accordance with the Section 404 permit, and Section 401 Water Quality Certification. Only those uses allowed in the Section 404 permit and Section 401 Water Quality Certification and/or the Streambed Alteration Agreements shall be permitted in the wetlands preserve and its buffer.*
- 10) *Water quality in the avoided wetlands shall be protected during construction in the watershed by using erosion control techniques including (as appropriate), but not necessarily limited to, preservation of existing vegetation, mulches (e.g., hydraulic, straw, wood), and geotextiles and mats. Additionally, urban runoff shall be managed to protect water quality in the wetlands preserve using techniques such as velocity dissipation devices, sediment basins and pollution collection devices.*

Impact Significance After Mitigation: Mitigation Measure 3.4-1 would ensure that the project achieves no net loss of wetlands through avoidance and restoration. Additionally, buffer requirements as set forth in the Section 404 and/or 401 water quality certification would reduce the potential for storm water runoff to cause adverse impacts to onsite wetland. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-2: Implementation of the proposed project could result in adverse impacts to special-status species, either directly or through habitat modifications.

Implementation of the proposed project could have a substantial adverse effect, either directly or indirectly through habitat modification on special-status species. Construction activities, such as grading, landscaping, and building roads, drainages, and structures could directly harm or kill special-status species, and remove or degrade substantial amounts of their habitats in Areas A through J, as shown in Table 3.4-1. The removal of habitat or the modification of habitat for special-status species would occur throughout the Plan Area. The transformation of the Plan Area from active and fallow rice fields, pasture, wetlands, and vernal pool complexes to urban uses would directly or indirectly displace or eliminate special-status species from the Plan Area, and

would permanently modify the habitat. As shown in Table 3.4-1, approximately 3,418 acres of potential habitat and land cover would be disturbed in the Plan Area.

Special-status species that use rice fields, pasture, wetlands, or vernal pool complexes as habitat would no longer be able to use the Plan Area as nesting or foraging habitat. Species such as vernal pool crustaceans or amphibians, rare plants, valley elderberry longhorn beetle, western pond turtle, fish, and migratory birds, for example, could be adversely affected due to the inability to use the Plan Area as a nesting, burrowing, foraging, or breeding area. Impacts to specific species and habitats and their levels of significance are discussed under Impacts 3.4-1, 3.4-3, 3.4-4, 3.4-5, 3.4-6, 3.4-7, 3.4-8, and 3.4-9. Many of these species flourish when there are large tracts of land preserved, rather than small patches of land, because species movement and migration can be preserved. Buildout of the Plan Area would eliminate large tracts of land that could be used by special-status species and directly and indirectly affect special-status species. Therefore, the impact to special-status species would be **potentially significant**.

Mitigation Measures

Mitigation Measure 3.4-2

- a) *If the PCCP has been adopted by the County, the City, and approved by the agencies, the project applicant shall comply with the PCCP and that participation shall satisfy all of the mitigation requirements for this impact.*
- b) *If the PCCP has not been adopted by the County and City and/or has not been approved by the agencies, the following mitigation measures shall apply:*
 - 1) *The project applicant shall obtain a Biological Opinion and any applicable incidental take authorization from USFWS and comply with the conditions and requirements therein.*
 - 2) *The project applicant shall prepare and submit to the City, a Project-Level Open Space, Agricultural Land and Biological Resources Mitigation Plan that implements the open space, agricultural land and biological resources strategy and includes the following elements:*
 - i. *Identification and quantification of land cover and wetland removal and applicable mitigation requirements set forth below in subsection (5).*
 - ii. *Identification and quantification of proposed mitigation lands and/or resources with sufficient detail to allow for City evaluation, including plans for restoration, enhancement and/or creation of wetlands.*
 - iii. *Identification of any conservation or mitigation bank credits or assignment of excess mitigation from other projects in the V5SP.*

- iv. *Draft conservation easements and draft management and monitoring plans, if applicable.*
 - v. *An endowment for long-term management of the proposed mitigation lands.*
- 3) *Any Project-Level Open Space, Agricultural Land and Biological Resource Mitigation Plan must be approved by the City, in its sole discretion, at the time of the approval of any improvement plans for subdivision improvements or off-site infrastructure, recordation of a final map (not including a large lot final map that results in no disturbance of any existing natural condition), or issuance of any project-level discretionary approval for non-residential land uses that does not require a tentative subdivision map. A Project-Level Open Space, Agricultural Land and Biological Resource Mitigation Plan may cover a development project or group of projects and must include any required off-site infrastructure unless covered by a separate project-level mitigation plan for that infrastructure improvement. The City may require the applicant to provide a conceptual plan for the Project-Level Open Space, Agricultural Land and Biological Resources Mitigation Plan that includes a calculation of acres of impact and acres of required mitigation prior to approval of a General Development Program or tentative map. A tentative map may have more than one Project-Level Open Space, Agricultural Land and Biological Resource Mitigation Plan if the development authorized by the map is owned by separate owners.*
- 4) *Each project (including off-site infrastructure) must demonstrate compliance with an approved Open Space, Agricultural Land and Biological Resources Mitigation Plan prior to approval of a grading permit that results in land cover or wetland impact. Such compliance may be phased with the actual development of the project. Demonstration of compliance shall include:*
- i. *Demonstrate recordation of required easements for land conservation.*
 - ii. *Demonstrate ownership of applicable credits and/or assignment of any applicable excess mitigation from other projects in the V5SP.*
 - iii. *Demonstrate implementation of an endowment for the management of all mitigation lands.*
 - iv. *Demonstrate approval of construction and monitoring plans for any required restoration, enhancement, or creation of wetlands. Provide proof of executed contracts and initiation of construction.*

- v. *Documentation and approval of any mitigation credits eligible for future use or assignment.*
- 5) *An Open Space, Agricultural Land and Biological Resources Mitigation Plan shall require that for every 1.0 acres of land cover impacted, 1.35 acres of land will be conserved in perpetuity. The impact area shall be calculated to the nearest one-tenth (0.10) acre. The total amount of required acreage will be automatically reduced by any and all off-site conservation or mitigation land required by any permitting agency, specifically including upland areas required in association with wetland mitigation, whether acquired through mitigation bank credits or other means. The mitigation land to be conserved may be located in the Reserve Acquisition Areas, or elsewhere as determined by the City and regulatory agencies. No additional land mitigation will be required beyond the 1.35 to 1.0 requirement for the removal of land cover.*
- 6) *To determine the acreage of land cover impact, all land within the V5SP shall be considered to be “land cover,” except for land that is already developed with infrastructure, such as roadways, and homes and related development such as accessory structures, driveways, improved roadways, and landscaped areas. Any land cover that will be maintained in or restored to a natural or semi-natural condition as required by the City and/or any state or federal permitting agency shall not be included in the land cover impacted acreage. Any wetland area required to be avoided, restored, and/or enhanced on site by the City and/or any permitting agency shall be automatically excluded from the removal calculation.*
- 7) *Land conserved under this measure shall, to the extent feasible, as determined by the City, be located within the Reserve Acquisition Area, but may be included in other areas deemed adequate by the regulatory agencies. Impacts to annual grassland, vernal pool grassland, and pasture lands cover shall be mitigated on existing or restorable grassland. All other land cover impacts may be mitigated on any natural or semi-natural land within the Reserve Acquisition Areas, specifically including agricultural land. Vernal pool grassland will be mitigated by any grassland without regard to wetted area density.*
- 8) *Conservation sites shall be subject to recorded conservation easements and management plans with an identified funding source for long-term management of conserved lands. The conservation easements and management plans are subject to approval by the City and shall provide for the long-term maintenance of biological functions and values while, whenever feasible, also providing for compatible agricultural use. The City shall accept as satisfactory*

mitigation any conservation easement and/or management plan required and approved by the terms and conditions of any permit issued by a state or federal resource agency.

- 9) *Project applicants may use credits from approved conservation or mitigation banks to meet all or a part of the conservation required by this strategy. Specifically, the uplands associated with any bank wetland preservation, restoration, enhancement or creation may be applied towards the land cover mitigation requirement provided that the uplands are subject to an appropriate conservation easement and the applicant can demonstrate that the approved mitigation credits include both wetland and upland land cover to the satisfaction of the City. Mitigation and conservation banks must be approved by the USFWS, USACE, or the CDFW. Credits can count toward mitigation obligations if the banks are consistent with the requirements of state and federal natural resources agencies, as accepted by the City.*
- 10) *It is anticipated that, depending on the availability and relative parcel size of potential conservation sites, some projects within the V5SP may provide land cover mitigation in excess of the acreage required by this strategy. Excess mitigation may be freely assigned by private agreement between projects within the City of Lincoln and the Lincoln Sphere of Influence. Such assignment will be documented and tracked by the City. Project applicants may apply excess mitigation assigned from other projects in the V5SP to meet all or a part of the land cover mitigation required by this measure provided proof of assignment can be provided to the satisfaction of the City.*
- 11) *Because of their particular regulatory status and their biological importance, wetlands shall be accounted for separately through mitigation ratios requiring preservation and or restoration of a set amount of wetted area calculated as a proportion of wetland impact as set forth in Mitigation Measure 3.4-1. These wetted acres, along with any upland area that is conserved in association with the wetted acres, will be fully credited towards the required land cover mitigation. It is intended that all of the wetland mitigation shall be counted towards land cover mitigation requirements. Likewise, all wetted acres contained within land cover mitigation shall be counted towards wetland mitigation.*

Impact Significance After Mitigation: If the PCCP is adopted and agency-approved, compliance with it would satisfy all legal requirements to mitigate impacts to special-status species because the PCCP would identify all covered species and ratios for protecting them. If the PCCP is not yet adopted and agency-approved when permitting occurs, consultation with the Corps, CDFW, and USFWS, and the development of a Project-Level Open Space, Agricultural

Land and Biological Resources Mitigation Plan would ensure that habitat modification and potential impacts to special-status species are mitigated on a system-wide level, ensuring the conservation of large, contiguous tracts of land to maintain species habitat. This plan would both comply with the draft PCCP, should it be adopted, and would provide a framework for habitat and species preservation should the draft PCCP not be adopted. Therefore, with the implementation of Mitigation Measure 3.4-2, the impact to special-status species would be **less than significant**.

Impact 3.4-3: Implementation of the proposed project could result in the loss and/or degradation of vernal pool habitat, and the loss of special-status vernal pool crustaceans or amphibians.

Full Specific Plan (Except Area A and Windsor Cove)

Development of the V5SP could result in the loss of special-status vernal pool crustaceans and amphibians and degradation and/or loss of their habitat, including the loss of federally designated critical habitat for vernal pool fairy shrimp. The Plan Area contains a variety of habitats including seasonal wetlands and vernal pools, which could support vernal pool crustaceans and western spadefoot toads. Based on habitat data developed as part of the PCCP process, as shown in Figure 3.4-1 and Table 3.4-1, approximately 1,204 acres of vernal pool complex habitat with the potential to support vernal pools, vernal pool crustaceans, and amphibians could be lost as a result of implementation of the full specific plan. This includes 94 acres of the approximately 180 acres of vernal pool fairy shrimp critical habitat located within the Plan Area¹³⁰ mostly located in Area B with 0.03 acres in Area C. Approximately 20 acres of additional habitat in Area B (and less than 0.01 acres in Area J), including pasture, rural residential, and valley foothill riparian woodland, is also designated critical habitat for vernal pool fairy shrimp, and could be lost as a result of the implementation of the V5SP. GIS analysis shows that approximately 112 acres of vernal pool critical habitat could be lost as a result of the implementation of the full buildout of V5SP. The remaining 68 acres of critical habitat¹³¹ within the Plan Area are located within the Auburn Ravine reserve area and would not be impacted because it would be avoided and protected. Because development of the V5SP could result in the loss of individual vernal pool crustaceans, amphibians, or their habitat through grading and conversion to urban development or landscaping, this would be considered a **potentially significant impact**.

Area A

Surveys in Area A found *Branchinecta* (fairy shrimp) eggs in separate areas of the site, and it is expected that vernal pool crustaceans are present in suitable habitats within Area A, including

¹³⁰ ECORP Consulting, Inc., 2015. Analysis of Vernal Pool Fairy Shrimp (*Branchinecta lynchi*) Critical Habitat within the Lincoln Village 5 Project. Memorandum to Katherine Hart, Richland Investments. September 11, 2015.

¹³¹ U.S. Fish and Wildlife Service, 2015. List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project. Consultation Code: 08ESMF00-2015-SLI-0329. Available: <http://ecos.fws.gov/ipac/>. Accessed April 16, 2015.

vernal pools and other seasonal wetland features. Within the 62 acres of vernal pool complex in Area A, approximately 8.5 acres of potentially suitable vernal pools, seasonal wetlands, and seasonal swales would be directly lost during development of Area A. An additional 4.7 acres of potentially suitable vernal pools, seasonal wetlands, and seasonal swales are located in other habitat types outside of the mapped vernal pool complex. Development of Area A would result in the loss of approximately 13 acres (or 1%) of potential vernal pool crustaceans habitat, and individual vernal pool crustaceans and spadefoot toad through grading and conversion to urban development or landscaping, and thus, potential loss of wetland and habitat of a federally listed species (vernal pool fairy shrimp) is considered to be a “take” of a federally listed species and would be considered a **potentially significant impact**.

Windsor Cove

No surveys for vernal pool crustaceans have been conducted in the Windsor Cove area; however, suitable habitat has been identified within Windsor Cove including vernal pools and vernal swales.¹³² In 2014, 13 vernal pools (0.68 acres) and three vernal swales (3.48 acres) were delineated on the site as part of a wetland delineation¹³³ and these features could potentially support vernal pool crustaceans and western spadefoot toad. Because development of the Windsor Cove area could result in the loss of individual vernal pool crustaceans or amphibians, and potential habitat through grading and conversion to urban development or landscaping, this would be considered a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.4-3

- a) *If the PCCP has been adopted by the County, the City, and approved by the agencies, the project applicant shall comply with the PCCP and that participation shall satisfy all of the mitigation requirements for this impact.*
- b) *If the PCCP has not been adopted by the County and City and/or has not been approved by the agencies, the following mitigation measures shall apply:*
 - 1) *The project applicant shall implement Mitigation Measure 3.4-1, subsection b) and Mitigation Measure 3.4-2.*

Avoidance and Minimization Measures

- c) *Orange exclusionary fencing shall be placed, and a buffer area of 250 feet (or lesser distance deemed sufficiently protective by a qualified biologist with approval from*

¹³² Cardno, 2015. Preliminary Biological Assessment for the Moore Road Property. March 2, 2015.

¹³³ Cardno, 2015. Wetland Delineation and Preliminary Jurisdictional Determination. Moore Road Property. February 4, 2015.

USFWS) maintained, around any avoided (preserved) vernal pool crustacean or western spadefoot toad habitat during construction to prevent impacts from construction vehicles and equipment. This fencing shall be inspected by a qualified biologist throughout the construction period to ensure that it is in good functional condition.

- d) *Prior to beginning work on a project site, all on-site construction personnel shall receive instruction regarding the presence of listed species and the importance of avoiding impacts to these species and their habitat.*

Impact Significance After Mitigation: Compliance with the PCCP, if adopted and approved, would satisfy all legal requirements to mitigate impacts to vernal pool habitat, special-status vernal pool crustaceans or amphibians because the PCCP would identify all covered species and ratios for protecting them. Should the PCCP not be adopted or approved by the time permitting occurs, the applicants implementation of Mitigation Measure 3.4-3 would ensure a conservation strategy through the protection and restoration of vernal pool complexes, vernal pool wetlands, seasonal wetlands and seasonal swales, and avoidance and minimization measures that include requiring a buffer area during construction and not changing flows into adjacent resources as required by the draft PCCP. Thus, any impacts on vernal pools or vernal pool species would be reduced to a **less-than-significant** level.

Impact 3.4-4: Implementation of the proposed project could result in the loss and/or degradation of rare plant populations.

Full Specific Plan

Based on the literature review and studies described above, nine rare plant species could occur within the Plan Area including: pincushion navarretia, dwarf downingia, legenera, Boggs Lake hedge-hyssop, Ahart's dwarf rush, Red Bluff dwarf rush, slender Orcutt grass, Sanford's arrowhead, and big-scale balsamroot. Habitats in the Plan Area such as vernal pools, seasonal wetlands, seasonal swales, fresh emergent marsh, or nonnative annual grasslands could support these species. If these species are present and are not identified and appropriately managed, grading or other ground disturbance related to the proposed project would result in the removal of habitats that could support these species. This is considered a **potentially significant impact**.

Area A

Based on the literature review and on-site field studies described above, nine rare plant species could occur within Area A including: pincushion navarretia, dwarf downingia, legenera, Boggs Lake hedge-hyssop, Ahart's dwarf rush, Red Bluff dwarf rush, slender Orcutt grass, Sanford's arrowhead, and big-scale balsamroot. Habitats including vernal pools, seasonal wetlands, seasonal swales, or nonnative annual grasslands could support these species. Rare plant surveys were conducted during the 2013 and 2014 growing seasons for the target species, and none were

found in Area A. These surveys were conducted at the appropriate time of year to detect the target species and were conducted per established protocols. Because none of these species were found to occur within Area A, no further surveys are necessary. Because of none of the rare species with potential to occur are currently present in Area A, the development of Area A is not expected to impact rare plant species. This would be considered a **less-than-significant impact**.

Mitigation Measures

Mitigation Measure 3.4-4 (Full Specific Plan)

- a) *For Areas B through J, the project applicant(s) for each phase shall retain a qualified biologist to conduct focused botanical surveys in vernal pool complexes, fresh emergent marsh, seasonal wetlands and nonnative annual grassland habitats within the Plan Area for special-status plant species including, but not limited to, pincushion navarretia, dwarf downingia, legenera, Boggs Lake hedge-hyssop, Ahart's dwarf rush, Red Bluff dwarf rush, slender Orcutt grass, Sanford's arrowhead, and big-scale balsamroot during the appropriate time of year. If no special-status plants are located during the surveys, no mitigation would be required.*
- b) *If special-status plant species are located during surveys in areas proposed for ground disturbance, the project applicant for each project shall mitigate for impacts to vernal pool wetlands and complexes as described in Mitigation Measure 3.4-3, for impacts to grasslands as described in Mitigation Measure 3.4-2, and for wetlands as described in Mitigation Measure 3.4-1. The applicant shall also report the plant survey results to CDFW using a CNDDDB field survey form.*
- c) *If state or federally-listed plants are found during surveys, project applicant for each project phase shall consult with CDFW to obtain an Incidental Take Permit under Section 2081 of the CESA and comply with the conditions and requirements therein, and/or USFWS to obtain a Biological Opinion under Section 7 of FESA and comply with the conditions and requirements.*

Impact Significance After Mitigation: The above-referenced mitigation will ensure that the project impacts to special-status plants will be mitigated. For these reasons, impacts to special-status plants would be reduced to a **less-than-significant** level.

Impact 3.4-5: Implementation of the proposed project could result in the loss of western pond turtle and/or degradation of potential habitat.

Potential habitat for western pond turtle exists in the Plan Area in the vicinity in Auburn Ravine, Markham Ravine, irrigation canals, and stock ponds. No western pond turtles have been observed

within the Plan Area or vicinity and both Auburn and Markham Ravines would be substantially avoided as a part of project design to retain open space along the ravines. However, approximately 0.59 acres of potentially suitable creek habitat could be lost as a result of project implementation where Nelson Lane would cross Auburn Ravine, where Mavis Avenue would abut Markham Ravine, and where Dowd Road would cross Markham Ravine. In addition, onsite stock ponds and other waters, as well as adjacent upland habitat, could be lost through grading or other construction-related activities. Up to approximately 36 acres of potentially suitable freshwater emergent wetland, stock ponds, and lacustrine habitat could be lost as a result of project implementation. Western pond turtle is a state species of concern, and potential loss of individual western pond turtles or their habitat would be considered a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.4-5

- a) *If the PCCP has been adopted by the County, the City, and approved by the agencies, the project applicant shall comply with the PCCP and that participation shall satisfy all of the mitigation requirements for this impact.*
- b) *If the PCCP has not been adopted by the County and City and/or has not been approved by the agencies, the following mitigation measures shall apply:*
 - 1) *Prior to project construction for each phase that would disturb any potential habitat for western pond turtle, the project applicant(s) for such phase shall retain a qualified biologist to conduct preconstruction surveys of potential habitat and the vicinity (250 feet) within 30 days prior to project construction. If no western pond turtles are located, no mitigation would be required and construction could proceed.*
 - 2) *If western pond turtles are determined to be present, and potential habitat is not proposed for modification due to development of the site, then exclusionary fencing shall be used to prevent the turtle(s) from entering the construction area. The location of the fence shall be determined by a qualified biologist. Retained habitat shall also be protected through implementation of water quality and hydrology measures that ensure habitat remains viable post-construction as required for Clean Water Act Sections 401 and 404 permits and would be consistent with the Draft PCCP.*
 - 3) *If occupied habitat would be impacted or lost, the project applicant(s) for each phase shall retain a qualified biologist approved by the CDFW to relocate all potentially affected western pond turtles into suitable habitat. Lost habitat*

would be mitigated through the Sections 401 and 404 permitting process, and would be consistent with the Draft PCCP.

Impact Significance After Mitigation: Compliance with the PCCP, if adopted and approved, would mitigate all impacts to the western pond turtle to less than significant. However, if the PCCP has not yet been adopted or approved by the time project applicants seek permits to construct, these measures mimic those in the draft PCCP. Furthermore, the majority and highest quality habitat for western pond turtle would be protected in Auburn and Markham Ravines, and any western pond turtles present within the Plan Area prior to construction would either be protected in place or relocated (as required by Mitigation Measure 3.4-5), and because loss of their aquatic habitat would be compensated through compliance with the Sections 401 and 404 permitting process, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-6: Implementation of the proposed project could result in the loss or disturbance of nesting birds and the loss or degradation of special-status bird nesting and foraging habitat.

Various habitats within the Plan Area could provide nesting and foraging habitat for protected raptors, migratory birds, and other special-status bird species including: tricolored blackbird, grasshopper sparrow, Swainson's hawk, northern harrier, western yellow-billed cuckoo, white-tailed kite, loggerhead shrike, purple martin, heron/egret rookeries, and wintering special-status birds. Nests and eggs of any bird species are protected by California Fish and Game Code Sections 3503 and 3503.5. While many of the riparian trees and shrubs would be avoided and preserved in open space areas, implementation of V5SP, including Area A, could require tree and shrub removal, as well as disturbance and/or removal of grassland, that could result in direct mortality of adult or young birds, nest destruction, disturbance of nesting bird species (including migratory birds and other special-status species) resulting in nest abandonment and/or the loss of reproductive effort, and/or loss of foraging habitat. Disruption of nesting birds resulting in the abandonment of active nests, the loss of active nests through structure removal, or the loss of foraging habitat for special-status bird species would be considered a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.4-6

- a) *If the PCCP has been adopted by the County, the City, and approved by the agencies, the project applicant shall comply with the PCCP and that participation shall satisfy all of the mitigation requirements for this impact.*

- b) *If the PCCP has not been adopted by the County and City and/or has not been approved by the agencies, the following mitigation measures for foraging habitat shall apply:*
- 1) *The project applicant shall comply with Mitigation Measure 3.4-2(b)(2)-(10).*
- c) *If the PCCP has not been adopted by the County and City and/or has not been approved by the agencies, the following mitigation measures for nesting habitat shall apply:*
- 1) *If construction activity that may disturb nesting birds (according to a qualified biologist) occurs during the nesting season (March 15-August 30), the project applicant(s) for each project phase shall retain a qualified biologist to conduct a pre-construction breeding-season survey of the project site at least 30 days prior to onset of construction. Surveys for nesting raptors shall be conducted within ¼ mile of proposed. A survey for nesting birds shall be conducted within 500 feet of construction areas to determine if any birds are nesting on or within 500 feet of the project site. The results of the survey shall be valid only for the season when it is conducted. New surveys shall be conducted if construction of the surveyed area extends into the following season or if construction is suspended for more than 14 days during the nesting season, unless all of the potential nesting trees or other habitat have been removed.*
 - 2) *If the pre-construction survey does not identify any protected raptor or bird nests on or within the buffers to the project site, no mitigation would be required. However, should any active nests be located within 500 feet of a proposed construction area, the project applicant(s) for each project phase, in consultation with CDFW, shall avoid all bird nest sites located in the project site disturbance area(s) during the breeding season (approximately March 15 through August 30) while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction in close proximity to the nest during the nesting season or establishing a non-disturbance buffer zone around the nest site. The size of the buffer zone shall be determined in consultation with CDFW. The buffer zone shall be delineated by orange temporary construction fencing. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer in use.*

Additional Measures for Swainson's Hawk

- 3) *The project applicant(s) for each project phase shall retain a qualified biologist to conduct a Swainson's hawk nesting survey within the area to be disturbed, extending out to one-half mile. The survey shall be conducted during the nesting season of the same calendar year that construction is expected to*

begin, and prior to the issuance of any grading permits. If this survey does not identify any nesting Swainson's hawk in the area within the project site that will be disturbed plus the one-half mile radius, no mitigation would be required.

- 4) *Should any active Swainson's hawk nests be located within one-half mile of the disturbance area, no project-related activities that could cause nest abandonment or forced fledging (such as heavy equipment operation), shall be initiated within the one-quarter mile (buffer zone) of an active nest between March 1 and September 15.*

Additional Measures for Burrowing Owl

- 5) *Prior to project construction the project applicant(s) for each project phase shall hire a qualified biologist to conduct both nesting and wintering season surveys for burrowing owl to determine if potential habitat within 500 feet of ground disturbance is used by this species. The timing and methodology for the surveys shall be based on the CDFW/Burrowing Owl Consortium Survey Guidelines. If possible, the nesting season survey should be conducted during the peak of the breeding season, between April 15 and July 15. Winter surveys should be conducted between December 1 and January 31, during the period when wintering owls are most likely to be present.*
- 6) *If burrowing owls are discovered in the Plan Area, the project applicant shall notify the CDFW. A qualified biologist shall monitor the owls and establish a fenced exclusion zone around each occupied burrow. No construction activities shall be allowed within the exclusion buffer zone until such time that the burrows are determined to be unoccupied by a qualified biologist. The buffer zones shall be a minimum of 150 feet from an occupied burrow during the non-breeding season (September 1 through January 31), and a minimum of 250 feet from an occupied burrow during the breeding season (February 1 through August 31).*
- 7) *If complete avoidance is not feasible, the CDFW shall be consulted regarding the implementation of avoidance or passive relocation methods. All activities that will result in a disturbance to burrows shall be approved by CDFW prior to implementation.*

Impact Significance After Mitigation: Compliance with the PCCP, if adopted and approved, would mitigate all impacts to foraging and nesting habitats for special-status birds because this measure would ensure the avoidance and/or preservation of such habitat in excess of 1:1 ratios, and ensuring active nesting habitat is not disturbed. If, however, the PCCP has not yet been approved or adopted by the time project applicant(s) seek permits to construct, the mitigation

measures listed above would mimic those in the PCCP. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-7: Implementation of the proposed project could result in the loss of valley elderberry longhorn beetle and/or loss or degradation of potential habitat.

Full Specific Plan

The Markham and Auburn Ravines provide suitable habitat for elderberry plants, however, elderberry shrubs could be present in other areas of the Plan Area that are not designated as open space. VELB is listed as threatened under FESA and take of this species without incidental take authorization is prohibited. Surveys for elderberry shrubs have not been conducted in Areas B through J. Thus, implementation of the V5SP in Areas B through J could result in damage to, or loss of elderberry shrubs through root damage, removal of the shrub or trampling resulting from construction-related activities, and the loss of VELB could result. Loss of individual VELB or their habitat (elderberry shrubs) would be considered a **potentially significant impact**.

Area A

Surveys for elderberry shrubs were conducted by ECORP throughout all of Area A in 2015.¹³⁴ No elderberry shrubs were identified. Thus, implementation of the project in Area A would be considered a **less-than-significant impact** on the VELB or its habitat.

Windsor Cove

Cardno biologists surveyed the Windsor Cove site in May 2014 and February 2015. No elderberry shrubs were identified.¹³⁵ Thus, implementation of the project in Windsor Cove would be considered a **less-than-significant impact** on the VELB or its habitat.

Mitigation Measures

Mitigation Measure 3.4-7 (Full Specific Plan, Excluding Area A and Windsor Cove)

- a) *If the PCCP has been adopted by the County and City and approved by the agencies, the project applicant shall comply with the PCCP, which shall be deemed to mitigate for impacts to the VELB.*
- b) *If the PCCP has not been adopted by the County and City and approved by the agencies, the project applicant shall comply with mitigation measures c) through e).*

¹³⁴ ECORP Consulting, Inc., 2014. Results of Elderberry Shrub Surveys for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. March 9, 2015.

¹³⁵ Cardno, 2015. Preliminary Biological Assessment for the Moore Road Property. March 2, 2015.

- c) *For construction requiring consultation under Section 7 of the FESA, the project applicant shall obtain incidental take authorization and comply with the requirements therein. If no Section 7 consultation is required (because no federal permit is required), the applicant shall comply with mitigation measures d) through (f).*
- d) *The removal of elderberry shrubs or their stems measuring one inch or greater (removal or trimming) shall be compensated for by salvaging and planting the affected elderberry shrubs and planting additional elderberry shrubs and associated native riparian plants at a 1:1 ratio. Mitigation planting shall occur, to the maximum extent practicable, in areas adjacent to the impact area and/or located to fill in existing gaps in riparian corridors. If the plants to be removed show recent boring holes, the project applicants shall consult with the USFWS and obtain incidental take authorization prior to removal.*
- e) *Elderberry shrubs with stems measuring one inch or greater in diameter at ground level that are not proposed to be removed shall be protected as follows during construction:*
1. *Any ground disturbing activities within 100 feet of elderberry plants containing stems measuring one inch or greater in diameter at ground level shall provide a minimum setback of at least 20 feet from the drip line of each elderberry plant containing stems measuring one inch or greater in diameter at ground level. The setbacks shall be fenced and flagged to prohibit equipment and materials encroachment into the setback zone. Fire fuel breaks (disked land) may not be included within the 20-foot setback.*
 2. *The project applicant shall brief the construction foreman on the need to avoid damaging the elderberry plants (unless the proper take authorization is obtained) and the possible penalties for not complying with these requirements. A copy of these mitigation measures shall be provided to the construction foreman for his distribution to his crews by the project applicant.*
 3. *No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant shall be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring one inch or greater in diameter at ground level.*
 4. *No mowing shall occur closer than five feet to elderberry plant stems. Mowing shall be done in a manner that avoids damaging elderberry plants (e.g., avoid stripping away bark through careless use of mowing/trimming equipment).*
 5. *Trimming of elderberry stems less than one inch in diameter may occur between September 1 and March 14. The elderberry plants shall only be*

trimmed between November through the first two weeks in February, or when the plants are dormant and after they have lost their leaves.

Impact Significance After Mitigation: By requiring identification of all potentially affected elderberry shrubs on or adjacent to the Plan Area, protecting elderberry shrubs that will not be removed, and by requiring mitigation of VELB habitat as required by Mitigation Measure 3.4-7, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-8: Implementation of the proposed project could result in changes to surface water quality in Auburn Ravine that could affect Central Valley Steelhead and Chinook salmon due to the reconstruction and/or widening of various bridges within the Plan Area.

The reach of Auburn Ravine that passes through the Plan Area is designated as Critical Habitat for Central Valley steelhead and represents migration and possibly spawning habitat for this species and for Chinook salmon which have been documented downstream of the Plan Area. Fall-run Chinook salmon is a California Species of Special Concern and it may spawn in Auburn Ravine. Spring-run and winter-run Chinook salmon are federally listed and although they have been collected in Auburn Ravine, they are not expected to spawn in the stream. They are likely only rearing as juveniles at this location. Take of Central Valley steelhead and spring-run and winter-run Chinook salmon or degradation of their habitat without incidental take authorization is prohibited.

Two bridges across Auburn Ravine are planned to be replaced with larger bridges as part of the proposed project: one bridge at Nelson Lane and one bridge at Moore Road. At each location pilings of the old bridge would be removed and new pilings would be placed in the stream. For the Nelson Lane Bridge, the bridge would be supported by a total of 144 piers – nine rows of 16 piers that would support the roadway structure. Each row of piers would be placed at 44-foot intervals, with three rows of piers within the ordinary high water mark of the seasonal waterway of Auburn Ravine. Each pier would be approximately 24 inches in diameter. The total footprint of all of the bridge piers would be approximately 450 square feet, with approximately 150 square feet (0.004 acres) of permanent disturbance within the ordinary high water mark of the seasonal waterway of Auburn Ravine.

The existing two-lane rural bridge on Moore Road at Auburn Ravine would be replaced by a 60-foot-wide, two-lane collector bridge. The bridge would be a 15-span cast-in-place (CIP) concrete slab bridge shifted slightly north of its current location to avoid impacts to the Auburn Ravine floodway and the existing adjacent wastewater treatment outflow structure near the southeast corner of the bridge.

Additionally, an existing bridge on Dowd Road across Auburn Ravine would be expanded from two lanes to four lanes, resulting in the addition of a single pier of 17 cylindrical columns placed in the ravine.

During bridge construction access to the creek would be required to allow for construction of pile piers for the bridges, and to provide temporary support for bridge falsework. To provide for in-channel work, dewatering would be conducted to accommodate flows through the work area. All dewatering structures would be removed at the conclusion of the project. Areas that are temporarily impacted during construction would be restored to a similar condition as the baseline condition following construction. Temporary or permanent damage to or direct loss of Central Valley steelhead, Chinook salmon or their habitat through direct modification and loss of habitat or the excavation, siltation or other pollution of the habitat would be considered a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.4-8

- a) *If the PCCP has been adopted and approved prior to the start of construction in the V5SP area in question, the project applicant(s) (be they the City, County, or another agency) shall comply with the PCCP and mitigate for impacts to Central Valley steelhead and Chinook salmon as stated in the PCCP.*
- b) *If the PCCP has not been adopted and approved prior to the start of construction in the V5SP area in question, the project applicant(s) (be they the City, County, or another agency) shall comply with the following mitigation measures:*
 - 1) *Obtain a Biological Opinion and incidental take authorization for Central Valley steelhead and winter-run and spring-run Chinook salmon from NMFS and comply with the conditions and requirements therein.*
 - 2) *Obtain any necessary permits from the USACE, CDFW, and the RWQCB. Dewatering plans and the specific temporary impacts to Auburn Ravine associated with bridge construction shall be discussed in the permit applications and avoidance and minimization measures shall be proposed, including timing of construction to avoid presence of steelhead and Chinook salmon, fish rescue and relocation, as well as specific BMPs to avoid impacts to these species and their habitat. The permit requirements shall include the following elements:*
 - *In-water construction work windows shall be observed in consultation with NMFS and CDFW, and as specified in the permits issued.*
 - *Applicant(s) shall implement a pile driving, dewatering and fish rescue plan. The plan shall include specific measures to avoid and minimize impacts to salmonids and their habitats during bridge construction, and shall be approved by NMFS and CDFW.*

- 3) *Install Environmentally Sensitive Area (ESA) fences within 200 feet of work along Auburn Ravine, as indicated in the 401 or 404 permits. The ESA fencing shall be delineated on the final plans for each project phase and the fence shall be installed and remain on-site until construction within 200 feet of the Auburn Ravine preserve area is completed.*

- 4) *Implement Mitigation Measure 3.10-1 and construction best management practices (BMPs) as prescribed in the project's Storm Water Pollution Prevention Plan (SWPPP) prepared in accordance with the California National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit) (Order No. 2009-0009-DWQ, NPDES No. CAR000002). These BMPs shall be in place throughout the construction for each project phase. The SWPPP shall include specific measures for water conservation; vehicle and equipment cleaning, fueling and maintenance; dewatering; paving and grinding; concrete finishing and curing; directing water away from work areas; use of attachments on construction equipment to catch debris; use of approved covers or platforms to collect debris; stockpiling of accumulated debris and waste generated during demolition away from watercourses; and ensuring safe passage of wildlife, as necessary.*

Impact Significance After Mitigation: Protection of Central Valley steelhead, Chinook salmon and their habitat in Auburn Ravine would occur through avoidance and minimization of impacts on these salmonids (e.g., by observing work-windows and BMPs), protection of riverine habitat, and protection of water quality as required by Mitigation Measure 3.4-8. Avoiding work in Auburn Ravine during the identified work window would ensure sensitive fish would not be present when heavy construction activities occur in and adjacent to the ravine. Therefore, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-9: Implementation of the proposed project could have a substantial adverse effect on riparian habitat or other sensitive natural communities identified in local, state, or federal plans, policies, or regulations.

The proposed project protects riparian habitat in the Plan Area because it would preserve most lands associated with the Markham and Auburn Ravine floodplains where almost all riparian habitat within the Plan Area occurs. However, the proposed project would require existing bridges be replaced or expanded (widened) where Nelson Lane, Moore Road, and Dowd Road cross Auburn Ravine and where Nelson Lane and Dowd Road cross Markham Ravine. Thus, bridge replacement and construction could affect approximately 17 acres of riparian habitat by removal or damaging of riparian trees and shrubs.

Other sensitive natural communities include vernal pools, seasonal swales, seasonal wetlands, fresh emergent marsh, and riverine (creek) habitat as shown in Table 3.4-2. Those habitats would be affected directly and indirectly by implementation of the V5SP through permanent and temporary construction disturbance in the Plan Area, or future operation within the Plan Area.

Sensitive habitat for western pond turtle exists within Auburn and Markham Ravines, as discussed in Impact 3.4-5. Sensitive habitat for steelhead and Chinook salmon exists within Auburn Ravine, as discussed in Impact 3.4-8. Riverine woodland habitat is also present within Auburn and Markham Ravines. The ravines would be protected from degradation through compliance with regulations (e.g., California Fish and Game Code Section 1600 and CWA Sections 401 and 404) and policies (e.g., Policies OSC 1.1, 1.6, 1.7, 5.1 and 5.2, of the Open Space and Conservation Element of the City of Lincoln General Plan), but indirect impacts could result from storm water runoff and construction of bridges.

As discussed in Impact 3.4-3, approximately 1,204 acres of vernal pool complex habitat with the potential to support vernal pools, vernal pool crustaceans, and amphibians could be lost as a result of implementation of the Full Specific Plan. Both the direct filling of wetlands and storm water runoff or the discharge of pollutants to these natural communities can contribute to their direct loss or indirect degradation, respectively.

The loss or degradation of sensitive natural communities protected by local, regional, state, and federal policies would be considered a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.4-9

- a) *If the PCCP has been adopted and approved prior to the start of construction in the V5SP area in question, the project applicant(s) shall comply with the PCCP and mitigate for impacts to and loss of sensitive natural communities as stated in the PCCP.*
- b) *If the PCCP has not been adopted and approved prior to the start of construction in the V5SP area in question, the project applicant(s) shall comply with Mitigation Measures 3.4-1, 3.4-2, 3.4-3, 3.4-4, and 3.10-1.*

Impact Significance After Mitigation: By complying with the adopted and approved PCCP (if in place) or preserving the majority of lands associated with the Markham and Auburn Ravine floodplains and ensuring no net loss of riparian habitat values, including implementing Mitigation Measures 3.4-1, 3.4-2, 3.4-3, 3.4-4, and 3.10-1 which ensure protection and restoration of vernal pools, seasonal swales, seasonal wetlands, marsh, and riverine (creek) natural communities as required by Mitigation Measure 3.4-9, this impact would be reduced to a **less-than-significant** level.

Impact 3.4-10: Implementation of the proposed project could interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Full Specific Plan (Except Area A)

Auburn and Markham Ravines traverse the Plan Area; these corridors provide habitat for special-status species, and harbor a variety of habitats for fish and wildlife, including riverine habitat and riparian woodland. The riparian habitat along Auburn and Markham Ravines provides important shelter, nesting and foraging habitat for both common and special-status wildlife species in the region.

While the proposed project would urbanize much of the Plan Area, the proposed project would also preserve a majority of Auburn Ravine and Markham Ravine, thereby retaining wildlife habitat and movement corridors through the site and retaining connectivity with adjacent and regional areas of wildlife habitat. The impact would be **less than significant**.

Area A

Some animals are extremely sensitive to light cues, which influence their physiology and behaviors. The proposed electronic message center would be located within or adjacent to suitable foraging and nesting habitat for migratory and special-status bird species. In particular, artificial night light sources could influence migratory behavior in birds if the light source appears as a point source of light from above. Point source lighting could also attract birds to the source of light and cause disorientation, potential exposure to predators, and stress or exhaustion.

Artificial lighting could also indirectly affect birds and bats, as well as amphibians and insects, by increasing the nocturnal activity of predators and/or causing birds and bats, as well as amphibians and insects, to avoid well-lit areas. Birds could be deterred from nesting or roosting in trees and shrubs in the vicinity of the proposed electronic message center. Thus, nesting/roosting habitat availability and quality for birds could be reduced in areas with introduced nighttime lighting.

However, based upon the following factors, lighting produced by the proposed electronic message center would not significantly affect the migration or nesting activities of birds in the vicinity of the proposed electronic message center for the following reasons:

- The proposed electronic message center is designed to emit light from the face of the electronic message center and light emission is produced by light emitting diodes (LEDs) which are laid out in a grid and shielded such that the billboard is visible from direct view and less visible as the viewing position is shifted to a 35 degree angle from center. At a sufficient angle, the LED lights would not be visible. Consequently, the viewing angle will be narrow enough to preclude attracting migratory birds when birds are flying more than 35 degrees above center of the sign's beam angle. Additionally, the electronic message center

light would be no more than 0.3 lumens at 250 feet from the electronic message center face. Thus, lighting from the electronic message center would not create a significant point source (as viewed from above) that would attract birds migrating at night.

- The proposed electronic message center would be located adjacent to a major highway (SR 65), urban areas, or near structures that would be lighted during the night (e.g., Regional Sports Park). Thus, operation of the proposed electronic message center would not significantly increase ambient lighting at the proposed electronic message center site. Additionally, birds that typically nest or roost in urban environments are not likely to be deterred by the introduction of night lighting. However, those that may be deterred by lighting from the proposed electronic message center in areas adjacent to Markham Ravine would have abundant similar habitat available to them elsewhere along Markham Ravine and Auburn Ravine.

In summary, because the electronic message center would not produce a direct light source as perceived by migratory birds, its impacts on migratory birds would be **less than significant**.

Because the proposed project would retain the primary fish and wildlife movement corridors present within the Plan Area, the development of the urbanized portion of the Plan Area on migratory fish and wildlife would be considered a **less-than-significant impact**.

Mitigation Measure

None required.

Impact 3.4-11: Implementation of the proposed project could conflict with the provisions of approved local, regional or state policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Full Specific Plan (Except Area A and Windsor Cove)

The proposed project is generally consistent with relevant local regulations, including the City's General Plan and Municipal Code (i.e., ordinances). The V5SP has been designed to protect many of the natural resources present on the site, including almost all of Auburn Ravine and Markham Ravine and their floodplains, per General Plan policies OSC-1.1 and OSC-5.5. During construction, sensitive areas would be fenced to limit temporary impacts to biological resources in accordance with all applicable project permits. Following construction, permanent fencing and educational signage would be installed around all open space preserves to protect sensitive areas from human or vehicular encroachment and to educate the community about the biological resources located within the open space, consistent with the proposed PCCP and with any project-level permits obtained from the resource agencies. Sensitive areas include wetlands or other protected waters, protected trees, or habitats for special-status plants and wildlife.

As described, Impact 3.10-1 in Section 3.10, Hydrology and Water Quality, project mitigation includes BMPs to reduce impacts from soil erosion and sedimentation during construction and project operation, per General Plan policies OSC-1.6 and 1.7. The project would include a substantial amount of undeveloped open space and parkland that would preserve a variety of natural features including vernal pools and other wetland areas, in compliance with General Plan policy OSC-5.2.

Policy OSC-5.1 requires that the City protect significant vegetation. Specifically, it states as follows:

The City shall support the preservation of heritage oaks and threatened or endangered vegetative habitat from destruction. A heritage oak shall be defined as a tree with a diameter of 36 inches measured at a point 4.5 feet above grade level (i.e., diameter at breast height or DBH).

The Plan Area contains a number of heritage oak trees, almost all of which are located within the riparian corridors of the Auburn and Markham Ravines, most of which will be preserved. While most of the oak heritage trees will be preserved, there may be instances when an heritage oak is located within a proposed utility or infrastructure corridor, and which cannot be avoided or preserved. The loss of any heritage oak would be considered a **significant impact**.

Additionally, the development of the full specific plan could impact special-status species and their habitats and sensitive habitats such as wetlands through direct loss of habitats and individuals, or through indirect impacts from temporary construction disturbance or future operation of the specific plan outside of the preserved ravine areas. The loss of special-status and other native species or their habitats, or sensitive habitats, either directly or indirectly would not be consistent with local, regional and state policies regulating biological resources, including City of Lincoln General Plan policies OSC-5.6, OSC-5.7, OSC-5.8, and OSC-5.9, the California Fish and Game Code, and the Porter-Cologne Act, and would be considered a **potentially significant impact**.

Area A

GIS analysis of wetland mapping¹³⁶ shows that in Area A, the project would impact up to 20.78 acres of potentially jurisdictional wetlands and other waters of the U.S. The loss of sensitive species or their habitats, or sensitive habitats such as wetlands, either directly or indirectly would not be consistent with local, regional, or state policies regulating biological resources and would be considered a **potentially significant impact**.

¹³⁶ECORP Consulting, Inc., 2015. Wetland Delineation for the Lincoln Village 5, Phase 1 Project. Prepared for Richland Developers, Inc. June 2, 2015. Verified by the USACE June 5, 2015.

Windsor Cove

At the Windsor Cove site, the project would impact up to 7.68 acres of potentially jurisdictional wetlands and other waters of the U.S. The loss of sensitive species or their habitats, or sensitive habitats such as wetlands, either directly or indirectly would not be consistent with local, regional, or state policies regulating biological resources and would be considered a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.4-11

- a) *For impacts to threatened or endangered vegetation, the project applicant(s) shall implement Mitigation Measures 3.4-1, 3.4-2, 3.4-3, 3.4-4, 3.4-5, 3.4-6, 3.4-7, 3.4-8, 3.4-9, and 3.10-1 as applicable.*
- b) *For impacts to heritage oak trees, the project applicant(s) shall first make every reasonable attempt to avoid any heritage oak tree by designing around it. If a heritage oak tree cannot be avoided due to health, safety, and welfare risks, the project applicant(s) shall provide the following mitigation:*
 - i. *Submit a justification statement as to why the heritage tree(s) cannot be preserved in place to the City's Community Development Director.*
 - ii. *Provide a Site Plan with proposed development which also identifies the location of the heritage tree(s) to be removed.*
 - iii. *If the Community Development Director deems the justification statement to be valid, the project applicant(s) shall mitigate the loss of heritage oak trees on an inch for inch basis. Specifically, for every inch of heritage oak tree removed, an inch of oak tree shall be planted. All new plantings shall be plantings in a minimum of 15 gallon pots, and shall be of the same species of oak as was being removed and replaced, and shall, if feasible, be located on the property from which the heritage oak tree was removed. Project applicant(s) shall submit to the City's Community Development Director a revegetation plan for his/her review and approval. The project applicant(s) shall irrigate and maintain the new plantings for a minimum of three years, at which time a licensed arborist shall opine as to whether the trees are sufficiently established to release the project applicant(s) from continuing to irrigate and maintain the plantings. Any replacement trees which die before the end of the irrigation and maintenance obligations shall be replaced at a 1:1 ratio.*

Impact Significance After Mitigation: By preserving a majority of lands associated with the Markham and Auburn Ravine floodplains and avoiding, minimizing, and compensating for

impacts of specific plan implementation on habitats and special-status species, as required by Mitigation Measure 3.4-11, the development of the urbanized portion of the Plan Area would be consistent with local, regional, and state policies and ordinances regulating biological resources. This includes consistency with the California Fish and Game Code, because impacts to habitats, state-listed species and nesting birds would be avoided, minimized and compensated. This also includes consistency with the Porter-Cologne Act, because implementing Mitigation Measures 3.4-1, 3.4-2, 3.4-9, and 3.10-1 would minimize, avoid and compensate impacts on Waters of the State, including impacts on their use as habitat.

By implementing Mitigation Measures 3.4-1, 3.4-2, 3.4-3, 3.4-4, 3.4-5, 3.4-6, 3.4-7 and 3.4-9, specific plan implementation would be consistent with City of Lincoln General Plan policies OSC-1.1 and OSC-5.5 to preserve or compensate for impacts to special-status species and their habitats, and would satisfy conditions for pre-construction surveys and appropriate mitigation for sensitive species as addressed in General Plan policies OSC-5.11 and OSC-5.12. Implementing Mitigation Measures 3.4-1, 3.4-2 and 3.4-9 would ensure no net loss of wetlands, meeting the intent of General Plan policies OSC-5.6, OSC-5.7, OSC-5.8, and OSC-5.9. Thus, by implementing Mitigation Measure 3.4-11 this impact would be reduced to a **less-than-significant** level.

Impact 3.4-12: Implementation of the proposed project could conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As discussed above, a draft HCP/NCCP known as the PCCP is currently under development, and has been for the last decade. The proposed PCCP would cover approximately 201,000 acres of western Placer County and would establish a conservation reserve program made up of existing reserve areas, desired acquisitions, and areas for future development. This conservation reserve system would preserve many acres of vernal pool habitat (approximately 50 percent of the County's remaining stock of these seasonal ecosystems). As it is currently being developed, the PCCP would be both an HCP under FESA and an NCCP under the California Natural Community Conservation Planning Act. If approved, the PCCP would address many of the species potentially impacted by the proposed project including Swainson's hawk, burrowing owl, northwestern pond turtle, steelhead, Chinook salmon, valley elderberry longhorn beetle, Conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp.

Adoption of the PCCP is scheduled for December 2017. While the adoption of the PCCP is anticipated, it is not guaranteed. Until the PCCP is actually adopted by the County and City and approved by the state and federal regulatory agencies, it cannot be relied upon to ensure regulatory compliance for environmental impacts. Notably, however, the proposed project has been designed to fully comply with the Draft PCCP by preserving a majority of both the Auburn and Markham Ravines in their natural, undeveloped states, in perpetuity via one or more

conservation easements. Additionally, to the extent the proposed project has remaining portions to be built out when the PCCP is adopted, the project would fully comply with the conservation and mitigation strategies and ratios in the PCCP. There are no other HCPs, NCCPs, or other conservation plans applicable to the project. Accordingly, the proposed project would have **no impact** on any conservation plan.

Mitigation Measure

None required.

Cumulative Impacts

The geographic scope of the cumulative impact assessment is western Placer County. Western Placer County includes approximately 261,000 acres ranging from the City of Auburn and Highway 49 westward to the Yuba, Sutter, and Sacramento County lines.

The western Placer County landscape and associated land uses are greatly influenced by topography. Most of the population in Placer County is on the valley floor and lower foothills in the western quarter of the County, and it is there that future growth is projected to occur. The valley floor has extensive areas of agricultural uses, as well as the urban and suburban development along Interstate 80 and State Route 65. Natural vegetation on the valley floor generally consists of grasslands, vernal pool complexes within a grassland matrix, and riparian woodlands. The foothills within western Placer County are dominated by rural residential land use, woodlands, orchards, and grazing land.

Over the past 150 years, grasslands, woodlands, and riparian areas in western Placer County have been largely converted to urban, rural, suburban, and agricultural uses. Since 1940, Placer County has almost doubled in population every 20 years. The pace of growth and change in land use accelerated in the 1970s, with economic growth stimulating more residential growth. Throughout the decade from 2000 to 2010, Placer County ranked as the fastest-growing county in California in terms of population growth. This growth rate has recently slowed.¹³⁷

The history of development is reflected in the present-day natural communities. Representatives of native species and natural communities still exist, but all of the natural communities in western Placer County have been significantly affected by the history of agriculture and development.

Western Placer County currently supports approximately 142,200 acres of natural communities, including 45,065 acres of vernal pool complexes that include 2,237 acres of vernal pools, seasonal swales and seasonal wetlands and 42,828 acres of upland grasses, and 34,760 acres of grassland not associated with vernal pool complexes. The area also has 6,685 acres of riparian and riverine habitat, 3,433 acres of open water and wetland habitat, and 52,234 acres of oak

¹³⁷ Placer County, 2016. Placer County Conservation Plan. Working Draft March 2016. Chapter 2.

woodlands.¹³⁸ In addition, the area supports approximately 19,600 acres of rice fields that may provide habitat to wintering waterfowl.

Over the next 50 years, approximately 30,100 acres of agricultural or natural and semi-natural land could be converted for urban/suburban and rural residential development and associated infrastructure and public facilities. This growth projection is based on analysis of development potential in Placer County and the cities in the county and assumptions about long-term trends for economic growth and housing demand.¹³⁹ Habitat loss under this scenario could include approximately 12,550 acres of vernal pool complexes, including 585 acres of vernal pools, seasonal swales and seasonal wetlands and 11,965 associated upland grasslands, as well as 6,800 acres of grasslands not associated with vernal pools. Additional projected habitat losses could include 524 acres of riparian and riverine habitat (including some uplands), 262 acres of open water and fresh emergent marsh, and (non-vernal pool complex) seasonal wetlands, and 6,350 acres of oak woodlands.¹⁴⁰ In addition, approximately 2,200 acres of rice fields are expected to be converted.

Impact 3.4-13: Implementation of the proposed project could contribute to a cumulative substantial adverse effect on federally protected wetlands defined by Section 404 of the Clean Water Act through direct removal, placement of fill, hydrological interruption, or by other means and would result in fill of jurisdictional wetlands or other protected waters.

Western Placer County supports habitats that could qualify as federally protected wetlands and waters, including 2,237 acres of vernal pools, seasonal swales and seasonal wetlands occurring in grasslands, 2,850 acres of fresh emergent marsh, lacustrine habitat and seasonal wetland (not in grassland), and 5,519 acres of riverine and riparian habitat. Projected development impacts for vernal pools, seasonal swales and seasonal wetlands were estimated at 585 acres; for fresh emergent wetland, lacustrine habitat, and seasonal wetlands (not in grassland) impacts would be 255 acres; and for riparian and riverine habitat 485 acres, or overall a loss of approximately 12 percent. The cumulative loss of potential jurisdictional wetlands and waters could be a significant impact because it could result in a substantial adverse effect on potential federally protected wetlands and waters.

Implementation of the proposed project would result in impacts on vernal pools, seasonal swales and seasonal wetlands estimated at 54 acres.¹⁴¹ Impacts on fresh emergent marsh and lacustrine habitats would be 34 acres, and impacts on riparian habitat would be 17 acres. The proposed

¹³⁸ Byous, Jennifer. Placer County Planning Services Division. Electronic mail message to Gerrit Platenkamp, Environmental Science Associates. November 5, 2015.

¹³⁹ Placer County, 2016. Placer County Conservation Plan. Working Draft March 2016. Section 2.5.1.

¹⁴⁰ Byous, Jennifer. Placer County Planning Services Division. Electronic mail message to Gerrit Platenkamp, Environmental Science Associates. November 5, 2015.

¹⁴¹ Estimate was based on vernal pool complex data for Table 3.4-1 assuming 10% wetland coverage for high density complexes, 5% wetland coverage for intermediate density complexes, and 1% wetland coverage for low density complexes.

project's contribution to the loss of wetlands and waters would be approximately eight percent of the anticipated cumulative loss the proposed project's contribution to the cumulative loss of wetlands and other protected waters would be cumulatively considerable, and thus, a **potentially significant** cumulative impact.

Mitigation Measure

Mitigation Measure 3.4-13

The project applicant shall implement Mitigation Measure 3.4-1.

Impact Significance After Mitigation: Implementation of Mitigation Measure 3.4-1 would mitigate the loss of protected wetlands and waters by requiring protection at 1.35:1 and restoration at a ratio of 1.25:1 of wetlands and waters types in large preserves or agency-approved mitigation banks. Therefore, with implementation of this mitigation, the project's contribution to the cumulative impact would be less than cumulatively considerable and the cumulative impact would be **less than significant**.

Impact 3.4-14: Implementation of the proposed project could contribute to cumulative loss and/or degradation of vernal pool habitat, and the loss of special-status vernal pool crustaceans or amphibians.

Western Placer County supports approximately 45,065 acres of vernal pool complex that provides habitat for special-status vernal pool crustaceans and amphibians. Projected development in western Placer County could result in the loss of 12,550 acres of vernal pool complexes, or a loss of approximately 28 percent. The cumulative loss of vernal pool habitat would be a significant impact because it would result in a substantial adverse effect on special-status species.

Implementation of the proposed project would result in a loss of 1,204 acres of vernal pool complex, which provides habitat to special-status vernal pool crustaceans and amphibians. The proposed project's contribution to the loss of vernal pool habitat would be approximately 10 percent of the anticipated cumulative loss. The proposed project's contribution to the cumulative loss of vernal pool habitat would be cumulatively considerable, and thus, could have a **potentially significant** cumulative impact on special-status vernal pool species and habitat.

Mitigation Measure

Mitigation Measure 3.4-14

The project applicant shall implement Mitigation Measures 3.4-1, 3.4-2, and 3.4-3.

Impact Significance After Mitigation: Implementation of Mitigation Measures 3.4-1, 3.4-2 and 3.4-3 would compensate for the project's contribution to the loss of vernal pool complexes by

protecting vernal pools, seasonal wetlands, and seasonal swales in vernal pool complexes at a ratio of 1.35:1 and restoring, enhancing, or creating these habitats at a ratio of 1.25:1 within large preserves in western Placer County. Therefore, with implementation of this mitigation, the project's contribution to the cumulative impact would be less than cumulatively considerable and the cumulative impact would be **less than significant**.

Impact 3.4-15: Implementation of the proposed project could contribute to cumulative loss and/or degradation of rare plant populations.

Rare plant habitat in western Placer County mostly consists of 45,065 acres of vernal pool complexes, 34,760 acres of upland grassland, and 1,112 acres of fresh emergent wetland. Projected development in western Placer County could result in a loss of 12,550 acres of vernal pool complexes, 6,800 acres of upland grassland, and 105 acres of fresh emergent wetland. Overall the projected development would result in a loss of 24 percent of these rare plant habitats. The cumulative loss of rare plant habitat would be a significant impact because it could result in a substantial adverse effect on special-status species.

Implementation of the proposed project would result in a loss of 1,204 acres of vernal pool complexes, 243 acres of upland grasslands, and 30 acres of fresh emergent wetland. The proposed project's contribution to the loss of potential rare plant habitat would be approximately eight percent of the anticipated cumulative loss. The proposed project's contribution to the cumulative loss of rare plant habitat would be cumulatively considerable, and thus, a **potentially significant** cumulative impact.

Mitigation Measure

Mitigation Measure 3.4-15

The project applicant shall implement Mitigation Measures 3.4-1, 3.4-2, 3.4-3, and 3.4-4.

Impact Significance After Mitigation: Implementation of Mitigation Measures 3.4-1, 3.4-2, and 3.4-3 would require preservation and restoration of natural habitats that could support rare plants. In addition, Mitigation Measure 3.4-4 would require conducting rare plant surveys and obtaining incidental take permits from CDFW, if required by that agency. Therefore, with implementation of this mitigation, the project's contribution to the cumulative impact would be less than cumulatively considerable and the cumulative impact would be **less than significant**.

Impact 3.4-16: Implementation of the proposed project could contribute to cumulative loss of western pond turtle and/or degradation of potential habitat.

Western pond turtle habitat in western Placer County includes 1,112 acres of fresh emergent marsh, 1,061 acres of lacustrine habitat, and 868 acres of riverine habitat. Projected development in western Placer County could result in a loss of 105 acres of fresh emergent marsh, 102 acres of lacustrine habitat, and 105 acres of riverine habitat. Overall the projected development would result in a loss of 10 percent of western pond turtle habitats. The cumulative loss of western pond turtle habitat would be a significant impact because it could result in a substantial adverse effect on a special-status species.

Implementing the proposed project could result in direct impacts on western pond turtles and the loss of western pond turtle habitat within riparian habitat, irrigation canals and stock ponds, including up to approximately 36 acres of potentially suitable freshwater emergent, stock ponds, and lacustrine habitat. The proposed project's contribution to the loss of potential western pond turtle habitat would be approximately 11 percent of the anticipated cumulative loss. The proposed project's contribution to the cumulative loss of western pond turtle habitat would be cumulatively considerable, and thus a **potentially significant** cumulative impact.

Mitigation Measure**Mitigation Measure 3.4-16**

The project applicant shall implement Mitigation Measure 3.4-5.

Impact Significance After Mitigation: Implementation of Mitigation Measure 3.4-5 would mitigate the impacts by avoiding or minimizing impacts on western pond turtles, or their habitats. Therefore, with implementation of this mitigation, the project's contribution to the cumulative impact would be less than cumulatively considerable and the cumulative impact would be **less than significant**.

Impact 3.4-17: Implementation of the proposed project could contribute to cumulative loss or disturbance of nesting birds and the loss or degradation of special-status bird habitat.

Western Placer County supports 45,065 acres of vernal pool complex and 34,760 acres of grassland that provide habitat for ground nesting birds and foraging habitat for raptors. In addition, the area supports 1,112 acres of marsh and 4,651 acres of riparian woodland that also provide habitat for nesting birds. The area also includes 19,580 acres of rice fields that provide wintering habitat to migratory waterfowl.

Projected development could result in the loss of 12,550 acres of vernal pool complex, 6,800 acres of grassland, 105 acres of fresh emergent marsh, and 364 acres of riparian woodland. Overall the projected development could result in a loss of 23 percent of these nesting bird

habitats. The total projected development would also result in the loss of 2,200 acres (11%) of rice fields. The cumulative loss of nesting bird habitat would be a significant impact because it would result in a substantial adverse effect on nesting birds which are protected under the California Fish and Game Code, migratory birds protected by the Migratory Bird Treaty Act and other special-status birds.

The proposed project would result in direct impacts on nesting birds and the loss of nesting bird habitat, including 1,204 acres of vernal pool complex, 243 acres of grassland, 30 acres of marsh and 17 acres of riparian woodland. The proposed project's contribution to the loss of potential bird nesting habitat would be approximately eight percent of the anticipated cumulative loss. The project would also result in the loss of 1,920 acres of rice fields, 87 percent of the cumulative loss. The proposed project's contribution to the cumulative loss of nesting and special-status bird habitat would be cumulatively considerable, and thus, a **potentially significant** cumulative impact.

Mitigation Measure

Mitigation Measure 3.4-17

The project applicant shall implement Mitigation Measures 3.4-2 and 3.4-6.

Impact Significance after Mitigation: Implementation of Mitigation Measure 3.4-6 would mitigate for impacts by avoiding or minimizing impacts on nesting and special-status birds, or their habitats. In addition, habitat losses would be mitigated by implementation of Mitigation Measure 3.4-2 that would require protection and restoration of habitats in large preserve areas. Therefore, with implementation of this mitigation, the project's contribution to the cumulative impact would be less than cumulatively considerable and the cumulative impact would be **less than significant**.

Impact 3.4-18: Implementation of the proposed project could contribute to cumulative loss of valley elderberry longhorn beetle and/or degradation of potential habitat.

Western Placer County supports 4,651 acres of riparian woodland which provides habitat to the hostplant (elderberry) of VELB. The projected development in western Placer County could result in 364 acres of riparian woodland, or a loss of approximately eight percent. The cumulative loss of riparian woodland habitat would be a significant impact because it could result in a substantial adverse effect on a special-status species.

Implementation of the proposed project would result in the loss of 17 acres of riparian woodland. The proposed project's contribution to the loss of potential VELB habitat would be approximately five percent of the anticipated cumulative loss. The proposed project's

contribution to the cumulative loss of VELB habitat would be cumulatively considerable, and thus, a **potentially significant** cumulative impact.

Mitigation Measure

Mitigation Measure 3.4-18

The project applicant shall implement Mitigation Measure 3.4-7.

Impact Significance After Mitigation: Implementation of Mitigation Measure 3.4-7 would mitigate the loss of VELB habitat by requiring avoidance, minimization, and compensation for direct impacts to VELB and elderberry shrubs, as well as protection and restoration of riparian woodland. Therefore, with implementation of this mitigation, the cumulative impact would be less than cumulatively considerable and the cumulative impact would be **less than significant**.

Impact 3.4-19: Implementation of the proposed project could contribute to cumulative changes to surface water quality in Auburn Ravine that could affect Central Valley steelhead and Chinook salmon due to the widening or construction of bridges within western Placer County.

Projected development in western Placer County is expected to involve construction activities that could potentially affect the aquatic habitat of Auburn Ravine, although any project would require permits under the CWA from USACE, water quality certification from RWQCB, and waste discharge requirements from RWQCB under the Porter-Cologne Act. These activities are therefore not expected to significantly affect Central Valley steelhead and Chinook salmon habitat.

Projected development in western Placer County is also expected to require additional transportation infrastructure, including the construction of bridges over major streams, including Auburn Ravine. Beyond the two bridges that would be constructed over Auburn Ravine as a direct result of the V5SP, a bridge expansion where Dowd Road crosses Auburn Ravine is planned. This bridge would likely include pilings that would be placed in the stream. These pilings could temporarily or permanently affect Central Valley steelhead and Chinook salmon and this would be a significant impact because special-status species habitat would be affected.

The proposed project would require the reconstruction and expansion of the bridges crossing Auburn Ravine at both Nelson Lane and Moore Road. The Nelson Lane Bridge would require approximately 450 square feet of pilings in Auburn Ravine. The two-lane Moore Road Bridge across Auburn Ravine would be replaced by a two-lane bridge of adequate length to span Auburn Ravine, which is a FEMA-designated floodway. Because two of the three planned bridge expansions over Auburn Ravine would be constructed as part of the specific plan, these bridges could represent a cumulatively considerable contribution to the temporary or permanent impact

on Central Valley steelhead and Chinook salmon special-status species habitat. Therefore, this is a **potentially significant** cumulative impact.

Mitigation Measure

Mitigation Measure 3.4-19

The project applicant shall implement Mitigation Measure 3.4-8.

Impact Significance After Mitigation: Implementation of Mitigation Measure 3.4-8 would mitigate the effect of bridge construction on salmonid habitat by requiring BMPs, implementing fish protection measures, and permit compliance. Therefore, with implementation of this mitigation, the project's contribution to the cumulative impact would be less than cumulatively considerable and the cumulative impact would be **less than significant**.

Impact 3.4-20: Implementation of the proposed project could contribute to a cumulative substantial adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations or by CDFW or USFWS.

Western Placer County supports 4,651 acres of riparian woodland habitat. Projected development could result in the loss of 364 acres, or a loss of approximately eight percent. The cumulative loss of riparian woodland habitat could be a significant impact because it could result in a substantial adverse effect on a sensitive natural community.

Implementation of the proposed project would result in the loss of 17 acres of riparian woodland. The proposed project's contribution to the loss of riparian woodland habitat would be approximately five percent of the anticipated cumulative loss. The proposed project's contribution to the cumulative loss of riparian woodland habitat would be cumulatively considerable, and thus, a **potentially significant** cumulative impact.

Mitigation Measure

Mitigation Measure 3.4-20

The project applicant shall implement Mitigation Measures 3.4-2 and 3.4-9.

Impact Significance After Mitigation: Implementation of Mitigation Measures 3.4-2 and 3.4-9 would compensate for the loss of riparian habitat by protecting riparian habitat within large preserves in western Placer County and/or agency-approved mitigation banks at a ratio of 1.35:1, and restoration of riparian habitat at a ratio of 1.5:1. Therefore, with implementation of this mitigation, the project's contribution to the cumulative impact would be less than cumulatively considerable and the cumulative impact would be **less than significant**.

Impact 3.4-21: Implementation of the proposed project could contribute to cumulative substantial interference with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Projected development in western Placer County could result in impacts on the movement of fish and wildlife because of the creation of urban landscapes that may act as barriers. Auburn and Markham Ravines are the most important corridors for fish and wildlife movement within western Placer County, and the V5SP would protect these streams, their associated floodplains and the riparian habitat they support within the Plan Area. A substantial portion of these streams that is within the valley floor portion of western Placer County occurs within the Plan Area, and some of the best riparian habitat of these streams occurs within the Plan Area. Further downstream where future development may occur the riparian habitat is narrow because of encroachment of agricultural land. In addition, conversion of annual grassland and open agricultural lands to urban uses could impact the ability of wildlife to move through the V5SP.

If the PCCP is adopted, large, connected, protected and restored habitat areas that would support fish and wildlife migration would be retained, including along Auburn and Markham Ravines. If the PCCP is ultimately not adopted, a substantial and relatively high quality portion of Auburn and Markham Ravines would still be protected under the V5SP. Additionally, land cover mitigation would result in the preservation of annual grassland and agricultural land that would ensure adequate open space would remain to allow for the movement of wildlife within the county. The cumulative loss of migratory wildlife corridors would therefore, be **less than significant**.

Mitigation Measure

None required.

Impact 3.4-22: Implementation of the proposed project could contribute to cumulative conflicts with the provisions of an approved local, regional or state policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Projected development in western Placer County would be implemented under the PCCP regulatory framework if the PCCP is adopted. As drafted, compliance with the PCCP would ensure that a project would be consistent with all local, regional, and state policies and ordinances. Even if the PCCP were not adopted, the proposed project would comply with all policies and ordinances in place for purposes of protecting biological resources. Thus, the cumulative impact regarding conflicts with local, regional, or state policies, or ordinances protecting biological species would be **less than significant**.

Mitigation Measure

None required.

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3.5 Climate Change

This section assesses the potential greenhouse gas (GHG) emissions and climate change effects of construction and operation of the Specific Plan and identifies potentially feasible mitigation measures where appropriate. The analysis was developed based on project-specific construction and operational features described in Chapter 2, Project Description, and data provided in the *City of Lincoln 2050 General Plan*,¹ *City of Lincoln 2050 General Plan Environmental Impact Report*,² the Placer County Air Pollution Control District (PCAPCD) *CEQA Air Quality Handbook*,³ the Sacramento Metropolitan Air Management District (SMAQMD) *Justification for Greenhouse Gas Emissions Thresholds of Significance*,⁴ GHG threshold information provided by PCAPCD via e-mail,⁵ the California Air Resources Board (CARB), and the United States Environmental Protection Agency (U.S. EPA).

Comments received in response to the NOP (see Appendix A) included a letter from the PCAPCD requesting a climate change impact analysis as well as identification of mitigation measures to address significant GHG emissions. The Placer County Community Development Resource Agency provided a general comment that the Plan's GHG impacts should be assessed. These issues and concerns are addressed in this section.

3.5.1 Environmental Setting

Greenhouse Gases

“Global warming” and “global climate change” are the terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal.⁶ Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning and deforestation are believed to be responsible for most of the observed temperature increase. Increases in GHG concentrations in the earth’s atmosphere are thought to be the main cause of human-induced

¹ City of Lincoln, 2008. *City of Lincoln 2050 General Plan*. Adopted March 25, 2008.

² City of Lincoln, 2008. *City of Lincoln General Plan Update Final Environmental Impact Report*. State Clearinghouse No. 2005112003. February 2008.

³ Placer County Air Pollution Control District, 2012. *CEQA Air Quality Handbook*. October 2012.

⁴ Sacramento Metropolitan Air Quality Management District, 2014. *Justification for Greenhouse Gas Emissions Thresholds of Significance*. September 2014.

⁵ Green, A., Placer County Air Pollution Control District, e-mail to Tim Rimpo, ESA, regarding PCAPCD GHG Thresholds, March 10, 2016.

⁶ Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Parry, Martin L., Canziani, Osvaldo F., Palutikof, Jean P., van der Linden, Paul J., and Hanson, Clair E. (eds.)]. Cambridge University Press, Cambridge, United Kingdom. 2007. p. 9.

climate change. Certain gases in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. This is sometimes referred to as the “greenhouse effect” and the gases that cause it are called “greenhouse gases.” Some GHGs occur naturally and are necessary for keeping the earth’s surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) are the principal GHGs. When concentrations of these gases exceed natural concentrations in the atmosphere, the greenhouse effect may be intensified. CO₂, CH₄, and N₂O occur naturally, and are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing⁷ associated with agricultural practices and landfills. Other human-generated GHGs include fluorinated gases such as SFCs, PFCs, and SF₆, which have much higher heat-absorption potential than CO₂, and are byproducts of certain industrial processes.

CO₂ is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. For example, CH₄ and N₂O are substantially more potent GHGs than CO₂, with GWPs of 21 and 310 times that of CO₂, respectively.

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons of CO₂ equivalents (CO₂e). CO₂e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO₂e, both from residential developments and human activity in general.

Potential Effects of Human Activity on GHG Emissions

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂ emissions (and thus substantial increases in atmospheric concentrations). In 1994, atmospheric CO₂ concentrations were found to have increased by nearly 30 percent above pre-industrial (c. 1860) concentrations.

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects

⁷ Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

are likely to include the displacement of thousands of coastal businesses and residences, impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity. As CARB's *Climate Change Scoping Plan* noted, the legislature in enacting Assembly Bill (AB) 32 found that global warming would cause detrimental effects to some of the state's largest industries, including agriculture, winemaking, tourism, skiing, commercial and recreational fishing, forestry, and the adequacy of electrical power generation. The *Climate Change Scoping Plan* states as follows:⁸ "The impacts of global warming are already being felt in California. The Sierra snowpack, an important source of water supply for the state, has shrunk 10 percent in the last 100 years. It is expected to continue to decrease by as much as 25 percent by 2050. World-wide changes are causing sea levels to rise – about eight inches of increase has been recorded at the Golden Gate Bridge over the past 100 years – threatening low coastal areas with inundation and serious damage from storms." AB 32 is discussed further below under Regulatory Setting.

Impacts of Climate Change

Ecosystem and Biodiversity Impacts

Climate change is expected to have effects on diverse types of ecosystems.⁹ As temperatures and precipitation change, seasonal shifts in vegetation would occur; this could affect the distribution of associated flora and fauna species. As the range of species shifts, habitat fragmentation could occur, with acute impacts on the distribution of certain sensitive species. The IPCC states that "20 percent to 30 percent of species assessed may be at risk of extinction from climate change impacts within this century if global mean temperatures exceed 2 to 3°C (3.6 to 5.4°F) relative to pre-industrial levels".¹⁰ Shifts in existing biomes could also make ecosystems vulnerable to encroachment by invasive species. Wildfires, which are an important control mechanism in many ecosystems, may become more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. In general terms, climate change is expected to put a number of stressors on ecosystems, with potentially catastrophic effects on biodiversity.

Human Health Impacts

Climate change may increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects such as malaria, dengue fever, yellow fever, and encephalitis. Cholera, which is associated with algal blooms, could also increase. While these health impacts would largely affect tropical areas in other parts of the world, effects would also be felt in California. Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more

⁸ California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. p. 10.

⁹ U.S. Environmental Protection Agency, 2008. *Climate Change – Ecosystems and Biodiversity*. Available: www.epa.gov/climatechange/effects/eco.html. Accessed June 19, 2012.

¹⁰ Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Parry, Martin L., Canziani, Osvaldo F., Palutikof, Jean P., van der Linden, Paul J., and Hanson, Clair E. (eds.)]. Cambridge University Press, Cambridge, United Kingdom. 2007. p. 38.

frequency and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply more vulnerable.¹¹

Greenhouse Gas Emissions Estimates

Global Emissions

Worldwide emissions of GHGs in 2004 were approximately 30 billion tons of CO₂e per year.¹² This includes both ongoing emissions from industrial and agricultural sources, but excludes emissions from land use changes.

U.S. Emissions

In 2009, the United States emitted about 6.7 billion tons of CO₂e or about 21 tons per year per person. Of the four major sectors nationwide — residential, commercial, industrial, and transportation — transportation accounts for the highest fraction of GHG emissions (approximately 33 percent); these emissions are entirely generated from direct fossil fuel combustion.¹³

State of California Emissions

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Emissions of CO₂ are byproducts of fossil fuel combustion. Methane, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Nitrous oxide is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution, respectively, two of the most common processes of CO₂ sequestration. California produced approximately 452 million gross metric tons of CO₂e in 2010. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2010, accounting for 38 percent of total GHG emissions in the state. This sector was followed by the electric power sector (including both in-state and out-of-state sources) (21 percent) and the industrial sector (19 percent).¹⁴

¹¹ U.S. Environmental Protection Agency, 2008. *Climate Change – Health and Environmental Effects*. Available: www.epa.gov/climatechange/effects/health.html#climate. Accessed June 19, 2012.

¹² United Nations Framework Convention on Climate Change, 2012. *Total CO₂ Equivalent Emissions without counting Land-Use, Land-Use Change and Forestry (LULUCF)*. http://unfccc.int/ghg_emissions_data/predefined_queries/items/3814.php. Accessed January 7, 2013. (For countries for which 2004 data was unavailable, the most recent year was used.)

¹³ U.S. Environmental Protection Agency, 2011. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2009; Executive Summary*, Table ES-2. April 2011. pp. 5-7.

¹⁴ California Air Resources Board, 2013. *California Greenhouse Gas Inventory for 2000-2010 — by Category Defined in the Scoping Plan*. February 19, 2013. pp. 1-2.

3.5.2 Regulatory Setting

The following sections provide federal, state and local regulations for energy as well as regulations for GHGs and global climate change. These agencies work jointly, as well as individually, to understand and regulate the effects of GHG emissions and resulting climate change through legislation, regulations, planning, policy-making, education, and a variety of programs.

Federal Regulations

U.S. Environmental Protection Agency “Endangerment” and “Cause or Contribute” Findings

The U.S. Supreme Court held that the U.S. EPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, 12 states and cities, including California, together with several environmental organizations, sued to require the U.S. EPA to regulate GHGs as pollutants under the CAA (127 S.Ct. 1438 (2007)). The Supreme Court ruled that GHGs fit within the CAA’s definition of a pollutant and the U.S. EPA had the authority to regulate GHGs.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- ***Endangerment Finding:*** The current and projected concentrations of the six key GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations.
- ***Cause or Contribute Finding:*** The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the U.S. EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year (FY) 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required the U.S. EPA to develop “...mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy....” The Reporting Rule will apply to most entities that emit 25,000 metric tons of CO₂e or more per year. Starting in 2010, facility owners are required to submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also mandates recordkeeping and administrative requirements in order for the U.S. EPA to verify annual GHG emissions reports.

State Regulations

California Environmental Quality Act and Climate Change

Under CEQA, lead agencies are required to disclose the reasonably foreseeable adverse environmental effects of projects they are considering for approval. GHG emissions have the potential to adversely affect the environment because they contribute to global climate change. In turn, global climate change has the potential to raise sea levels, alter rainfall and snowfall, and affect habitat.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The California Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted amendments to the State CEQA Guidelines, as required by SB 97. These State CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

State CEQA Guidelines

The State CEQA Guidelines are embodied in the California Code of Regulations (CCR), Title 14, Chapter 3, Section 15000 et seq. State CEQA Guidelines section 15064.4 specifically addresses the significance of GHG emissions, requiring a lead agency to make a "good-faith effort" to "describe, calculate or estimate" GHG emissions in CEQA environmental documents. Section 15064.4 further states that the analysis of GHG impacts should include consideration of (1) the extent to which the project may increase or reduce GHG emissions, (2) whether the project emissions would exceed a locally applicable threshold of significance, and (3) the extent to which the project would comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions." The CEQA Guidelines also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (State CEQA Guidelines section 15064(h)(3)). The State CEQA Guidelines do not, however, set a numerical threshold of significance for GHG emissions.

The CEQA Guidelines also include the following direction on measures to mitigate GHG emissions, when such emissions are found to be significant:

Consistent with section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester greenhouse gases; and
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

(State CEQA Guidelines section 15126.4(c).)

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed AB 1493, which required the CARB to develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by the CARB to be vehicles whose primary use is noncommercial personal transportation in the state.”

To meet the requirements of AB 1493, the CARB approved amendments to the CCR in 2004, adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1), require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight [GVW] rating of less than 10,000 pounds and that is designed primarily for the transportation of persons), beginning with model year 2009. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for model year 2016 are approximately 37 percent lower than the limits for the first year of the regulations, model year 2009. For light-duty trucks with an LVW of 3,751 pounds to a GVW of 8,500 pounds, as well as for medium-duty passenger vehicles, GHG emissions will be reduced approximately 24 percent between 2009 and 2016.

Because the Pavley standards (named for the bill's author, state Senator Fran Pavley) would impose stricter standards than those under the CAA, California applied to the U.S. EPA for a waiver under the CAA; this waiver was initially denied in 2008. In 2009, however, the U.S. EPA granted the waiver.

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, then-Governor Arnold Schwarzenegger established Executive Order S-3-05, which sets forth the following target dates by which statewide GHG emissions would be progressively reduced: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

As described below, legislation was passed in 2006 (AB 32, the California Global Warming Solutions Act of 2006) to limit GHG emissions to 1990 levels by 2020 with continued "reductions in emissions" beyond 2020, but no specific additional reductions were enumerated in the legislation. Further, SB 375 (sustainable community strategies/transportation) established goals for emissions from light duty truck and automobiles for 2020 and 2035.

Executive Order B-30-15

In April 2015, Governor Edmund G. Brown, Jr. signed Executive Order B-30-15 in order to establish an interim GHG reduction goal for California of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union which adopted the same target in October 2014. California is on track to meet or exceed the current target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (Assembly Bill 32, discussed below). This target GHG reduction by 2030 would make it possible for California to reach the ultimate goal of reducing GHG emissions by 80 percent under 1990 levels by the year 2050.

Assembly Bill 32 and the California Climate Change Scoping Plan***Assembly Bill 32 Requirements***

In 2006, the California legislature passed Assembly Bill 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires the CARB to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. The CARB has identified a GHG reduction target of 15 percent from current levels for local governments (municipal and community-wide) and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.

Scoping Plan Provisions

Pursuant to AB 32, the CARB adopted a *Climate Change Scoping Plan* in December 2008 (re-approved by the CARB on August 24, 2011¹⁵) outlining measures to meet the 2020 GHG reduction goals. The Scoping Plan recommends measures that are worth studying further, and that the State of California may implement, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO₂e (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and other sources could be achieved should the state implement all of the measures in the Scoping Plan. The Scoping Plan relies on the requirements of SB 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

The *First Update to the Climate Change Scoping Plan* describes progress made to meet near-term emissions goals of AB 32, defines California's climate change priorities and activities for the next few years, and describes the issues facing the state as it establishes a framework for achieving air quality and climate goals beyond the year 2020.¹⁶ In regard to achieving the 2050 GHG reduction goal, "progressing toward California's long-term climate goals will require that GHG reduction rates be significantly accelerated. Emissions from 2020 to 2050 will have to decline at more than twice the rate of that which is needed to reach the 2020 statewide emissions limit."¹⁷ On April 29, 2015, Governor Brown issued Executive Order B-30-15 establishing a mid-term GHG reduction target for California of 40 percent below 1990 levels by 2030. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target. CARB held regional workshops on the Scoping Plan in Fall 2015. CARB released an updated 2030 Draft Scoping Plan on June 17, 2016. Since then, CARB staff, in collaboration with other state agencies, has held numerous public workshops to develop the Draft 2030 Target Scoping Plan, including several Environmental Justice Advisory Committee meetings, a public meeting to discuss the GHG modeling and economic analysis that will be included in the Draft 2030 Target Scoping Plan, and other sector-specific public workshops. The first Board hearing on the Draft Scoping Plan is planned for November 2016 with a second Board hearing in March 2017. The Environmental Advisory Justice Committee is also planning a series of local community meetings plus additional full Committee meetings throughout the state starting in summer 2016.

Cap-and-Trade Program

The Scoping Plan identifies cap-and-trade as a key strategy for helping California reduce its GHG emissions.¹⁸ A cap-and-trade program sets the total amount of GHG emissions allowable for facilities under the cap and allows covered sources, including producers and consumers of energy, to determine the least expensive strategies to comply. AB 32 required the CARB to adopt the cap-and-trade regulation by January 1, 2011, and the program itself began in November 2012.

¹⁵ California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. pp. ES-1 and 17.

¹⁶ California Air Resources Board, 2014. *First Update to the Climate Change Scoping Plan*. May 2014. p. 5.

¹⁷ Ibid.

¹⁸ California Air Resources Board, 2008. *Climate Change Scoping Plan*. Adopted December 11, 2008, re-approved by the CARB on August 24, 2011. pp. 18-20.

Carbon offset credits are created through the development of projects, such as renewable energy generation or carbon sequestration projects, that achieve the reduction of emissions from activities not otherwise regulated, covered under an emissions cap, or resulting from government incentives. Offsets are verified reductions of emissions whose ownership can be transferred to others. As required by AB 32, any reduction of GHG emissions used for compliance purposes must be real, permanent, quantifiable, verifiable, enforceable, and additional. Offsets used to meet regulatory requirements must be quantified according to the CARB-adopted methodologies, and the CARB must adopt a regulation to verify and enforce the reductions. The criteria developed will ensure that the reductions are quantified accurately and are not double-counted within the system.¹⁹

Executive Order S-1-07

Executive Order S-1-07, signed by then-Governor Arnold Schwarzenegger in 2007, proclaimed that the transportation sector is the main source of GHG emissions in California, at over 40 percent of statewide emissions. The order established a goal of reducing the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020. It also directed the CARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete, early-action measure after meeting the mandates in AB 32. The CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Senate Bills 1078 and 107 and Executive Orders S-14-08 and S-21-09

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the CARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020.

The 33-percent-by-2020 goal was codified in April 2011 with SB X1-2, which was signed by Governor Edmund G. Brown, Jr. This new Renewable Portfolio Standard (RPS) preempts the CARB 33 percent Renewable Electricity Standard and applies to all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013 and 25 percent by the end of 2016, with the 33 percent requirement being met by the end of 2020.

¹⁹ Ibid., pp. 36-38.

Senate Bill 1368

SB 1368 is the companion bill of AB 32 and was signed by then-Governor Schwarzenegger in September 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a GHG emission performance standard for baseload generation from investor-owned utilities by February 1, 2007. The California Energy Commission (CEC) was also required to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

Senate Bill 375

SB 375 encourages housing and transportation planning on a regional scale, in a manner designed to reduce vehicle use and associated GHG emissions. As required under this law, CARB has assigned regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. The targets apply to the regions in the State covered by the 18 Metropolitan Planning Organizations (MPOs), including the Sacramento Regional Council of Governments (SACOG) in the Sacramento region. If MPOs do not meet the GHG reduction targets, transportation projects will not be eligible for funding programmed after January 1, 2012. CARB adopted regional reduction targets in 2010. For the SACOG area, the adopted reduction targets call for a 7 percent reduction by 2020 and a 16 percent reduction by 2025.

SB 375 also requires each MPO to include a Sustainable Communities Strategy (SCS) in their Regional Transportation Plan. The SCS must set forth a vision for growth for the region while taking into account transportation, housing, environmental, and economic needs. The SCS will be the blueprint by which the region will meet its GHG emissions reductions target if there is a feasible way to do so. Discussion of the recently adopted SACOG SCS is provided below in the Local Regulations section.

Senate Bill 350

In October, 2015, Governor Brown signed SB 350 into law. SB 350 includes the following two goals for 2030: 1) 50 percent of utility power must come from renewable energy; 2) the energy efficiency of existing buildings must increase by 50 percent.

Title 24 and Green Building Standards Code

The State of California regulates energy consumption under Title 24 of the CCR. The Title 24 Building Energy Efficiency Standards were developed by the CEC and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. New building construction in California must comply with the standards contained in Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards, of the CCR. Part 11 of Title 24 is the California Green Building Standards Code (CALGreen) which sets minimum and mandatory sustainability requirements, in order to reduce environmental impact through better planning, design and construction practices. CALGreen works along with the

mandatory construction codes of Title 24 and is enforced at the local level.²⁰ The list below identifies the most significant CALGreen requirements. In addition, CALGreen encourages local governments to adopt more stringent voluntary provisions, known as Tier 1 and Tier 2 provisions, to further reduce air pollutant emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. CALGreen includes the following provisions:

- A 20% mandatory reduction in indoor water use, with voluntary goal standards for 30%, 35%, and 40% reductions
- Separate indoor and outdoor water meters to measure nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects
- Diversion of 50% of construction waste from landfills, increasing voluntarily to 65% and 75% for new homes and 80% for commercial projects
- Mandatory periodic inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies
- Mandatory use of low-pollutant-emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.

The CEC updates Title 24 and the CalGreen code periodically, with the most recent update in 2013. New codes are adopted triennially and the 2016 standards will become effective July 1, 2017.²¹

Local

Sacramento Region Blueprint

In 2004 SACOG adopted the Preferred Blueprint Scenario for 2050 (Blueprint). The Blueprint depicts a way for the region to grow through 2050 in a manner consistent with the seven smart growth principals: (1) transportation choices; (2) mixed-use developments; (3) compact development; (4) housing choice and diversity; (5) use of existing assets; (6) quality design, and (7) natural resources conservation. The seven smart growth principals provide guidance for land use planners which, when implemented, would ultimately result in an overall reduction in vehicle miles traveled (VMT), emissions of criteria pollutants, and GHG emissions.

SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy

In April 2012, SACOG, the designated Metropolitan Planning Organization for the Sacramento region, adopted a Metropolitan Transportation Plan/Sustainable Communities Strategy for 2035

²⁰ California Department of Housing and Community Development, 2015. *2015 Report to the Legislature: Status of the California Green Building Standards Code*. Accessed December 18, 2015.

²¹ California Building Standards Code. Available: www.bsc.ca.gov/. Accessed January 30, 2016.

(MTP/SCS).²² Building on prior plans including the Blueprint Growth Strategy discussed above and the 2008 MTP, the SCS accommodates future growth through a more compact land use pattern largely within the region's current development footprint, emphasizes operational improvements over new roadway capacity projects, and reflects other factors that have tended to reduce motor vehicle use. The SCS demonstrates that, if implemented, the region will achieve a 9 percent per capita GHG reduction in passenger vehicle emissions in 2020 and a 16 percent reduction in 2035. These reductions meet the GHG targets for SACOG as discussed above. In June 2012, CARB issued an Acceptance of GHG Quantification Determination for the SACOG SCS, indicating that CARB concurs with SACOG's quantification of GHG emission reductions from the final MTP/SCS and its determination that the SCS would achieve the 2020 and 2035 targets established by CARB.

The 2016 MTP/SCS, approved in February 2016, proactively links the Sacramento region's land use, air quality, and transportation needs. Based on the Sacramento Region Blueprint, the 2016 MTP/SCS uses \$35 billion in transportation funds to operate, maintain, and expand the region's transportation system. The 2016 MTP/SCS reduces per capital passenger vehicle GHG emissions consistent with targets established by CARB.²³

In 2008, SACOG shifted its planning paradigm to more explicitly include rural areas. This shift was in response to criticism that SACOG's land use and transportation planning lacked adequate attention to and information about rural areas of the region. Consequently, SACOG launched its Rural-Urban Connections Strategy, which is used to inform approaches to building a responsible MTP/SCS.

City of Lincoln Neighborhood Electric Vehicle (NEV) Transportation

The Cities of Lincoln and Rocklin prepared a joint report that evaluates NEV transportation planning.²⁴ This document describes the City of Lincoln's Transportation Plan Implementation, including physical and roadway user challenges to implementation, and conflicts between NEVs and bicycles and motorists.

Placer County Air Pollution Control District

California has 35 Air Pollution Control Districts (APCD) and Air Quality Management Districts (AQMD), many of which are currently addressing climate change issues by developing significance thresholds, performance standards, and mitigation measures. At this time, there are no adopted quantitative federal or state guidelines for GHG emission impacts. PCAPCD was part of the committee of air districts in the Sacramento Region involved in the development of GHG thresholds of 1,100 metric tons CO₂e per year for the construction phase of projects or the

²² Sacramento Area Council of Governments, 2012. *Metropolitan Transportation Plan/Sustainable Communities Strategy for 2035*.

²³ Sacramento Area Council of Governments, 2016. About the 2016 MTP/SCS Update, Available: <http://www.sacog.org/2016-plan>.

²⁴ Leftwich, P.E., R. and Nartker, J., 2011. City of Lincoln and City of Rocklin Joint Report to the California State Legislature as required by Assembly Bill 2963, Neighborhood Electric Vehicle Transportation Plan Evaluation.

operational phase of land use development projects, or 10,000 direct metric tons CO₂e per year from stationary source projects. If a project exceeds this threshold, the level of mitigation is based on demonstrating consistency with CARB’s Climate Change Scoping Plan and the AB 32 State goals for reducing GHG emissions, which is currently 21.7 percent reduction from 2020 “business-as-usual” emissions.²⁵ However, the “business-as-usual” comparison has recently been dropped by the PCAPCD.²⁶

Placer County

The County has not established GHG reduction goals or policies.

City of Lincoln 2050 General Plan

The following goals and policies from the 2050 General Plan are relevant to climate change.

Goal LU-1 To grow in orderly pattern consistent with the economic, social, and environmental needs of Lincoln

Policies

LU-1.6 Transportation Choices. The City will promote the application of land use layouts and community designs that provide residents with transportation choices to walk, ride bicycles, ride transit services, as well as utilize a vehicle, including neighborhood electric vehicles.

LU-1.8 Compact Development. The City will promote the use of development patterns that are more compactly build and use space in an efficient but aesthetic manner to promote more walking, biking, and use of public transit.

Goal LU-15 To organize new development areas to create vibrant, mixed-use villages characterized by a mix of land uses, pedestrian and transit accessibility, and neighborhood identity.

Policies

LU-15.9 Alternative Fuels Vehicle Parking. The City shall prioritize parking within commercial and retail areas for electric vehicles, hybrid vehicles, and alternative fuel vehicles as well as provide electric charging stations.

Goal OSC-3 To encourage energy conservation in new and existing developments throughout the City.

Policies

OSC-3.1 Energy Conservation Measures. The City shall require the use of energy conservation features in new construction and renovation of existing structures in accordance with state law. New features that may be applied to construction and renovation include:

- Green building techniques (such as use of recycled, renewable, and reused materials; efficient lighting / power sources; design orientation; building techniques; etc.)
- Cool roofs

OSC-3.2 Landscape Improvements for Energy Conservation. The City shall encourage the planting of shade trees along all City streets to reduce radiation heating.

²⁵ Sacramento Metropolitan Air Quality Management District, 2014. *Justification for Greenhouse Gas Emissions Thresholds of Significance*. September 2014.

²⁶ Green, A., Placer County Air Pollution Control District. March 10, 2016 e-mail to Tim Rimpo, ESA, regarding PCAPCD GHG Thresholds.

- OSC-3.7 **Passive and Active Solar Devices.** The City shall encourage the use of passive and active solar devices such as solar collectors, solar cells, and solar heating systems into the design of local buildings.
- OSC-3.8 **Solar Orientation and Building Design.** The City shall encourage work that building and site design take into account the solar orientation of buildings during design and construction.
- OSC-3.9 **Shade Tree Planting.** The City will encourage the planting of shade trees within residential lots to reduce radiation heating and encourage the reduction of greenhouse gases.
- OSC-3.10 **Shade Tree Parking Lot Requirements.** The City will require commercial and retail parking lots will have 50% tree shading within 15 years to reduce radiation and encourage the reduction of greenhouse gases.
- OSC-3.11 **Energy Efficient Buildings.** The City will encourage the development of energy-efficient buildings and communities.
- OSC-3.12 **Solar Photovoltaic Systems.** The City will promote voluntary participation in incentive programs to increase the use of solar photovoltaic systems in new and existing residential, commercial, institutional and public buildings.
- OSC-3.13 **Energy Efficient Master Planning.** The City will encourage the incorporation of energy-efficient site design such as proper orientation to benefit from passive solar heating and cooling into master planning efforts when feasible.
- OSC-3.14 **Early Planning for Energy Efficiency.** The City will include energy planners and energy efficiency specialists in appropriate pre-application discussions with property owners and developers to identify the potential for solar orientation and energy efficient systems, building practices and materials.
- OSC-3.15 **California Title 24 Energy Efficiency Standards.** The City will explore offering incentives such as density bonus, expedited process, fee reduction/waiver to property owners and developers who exceed California Title 24 energy efficiency standards.

Goal HS-3 To reduce the generation of air pollutants and promote non-polluting activities to minimize impacts to human health and the economy of the City.

Policies

- HS-3.4 **Transportation Demand Management.** The City shall encourage public and private businesses to implement employee use of rideshare programs, public transportation, NEV's, and/or alternatives to motorized transportation such as bicycling or walking to work.
- HS-3.7 **Transportation Management Program.** The City shall require as a condition of approval for industrial, commercial, and office projects a Transportation Management Program that is consistent with the City's circulation policies of the General Plan.
- HS-3.10 **Travel Demand Measures.** Coordinating with the PCAPCD, the City shall require large development projects to mitigate air quality impacts. As feasible, mitigations may include, but are not limited to the following:
- Providing bicycle access and bicycle parking facilities,
 - Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles (including neighborhood electric vehicles or NEVs), and
 - Establishing telecommuting programs or satellite work Centers.

- HS-3.12 **Employment-Intensive Development.** The City shall encourage employment-intensive development with a high floor area ratio where adequate community transit services are planned, and discourage such development where adequate community transit service is not planned.
- HS-3.13 **Location of Support Services.** The City shall support the location of ancillary employee services (including, but not limited to, child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.
- HS-3.14 **Parking Control.** The City shall provide disincentives for single-occupant vehicle trips through parking supply and pricing controls in areas where supply is limited and alternative transportation modes are available.
- HS-3.15 **Infill Near Employment.** The City shall identify and adopt incentives for planning and implementing infill development projects within urbanized areas near job centers and transportation nodes.
- HS-3.17 **Street Design.** The City shall promote street design that provides an environment which encourages neighborhood electric vehicles, transit use, biking and walking.
- HS-3.18 **Design for Transportation Alternatives.** The City shall encourage all new development to be designed to promote pedestrian and bicycle access and circulation (including the use of NEVs), to the greatest extent feasible.
- HS-3.19 **Working with Employers.** The City shall encourage employers to provide transit subsidies, bicycle facilities, and alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking for carpools/vanpools.
- HS-3.20 **Transportation Management Associations.** The City shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations.

The relationship of these 2050 General Plan goals and policies to the V5SP is included in Chapter 5, General Plan Consistency.

Additional Greenhouse Gas Guidance

California Air Pollution Control Officers Association (CAPCOA)

CAPCOA is the association of California's Air Pollution Control Officers representing the thirty-five local air quality agencies throughout California. They have published several documents that address air pollution issues. The most relevant of these to GHG emissions include:

- Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures,²⁷ and
- Model Policies for Greenhouse Gases in General Plans, A Resource for Local Governments to Incorporate General Plan Policies to Reduce Greenhouse Gas Emissions.²⁸

These documents were used in the evaluation of Plan emissions and in the development of mitigation measures.

²⁷ California Air Pollution Control Officers Association, 2010. *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*. August 2010.

²⁸ California Air Pollution Control Officers Association, 2009. *Model Policies for Greenhouse Gases in General Plans, A Resource for Local Governments to Incorporate General Plan Policies to Reduce Greenhouse Gas Emissions*. June 2009.

California Attorney General

The California Attorney General has prepared several comments on CEQA documents.²⁹ Many of these comments have focused on GHG emissions and recommended mitigation to reduce project impacts. These letters have been reviewed and considered in the development of Plan-specific GHG mitigation.

3.5.3 Analysis, Impacts, and Mitigation

Significance Criteria

According to Appendix G of the CEQA *Guidelines*, a project would have a significant effect associated with GHGs if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

With regard to impacts from GHGs, CAPCOA considers GHG impacts to be exclusively cumulative impacts;³⁰ therefore, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere. This analysis uses both a quantitative and a qualitative approach.

The quantitative approach is used to address the first significance criterion: Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? PCAPCD was part of the committee of air districts in the Sacramento Region involved in the development of GHG thresholds for CEQA projects. The threshold applicable to this Plan uses 1,100 metric tons CO₂e per year as the significance level for the construction and/or operation of land use projects. The original GHG threshold used by PCAPCD also used a “no action taken” (NAT) approach that compared NAT emissions to project emissions. This NAT approach was used only if a project or plan’s emissions exceeded 1,100 metric tons CO₂e per year. This NAT approach has since been dropped by PCAPCD due to the result of a recent California Supreme Court decision (*Center for Biological Diversity et al., v. Newhall Land and Farming Company*, S217763, Filed 11/30/2015) invalidating the NAT approach in certain circumstances. Consequently, PCAPCD now recommends using the 1,100 metric tons CO₂e per year bright line project for all CEQA projects within its jurisdiction.³¹

²⁹ State of California Department of Justice, 2016. State of California Department of Justice Office of the Attorney General, Comment Letters. Available <https://oag.ca.gov/environment/ceqa/letters>.

³⁰ California Air Pollution Control Officers Association, 2008. *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*.

³¹ Green, A., Placer County Air Pollution Control District, e-mail to Tim Rimpo, ESA, regarding PCAPCD GHG Thresholds, March 10, 2016.

This quantifiable threshold recommended by PCAPCD is based on AB 32 and California Climate Change Scoping Plan reduction targets for 2020. This threshold is also used to evaluate the significance of the Plan's GHG impacts in 2030 and 2050.

As mentioned above, a qualitative approach is used to address the second criterion. A project cannot exceed an applied numeric threshold without also conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs (the state Climate Change Scoping Plan). Therefore, if a project exceeds a numeric threshold and results in a significant cumulative impact, it would also result in a significant cumulative impact with respect to the second significance criterion and conflict with a plan, policy, or regulation consistency, even though the project may incorporate measures and have features that would reduce its contribution to cumulative GHG emissions.

Methodology and Assumptions

GHG emissions associated with construction and operation of the Specific Plan were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2. Section 3.3, Air Quality of this EIR describes the construction model inputs in more detail. GHG emissions were estimated for 2020, 2030, and 2050 using assumptions about the expected levels of V5SP buildout for each of these years.

For the 2020 project scenario, the Specific Plan scenario includes the CalEEMod default 2020 on-road emission factors. Emissions were based on the land uses expected to be built out by 2020. These land uses are shown in the CalEEMod output results included in Appendix C. Trip generation rates were based on the land use trip rates as included in the traffic analysis. The 2020 estimates included updated PG&E CO₂ emission factors for 2020.³² The analysis also assumes that building energy use would be 50 percent lower than the values included in CalEEMod. CalEEMod uses 2008 Title 24 building energy efficiency standards. The 2013 standards were 25 percent more efficient than the 2008 standards and the 2017 standards are estimated to be 25 percent more efficient than the 2013 standards. Consequently, the use of a 50 percent lower value in CalEEMod is conservative in that actual savings would likely be greater than 50 percent. Additional information and model results for each of the analyses described above are presented in Appendix C.

For the 2030 project scenario, the Specific Plan scenario includes the CalEEMod default 2030 on-road emission factors. Emissions were based on the land uses expected to be built out by 2030. These land uses are shown in the CalEEMod output results included in Appendix C. Trip generation rates were based on the land use trip rates as included in the traffic analysis. The 2030 estimates included updated PG&E CO₂ intensity factors for 2020.³³ PG&E does not have estimates of CO₂ emission factors past 2020. The analysis also assumes that building energy use

³² Pacific Gas & Electric. 2015. Greenhouse Gas Emission Factors: Guidance for PG&E Customers. November. Available: www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf.

³³ Ibid.

would be 50 percent lower than the values included in CalEEMod. CalEEMod uses 2008 Title 24 building energy efficiency standards. The 2013 standards were 25 percent more efficient than the 2008 standards and the 2017 standards are estimated to be 25 percent more efficient than the 2013 standards. By 2030, the building energy efficiency requirements would likely be much more stringent, although no estimates are currently available. Consequently, the use of a 50 percent lower value in CalEEMod is conservative in that actual savings would likely be greater than 50 percent. Additional information and model results for each of the analyses described above are presented in Appendix C.

For the 2050 project scenario, the Specific Plan scenario includes the CalEEMod default 2050 on-road emission factors. Emissions were based on the land uses expected to be built out by 2050. These land uses are shown in the CalEEMod output results included in Appendix C. Trip generation rates were based on the land use trip rates as included in the traffic analysis. The 2050 estimates included updated PG&E CO₂ intensity factors for 2020.³⁴ PG&E does not have estimates of CO₂ emission factors past 2020. The analysis also assumes that building energy use would be 50 percent lower than the values included in CalEEMod. CalEEMod uses 2008 Title 24 building energy efficiency standards. The 2013 standards were 25 percent more efficient than the 2008 standards and the 2017 standards are estimated to be 25 percent more efficient than the 2013 standards. By 2050, the building energy efficiency requirements would likely be much more stringent, although no estimates are currently available. Consequently, the use of a 50 percent lower value in CalEEMod is conservative in that actual savings would likely be greater than 50 percent. Additional information and model results for each of the analyses described above are presented in Appendix C.

In regards to consistency with Executive Orders B-30-15 and S-3-05, and their goals of reducing Statewide GHGs by 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by the 2050, there are no protocols or thresholds that establish a basis for significance determination. However, as described in the *First Update to the Climate Change Scoping Plan*,

“...if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts [MW] of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80 percent below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.”³⁵

It is likely that additional GHG reduction measures established during the future development of the project would apply to various sectors that would generate GHGs directly and indirectly associated with development under the V5SP (such as energy and transportation).

³⁴ Ibid.

³⁵ California Air Resources Board, 2014. *First Update to the Climate Change Scoping Plan*. May 2014. p. 34.

Impacts and Mitigation Measures

Impact 3.5-1: Construction and operation of the proposed project would result in a cumulatively considerable increase in greenhouse gas (GHG) emissions that could conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing GHG emissions.

Full Specific Plan and Area A

GHG emissions are evaluated as a cumulative impact only rather than as a project-specific impact. Global warming is considered a global problem that is not caused by any single source of emissions but is instead the result of cumulative world-wide GHG emissions. Consequently, the V5SP is only evaluated for its contribution to global cumulative emissions.

GHG emissions were estimated for both construction and operation based on the methodology described above. Maximum annual GHG emissions from construction were estimated to be 9,528 metric tons CO₂e (year 2025). Annual GHG emissions from operations would equal 11,410 metric tons in 2020, 58,370 metric tons in 2030, and 103,552 metric tons in 2050 (see **Table 3.5-1**). Emissions from all emission categories would increase as the Plan Area is built out GHG emissions would exceed the PCAPCD threshold of 1,100 metric tons of CO₂e per year for each of the three years evaluated. Consequently, construction and operation of the proposed project would result in a cumulatively considerable increase in GHG emissions. This is a **potentially significant** impact.

**TABLE 3.5-1.
OPERATIONAL GHG EMISSIONS FOR 2020, 2030, AND 2040
(CO₂E, METRIC TONS PER YEAR)**

Category	2020	2030	2050
Area	1,104	4,819	6,604
Energy	2,467	11,758	17,708
Mobile	6,798	37,234	71,448
Waste	756	3,741	5,292
Water	285	818	2,500
Total	11,410	58,370	103,552

SOURCE: ESA 2016

However, the proposed project has several components that would help reduce GHG emissions. The V5SP will encourage alternative transportation modes that produce less GHGs than fossil-fuel powered vehicles. The proposed project is designed to encourage people to walk, ride bicycles, take public transportation, and use NEVs. These transportation options would reduce fuel consumption and GHG emissions.

The project also includes several goals and policies that will reduce energy consumption and GHG emissions. These include policies encouraging the use of domestic and commercial solar

energy, and a variety of sustainable building practices. Where feasible, developers will use green building standards and/or LEED standards in public and private projects and will promote sustainable building practices that go beyond Title 24 requirements.

According to the EIR transportation consultant, mixed-use developments such as Village 5 provide an opportunity for people to live, work, shop, and find recreation opportunities within one community. This allows people to travel shorter distances between their origins and destinations. These shorter travel distances reduce vehicle trip lengths and make walking and bicycling viable. The V5SP's traffic modeling accounts for several project design features that not considered as mitigation in this analysis. With the exception of the V5SP's proposed NEV network, the proposed project's land use, design, and GHG reduction features have been captured by the traffic modeling.

Those features include:

- project density and design,
- transit accessibility,
- pedestrian and bike networks, bike parking, and bike sharing,
- traffic calming,
- parking supply limits and unbundled parking costs,
- residential area parking permits,
- park and ride lots, and
- local shuttles.

Furthermore, the addition of retail, office, and commercial uses in the Plan Area would provide services and employment opportunities closer to residents of Lincoln, who would otherwise have to travel longer distances to other communities for these services and jobs.³⁶ Consequently, these factors have been incorporated into the transportation modeling and analysis.

Furthermore, the Plan Area roadways are designed to accommodate NEVs and include the designation of carpool/vanpool/rideshare spaces. Estimates show that NEVs will reduce gasoline powered motor vehicle trips by from one to two percent. Consequently, gasoline vehicle-generated GHG emissions would be reduced by up to two percent, although GHG emissions from electricity generated to power NEVs would increase. The decrease in GHG emissions from lower gasoline use and the increase in GHG emissions from higher electricity use associated with NEV use cannot be estimated using CalEEMod and, consequently, is not included in the emission estimates shown in Table 3.5-1. Other building-specific strategies are also described in the Specific Plan, though the degree of implementation and associated emissions reductions are not known at this time and were not included in the modeling. These strategies include:

³⁶ Fehr and Peers, 2015. *Village 5 Specific Plan EIR – Vehicle Miles Traveled Data and Analysis*. April 29, 2015.

- All new buildings constructed in the Plan Area will feature smart energy meters, solar hot water heaters, Energy Star appliances and be “solar- ready”.
- Shopping centers, office complexes, parks and public places will have preferentially located parking spaces and charging stations for NEVs.
- Coordinated tree plantings and building orientation that will reduce heating and cooling requirements.
- The use of drought-resistant native species for landscaping that would reduce the demand for irrigation (and indirect electricity use associated with water conveyance).

The goals of Executive Orders B-30-15 and S-3-05 include reducing statewide GHGs by 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by the year 2050. Currently, there are no established protocols or thresholds of significance that can be used to compare the Project’s GHG emissions in 2030 or 2050. However, as described above, the 1,100 metric tons per year of CO₂e used to evaluate the significance of the Plan’s 2020 emissions are also used to evaluate the significance of 2030 and 2050 GHG emissions. This impact is **potentially significant**.

Mitigation Measure

Mitigation Measure 3.5-1 (Full Specific Plan)

The following mitigation measures are based on measures identified by the project applicant, by the PCAPCD, by the California Attorney General, and by CAPCOA. The following measures focus primarily on non-transportation energy efficiency. Measures associated with reducing transportation emissions have already been incorporated into the GHG emission estimates shown in Table 3.5-1. The following measures will ensure that all Title 24 requirements are met and will further reduce GHG emissions through energy efficiency improvements.

All residential buildings shall:

- *Meet or exceed CalGreen Tier 2 requirements in place at the time of Building Permit issuance.*
- *Be pre-plumbed and structurally engineered for the future installation of a complete solar energy system.*
- *Include a tankless water heating system, a whole house ceiling fan, and “Energy Star” appliances (stoves, dishwashers, and any other appliances typically included within the initial installation by the builder).*
- *Include an energy efficient air conditioning unit(s) that exceeds the SEER ratio by a minimum of two points at the time of building permit issuance.*

- *Include programmable thermostat timers.*
- *Include exterior outlets on all single-family and multi-family buildings to allow the use of electrically-powered landscape equipment.*
- *Include wiring for at least one electric car charging station.*
- *Meet the 2016 Plumbing Code on all residences to reduce indoor and outdoor water use in installing low-flow bathroom faucets, kitchen faucets, toilets, and showers, and landscaping that uses water-efficient, drought resistant plants, and water-saving irrigation systems. Additionally, all residential units shall be pre-plumbed to enable the reuse of graywater systems.*
- *Not include wood-burning fireplaces, woodstoves, and other similar wood-burning devices. This prohibition shall be included in any covenants, conditions, and restrictions (CC&Rs) that are established.*
- *Provide covered storage facilities for securing bicycles for 15 percent or more of building occupants (multi-family housing units).*
- *Prior to issuance of an occupancy permit, the applicant shall establish tree planting guidelines that require residents to plant trees to shade buildings primarily on the west and south sides of buildings. Recommended use of deciduous trees (to allow solar gain during the winter) and direct shading of air conditioning systems shall be included in the guidelines.*

All non-residential structures within the Plan Area shall:

- *Be pre-plumbed and structurally engineered for the future installation of a complete solar energy system.*
- *Install photovoltaic rooftop energy systems on all community buildings and any commercial buildings over 100,000 square feet.*
- *Use “Energy Star” rated (or greater) roofing materials.*
- *Use both indoor and outdoor energy efficient lighting that meets or exceeds Title 24 requirements.*
- *Include an energy efficient heating system and an air conditioning system that exceeds the SEER ratio by a minimum of two points at the time of building permit issuance.*
- *Only use low flow water fixtures such as low flow toilets, faucets, showers, etc.*
- *Only use programmable thermostat timers.*

- *Include enough bike parking facilities to meet peak demand. Bike parking shall also be included near all transit locations that are developed during the course of this Plan. This will include providing secure bicycle racks and/or storage within 200 yards of a building entrance for five percent or more of all Full Time Equivalent (FTE) staff (measured at peak periods) and provide showers and changing facilities in the building, or within 200 yards of a primary staff building entrance, for 0.5 percent of FTE staff (measured at peak periods), or*

Provide secure bike racks and/or storage within 200 yards of a public building entrance according to the following guidelines based on project square footage:

- *Up to 5,000 square feet, two or more bicycle racks,*
 - *5,001 – 20,000 square feet, three or more bicycle racks,*
 - *20,001 – 50,000 square feet, six or more bicycle racks,*
 - *More than 50,000 square feet, ten or more bicycle racks.*
- *Install two 110/208 volt power outlets for every two loading docks.*
 - *Reserve a minimum of five percent of the total customer parking spaces within commercial and retail parking lots for electric vehicles, hybrid vehicles, alternative fueled vehicles, and carpools.*
 - *Install electric vehicle charging stations for a minimum of three percent of the total vehicle parking capacity of the site.*
 - *Include pedestrian-friendly paths and cross walks in all parking lots.*
 - *Pave all parking lots with reflective coatings (albedo = 0.30 or better). This measure is considered feasible if the additional cost is less than 10 percent of the cost of applying a standard asphalt product.*

In addition to the above measures, the following shall also be incorporated:

- *Prior to project approval, the applicant shall only show energy efficient lighting for all street, parking, and area lighting associated with the V5SP. The applicant shall also work to limit the hours of operation of outdoor lights through the use of timers and/or motion sensors, to the extent that these strategies do not compromise public safety.*
- *Any new park areas within the Plan Area shall include bicycle racks at appropriate locations and a community notice board and information kiosk within information about community events, ridesharing, and commute alternatives.*

- *Prior to issue of an occupancy permit within the Plan Area, the applicant shall create informational materials informing occupants of the alternative travel amenities provided, including ridesharing and public transit availability schedules and the Plan Area's pedestrian bicycle, and equestrian paths to community centers, shopping areas, employment areas, schools, parks, and recreation areas.*
- *Maximize the amount of drought tolerant landscaping by minimizing the amount of turf in all areas where this option is feasible.*

Impact Significance after Mitigation. Implementation of Mitigation Measure 3.5-1 would reduce GHG emissions. However, because of the large size of Village 5, GHG emissions would not be reduced to less than the significance thresholds adopted by the PCAPCD. Consequently, construction and operation of the Plan could result in a cumulatively considerable increase in GHG emissions that could conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted to reduce GHG emissions. Therefore, this impact is considered **significant and unavoidable**.

Cumulative Impacts

As described above in Impact 3.5-1, GHG emissions are evaluated as a cumulative impact only rather than as a project-specific impact. Consequently, the assessment above represents the cumulative impact analysis.

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3.6 Cultural Resources

This section presents data on cultural resources within the Plan Area and the regional vicinity, discloses the potential impacts of implementation of the proposed project, and, as appropriate, identifies approaches to mitigate significant impacts to cultural resources. Cultural resources include, but are not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Paleontological resources, described below, are also addressed.

One comment letter addressing cultural resources was received in response to the NOP (see Appendix A). The Native American Heritage Commission (NAHC) recommended that a records search be conducted at the appropriate Information Center and that any identified cultural resources be appropriately surveyed and mitigated. In addition, it was recommended that a Sacred Lands File check be requested from the NAHC, along with a list of the appropriate Native American contacts to be consulted. Section 3.6.3, below, details the research methods, including the records search conducted at the North Central Information Center as well as the findings of NAHC and tribal contact efforts.

The analysis included in this section was developed based on project-specific construction and operational features of the proposed project as presented in the V5SP, and data provided in the City of Lincoln 2050 General Plan,¹ City of Lincoln 2050 General Plan Environmental Impact Report², the Lincoln Village 7 Specific Plan Environmental Impact Report,³ and cultural resources analysis provided by the cultural resources consultants ECORP Consulting Inc.⁴ and Cardno.⁵

3.6.1 Environmental Setting

The following setting information is excerpted and summarized from the *Cultural Resources Inventory Report: Phase I Lincoln Village 5* completed by ECORP in 2015,⁶ the City of Lincoln 2050 General Plan Environmental Impact Report,⁷ and the Lincoln Village 7 Specific Plan Environmental Impact Report.⁸

¹ City of Lincoln, 2008. City of Lincoln 2050 General Plan. Adopted March 25, 2008.

² City of Lincoln, 2008. City of Lincoln General Plan Update Final Environmental Impact Report. State Clearinghouse No. 2005112003. Prepared by Environmental Science Associates. February 2008.

³ PBS&J, 2009. Draft Environmental Impact Report for the Village 7 Specific Plan Project. State Clearinghouse No. 2005062001. Prepared for the City of Lincoln. June 2009.

⁴ ECORP Consulting, Inc., 2015. Cultural Resources Inventory Report Phase I Lincoln Village 5 Placer County, California. Prepared for Richland Communities, Inc. May 2015.

⁵ Cardno, 2015. Cultural Resource Inventory Report for the Moore Road Subdivision Project, Lincoln, Placer County, California. Prepared for Praxis Properties. February 2015.

⁶ ECORP Consulting, Inc., 2015. Cultural Resources Inventory Report Phase I Lincoln Village 5 Placer County, California. Prepared for Richland Communities, Inc. May 2015.

⁷ City of Lincoln, 2006. City of Lincoln General Plan Update Draft Environmental Impact Report. SCH# 2005112003. October 2006.

⁸ City of Lincoln, 2009. Village 7 Specific Plan Project Draft Environmental Impact Report. June 2009.

Natural Setting

The land surrounding the Plan Area consists of a rural setting of agricultural fields with associated farms and rural residences to the north, west, and south. The lands to the east have resulted in suburban development within the last 10 years.

Nine soil types are identified within the project area, consisting of a variety of loams and Xerofluvents (an occasionally flooded soil type). The most common soil type is Kilaga loam, which comprises 51 percent of the soil. Kilaga loam is a well-drained alluvium found along terraces in elevations ranging between 50 to 200 feet above mean sea level. The soil matrix consists of loam from 0 to 19 inches below surface, clay loam from 19 to 30 inches, clay from 30 to 56 inches, and sandy clay loam from 56 to 80 inches below surface.

There exists the potential for buried prehistoric archaeological sites in the project area due to the presence of alluvium along Markham and Auburn Ravine creeks, and given the likelihood of prehistoric archaeological sites located along perennial waterways.

Geological Setting

Geologic history and conditions are relevant to the evaluation of paleontological resources because they influence the type of fossils that may be found (i.e., aquatic vs. terrestrial organisms) and the probability that any prehistoric remains would be subject to fossilization rather than normal decay. The Plan Area is located in the Sacramento Valley. The depositional history of the Sacramento Valley during the late Quaternary period included several cycles related to fluctuations in regional and global climate that caused alternating periods of deposition followed by periods of subsidence and erosion. The Sacramento Valley during the Pleistocene epoch consisted of stages of wetlands and floodplain creation as tidewaters rose in the valley from the west, areas of erosion when tidewaters receded, and alluvial fan deposition from streams emanating from the adjacent mountain ranges.

A review of geologic maps indicates that the Plan Area is located within the Riverbank Formation.⁹ Sediments in the Riverbank Formation consist of weathered reddish gravel, sand, and silt that form alluvial terraces and fans. In the Sacramento Valley, this formation contains more mafic igneous rock fragments than the San Joaquin Valley, and tends towards stronger soil-profile developments. The Riverbank Formation is Pleistocene in age; estimates place it between 130,000 and 450,000 years B.P. The Riverbank Formation forms alluvial fans and terraces of major rivers such as the Sacramento and the American. While no paleontological resources have been previously identified within the Plan Area or its vicinity, fossils have been encountered in other portions of the Riverbank Formation within the Sacramento Metropolitan Area.

⁹ Wagner, D.L., W. Jennings, T.L. Bedrossian, and E.J. Bortugno, 1981. California Geological Survey, Regional Geologic Map No. 1A, 1:250,000 scale.

Prehistoric Setting

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Animals that were hunted probably consisted mostly of large species still alive today. Around 8,000 BP, there was a shift in focus from hunting towards a greater reliance on plant resources. Archaeological evidence of this trend consists of a much greater number of milling tools (e.g., metates and manos) for processing seeds and other vegetable matter. This period extended until around 5,000 years BP and is sometimes referred to as the “Millingstone Horizon.” Projectile points are found in archaeological sites from this period, but they are far fewer in number than from sites dating to before 8,000 BP. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period.

In sites dating to after about 5,000 BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material. Flaked-stone tools became more refined and specialized and bone tools were more common. During this period, new peoples from the Great Basin began entering southern California. These immigrants, who spoke a language of the Uto-Aztecan linguistic stock, seem to have displaced or absorbed the earlier population of Hokan-speaking peoples. During this period, known as the “Late Horizon,” population densities were higher than before and settlement became concentrated in villages and communities along the coast and interior valleys. Regional subcultures also started to develop, each with its own geographical territory and language or dialect. These were most likely the basis for the groups encountered by the first Europeans during the eighteenth century. Despite the regional differences, many material culture traits were shared among groups, indicating a great deal of interaction. The introduction of the bow and arrow into the region sometime around 2,000 BP is indicated by the presence of small projectile points.

Ethnographic Setting

Ethnographically, the project area is in the southwestern portion of the territory occupied by the Penutian speaking Nisenan. The territory extended from the area surrounding the current City of Oroville on the north to a few miles south of the American River in the south. The Sacramento River bounded the territory on the west, and in the east, it extended to a general area located within a few miles of Lake Tahoe. As a language, Nisenan (meaning “from among us” or “of our side”) has three main dialects – Northern Hill, Southern Hill, and Valley Nisenan, with three or four subdialects. The Valley Nisenan lived along the Sacramento River, primarily in large villages with populations of several hundred each. Between there and the foothills, the grassy plains were largely unsettled, used mainly as a foraging ground by both valley and hill groups.

Politically, the Nisenan were divided into “tribelets,” made up of a primary village and a series of outlying hamlets, presided over by a chief who may or may not have inherited the position. Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house, owned by the chief.

Subsistence activities centered on the gathering of acorns (tan bark oak and black oak were preferred), seeds, and other plant resources. The hunting of animals such as deer and rabbits, and fishing were also an important part of normal subsistence activities. Trade was important with goods traveling to and from the coast and valleys up into the Sierra Nevada Mountains and beyond to the east. Coastal items like shell beads, salmon, salt, and Foothill pine nuts were traded for resources from the mountains and farther inland, such as bows and arrows, deer skins, and sugar pine nuts. In addition, obsidian was imported from the north.

The Spanish arrived on the central California coast in 1769, and on behalf of the Spanish government, by 1776 José Canizares had explored the Miwok territory bordering the Nisenan on the south. In 1808, Gabriel Moraga crossed Nisenan territory and in 1813, a major battle was fought between the Miwok and the Spaniards near the mouth of the Cosumnes River. Although the Nisenan appear to have escaped being removed to missions by the Spanish, they were not spared the ravages of European diseases. In 1833, an epidemic – probably malaria – raged through the Sacramento Valley, killing an estimated 75 percent of the native population. When John Sutter erected his fort at the future site of Sacramento in 1839, a few Nisenan survivors settled nearby. The discovery of gold in 1848 at Sutter’s Mill, near the Nisenan village of Colluma (now Coloma) on the South Fork of the American River, drew thousands of miners into the area, and led to widespread killing and the disruption of traditional Nisenan culture. Today, several groups of Nisenan are working towards preserving their culture, documenting tribal histories and genealogies, and celebrating their culture through traditional crafts, language revival, seasonal events, and performances.

Historical Setting

Placer County formed in 1851 from parts of Sutter and Yuba Counties. The principal economic activity in much of the county at that time was placer mining (hence the name). As miners soon discovered that gold deposits were absent in the alluvial valley portion of western Placer County, ranching (cattle and sheep) and agriculture (wheat cultivation) became the principal economic activities in that region.

The project vicinity within this portion of Placer County includes lands that are primarily dry plains, cut by occasional rivers and drainages such as Bear River, Coon Creek, and Markham and Auburn Ravines, and were found by early European American residents to be suitable for dry farming and raising livestock. Lands along the major drainages were the first to be occupied, followed by settlement in the dry plains and on the lesser drainages in the 1860s. The lands near the project vicinity were used for dry farming for crops such as grain and hay, and for the grazing of livestock. Some of the ranchers seasonally moved their herds to other holdings at higher

altitudes in the Sierra Nevada after the annual drying of their ranges following the cessation of the rains in May.

The town of Lincoln was surveyed and platted in 1864 on the Central California Railroad (CCRR) line from Folsom to Marysville. The town was named after Charles Lincoln Wilson who had built the CCRR, which reached the town of Lincoln on October 31, 1861. During the next few years, the town prospered, growing to approximately 500 residents, with several trains passing through daily. In 1866 the rail stop was moved to Wheatland, cutting off most of the shipping that the newly formed town of Lincoln had relied upon.

Although the railroad and freight economy declined, fruit crops, dry land agriculture, and cattle ranching continued to comprise a large part of the early economy in Lincoln. In 1873, several coal beds were discovered, leading to such mines as the Lincoln Coal Mine and the Clipper Coal Mine. Large amounts of clay were found within the Lincoln Coal Mine, and when word spread, Charles Gladding, who was visiting from Chicago, took the clay back home to have it tested by ceramics experts. The quality of the clay was of such high quality that Gladding came back to Lincoln and started Gladding, McBean and Company, which eventually made and shipped sewer pipe throughout California. By the 1890s, the company was also making fire brick, ornamental pottery, chimney pipes, and world-renowned terra cotta facades. In recent times, Gladding, McBean has been a major contributor to the economy of Lincoln, along with Sierra Pacific Industries' sawmill, located just north of Lincoln.

Today, rural residential and agricultural uses dating from the early twentieth century through the present characterize the Plan Area.

3.6.2 Regulatory Setting

Federal

National Register of Historic Places

The National Register of Historic Places (National Register), administered by the National Park Service, includes a list of buildings, structures, sites, objects, and districts that have been determined to possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the National Register as significant historical resources. Properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the National Register. As set forth in 36 Code of Federal Regulations (CFR) Part 60, the criteria for listing in the National Register include resources that:

- A. Are associated with events that have made a significant contribution to the broad patterns of history;
- B. Are associated with the lives of persons significant in our past;

- C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded or may likely yield information important in prehistory or history.

Listing in the National Register does not entail specific protection or assistance for a property but it does guarantee recognition in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the National Register must be evaluated under CEQA.

The National Register Bulletin also provides guidance in the evaluation of archaeological site significance. If a heritage property cannot be placed within a particular theme or time period, and thereby lacks “focus,” it is considered not eligible for the National Register. In further expanding upon the generalized National Register criteria, evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, flumes, etc.) are considered in terms of four related criteria that account for specific elements that define engineering and construction methods of linear features: (1) size and length; (2) presence of distinctive engineering features and associated properties; (3) structural integrity; and (4) setting. The highest probability for National Register eligibility exists within the intact, longer segments, where multiple criteria coincide.

State

California Environmental Quality Act

In general, a significant effect under CEQA would occur if a project results in a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines section 15064.5(a). Substantial adverse change is defined as “physical demolition, destruction, relocation, or alteration of the resource *or its immediate surroundings* [emphasis added] such that the significance of a historical resource would be materially impaired” (CEQA Guidelines section 15064.5(b)(1)). According to CEQA Guidelines section 15064.5(b)(2), the significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics that:

- A. Convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- B. Account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- C. Convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a Lead Agency for purposes of CEQA.

In general, a project that complies with the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and

Reconstructing Historic Buildings (Standards) (Weeks and Grimer, 1995) is considered to have mitigated its impacts to historical resources to a less-than-significant level (CEQA Guidelines section 15064.5(b)(3)).

Per CEQA Guidelines section 15064.5(c), CEQA applies to effects on archaeological sites under the following circumstances:

- 1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, listed in either the California or local registers, or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to eligible for listing in the California Register.
- 2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- 3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
- 4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Impacts to resources that do not qualify as historical resources or "unique" archaeological sites are not considered significant, and need not be considered further in the CEQA process (Public Resources Code (PRC) Section 21083.2).

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC Section 5024.1[a]). The criteria for eligibility for the California Register are based upon National Register criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

Similar to the National Register, to be eligible for the California Register, a cultural resource must be significant at the local, state, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must be of sufficient age, and retain enough of its historic character or appearance (integrity) to convey the reason for its significance.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation and have been recommended to the State Historical Commission for inclusion on the California Register.

Senate Bill 18

Senate Bill 18 requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting tribal cultural resources. Senate Bill 18 applies to the adoption or substantial amendment of general plans and specific plans, and requires that the Lead Agency consult with California Native American Tribes that are on the NAHC contact list and have traditional lands located within the agency's jurisdiction.

Assembly Bill 52

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on "tribal cultural resources," separately from archaeological resources (PRC Section 21074; 21083.09). The bill defines "tribal cultural resources" in a new section of the PRC Section 21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC Section 21080.3.1, 21080.3.2, 21082.3). Finally, AB 52 requires the Office of Planning and Research to update Appendix G of the CEQA Guidelines by July 1, 2016 to provide sample questions regarding impacts to tribal cultural resources (PRC Section 21083.09).

The provisions of AB 52 only apply to projects that have a notice of preparation filed on or after July 1, 2015, and therefore the bill's requirements are not applicable to the proposed project (the NOP was published on May 22, 2014). However, this requirement will apply to future projects within the V5SP where site-specific CEQA review is necessary.

While the requirements of AB 52 do not apply to this EIR, this EIR has evaluated the proposed project's potential impacts on tribal cultural resources, as defined by Section 21074 of the PRC (added by AB 52). In addition, as provided in greater detail in Section 3.6.3, the project proponent has consulted with California Native American tribes that are traditionally or culturally affiliated with the geographic area of the proposed project.

Paleontological Resources

Paleontological resources are explicitly afforded protection by CEQA section V(c) of Appendix G, the "Environmental Checklist Form," which addresses the potential for adverse impacts to "unique paleontological resource[s] or site[s] or ... unique geological feature[s]". This provision discusses significant fossils – remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group – as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Mitigation of adverse impacts to paleontological resources is therefore required under CEQA. Appendix G (Part V) of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, stating that a project will normally result in a significant impact on the environment if it will "...disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study."

The Society of Vertebrate Paleontology (SVP) has established standard guidelines that outline acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most California State regulatory agencies accept the SVP standard guidelines as a measure of professional practice.

Health and Safety Code, Sections 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the NAHC.

Public Resources Code, Section 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. Section 5097.5 of the PRC states as follows:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Local

City of Lincoln 2050 General Plan

The City of Lincoln 2050 General Plan (2008) Open Space and Conservation Element contains several goals and policies relevant to the protection of cultural resources within the Plan Area. The Cultural Resources section of the element provides policies directing the protection of historical, archaeological, and paleontological resources within the City. The following goals and policies from the 2050 General Plan are relevant to cultural resources.

Goal OSC-6 To preserve and protect existing archaeological, historical, and paleontological resources for their cultural values.

Policies

- OSC-6.1 **Evaluation of Historic Resources.** The City shall use appropriate State and Federal Standards in evaluating the significance of historical resources that are identified in the City.
- OSC-6.7 **Discovery of Archaeological / Paleontological Resources.** In the event that archaeological/paleontological resources are discovered during ground disturbing activities, the City shall require that grading and construction work within 100 feet of the find shall be suspended until the significance of the features can be determined by a qualified professional archaeologist/paleontologist as appropriate. The City will require that a qualified archeologist/paleontologist make recommendations for measures necessary to protect the find; or to undertake data recovery, excavation, analysis, and curation of archaeological/paleontological materials, as appropriate.
- OSC-6.8 **Archaeological Resource Surveys.** Prior to project approval, the City shall require project applicant to have a qualified professional archeologist conduct the following activities within the area of potential effects (APE): (1) conduct a record search at the North Central Information Center located at California State University Sacramento and other appropriate historical repositories to determine the extent of previously recorded sites and surveys within the project area, and to develop a historical context within which sites can be evaluated for significance, (2) conduct a field survey to locate, map, and record prehistoric and historic resources, and (3) prepare cultural resource inventory and evaluation reports meeting California Office of Historic Preservation Standards to document the results of the record search and field survey, and to provide significance evaluations and management recommendations for any identified historical resources within the APE.
- OSC-6.9 **Native American Resources.** The City shall consult with Native American representatives, including appointed representatives from United Auburn Indian Community, to discuss concerns regarding potential impacts to cultural resources and to identify locations of importance to Native Americans, including archeological sites and traditional cultural properties. Coordination with the Native American Heritage Commission should begin at the onset of the review of a proposed project.
- OSC-6.10 **Discovery of Human Remains.** Consistent with CEQA Guidelines (Section 15064.5), if human remains are discovered during project construction, it is necessary to comply with state laws relating to prohibitions on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (California Health and Safety Code Section 7050.5). If any human remains are discovered or recognized in any location on the project site, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- A. The Placer County Coroner / Sheriff has been informed and has determined that no investigation of the cause of death is required; and
- If the coroner determines that the remains are of Native American origin,
1. The coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours.
 2. The NAHC shall identify the person or persons it believes to be the most likely descendent (MLD) from the deceased Native American.
 3. The MLD shall have an opportunity to make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.
- B. Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.
- C. The County has notified the United Auburn Indian Community (UAIC) Tribal Council and solicited their input.

The relationship of these 2050 General Plan Policies to the V5SP is included in Chapter 5, General Plan Consistency.

3.6.3 Analysis, Impacts, and Mitigation

Significance Criteria

Based on the Appendix G of the CEQA Guidelines, project implementation would have significant impacts and environmental consequences on cultural resources if it would result in:

- A substantial adverse change in the significance of a historical resource that is either listed or eligible for listing on the National Register of Historic Places, the CRHR [California Register], or a local register of historic resources;
- A substantial adverse change in the significance of a unique archaeological resource;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturbance of any human remains, including those interred outside or formal cemeteries.

Methods and Assumptions

The following methods and findings discussion is excerpted and summarized from the *Cultural Resources Inventory Report: Phase I Lincoln Village 5* completed by ECORP Consulting, Inc. for Area A, and the *Cultural Resources Inventory Report for the Moore Road Subdivision Project* completed by Cardno for a 90 acre subsection of Area J.¹⁰⁻¹¹

¹⁰ ECORP Consulting, Inc., 2015. Cultural Resources Inventory Report Phase I Lincoln Village 5 Placer County, California. Prepared for Richland Communities, Inc. May 2015.

¹¹ Cardno, 2015. Cultural Resource Inventory Report for the Moore Road Subdivision Project, Lincoln, Placer County, California. Prepared for Praxis Properties. February 2015.

Archival Review

A records search for the Plan Area was completed at the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) at California State University-Sacramento on February 12, 2015 (NCIC search #PLA-15-19). The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) of the Plan Area, and whether previously documented prehistoric or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

In addition to the official records and maps for archaeological sites and surveys in Placer County, the following historic references were also reviewed: Historic Property Data File for Placer County; The National Register Information System; Office of Historic Preservation, California Historical Landmarks; California Historical Landmarks; California Points of Historical Interest; Directory of Properties in the Historical Resources Inventory; Caltrans Local Bridge Survey; Caltrans State Bridge Survey; and Historic Spots in California. Historic map review included the 1942 USGS Markham Ravine and 1953 Lincoln quadrangle topographic maps.

The records search indicated that 27 previous cultural resource investigations have been conducted within 0.5 miles of the Plan Area, with seven covering portions of the immediate Plan Area. Approximately 30 percent of the entire Plan Area has been surveyed. The previous surveys that covered portions of the Plan Area were primarily address the eastern and southern portions of the Plan Area. This includes portions of Sections 7, 12, 13, 17, 18, 19, 20, 22, 23, 24, 25, and 30 of Township 12N, Range 5E. This predominantly includes areas around the CA-65 Lincoln Bypass, portions of Auburn Ravine in the vicinity of Moore Road between Aitken Road and Fiddyment Road, and the area immediately south of McClellan Airforce Base. These studies revealed the presence of four previously recorded historic-age sites, including remains of granite columns (near Auburn Ravine), a windmill (near the intersection of Moore Road and Dowd Avenue), farm complexes (south of Auburn Ravine along Moore Road) earthen ditch (near the intersection of Moore Road and Dowd Avenue), and historic trash scatters within the Plan Area, and larger more complex sites, such as farm complexes (south of Auburn Ravine) and remains of a WWII compound (near the Lincoln Airport), within 0.5 miles of the Plan Area. The previous studies were conducted between 1981 and 2012 and vary in size up to 12,000 acres.

The records search also determined that 18 previously recorded historic-era cultural resources are located within 0.5 miles of the Plan Area. Of these, six are located within the Plan Area and include remains of granite columns, remains of a windmill, an earthen ditch, a pile of historic-age metal, and an isolate (both south of Auburn Ravine, near Moore Road). The historic-age Fiddyment Road also runs adjacent to the Plan Area and partially within the Plan Area. Other historic-age cultural resources identified within 0.5 miles of the Plan Area include a few ranch and farm complexes, remains of a WWII compound, a house, and remains of other ranching/farming implements.

Area A

A records search for the Area A property was completed at the NCIC on February 12, 2015 (NCIC search #PLA-15-19). The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) of the proposed project site, and whether previously documented prehistoric or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

In addition to the official records and maps for archaeological sites and surveys in Placer County, the following historic references were also reviewed: Historic Property Data File for Placer County; The National Register Information System; Office of Historic Preservation, California Historical Landmarks; California Historical Landmarks; California Points of Historical Interest; Directory of Properties in the Historical Resources Inventory; Caltrans Local Bridge Survey; Caltrans State Bridge Survey; and Historic Spots in California.

Other references examined by ECORP include a RealQuest Property Search, review of historic aerial photographs from 1937, 1954, and 1966, and historical maps.

Seven previous cultural resource investigations have been conducted within 0.5 miles of the Plan Area. Of the seven investigations, two included archaeological surveys that covered portions of the Plan Area, predominantly in the north and eastern portions in proximity to the Lincoln SR 65 Bypass. The Plan Area has not been surveyed in its entirety and previous surveys that covered portions of the Plan Area were primarily located in the eastern and northern portions of the Plan Area. These studies revealed the presence of four previously recorded historic-age cultural resources, including the remains of granite columns, a windmill, a community hall complex (located south of Auburn Ravine), and Fiddyment Road, located within 0.5 miles of the project area. Of the previously recorded sites located within 0.5 miles of the project area only one is located within the project area (P-31-5468, a historic period windmill, north of Auburn Ravine and west of Nelson Lane). Additionally, the inventory identified the National Register ineligible Moore Road Bridge over Auburn Ravine (Caltrans Bridge No. #19C0110), just outside of Area A.

Windsor Cove

A records search for a 90-acre property known as Windsor Cove within Area J was completed at the NCIC at California State University-Sacramento on January 15, 2015 (NCIC search #PLA-15-13). This 90-acre parcel is rectangular in shape and bounded by Moore Road to the south and undeveloped roads to the west, north, and east. The 90-acre property is also located at the northeast corner of Moore Road and Fiddyment Road, and Auburn Ravine is generally located to the north of the property. The purpose of the records search was to determine the extent of previous surveys within one quarter mile of the proposed project location, and whether previously documented prehistoric or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area. The records search results indicated that no previously recorded cultural resources were present within the boundaries of Windsor Cove, but one cultural

resource had been previously identified within one quarter mile of the project area (P-31-1422, a segment of Fiddymment Road). The records search indicated that only a small portion of Area J had been previously surveyed as part of the analysis of the City of Lincoln Wastewater Treatment Plant Project in 1997 by Cultural Resources Unlimited.

Field Survey

Area A

On February 23, 24, and 25, March 3, 4, 16, 17, and 18, and April 28, 2015 the entire Area A was subjected to an intensive pedestrian survey by ECORP archaeologists using 15-meter transects. At that time, the ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits.

All cultural resources encountered during the survey were recorded using Department of Parks and Recreation 523-series forms approved by the California OHP. The resources were photographed, mapped using a handheld sub-meter GPS receiver, and sketched as necessary to document their presence. Isolates were recorded with a Primary Record and Location Map, while sites were recorded with a Primary Record, Archaeological Site Record, Location Map, Sketch Map, and any other pertinent forms.

As a result of previous investigations by other firms, one site was recorded directly within Area A (P-31-5468, the historic period windmill), and an additional site was recorded approximately one mile to the west but was found to extend into the boundaries of Area A (P-31-5476, an earthen ditch/canal). As a result of the current effort, both sites were revisited and updated to identify any changes in description or condition. Additionally, as a result of the ECORP's 2015 pedestrian survey, a dam (LV-001) and an irrigation system (LV-002) were identified and recorded within Area A. ECORP evaluated each of the cultural resources for significance and concluded that all four sites (P-31-5468, P-31-5476, LV-001, and LV-002) appear to be ineligible for listing in the National and California Registers.

Windsor Cove

Cardno field personnel conducted a reconnaissance level survey of Windsor Cove on January 26, 2015. Crew surveyed east-west transects at an interval not exceeding 15 meters across the entire Windsor Cove property. One resource was encountered during pedestrian survey (MP-1, a historic trash scatter), which Cardno recommended as not eligible for listing in the National and California Registers. No additional cultural resources were identified during field survey.

Native American Consultation

Area A

ECORP contacted the NAHC on February 20, 2015 to request a search of the sacred land files for Area A. A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Area A. The NAHC provided a list of individuals and organizations in the Native American community that may be able to provide information about unrecorded sites in the project vicinity. ECORP contacted all persons or organizations on the NAHC list by letter on March 12, 2015 to request information on unrecorded cultural resources that may exist within Area A APE, or to inquire about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the proposed action. Each individual was subsequently telephoned on March 27, 2015 and April 6, 2015 to ensure that the materials had been received and to further solicit comments.

Follow-up telephone calls were successful in gathering comments on the proposed project from the list of Native American contacts provided by the NAHC. Rose Enos, independent member affiliated with the local Maidu community, stated she would like to be notified when the project initiates ground breaking and if any burial sites are found. Grayson Coney of the Tsi-Akim Maidu verbally stated that his group had no concerns for this project. As noted above, Marcos Guerrero with the UAIC responded with an email requesting a site visit and provided a site location within the project area. Judith Marks of the Colfax-Todds Valley Consolidated Tribe responded with an email requesting to have a monitor on-site and to keep her informed if the project goes forward. Daniel Fonseca of the Shingle Springs Band of Miwok Indians sent a letter stating that his group was unaware of any known cultural resources on site, to keep them updated on the project, requested all complete record searches and survey reports (environmental, archaeological, cultural), and provided a contact if anything was found.

A field visit with representatives of the UAIC, landowner, and ECORP cultural resources staff was scheduled on April 17, 2015 so UAIC staff could visit and identify the location of a possible Native American site on the property; however, the UAIC cancelled their presence for this visit. ECORP carried out a field visit on April 24, 2015 to examine the area and interview the farmer. Following the field visit, at which time no evidence for Native American sites was observed, ECORP provided the results of the visit and the LIDAR (Light Detection and Ranging) imagery of the location to the UAIC. No additional comments have been received to date.

Windsor Cove

Cardno contacted the NAHC on December 4, 2014 to request a search of the sacred land files for the Windsor Cove property. A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in Windsor Cove.

On December 11, 2014, the NAHC provided a list of individuals and organizations in the Native American community that may be able to provide information about unrecorded sites in the project vicinity. ECORP contacted all persons or organizations on the NAHC list by letter on

January 13, 2015 to request information on unrecorded cultural resources that may exist within the Windsor Cove APE, or to inquire about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the proposed action. Each individual was subsequently telephoned on January 21, 2015 to ensure that the materials had been received and to further solicit comments.

Cardno received a letter of response from Mr. Daniel Fonseca of the Shingle Springs Rancheria dated January 21, 2015. In his letter, Mr. Fonseca indicated that the Shingle Springs Band of Miwok Indians does not have any information regarding cultural resources within the subsection of Area J, but requested that the tribe be contacted in the event that human remains were discovered during project implementation.

Impacts and Mitigation Measures

As described in Chapter 1, Introduction, this Draft EIR evaluates the direct and indirect project impacts and cumulative impacts of construction and operation of the full Specific Plan at a programmatic level, and the first phase at a project-specific level. Project-level analysis is included below for only Area A and Windsor Cove, and subsequent analysis would occur for the rest of the Plan Area. The Plan Area for Village 5 will likely develop separately and under different timelines, anticipated to be over a 15 to 25 year period. These future phases of development will be subject to their own CEQA analysis and associated cultural resource inventory and evaluation efforts.

Impact 3.6-1: Implementation of the proposed project would adversely impact historic architectural resources directly through demolition or substantial alteration, or indirectly through changes to historical setting.

A significant impact could occur if project construction or operation would result in a substantial adverse change in the significance of historic architectural resources that are either listed or eligible for listing on the National or California Registers. Substantial adverse change is defined as the demolition, relocation, or alteration of a resource to the extent that the character defining features which convey its significance would be lost.

Full Specific Plan

The inventory and evaluation reports prepared by ECORP Consulting, Inc. and Cardno indicate that approximately 35 percent of the V5SP area has been previously surveyed for cultural resources, including the current survey efforts undertaken for this analysis. As described above, previous studies revealed the presence of historic-era sites, including agricultural features, water conveyance features, trash scatters, farm complexes and WWII sites within the Plan Area and its vicinity. Similar types of sites and features are anticipated to be located in the remaining unsurveyed portions of V5SP area (Areas B-I). None of the historic-era sites identified during the current or previously conducted surveys were recommended eligible for listing in the National or California Registers due to a lack of association with significant events, people or architectural styles as well as a lack of physical integrity.

Review of Caltrans Historic Bridge Inventory determined that three of the bridges proposed for replacement (Dowd Road over Markham Ravine [Caltrans Bridge No. 19C0118], Moore Road Bridge over Auburn Ravine [Caltrans Bridge No. 19C0110], and Nelson Road over Auburn Ravine [Caltrans Bridge No. 19C0083]) are over 50 years of age.¹² Caltrans previously evaluated these bridges and recommended them ineligible for listing in the National Register. As such, the replacement of these bridges with new structures would not result in impacts to historic architectural resources.

While no eligible or listed historic architectural resources were identified within Areas A or the subsection of J, the remaining Plan Area has not yet been systematically analyzed for the presence of significant cultural resources. Therefore, it is possible that currently unknown historic architectural resources may be present within the Plan Area.

During the course of future phases of project specific development, structures meeting the 45 year threshold for listing in the California Register and located within the Plan Area outside of Area A and Windsor Cove would need to be evaluated for their eligibility for listing in the California or National Registers. In the event that analysis determines these buildings are eligible for listing in the California or National Registers, direct or indirect impacts to these resources have the potential to result in substantial adverse changes to their character. This would be a **potentially significant impact** to historic architectural resources.

Operation of the proposed project would not result in any anticipated significant impacts to historic architectural resources within Area A and Windsor Cove, and is therefore, not analyzed further in this document. In the event that historic architectural resources are identified within the remaining V5SP area, significant indirect impacts to the historical setting of the resource could occur as a result of project construction and operation, impacting the resource's ability to convey its historic associations. This would result in a substantial adverse change in the significance of historic architectural resources listed or eligible for listing on the National or California Registers, and this would be a **potentially significant impact**.

Area A

ECORP Consulting, Inc. conducted archival review and field survey of Area A in February through April, 2015. Their efforts identified two previously recorded sites within Area A (P-31-5468, the historic period windmill, and P-31-5476, an earthen ditch/canal). Additionally, ECORP's pedestrian survey identified and recorded a dam (LV-001) and an irrigation system (LV-002) within Area A. ECORP recommended that all four sites (P-31-5468, P-31-5476, LV-001, and LV-002) appeared to be ineligible for listing in the National and California Registers. No other historic period resources were identified within Area A. The proposed project would therefore result in **no impact** to historic architectural resources within Area A.

¹² California Department of Transportation, 2010. Historic Bridge Inventory: Local Agency Bridges. Available: <http://www.dot.ca.gov/hq/structure/strmaint/historic.htm>. Accessed March 28, 2016.

Windsor Cove

Cardno completed an archival review of Windsor Cove and a reconnaissance level survey of the area on January 26, 2015. No historic period architectural resources were identified during either archival or field review of Windsor Cove. The proposed project would therefore result in **no impact** to historic architectural resources within Windsor Cove.

Mitigation Measures

Mitigation Measure 3.6-1 (Full Specific Plan except Area A and Windsor Cove)

When project-level development plans outside of Area A or Windsor Cove are submitted to the City of Lincoln for approval, the project proponent shall be required to complete a cultural resources investigation for review and approval by the City that includes, at a minimum:

- *An updated records search at the North Central Information Center;*
- *An intensive cultural resources survey, documenting and evaluating resources 45 years or older within and adjacent to the project footprint for listing in the California or National Registers;*
- *A report disseminating the results of this research; and,*
- *Recommendations for additional mitigation to resolve adverse impacts to recorded cultural resources.*

The survey shall be carried out by a qualified historian or architectural historian meeting the Secretary of the Interior's Standards for Architectural History, and can be compiled in the same document as Mitigation Measure 3.6-2(a). Demolition or substantial alteration of all previously recorded historic resources, including significant historic resources encountered during the survey and evaluation efforts, shall be avoided. Any alterations, including relocation, to historic buildings or structures shall conform to the Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.¹³ If avoidance of identified historic resources is deemed infeasible, the City shall prepare a treatment plan to include, but not limited to, adaptive reuse, photo-documentation and public interpretation of the resource.

If avoidance, adaptive reuse, or relocation of an historic resource is determined infeasible, a qualified architectural historian shall be retained to document the affected historic

¹³ National Park Service, 1995. Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Available: <https://www.nps.gov/tps/standards/four-treatments/treatment-guidelines.pdf>.

resource in accordance with the National Park Service's Historic American Buildings Survey (HABS) and/or Historic American Engineering Record (HAER) standards. Such standards typically include large format photography using (4x5) negatives, written data, and copies of original plans if available. The HABS/HAER documentation packages shall be archived at local libraries and historical repositories, as well as the Northwest Information Center of the California Historical Resources Information System. Public interpretation of historic resources at their original site shall also occur in the form of a plaque, kiosk or other method of describing the building's historic or architectural importance to the general public. These mitigation actions will be undertaken at the developer's expense.

Impact Significance After Mitigation: The recordation of a building or structure to HABS/HAER standards and public interpretation efforts would reduce impacts on significant historic buildings and structures, but such efforts typically do not reduce them to a less-than-significant level (CEQA section 15126.4(b)(2)). Impacts to significant historic buildings or structures under these circumstances would be significant and unavoidable. Mitigation Measure 3.6-1 provides guidance for the identification and treatment of historic architectural resources discovered during the course of development. In the event that no resources eligible for listing within the remaining portions of the Plan Area, or eligible resources are protected according to Secretary of Interior Standards for Treatment of Historic Properties, impacts to historic architectural resources would be reduced to a less-than-significant level. As the exact nature of future development and the eligibility of potentially affected resources are currently unknown, impacts to potentially eligible resources may occur. Therefore, impacts to eligible resources would be **significant and unavoidable**.

Impact 3.6-2: Implementation of the proposed project could result in damage or destruction of known or previously unidentified unique archaeological resources.

Full Specific Plan

Approximately 72 percent of the Plan Area not been subjected to systematic cultural resource survey analysis. Archival review of the Plan Area was conducted and no unique archaeological resources were identified. However, prehistoric resources or historic-era archaeological sites could be unearthed during construction and earth-moving activities on the project site.

Due to the presence of Auburn and Markham Ravines, and the presence of alluvium soils that may contain buried prehistoric sites, there is the potential that subsurface prehistoric archaeological sites may be present in the Plan Area. Prehistoric native communities tended to congregate along perennial waterways, as waterways provided for the presence of fresh water as well as hunting and fishing opportunities. Ongoing dialogue with the United Auburn Indian Community (UAIC) has indicated local concern related to the potential presence of archaeological resources within Area A, although a field survey by archaeologists and tribal

representatives found no evidence of these resources. There is the potential for the future identification of unique prehistoric and historic period archaeological resources during build out of the Plan Area.

As noted in Impact 3.6-1 above, the proposed project includes the construction of new bridges over Auburn and Markham Ravines to replace functionally obsolete bridges within the Plan Area. The construction of these bridges would include earth disturbing activities associated with the construction of concrete piers within the ravines that could inadvertently damage archaeological resources within the bridge construction footprint. Bridge widths are anticipated to range between 60-feet for two-lane collector roads and 96-feet for four-lane minor arterial roads. The proposed bridge at Nelson Lane over Auburn Ravine would extend approximately 440 feet and include 10 piers. Three to four of the piers would fall within Auburn Ravine, and each pier would be constructed with sixteen 24-inch diameter columns. The columns would span the width of the 96-foot bridge slab, distributed evenly every six feet. Moore Road Bridge over Auburn Ravine would extend approximately 660 feet across the ravine, and include 15 piers total, with five falling within the ravine. The piers would be constructed with columns similarly spaced as those described for Nelson Lane. Anticipated depths of the piers are currently unknown, but would depend on location within the ravine, as well as weight bearing requirements for the bridge.

As described above, no unique archaeological resources have been identified within the 72 percent of the Plan Area that has been subject to previous survey, although the UAIC has indicated concern over the potential presence of prehistoric archaeological resources within Auburn Ravine. The closest known archaeological resource to the Nelson Lane Bridge and Moore Road Bridge over Auburn Ravine are the historic period granite columns identified by Derr in 1997 (P-31-1701). No prehistoric archaeological resources have been previously documented in the vicinity of the proposed bridge locations.

The proposed bridge locations are within the records search conducted by the NCIC, but not within areas that have been subject to archaeological field survey or tribal consultation efforts. Noted above, the ravines and the readily available presence of fresh water present areas that would be attractive to prehistoric peoples, and Auburn Ravine specifically has been noted as an area of concern by the UAIC. As such, bridge construction within Auburn and Markham Ravines has the potential to disturb currently unknown unique significant archaeological resources.

In the event that currently unknown unique significant archaeological resources of either the prehistoric or historic periods are disturbed by earth moving activities, the disturbance of significant archaeological resources would be a **potentially significant impact**.

Operation of the uses within the entire Plan Area, including Area A and Windsor Cove, would not result in any anticipated significant impacts to unique archaeological resources, as impacts to archaeological resources typically occur as the result of earthmoving activities associated with construction. Earthmoving activities would not be associated with the operations of the proposed

project, and operation of the proposed project would have **no impact** on historic or pre-historic archaeological resources.

Area A

ECORP Consulting, Inc. conducted archival review and field survey of Area A in February through April, 2015, as well as Native American consultation between February and April 2015. No prehistoric or historic period archaeological resources were identified during their archival or survey efforts. Tribal consultation conducted by ECORP included communications with the UAIC and Colfax-Todds Valley Consolidated Tribe, noting concern over the potential for Native American prehistoric resources to be present within the area. A field survey conducted in April 2015 by ECORP and the UAIC identified no evidence of Native American sites within Area A.

ECORP noted that due to the presence of Auburn and Markham Ravines, and the presence of alluvium soils that may contain buried prehistoric sites, there is the potential that subsurface prehistoric archaeological sites may be present in Area A. Prehistoric native communities tended to congregate along perennial waterways, as waterways provided for the presence of fresh water as well as hunting and fishing opportunities.

While ECORP's analysis identified no known archaeological resources, the possibility of accidental discovery of subsurface resources cannot be discounted. In the event that currently unknown significant archaeological resources are disturbed by earth moving activities, the disturbance of significant unique archaeological resources would be a **potentially significant impact**.

Windsor Cove

Cardno completed an archival review of Windsor Cove and a reconnaissance level survey of the area on January 26, 2015, and conducted Native American consultation between December 2014 and January 2015. No prehistoric archaeological resources were identified during either archival or field review of Windsor Cove, although a historic period trash scatter (MP-1) was documented during field survey. Cardno received no responses indicating areas of concern by Native American tribes or individuals. While Cardno's analysis identified no known archaeological resources, the possibility of accidental discovery of subsurface resources during earth-moving activities and project construction cannot be discounted. In the event that currently unknown significant archaeological resources are disturbed by earth moving activities, the disturbance of significant unique archaeological resources would be a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.6-2(a) (Full Specific Plan except Area A and Windsor Cove)

When project-level development plans outside of Area A or Windsor Cove are submitted to the City of Lincoln for approval, the project proponent shall be required to complete a cultural resources investigation for review and approval by the City that includes, at a minimum:

- *An updated records search at the North Central Information Center;*
- *An intensive cultural resources survey, including subsurface presence/absence studies as appropriate;*
- *Contact and coordination with the Native American Heritage Commission and interested and involved local tribes;*
- *A report disseminating the results of this research that evaluates the eligibility of recorded resources for inclusion in the National and California Registers; and,*
- *Recommendations for additional cultural resources investigations necessary to mitigate adverse impacts to recorded and/or undiscovered archaeological resources.*

Additional cultural resources investigations may include testing and evaluation of archaeological resources, as well as data recovery efforts. If a significant unique archaeological resource is present that could be adversely impacted by a project, the project proponent shall:

- a) In consultation with the lead agency and archaeologist, determine if preservation in place is feasible. Consistent with State CEQA Guidelines section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement; or*
- b) Design and implement an Archaeological Research Design and Treatment Plan (ARDTP). If avoidance is not feasible, the project proponent shall hire a Secretary of the Interior-qualified archaeological consultant who shall prepare a draft ARDTP that shall be submitted to the City of Lincoln for review and approval. The ARDTP shall identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. Treatment of unique archaeological resources shall follow the applicable requirements of Public Resources Code Section 21083.2. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The ARDTP shall include provisions for analysis of data in a regional context, reporting of results within a timely manner and subject to review and comments by the appropriate Native American representative before being finalized, curation of artifacts and data at a local facility acceptable to the appropriate Native American representative, and dissemination of final confidential reports to the appropriate Native American representative, the*

Northwest Information Center of the California Historical Resources Information System, the City, and interested professionals.

3.6-2(b) (Full Specific Plan, Area A, and Windsor Cove)

Before the start of grading or excavation activities, construction personnel involved with earth-moving activities shall be informed of the possibility of encountering archaeological resources, the appearance and types of resources likely to be seen during construction activities, and the proper notification procedures to follow should archaeological resources be encountered. This worker training shall be prepared and presented by a qualified archaeologist.

If archaeological resources are discovered during earth-moving activities, the requirements of General Plan Policy OSC-6.7 (Discovery of Archaeological/Paleontological Resources) shall be followed, as described herein. In the event of accidental discovery during construction, all work must halt within a 100-foot radius of the discovery if subsurface deposits believed to be cultural or human in origin are discovered during construction. A qualified professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. A Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the NAHC, will be required if the nature of the unanticipated discovery is prehistoric.

Work cannot continue within the no-work radius until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the California or National Registers.

If a potentially eligible resource is encountered, then the lead agency shall require the project proponent to arrange for either 1) total avoidance of the resource, if feasible or 2) test excavations to evaluate eligibility and, if eligible, potentially data recovery as mitigation. The determination shall be formally documented in writing and submitted to the lead agency as verification that the provisions in CEQA for managing unanticipated discoveries have been met. Curation of any identified resources would be determined through consultation between the archaeologist, project proponent, and lead agency during the course of analysis.

Impact Significance After Mitigation: Mitigation Measure 3.6-2(a) provides guidance for the identification and treatment of unique archaeological resources discovered during the course of project specific development. In the event that no resources eligible for listing are identified

within the remaining portions of the Plan Area, impacts to archaeological resources would be reduced to a **less-than-significant** level.

In the event of accidental discovery of archaeological resources during construction, implementation of Mitigation Measure 3.6-2(b) provides guidance for the treatment of resources discovered during the course of construction. Implementation of Mitigation Measure 3.6-2(b) would reduce impacts resulting from accidental discovery to a **less-than-significant** level.

Impact 3.6-3: Ground-disturbing construction associated with implementation of the proposed project could result in disturbance or destruction of a paleontological resource.

Full Specific Plan

As described above, evidence of paleontological resources is not typically visible at the surface where the ground has not been disturbed and formations exposed. The Plan Area (including Area A and Windsor Cove) is underlain by the Riverbank Formation which is known to hold fossilized remains of prehistoric creatures. Thus, there is the potential for the accidental discovery and disturbance of paleontological resources during grading, trenching, or other earth moving activities within the Plan Area. The inadvertent destruction or disturbance of such previously unknown paleontological resources could result in an adverse effect. This is considered a **potentially significant** impact.

Operation of the uses within the entire Plan Area, including Area A and Windsor Cove, would not result in any anticipated significant impacts to paleontological resources, as impacts to paleontological resources typically occur as the result of earthmoving activities associated with construction. Earthmoving activities would not be associated with the operations of the proposed project, and operation of the proposed project would have **no impact** on paleontological resources.

Area A

Area A is underlain by the Riverbank Formation which is known to hold fossilized remains of prehistoric creatures, although no evidence of paleontological resources has been documented within Area A. As noted above, surficial evidence of paleontological resources is not typically evident in undisturbed areas. There is, therefore, potential for the accidental discovery of paleontological resources. The inadvertent destruction or disturbance of such previously unknown paleontological resources could result in an adverse effect, resulting in a **potentially significant impact**.

Windsor Cove

Like Area A, Windsor Cove is also underlain by the Riverbank Formation, known to hold fossilized remains of prehistoric creatures, although no previously recorded fossils have been documented within Windsor Cove. The inadvertent destruction or disturbance of previously

unknown paleontological resources could result in an adverse effect, resulting in a **potentially significant impact**.

Mitigation Measure

Mitigation Measure 3.6-3 (Full Specific Plan, Area A, and Windsor Cove)

Before the start of grading or excavation activities, construction personnel involved with earth-moving activities shall be informed of the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction activities, and the proper notification procedures to follow should fossils be encountered. This worker training shall be prepared and presented by a qualified paleontologist.

If paleontological resources are discovered during earth-moving activities the following requirements of General Plan Policy OSC-6.7 (Discovery of Archaeological/ Paleontological Resources) will be followed: the construction crew shall immediately cease work and the Planning Department shall be notified immediately if any paleontological resources (e.g., fossils) are uncovered during construction. All construction must stop in within 100 feet of the find and a paleontologist shall be retained to evaluate the resource and prepare and implement a proposed mitigation plan, including curation, in accordance with Society of Vertebrate Paleontology guidelines.¹⁴

Impact Significance After Mitigation: Mitigation Measure 3.6-3 provides guidance for the analysis and treatment of paleontological resources discovered during the course of construction. With the implementation of Mitigation Measure 3.6-3, this impact would be reduced to a **less-than-significant** level.

Impact 3.6-4: Ground-disturbing activities associated with construction of the proposed project could result in damage to previously unidentified human remains.

Full Specific Plan

Although archival evidence and field survey do not suggest the presence of human burials within the Plan Area, the possibility of encountering human remains cannot be entirely discounted.¹⁵⁻¹⁶ In the unlikely event that prehistoric or historic human remains are discovered during subsurface

¹⁴ Society of Vertebrate Paleontology, 1995. Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources – Standard Guidelines, Society of Vertebrate Paleontology News Bulletin, Vol. 163. pp. 22-27.

¹⁵ ECORP Consulting, Inc., 2015. Cultural Resources Inventory Report Phase I Lincoln Village 5 Placer County, California. Prepared for Richland Communities, Inc. May 2015.

¹⁶ Cardno, 2015. Cultural Resource Inventory Report for the Moore Road Subdivision Project, Lincoln, Placer County, California. Prepared for Praxis Properties. February 2015.

activities, the human remains could be inadvertently damaged, which could be a **potentially significant impact**.

Operation of the uses within the Plan Area would not result in any anticipated significant impacts to human remains, as impacts to human remains typically occur as the result of earthmoving activities associated with construction and no earthmoving activities are currently associated with the operations of the proposed project, and is therefore not analyzed further in this document.

Area A

As described above in Impact 3.6-2, ECORP Consulting, Inc. conducted archival review and field survey of Area A and identified no prehistoric period archaeological resources.¹⁷ Tribal communications with the UAIC and Colfax-Todds Valley Consolidated Tribe noted concern over the potential for Native American prehistoric resources within the area, although field survey conducted by ECORP and the UAIC identified no evidence of Native American sites. The possibility of encountering human remains cannot be entirely discounted. In the unlikely event that prehistoric or historic human remains are discovered during subsurface activities, the human remains could be inadvertently damaged, which could be a **potentially significant impact**.

Windsor Cove

Cardno completed an archival review and survey of Windsor Cove in January, 2015, and conducted Native American consultation between December 2014 and January 2015.¹⁸ No prehistoric archaeological resources were identified during either archival or field review of Windsor Cove. Cardno received no responses indicating areas of concern by Native American tribes or individuals. While Cardno's analysis identified no known human remains, the possibility of accidental discovery of human remains during ground disturbance cannot be discounted. In the event that human remains are disturbed or damaged by earth moving activities, this would be a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.6-4 (Full Specific Plan, Area A, and Windsor Cove)

- a) *Implement Mitigation Measure 3.6-2(b).*
- b) *In the event that evidence of human remains is discovered, the following requirements of General Plan Policy OSC-6.10 (Discovery of Human Remains) shall be followed. Construction activities within any area reasonably suspected to overlie adjacent human remains shall be halted or diverted. In addition, the provisions of*

¹⁷ ECORP Consulting, Inc., 2015. Cultural Resources Inventory Report Phase I Lincoln Village 5 Placer County, California. Prepared for Richland Communities, Inc. May 2015.

¹⁸ Cardno, 2015. Cultural Resource Inventory Report for the Moore Road Subdivision Project, Lincoln, Placer County, California. Prepared for Praxis Properties. February 2015.

Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code (PRC), and Assembly Bill (AB) 2641 shall be implemented. Specifically, the discovery shall be reported to the County Coroner (Section 7050.5 of the Health and Safety Code) and reasonable protection measures be taken during construction to protect the discovery from disturbance (AB 2641). If the Coroner determines the remains are Native American, the Coroner will notify the NAHC which will then designates a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the PRC). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641). The United Auburn Indian Community (UAIC) Tribal Council shall be solicited their input as part of the mitigation process.

Impact Significance After Mitigation: Mitigation Measure 3.6-4 (a) and (b) provides guidance for the analysis and treatment of human remains discovered during the course of construction. With the implementation of Mitigation Measure 3.6-4(a) and (b), this impact would be reduced to a **less-than-significant** level.

Cumulative Impacts

The greater Central Valley has been inhabited by people for thousands of years, and development of urban areas has resulted in the demolition and loss of numerous significant cultural resources. The cumulative context for cultural resource impacts of the proposed project include the portions of Central Valley identified as the territory of the local Native American community for prehistoric archaeological resources (generally from the City of Marysville in the north to the American River), the geological Riverbank Formation within the Central Valley for paleontological resources, and the City of Lincoln sphere of influence for historic architectural and archaeological resources. The City's 2050 General Plan determined that as a result of implementation of its own project level local policies (OSC-6.1 *Evaluation of Historic Resources*, OSC-6.8 *Archaeological Resource Surveys*, OSC-6.9 *Native American Resources*, OSC-6.10 *Discovery of Human Remains*, and OSC-6.7 *Discovery of Archaeological/ Paleontological Resources*.), along with mandated state and federal regulations, impacts to cultural resource would be cumulatively less than significant. As described above, the V5SP complies with the policies outlined by the General Plan, and the proposed mitigate reflects the requirements of the General Plan in treatment of cultural resources.

Impact 3.6-5: The proposed project, in conjunction with past, present, and reasonably foreseeable future projects, would result in significant cumulative impacts on historic architectural resources.

Continued development within the City of Lincoln Sphere of Influence runs the inherent risk of damaging or destroying historic architectural resources important to our history, which would be a cumulative impact. The project's contribution to this impact would be cumulatively considerable if significant architectural resources are identified within currently unsurveyed portions of the Plan Area as the loss of historically significant architectural resources could result in the loss of significant contributors to the historic context of agricultural development in the area. Therefore, the impact would be **potentially cumulatively significant**.

Mitigation Measure

Mitigation Measure 3.6-5

Implement Mitigation Measure 3.6-1.

Impact Significance After Mitigation: With the implementation of Mitigation Measure 3.6-1, impacts resulting from proposed project's cumulatively considerable contribution to the cumulative impacts on historic architectural resources would be lessened, however this impact would remain cumulatively **significant and unavoidable** because the loss of potentially significant architectural resources would be permanent and could significantly and adversely affect the historic context of the area.

Impact 3.6-6: The proposed project, in conjunction with past, present, and reasonably foreseeable future projects, would not result in significant cumulative impacts on unique archaeological resources.

The cumulative context for cultural resource impacts of the proposed project include the portions of Central Valley identified as the territory of the local Native American community for prehistoric archaeological resources. Continued development in the City's SOI as a result of the build out of the City of Lincoln General Plan runs the inherent risk of damaging or destroying previously unknown significant archaeological resources that could yield information important to our history or prehistory, which would be a cumulative impact. The project could have a cumulatively considerable contribution to this cumulative impact if unique archaeological resources are located beneath the surface of the project site and discovered during construction activities, as these resources are finite and irreplaceable representations of prehistoric culture. Therefore, the impact would be **potentially cumulatively significant**.

Mitigation Measure

Mitigation Measure 3.6-6

Implement Mitigation Measures 3.6-2(a) and 3.6-2(b).

Impact Significance After Mitigation: With the implementation of Mitigation Measures 3.6-2(a) and 3.6-2(b), this impact would be reduced to a less-than-significant level because surveys would be conducted prior to earth disturbing activities that would identify the potential for subsurface archaeological resources and develop and implement resource treatment plans to protect unique archaeological resources should they be discovered during construction activities.

Impact 3.6-7: The proposed project, in conjunction with past, present, and reasonably foreseeable future projects, would not result in significant cumulative impacts on paleontological resources.

The cumulative context for paleontological resource impacts includes the geological Riverbank Formation within the Central Valley, which, as described above, is considered sensitive for paleontological resources. Paleontological resources have been discovered within the region of cumulative consideration, and significant paleontological resources are a non-renewable resource. As projects develop within the northern portion of the Central Valley within the geological Riverbank Formation, the possibility exists for fossils to be present. Significant impacts resulting in their destruction or loss through construction would contribute to a regional cumulative loss, because paleontological resources are finite and contribute to our scientific repository of knowledge regarding the region. Therefore, the cumulative impact to paleontological resources would be **potentially significant**.

Mitigation Measure

Mitigation Measure 3.6-7

Implement Mitigation Measure 3.6-3.

Impact Significance After Mitigation: With the implementation of Mitigation Measure 3.6-3, this impact would be reduced to a **less-than-significant** level due to proposed identification and recovery plans to protect unique paleontological resources.

Impact 3.6-8: The proposed project, in conjunction with past, present, and reasonably foreseeable future projects, would not result in significant cumulative impacts on human remains.

The cumulative context of human remains includes both the territory of the local Native American community for prehistoric remains and the City of Lincoln Sphere of Influence for historic period remains. Continued development within the City of Lincoln Sphere of Influence and prehistoric territorial regions (detailed in Impact 3.6-6) runs the inherent risk of damaging or destroying previously unknown human remains, which would be a significant cumulative impact. Like archaeological resources, human remains are a finite representation of historic and prehistoric culture. The project could have a cumulatively considerable contribution to this impact if human remains are located beneath the surface of the project site and discovered during construction activities. Therefore, the cumulative impact on human remains would be **potentially significant**.

Mitigation Measure

Mitigation Measure 3.6-8

Implement Mitigation Measure 3.6-2(b) and Mitigation Measure 3.6-4(a) and (b).

Impact Significance After Mitigation: With the implementation of Mitigation Measures 3.6-2(b) and 3.6-4(a) and (b), this impact would be reduced to a **less-than-significant** level because proposed identification and recovery plans would be implemented to protect human remains accidentally discovered during project construction. Implementation of these plans, and halting work in the event of a discovery, would result in the proper handling of human remains.

3.7 Energy Resources

This section assesses the potential energy impacts of construction and operation of the Specific Plan and identifies potentially feasible mitigation measures where appropriate. The analysis was developed based on project-specific construction and operational features described in Chapter 2, Project Description, and data provided in the *City of Lincoln 2050 General Plan*,¹ *City of Lincoln 2050 General Plan Environmental Impact Report*,² and traffic information provided by Fehr & Peers.

Comments received in response to the NOP are included in Appendix A. No specific comments to energy resource issues were received.

3.7.1 Environmental Setting

Electrical System

The components of electrical transmission and distribution systems include the generating facility, switching yards and stations, primary substation, distribution substations, distribution transformers, various sized transmission lines, and the customers. In the United States there are over a quarter million miles of transmission lines, most of them capable of handling voltages between 115 kilovolt (kV) and 345 kV, and a handful of systems of up to 500 kV and 765 kV capacity. Transmission lines are rated according to the amount of power they can carry, the product of the current (rate of flow), and the voltage (electrical pressure). Generally, transmission is more efficient at higher voltages.

Generating facilities, hydro-electric dams, and power plants usually produce electrical energy at fairly low voltages, which is increased by transformers in substations. From there, the energy proceeds through switching facilities to the transmission lines. At various points in the system, the energy is “stepped down” to lower voltages for distribution to customers. Power lines are either high voltage (115, 230, 500, and 765 kV) transmission lines or low voltage (12, 24, and 60 kV) distribution lines.

Overhead transmission lines consist of the wires carrying the electrical energy (conductors), insulators, support towers, and grounded wires to protect the lines from lightning (called shield wires). Towers must meet the structural requirements of the system in several ways. They must be able to support both the electrical wires, the conductors, and the shield wires under varying weather conditions, including wind and ice loading, as well as a possible unbalanced pull caused by one or two wires breaking on one side of a tower. Every mile or so, a “dead-end” tower must be able to take the strain resulting if all the wires on one side of a tower break. Every change in

¹ City of Lincoln, 2008. *City of Lincoln 2050 General Plan*. Adopted March 25, 2008.

² City of Lincoln, 2008. *City of Lincoln General Plan Update Final Environmental Impact Report*. State Clearinghouse No. 2005112003. Prepared by Environmental Science Associates. February 2008.

direction requires a special tower design. In addition, the number of towers required per mile varies depending on the electrical standards, weather conditions, and the terrain. All towers must have appropriate foundations and be available at fairly regular spacings along a continuous route accessible for both construction and maintenance.

A right-of-way is a fundamental requirement for all transmission lines. A right-of-way must be kept clear of vegetation that could obstruct the lines or towers by falling limbs or interfering with the sag or wind sway of the overhead lines. Land acquisition and maintenance requirements can be substantial. The dimensions of a right-of-way depend on the voltage and number of circuits carried and the tower design. Typically, transmission line rights-of-way range from 100 feet to 300 feet in width.

Pacific Gas and Electric Company (PG&E) is the electric service provider in Placer County and the City of Lincoln. The electric power supply grid within Placer County is part of a larger supply network operated and maintained by PG&E that encompasses the entire northern California region. PG&E produces some of its own power and purchases some of its electricity through the Independent System Operator, which in turn obtains electricity from a number of companies that operate power plants throughout the Western Grid. On average, about half of the electricity provided by PG&E to customers is from renewable sources, including non-emitting nuclear generation (21 percent), large hydroelectric facilities (11 percent), and other renewable sources (19 percent, including wind, geothermal, biomass, solar, and small hydroelectric).³

Building on PG&E's current electricity distribution system within the City, the V5SP would involve the construction of new overhead and underground distribution lines, joint trench facilities, and streetlights. Depending on the results of a dry utilities study, an on-site substation may be necessary to accommodate the ultimate load growth. If necessary, this substation would most likely be served from PG&E's 230 kV lines in the vicinity of Rio Oso Substation on Hicks Road, 5.5 miles west of State Route 65.

Natural Gas Service

Natural gas service in the Plan Area is also provided by PG&E, and the site improvements for gas provision would include the construction of a joint trench to accommodate all of the gas facilities within the boundaries of the Plan Area. This gas distribution system would emanate from the existing PG&E mains within the Plan Area.

Transportation Fuel

In regard to transportation fuels, California is a net importer of petroleum, with petroleum-based fuels (gasoline and diesel) accounting for about 96 percent of the state's transportation needs while producing only about 37 percent of the petroleum used. The state is working on developing

³ Pacific Gas and Electric Company, 2015. Clean Energy Solutions. Available: <http://www.pge.com/en/about/environment/pge/cleanenergy/index.page>. Accessed July 23, 2015.

strategies to reduce petroleum fuel use. Notwithstanding, the California Energy Commission (CEC) anticipates gasoline and diesel demand will increase over the near term.⁴

3.7.2 Regulatory Setting

Federal

Energy Policies and Programs

On the federal level, the U.S. Department of Transportation (DOT), U.S. Department of Energy, and U.S. Environmental Protection Agency (U.S. EPA) are three agencies with substantial influence over energy policies and programs. Generally, federal agencies influence transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure projects. In addition, the Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licenses hydropower projects. Licensing of hydroelectric facilities under the authority of FERC includes input from state and federal energy and power generation, environmental protection, fish and wildlife, and water quality agencies. The CEC's Systems Assessment and Facilities Siting Division coordinates with FERC to ensure that needed energy facilities are authorized in an expeditious, safe, and environmentally acceptable manner.

The National Energy Policy,⁵ developed in May 2001, proposes recommendations on energy use and on the repair and expansion of the nation's energy infrastructure. The policy is based on the finding that growth in U.S. energy consumption is outpacing the current rate of production. Based on this policy document, during the years 2000 to 2020, the growth in the consumption of oil is predicted to increase by 33 percent natural gas by over 50 percent and electricity by 45 percent. While federal policy promotes further improvements in energy use through conservation, it focuses on increased development of domestic oil, gas, and coal and the use of hydroelectric and nuclear power resources. To address the over-reliance on natural gas for new electric power plants, the federal policy proposes research in clean coal technology and expanding the generation of energy to include energy derived from landfill gas, wind, and biomass sources.

Clean Vehicles

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama announced a new National Fuel Efficiency Policy directing federal agencies to increase fuel economy for all new cars and trucks sold in the United States. On

⁴ California Energy Commission, 2015. Energy Almanac – California Petroleum Statistics and Data. Available: <http://energyalmanac.ca.gov/petroleum>. Accessed July 23, 2015.

⁵ National Energy Policy Development Group, 2001. National Energy Policy. May 2001.

April 1, 2010, the U.S. EPA and the Department of Transportation's National Highway Safety Administration established a joint final rule to reduce greenhouse gas (GHG) emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The new rules require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and conserve approximately 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The U.S. EPA and the National Highway Safety Administration are working on a second-phase joint rulemaking to establish national standards for light-duty vehicles for model years 2017 and beyond.

On October 25, 2010, the U.S. EPA and DOT proposed the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year, which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by the 2018 model year.

Renewable Fuel Standard (RFS) Program

The RFS program was created under the Energy Policy Act (EPAAct) of 2005, and established the first renewable fuel volume mandate in the United States. As required under EPAAct, the original RFS program (RFS1) required 7.5 billion gallons of renewable- fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act (EISA) of 2007, the RFS program was expanded in several key ways:

- EISA expanded the RFS program to include diesel, in addition to gasoline;
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel, and set separate volume requirements for each one; and

EISA required U.S. EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

State

California Energy Commission

The CEC is California's primary energy policy and planning agency. Created by the California Legislature in 1974, the CEC has five major responsibilities: 1) forecasting future energy needs and keeping historical energy data; 2) licensing thermal power plants 50 megawatts (MW) or larger; 3) promoting energy efficiency through appliance and building standards; 4) developing energy technologies and supporting renewable energy; and 5) planning for and directing State response to energy emergencies. Under the requirements of the California Public Resources Code (PRC), the CEC in conjunction with the California Department of Conservation (DOC) Division of Oil, Gas, and Geothermal Resources is required to assess electricity and natural gas resources on an annual basis or as necessary.

The State of California regulates energy consumption under Title 24 of the California Code of Regulations (CCR). The Title 24 Building Energy Efficiency Standards were developed by the CEC and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The CEC updates these standards periodically, with the most recent update enacted in the year 2013.

All projects that apply for a building permit after July 1, 2014 must adhere to the new 2013 Title 24 standards. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings, and include requirements that will enable both demand reductions during critical peak periods and future solar electric and thermal system installations. The 2013 standards also include updates to the energy efficiency divisions of the California Green Building Code Standards (Title 24, Part 11) discussed below.

California Green Building Standards

The California Green Building Standards Code, known as CALGreen, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings. The purpose of CALGreen is to improve public health, safety and general welfare through enhanced design and construction of buildings using concepts which reduce negative impacts and promote those principles which have a positive environmental impact and encourage sustainable construction practices. CALGreen focuses on planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

California Public Utilities Commission

The California Public Utilities Commissions (CPUC) is a state agency created by a constitutional amendment to regulate privately-owned utilities providing telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation services, and in-state moving companies. The CPUC is responsible for assuring that California utility customers have safe, reliable utility services at reasonable rates, while protecting utility customers from fraud. The

CPUC regulates the planning and approval for the physical construction of electric generation, transmission, or distribution facilities; and local distribution pipelines of natural gas.

Pavley Regulations

California AB 1493, enacted on July 22, 2002, required the California Air Resources Board (CARB) to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. The regulation was stalled by automaker lawsuits and by the U.S. EPA's denial of an implementation waiver. On January 21, 2009, the CARB requested that the U.S. EPA reconsider its previous waiver denial. On January 26, 2009, President Obama directed that the U.S. EPA assess whether the denial of the waiver was appropriate. On June 30, 2009, the U.S. EPA granted the waiver request, which begins with motor vehicles in the 2009 model year.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near term (2009-2012) standards will result in about a 22 percent reduction compared with the 2002 fleet, and the mid-term (2013-2016) standards will result in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

Independent System Operator

The Independent System Operator (ISO), whose governing board is appointed by the Governor, manages most of California's transmission system. The ISO's primary function is to balance electricity supply with demand and maintain adequate reserves to meet the needs of California homes and businesses. FERC regulates the ISO. The California Electricity Oversight Board monitors and reports on the activities of the ISO.

Senate Bills 1078, SB 107, and SB 350 and Executive Orders S-14-08 and S-21-09

Senate Bill (SB) 1078 (Chapter 516, Statutes of 2002) established the California Renewables Portfolio Standard Program, which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date from 2017 to 2010.

In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Portfolio Standard (RPS) to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the RPS by signing Executive Order S-21-09, which directs the CARB under its AB 32 authority to enact regulations to help the state meet its RPS goal of 33 percent renewable energy by 2020.

The 33-percent-by-2020 goal was codified in April 2011 with Senate Bill X1-2, which was signed by Governor Edmund G. Brown, Jr. This new RPS preempts the CARB 33 percent Renewable Electricity Standard and applies to all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013 and 25 percent by the end of 2016, with the 33 percent requirement being met by the end of 2020.

In October, 2015, Governor Brown signed SB 350 into law. SB 350 includes the following two goals for 2030: 1) 50 percent of utility power must come from renewable energy; 2) the energy efficiency of existing buildings must increase by 50 percent.

Local

City of Lincoln 2050 General Plan

The following goals and policies from the 2050 General Plan are relevant to energy resources.

Goal LU-15 To organize new development areas to create vibrant, mixed-use villages characterized by a mix of land uses, pedestrian and transit accessibility, and neighborhood identity.

Policies

LU-15.9 **Alternative Fuels Vehicle Parking.** The City shall prioritized parking within commercial and retail areas for electric vehicles, hybrid vehicles, and alternative fuel vehicles as well as provide electric charging stations.

Goal OSC-3 To encourage energy conservation in new and existing developments throughout the City.

Policies

OSC-3.1 **Energy Conservation Measures.** The City shall require the use of energy conservation features in new construction and renovation of existing structures in accordance with state law. New features that may be applied to construction and renovation include:

- Green building techniques (such as use of recycled, renewable, and reused materials; efficient lighting / power sources; design orientation; building techniques; etc.)
- Cool roofs

OSC-3.2 **Landscape Improvements for Energy Conservation.** The City shall encourage the planting of shade trees along all City streets to reduce radiation heating.

OSC-3.7 **Passive and Active Solar Devices.** The City shall encourage the use of passive and active solar devices such as solar collectors, solar cells, and solar heating systems into the design of local buildings.

OSC-3.8 **Solar Orientation and Building Design.** The City shall encourage work that building and site design take into account the solar orientation of buildings during design and construction.

OSC-3.9 **Shade Tree Planting.** The City will encourage the planting of shade trees within residential lots to reduce radiation heating and encourage the reduction of GHGs.

OSC-3.10 **Shade Tree Parking Lot Requirements.** The City will require commercial and retail parking lots will have 50% tree shading within 15 years to reduce radiation and encourage the reduction of GHGs.

- OSC-3.11 **Energy Efficient Buildings.** The City will encourage the development of energy-efficient buildings and communities.
- OSC-3.12 **Solar Photovoltaic Systems.** The City will promote voluntary participation in incentive programs to increase the use of solar photovoltaic systems in new and existing residential, commercial, institutional and public buildings.
- OSC-3.13 **Energy Efficient Master Planning.** The City will encourage the incorporation of energy-efficient site design such as proper orientation to benefit from passive solar heating and cooling into master planning efforts when feasible.
- OSC-3.14 **Early Planning for Energy Efficiency.** The City will include energy planners and energy efficiency specialists in appropriate pre-application discussions with property owners and developers to identify the potential for solar orientation and energy efficient systems, building practices and materials.
- OSC-3.15 **California Title 24 Energy Efficiency Standards.** The City will explore offering incentives such as density bonus, expedited process, fee reduction/waiver to property owners and developers who exceed California Title 24 energy efficiency standards.

Goal HS-3 To reduce the generation of air pollutants and promote non-polluting activities to minimize impacts to human health and the economy of the City.

Policies

- HS-3.4 **Transportation Demand Management.** The City shall encourage public and private businesses to implement employee use of rideshare programs, public transportation, NEV's, and/or alternatives to motorized transportation such as bicycling or walking to work.
- HS-3.7 **Transportation Management Program.** The City shall require as a condition of approval for industrial, commercial, and office projects a Transportation Management Program that is consistent with the City's circulation policies of the General Plan.
- HS-3.10 **Travel Demand Measures.** Coordinating with the PCAPCD, the City shall require large development projects to mitigate air quality impacts. As feasible, mitigations may include, but are not limited to the following:
- Providing bicycle access and bicycle parking facilities,
 - Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles (including neighborhood electric vehicles or NEVs), and
 - Establishing telecommuting programs or satellite work Centers.
- HS-3.12 **Employment-Intensive Development.** The City shall encourage employment-intensive development with a high floor area ratio where adequate community transit services are planned, and discourage such development where adequate community transit service is not planned.
- HS-3.13 **Location of Support Services.** The City shall support the location of ancillary employee services (including, but not limited to, child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.
- HS-3.14 **Parking Control.** The City shall provide disincentives for single-occupant vehicle trips through parking supply and pricing controls in areas where supply is limited and alternative transportation modes are available.
- HS-3.15 **Infill Near Employment.** The City shall identify and adopt incentives for planning and implementing infill development projects within urbanized areas near job centers and transportation nodes.

- HS-3.17 **Street Design.** The City shall promote street design that provides an environment which encourages neighborhood electric vehicles, transit use, biking and walking.
- HS-3.18 **Design for Transportation Alternatives.** The City shall encourage all new development to be designed to promote pedestrian and bicycle access and circulation (including the use of NEVs), to the greatest extent feasible.
- HS-3.19 **Working with Employers.** The City shall encourage employers to provide transit subsidies, bicycle facilities, and alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking for carpools/vanpools.
- HS-3.20 **Transportation Management Associations.** The City shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations.
- Goal T-4 To provide and maintain viable alternate modes of transportation for community that will relieve congestion and improve environmental conditions.**
- T-4.7 **Electric Golf Carts.** Through the use of Golf Transportation Plans, the City shall support the use of electric golf carts within the City, and providing the necessary infrastructure to support them, when feasible.
- T-4.8 **Neighborhood Electric Vehicles.** Through the implementation of the Neighborhood Electric Vehicle Plan, the City shall support the use of Neighborhood Electrical Vehicles (NEV) and similar vehicles by providing where possible for street classifications that provide for their use and ensure connectivity throughout the City.
- Goal T-5 To provide an interconnected system of bikeways that would provide users with direct linkages at a city and regional level.**
- T-5.6 **Trails and Pathways to Retail and Employment Centers.** The City shall promote pedestrian convenience and safety through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping, and employment centers. Where feasible, trails will be looped and interconnected.
- T-5.9 **Pedestrian Access.** The City shall encourage specific plans and development plans to include design of pedestrian access that enables residents to walk from their homes to places of work, recreation, and shopping.
- T-5.10 **Review Site Plans for Pedestrian Accessibility.** The City shall review site plans to determine if residential, commercial, and office land uses are designed for pedestrian access. Future developments shall contain an internal system of trails that link schools, shopping centers, and other public facilities with residences in order to provide pedestrians with sufficient internal access.
- Goal PFS-6 To ensure that adequate and efficient public utilities are provided to meet the needs of residents of the city.**
- PFS-6.3 **Renewable Energy.** The City shall support the use of renewable energy sources, such as solar, in residential, commercial, and industrial developments.

The relationship of these 2050 General Plan Policies to the V5SP is included in Chapter 5, General Plan Consistency.

3.7.3 Analysis, Impacts, and Mitigation

Significance Criteria

The significance criteria for this analysis were developed from criteria presented in Appendix F (Energy Conservation) of the *CEQA Guidelines* and based on the professional judgment of the City and its consultants. Under CEQA, it is appropriate to evaluate the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Accordingly, the Plan would cause a significant impact to energy resources if it would:

- Use fuel and energy in an unnecessary, wasteful, or inefficient manner during construction; or
- Result in greater vehicle miles traveled (VMT) per service population, as compared to the existing baseline, causing fuel use in an unnecessary, wasteful, or inefficient manner; or
- Use energy in an unnecessary, wasteful, or inefficient manner by not complying with the most current version of Title 24 energy standards for energy conservation.

Methodology and Assumptions

The analysis in this section focuses on the nature and magnitude of the change in energy resources due to construction and operation of land uses to be developed under the Specific Plan and Area A. The energy use associated with alternatives to the Specific Plan is described in Chapter 6, Alternatives. Each of the four alternatives is described in terms of their energy consumption as compared to V5SP.

All buildings would be constructed consistent with the latest Title 24 California energy building standards. The estimates of building energy use included in this analysis assume that all future buildings would comply with the 2013 Title 24 standards. However, the CEC has stated that the 2016 building energy efficiency standards currently under development will require that buildings use 28 percent less energy for lighting, cooling, ventilation, and water heating as compared to the 2013 standards.⁶ The CEC further stated that when it adopts the 2016 Building Energy Efficiency Standards, it will be one step closer to the state's 2020 zero net energy goal, where a building produces as much energy as it consumes. The estimates of building energy use in this analysis are based on the 2013 standards since neither the 2016 standards nor 2020 goals have been finalized by CEC. Consequently, the building energy use estimates in this report likely overestimate energy electricity and natural gas use for V5SP and Area A analyses.

⁶ California Energy Commission, 2015. Energy Commission Continues March Toward Zero Net Energy With 2016 Building Energy Efficiency Standards.

For the V5SP and Area A construction, energy use focuses on fuel use (diesel and/or gas) associated with construction equipment and vehicles. For operations, energy use includes fuel use associated with on-road vehicles, as well as natural gas and electricity use in buildings.

Construction- and operational-related fuel use was back-calculated based on GHG emissions estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2. In addition, CalEEMod calculates annual energy (i.e., natural gas and electricity) for operational-related activities for the land uses specified. Finally, Fehr & Peers (the transportation consultant for the EIR) used the Placer County travel forecasting model in order to determine the VMT per service population for the Specific Plan versus existing baseline.⁷

Table 3.7-1 shows energy use associated with construction. Construction of Area A and the Full V5SP would require 9.66 million gallons of diesel fuel and 0.58 million gallons of gasoline.

**TABLE 3.7-1.
CONSTRUCTION ENERGY USE**

	Diesel Fuel (gallons)	Gasoline (gallons)
Area A	2,753,409	165,084
Areas B through J	6,908,980	414,237
Total Village 5	9,662,389	579,321

NOTE:
Assumes highest construction energy use based on the CalEEMod 2013.2.2 model and the methodology described above. See Appendix C for model outputs and additional details.
SOURCE: ESA, 2015

Table 3.7-2 shows operational energy use at buildout of Village 5. Annual Village 5 operation would require 111,956 megawatt-hours of electricity, 227,920 million Btu of natural gas, 7.8 million gallons of gasoline and 70,000 gallons of diesel fuel.

Table 3.7-3 shows operational energy use at buildout of Area A. Annual Area A operation would require 29,311 megawatt-hours of electricity, 64,709 million Btu of natural gas, two million gallons of gasoline and 19,000 gallons of diesel fuel.

⁷ Fehr & Peers, 2015. Village 5 Specific Plan EIR – Vehicle Miles Traveled Data and Analysis. April 29, 2015.

**TABLE 3.7-2.
VILLAGE 5 OPERATIONAL ENERGY USE**

CalEEMod Land Use ³	Amount	Units	Electricity ¹	Natural Gas ¹	Gasoline ²	Diesel Fuel ²
			Megawatt-hours/year	Million Btu/year	1,000 gallons/year	1,000 gallons/year
Apartments	1,497	units	5,665	11,845	544	4.9
Single Family	5,709	units	41,645	146,893	2870	26
Retirement Community	1,000	units	4,722	17,172	184	1.7
Elementary School	1,950	students	956	1,232	29	0.3
Junior High	1,200	students	828	1,067	57	0.5
High School	2,000	students	1,601	2,006	113	1.0
General Office	1,086.7	1,000 square feet	11,985	14,225	797	7.2
Office Park	537.5	1,000 square feet	6,248	4,628	360	3.3
Shopping Center	1,918.3	1,000 square feet	23,219	17,859	1829	16.5
Mall	1,180.8	1,000 square feet	14,388	10,993	987	8.9
City Park	168.7	acres	699	-	9	0.1
Total			111,956	227,920	7,778	70

NOTES:

- Electricity and natural gas consumption estimates were generated using CalEEMod 2013.2.2 model and the methodology described above. See Appendix C for model outputs and additional details.
- Annual gasoline and diesel fuel consumption rates are based on a vehicle fleet consisting of 99% gasoline powered vehicles and 1% diesel powered vehicles. The total greenhouse gas emissions from transportation sources generated using CalEEMod 2013.2.2 model and unit volume fuel factors obtained from the *U.S. Energy Information Voluntary Reporting of Greenhouse Gases Program* were used to calculate the total gallons of gasoline and diesel consumed by the project after full buildout of Village 5. The total gallons of gasoline and diesel fuel consumed were distributed to each land uses based on VMT provided by Fehr & Peers. The inclusion of on-site NEV lanes was included in this analysis.
- CalEEMod land use categories were used to model onsite energy use. The land use categories reflected in this table represent the land uses proposed in the V5SP, but uses CalEEMod terminology.

SOURCE: ESA, 2015

**TABLE 3.7-3.
AREA A OPERATIONAL ENERGY USE**

CalEEMod Land Use ³	Amount	Units	Electricity	Natural Gas	Gasoline	Diesel Fuel ²
			Megawatt-hours/year	Million Btu/year	1,000 gallons/year	1,000 gallons/year
Single Family	1,417	units	10,462	36,630	758	6.9
Retirement Community	1,000	units	4,712	17,172	200	1.8
Elementary School	650	students	325	411	23	0.2
Office Park	36.1	1,000 square feet	426	311	15	0.1
Shopping Center	751.9	1,000 square feet	9,070	7,000	761	6.9
Mall	342.1	1,000 square feet	4,155	3,185	305	2.8
City Park	38.9	acres	161	-	2	0
Total			29,311	64,709	2,063	19

NOTES:

- Electricity and natural gas consumption estimates were generated using CalEEMod 2013.2.2 model and the methodology described above. See Appendix C for model outputs and additional details.
- Annual gasoline and diesel fuel consumption rates are based on a vehicle fleet consisting of 99% gasoline powered vehicles and 1% diesel powered vehicles. The total greenhouse gas emissions from transportation sources generated using CalEEMod 2013.2.2 model and unit volume fuel factors obtained from the *U.S. Energy Information Voluntary Reporting of Greenhouse Gases Program* were used to calculate the total gallons of gasoline and diesel consumed by the project after full buildout of Area A. The total gallons of gasoline and diesel fuel consumed were distributed to each land uses based on VMT provided by Fehr & Peers. The inclusion of on-site NEV lanes was included in this analysis.
- CalEEMod land use categories were used to model onsite energy use. The land use categories reflected in this table represent the land uses proposed in the V5SP, but uses CalEEMod terminology.

SOURCE: ESA, 2015

Impacts and Mitigation Measures

Impact 3.7-1: Construction of the proposed project would not use fuel and energy in an unnecessary, wasteful, or inefficient manner during project construction.

Full Specific Plan and Area A

Construction of the proposed project would require the use of fuels (primarily gasoline and diesel) for operation of construction equipment (e.g., dozers, excavators, and trenchers), construction vehicles (e.g., dump and delivery trucks), and construction worker vehicles. Direct energy use would also include the use of electricity required to power construction equipment (e.g., welding machines and electric power tools).

Electricity

The amount of electricity consumption that would be associated with energy consuming equipment and processes used during construction of the Plan Area is unknown and cannot be estimated as it would be too speculative given existing data. However, electricity demand during construction is not expected to be unnecessary, wasteful, or inefficient since unusually energy-intensive construction activities are not anticipated based on the general land uses proposed. In addition, PG&E generates approximately half of its electrical power from renewable sources.

Fuel

The amount of diesel fuel and gasoline needed for buildout of the Specific Plan is shown in Table 3.7-1 above. The construction fuel use estimates assume that 95 percent of all fuel use would be diesel fuel and five percent would be gasoline. Gallons of diesel fuel and gasoline were back-calculated using a conversion factor of 10.15 kilograms of CO₂ per gallon of diesel and 8.91 kilograms of CO₂ per gallon of gasoline⁸ and based on the total metric tons of CO₂ estimated with CalEEMod version 2013.2.2. These calculations are included in Appendix C.

Construction of the proposed Specific Plan would consume a total of 10.2 million gallons of fuel, of which 9.7 million gallons would be diesel fuel and 0.6 million gallons would be gasoline. Construction activities could result in wasteful or inefficient use of energy if construction equipment is not well maintained, if equipment is left to idle when not in use, or if haul trips are not planned efficiently.

Construction of Area A would consume a total of 2.9 million gallons of fuel, of which 2.8 million gallons would be diesel fuel and 0.2 million gallons would be gasoline. Construction activities could result in wasteful or inefficient use of energy if construction equipment is not well maintained, if equipment is left to idle when not in use, or if haul trips are not planned efficiently. As a result, there is a potential for project construction of both the Full Specific Plan and Area A

⁸ U.S. Energy Information Administration, 2011. Voluntary Reporting of Greenhouse Gases Program. Available: www.eia.gov/oiaf/1605/coefficients.html, page last updated January 31, 2011.

to use large amounts of fuel or energy in a wasteful or inefficient manner, which is considered a **potentially significant** impact.

Mitigation Measures

Mitigation Measure 3.7-1 (V5SP and Area A)

The applicant(s) shall implement the following mitigation measures for each phase of development in the time frames provided:

- a) *The prime contractor shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. If any new equipment is added after submission of the inventory, the prime contractor shall contact the District prior to the new equipment being utilized. At least three business days prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the District with the anticipated construction timeline, including start date, name, and phone number of the property owner, project manager, and on-site foreman.*

Prior to approval of grading or improvement plans, (whichever occurs first), the applicant(s) shall provide a written calculation to the District for approval demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will meet Tier 4 emission standards. If Tier 4 equipment is unavailable for any equipment type, the prime contractor shall notify the PCAPCD that Tier 3 off-road equipment will be utilized.

- c) *During construction, the contractor shall utilize existing power sources (e.g., electricity) or clean fuel (e.g., propane, gasoline, biodiesel, and/or natural gas) generators rather than temporary diesel power generators, to the degree feasible.*
- d) *During construction, the contractor shall minimize idling time to a maximum of 5 minutes for all diesel-powered equipment.*
- e) *Signs shall be posted in the designated queuing areas of the construction site to limit idling to a maximum of 5 minutes.*
- f) *Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.*

Impact Significance after Mitigation: Implementation of Mitigation Measure 3.7-1 would ensure that non-renewable energy use during construction would not be wasteful, inefficient, or

unnecessary. Although it is not possible to estimate the amount of energy reduction, Mitigation Measure 3.7-1 would clearly reduce non-renewable energy consumption by limiting idling and fuel waste, requiring the use of renewable (electricity) and clean fuel power sources, and ensuring proper operating condition of construction equipment to reduce the potential for fuel leaks or inefficiencies. Additionally, as technology and construction equipment improves over time, engines will become more efficient and reduce the amount of energy required. As a result, this impact would be **less-than-significant** with implementation of this mitigation measure.

Impact 3.7-2: Development of the proposed project would result in decreased vehicle-miles travelled per service population, as compared to the existing baseline, resulting in a corresponding decrease in transportation energy use per service population.

Full Specific Plan

VMT per service population (i.e., combination of the residents who live in the sub-area and the workers who are employed in the sub-area) is an indicator of whether a project would result in wasteful or inefficient use of transportation energy from long-term operations on an individual basis, since a project that would result in greater VMT per capita or service population in comparison to the existing baseline would mean that individuals would be driving greater distances, and thus using greater amounts of fuel, than without the project. As described above in the methodology section, in order to determine the daily VMT per service population for the Specific Plan versus existing baseline, Fehr & Peers used the Placer County travel forecasting model for the sub-area that includes the proposed Specific Plan.⁹ The analysis used land use inputs in the Placer County travel forecasting model and population and employment conversion factors to calculate the service population within the VMT analysis sub-area. The sub-area boundaries are:

- Placer-Yuba County line to the north
- Sierra College Blvd alignment to the east
- Placer-Sacramento County line to the south
- Placer-Sutter County line to the west

The sub-area boundaries were selected by Fehr & Peers through consideration of the travel characteristics of Village 5, the regional roadway network, and the travel model's limitations to effectively model trips outside Placer County. The sub-area boundaries include the major communities with which the residents and those employed in Village 5 would interact, including cities in South Placer County such as Lincoln, Roseville, and Rocklin. The sub-area also includes

⁹ Fehr & Peers, 2015. Village 5 Specific Plan EIR – Vehicle Miles Traveled Data and Analysis. April 29, 2015.

areas of planned growth with which the proposed Specific Plan uses would likely interact in future year scenarios, including Placer Ranch and the other Lincoln villages.¹⁰

Fehr & Peers determined that the daily VMT per service population in the analysis sub-area decreases when the Specific Plan is included. The daily VMT per service population in the sub-area decreases from 15.94 under existing conditions to 15.80 under existing plus project conditions, a decrease of 0.9 percent. This result is caused by the marginal increase in service population being relatively greater than the marginal increase in VMT.¹¹ This decrease of nearly one percent would result in a corresponding decrease of 793,000 gallons of gasoline and 7,000 gallons of diesel per year of transportation fuel consumption with the proposed Specific Plan compared to existing conditions. (i.e., no V5SP).

This reduced VMT is a result of the Specific Plan land use design, roadway system, and mobility network being developed in accordance with smart growth principles. According to Fehr & Peers, mixed-use developments, such as Village 5, provide an opportunity for people to live, work, shop, and find recreation opportunities within one community. This allows people to travel shorter distances between their origins and destinations. These shorter travel distances reduce vehicle trip lengths and make walking and bicycling more viable travel options. Furthermore, the addition of retail, office, and commercial uses in the Plan Area would provide services and employment opportunities closer to residents of Lincoln, who would otherwise have to travel longer distances for these services and jobs.¹² In addition, the Plan Area roadways are designed to accommodate neighborhood electric vehicles (NEVs) and include the designation of carpool/vanpool/rideshare spaces. According to the City of Lincoln, NEVs can achieve the energy equivalent of over 150 miles per gallon (mpg) for a standard powered vehicle. NEVs consume less than one-fifth the energy of a conventional automobile.¹³ Therefore, the proposed project would not result in wasteful, inefficient, or unnecessary fuel consumption associated with vehicle trips generated by the proposed project and this impact would be **less than significant**.

Area A

The traffic study determined that the daily VMT per service population in the analysis sub-area decreases when Area A is included. The daily VMT per service population in the sub-area decreases from 15.94 (based on total VMT of 5,015,087 and service population of 314,696) under existing conditions to 15.80 (based on total VMT of 5,539,776 and service population of 350,552) under existing plus project conditions (which includes Area A), a decrease of approximately 0.1%. This decrease is caused by the increase in service population being relatively greater than the increase in VMT.¹⁴ This 0.1 percent decline represents the decrease in transportation fuel use

¹⁰ Ibid.

¹¹ Ibid.

¹² Ibid.

¹³ City of Lincoln, 2006. NEV Transportation Plan. August 2006.

¹⁴ Fehr & Peers, 2015. Village 5 Specific Plan EIR – Vehicle Miles Traveled Data and Analysis. April 29, 2015.

per service population within the Plan Area compared to existing conditions. Therefore, development of Area A would not result in wasteful, inefficient, or unnecessary fuel consumption associated with vehicle trips generated by the proposed project and this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 3.7-3: Development of the proposed project would comply with the most current version of Title 24 energy standards for energy conservation.

Full Specific Plan and Area A

The State of California regulates energy consumption under CCR Title 24. The Title 24 Building Energy Efficiency Standards were developed by the CEC and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The CEC updates these standards periodically, with the most recent update enacted in the year 2013. Projects that would not comply with these energy conservation standards would result in wasteful, inefficient, or unnecessary use of energy from long-term operations.

Operational buildout of the Specific Plan was modeled with CalEEMod and includes an estimate of annual energy (i.e., natural gas and electricity) use. These output files are included Appendix C (for the Specific Plan scenario). Natural gas and electricity use was estimated at 227,920 kBTU per year and 117,305 kilowatt hours (kWh) per year, respectively. The 2013 Title 24 standards for natural gas and electricity use were included in these emissions projections for the Specific Plan. Since these standards are updated periodically with more stringent conservation requirements, it is likely that additional updates and associated building energy use reductions would occur over the span of Specific Plan buildout. As such, the annual energy use estimates described above would be conservative. The Specific Plan also includes strategies to increase reliance on renewable energy sources:

- All new buildings constructed in the Plan Area will feature solar hot water heaters and be “solar-ready.”
- Photovoltaic systems are encouraged for residential and commercial uses.

Other sustainability strategies are also described in the Specific Plan that would further reduce energy use include:

- All new buildings constructed in the Plan Area will feature smart energy meters and Energy Star appliances.
- Coordinated tree plantings and building orientation may also be used to reduce heating and cooling requirements.

- The use of drought-resistant native species for landscaping would reduce the demand for irrigation (and indirect electricity use associated with water conveyance).

Compliance of the Specific Plan with the *City of Lincoln 2050 General Plan* energy efficiency policies is discussed above in the Regulatory Setting.

The Full Specific Plan, including Area A, would provide for a comprehensively planned infrastructure system with coordinated phasing and construction of facilities. In general, the phasing/development sequencing plan has been structured to ensure that the backbone infrastructure improvements in each phase would support associated development in compliance with City policies and standards, and that the development in each phase of the Specific Plan would support the costs of the required improvements. PG&E would extend lines and construct facilities to serve the Plan Area concurrently with development phases as needed, and as part of the Specific Plan approval process, the City would coordinate with and meet the requirements of PG&E (as applicable) regarding the extension and locations of on-site infrastructure. As an energy provider, PG&E generates approximately 50 percent of its electricity from renewable energy sources, including non-emitting nuclear generation (21%), large hydroelectric facilities (11%), and other renewable sources (19%, including wind, geothermal, biomass, solar, and small hydroelectric) and continues to add more renewable sources into the power mix under California's RPS in order to achieve the 33 percent renewables by 2020.¹⁵

In summary, the Plan would comply with all existing local, state and federal requirements, including the Building Energy Efficiency Standards (CCR Title 24). As a result, the increase in energy demand and associated infrastructure for buildout of the Plan Area would not result in the wasteful, inefficient, or unnecessary consumption of energy for long-term operations or preempt future renewable energy development or future energy conservation. Thus, this impact would be considered **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative impacts regarding the wasteful, inefficient, or unnecessary consumption of energy during construction (Impact 3.7-1) and building operations (Impact 3.7-3) would be the same as the project-specific context. Energy consumption effects related to individual projects are localized and would not combine with similar effects in other locations. However, in regard to the VMT per service population criterion, the geographic context for the most affected areas due to development of the Specific Plan would be within the sub-area described in Impact 3.7-2. The sub-area boundaries include the major communities with which Village 5 interacts, including

¹⁵ Pacific Gas and Electric, 2015. Clean Energy Solutions. Available: <http://www.pge.com/en/about/environment/pge/cleanenergy/index.page>. Accessed July 23, 2015.

cities in South Placer County such as Lincoln, Roseville, and Rocklin. The sub-area also includes areas of planned growth with which the Plan uses will likely interact in future year scenarios, including Placer Ranch and the other Lincoln Villages.¹⁶ The cumulative impact analysis for VMT per service population is provided in Impact 3.7-4 below.

Impact 3.7-4: Development of the proposed project, along with other cumulative growth, could result in a cumulative increase of vehicle-miles travelled per service population.

The cumulative plus project scenario includes the Plan in addition to the cumulative land use and transportation system inputs. Specific land use and transportation system inputs included in the transportation model are described in Section 3.15, Transportation and Circulation of this EIR.

As described in Impact 3.7-2, Fehr & Peers determined that the VMT per service population in the analysis sub-area decreases when the proposed Specific Plan is included. The daily VMT per service population in the sub-area decreases from 17.05 under cumulative no project conditions to 16.96 under cumulative plus project conditions, a decrease in daily VMT of approximately 0.5 percent. This result is caused by the marginal increase in service population being relatively greater than the marginal increase in VMT. The decrease in daily VMT per service population would result in a corresponding decrease in transportation fuel demand per service population.

In addition, the Specific Plan land use design, roadway system, and mobility network were developed in accordance with smart growth principles. According to Fehr & Peers, mixed-use developments, such as Village 5, provide an opportunity for people to live, work, shop, and find recreation opportunities within one community. This allows people to travel shorter distances between their origins and destinations. These shorter travel distances reduce vehicle trip lengths, make walking and bicycling more viable options of travel, and, therefore, reduce fuel consumption. While fuel use would increase on a cumulative level, the Specific Plan would not result in increase of VMT per service population under cumulative conditions. Therefore, the proposed project would not result in wasteful, inefficient, or unnecessary fuel consumption associated with vehicle trips generated by the proposed project, and the cumulative impact would be **less than significant**.

Mitigation Measure

None required.

¹⁶ Fehr & Peers, 2015. Village 5 Specific Plan EIR – Vehicle Miles Traveled Data and Analysis. April 29, 2015.

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3.8 Geology, Soils, and Seismicity

This section addresses the potential effects related to any onsite geologic and soil conditions within the Plan Area. This chapter also describes site characteristics such as topography, regional and local geology, and soil types on site. The regulatory setting section discusses the applicable federal, state, and local regulations and policies that affect the proposed project. The possible presence of hazardous materials, hazardous waste, and soil and groundwater contamination is discussed in Section 3.9, Hazards/Hazardous Materials.

There were no comments received during the public comment period on the notice of preparation (NOP) for the environmental impact report (EIR) regarding geology, soils, or seismicity.

The analysis provided in this section was developed based on project-specific construction and operational features, along with data provided in the City of Lincoln 2050 General Plan (hereafter referred to as the 2050 General Plan), the City of Lincoln 2050 General Plan Environmental Impact Report (hereafter referred to as the 2050 General Plan EIR), a Geotechnical Feasibility Report prepared by ENGEO for portions¹ of Area A (hereafter referred to as the ENGEO Report, included in Appendix F), and a Geotechnical Engineering Investigation Report prepared by MatriScope Engineering Laboratories, Inc. for Windsor Cove² (hereafter referred to as the MatriScope Report and included in Appendix F).

3.8.1 Environmental Setting

Topography

Regional Topography

The approximately 4,787-acre Plan Area is located within the Sacramento Valley, and more specifically western Placer County. Throughout the Sacramento Valley, the most prominent topographic feature consists of the Sutter Buttes, which are an ancient volcanic remnant rising about 1,980 feet above the valley and about 30 miles to the northwest of the Plan Area. Other significant features include the Northern Coast ranges, west of the Plan Area, and the Sierra Nevada range to the east of the Plan Area.

¹ The boundaries of the study area for the Geotechnical Feasibility Report do not match the Plan Area boundaries exactly, but do overlap considerably and considering some of the similar broad geomorphic and geologic conditions found throughout the valley are considered representative of the Plan Area for the purposes of this CEQA analysis. The study area that was reviewed is shown in Figure 2 of Appendix F.

² Similar to above, this Geotechnical Engineering Report for Windsor Cove, a 90-acre rectangular portion of Area J (located at 3440 Moore Road, the northeast corner of Fiddymen Road and Moore Road, does not match entirely the study area of the Plan Area but is considered relevant in combination with the ENGEO report for CEQA purposes. See Plate 1 of the MatriScope report in Appendix F for details.

Local Site Conditions

The Plan Area contains gently rolling topography, draining toward the west and southwest and with site elevation ranging from approximately 95 feet to 115 feet above mean sea level (AMSL).³ Markham Ravine and Auburn Ravine are two waterways that flow across major portions of the Plan Area.

Geology

Regional Geology

The Plan Area is located within the Great Valley geomorphic province of California, which consists of an elongate, northwest-trending structural trough situated between Northern Coast ranges to the west and the Sierra Nevada range to the east.⁴ Generally, the Sierra Nevada range fills the Great Valley with sediments, and the formation found in the Plan Area contains a dissected alluvial fan resulting from the ancestral rivers and streams flowing from the western slopes of the Sierra Nevada range.⁵ This deposit mainly contains semi-consolidated gravels, sands, silts, and minor clay. Holocene Alluvium that is located within Markham Ravine and Auburn Ravine is characterized as unweathered gravel, sand, and silt, deposited by present day river or stream systems.⁶

Local Site Conditions

The site is mapped as Quaternary Upper and Lower Riverbank Formation which consists of an alluvial fan with sediments deposited by ancestral rivers and streams flowing from the western slopes of the Sierra Nevada. These alluvial deposits generally consists of semi-consolidated gravels, sands, silts, and minor clay. Additionally, Holocene Alluvium mapped within Markham Ravine and Auburn Ravine is described as unweathered gravel, sand, and silt deposited by present day river or stream systems.

According to a review of past geotechnical explorations at the site, the subsurface conditions consist of discontinuous layers of silty sand, clayey sand, silty or sandy clay, and minor clean sands.⁷ Commonly, a cemented clayey or sandy silt (hardpan) layer was reportedly encountered below three feet. Clay layers were encountered at various depths in the upper eight feet with typical reported thicknesses of one to three feet. Expansion Index tests on four clay samples indicate high to very high expansion potential.

³ ENGEO Incorporated, 2013. Geotechnical Feasibility Report: Lincoln Village 5, Special Use District B, Placer County, California. August 19, 2013.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

Soils

According to the United States Department of Agriculture, Natural Resources Conservation Service, the Plan Area consists of 14 different surface and near-surface soils.⁸

Alamo-Fiddymment Complex (104)

This map unit consists of approximately 50 percent Alamo soil, 30 percent Fiddymment soil, with the remaining 20 percent composed of a mixture of San Joaquin sandy loam, Comenta sandy loam, and Kaseberg loam. The Alamo soil is poorly drained clay at a moderate depth over a hardpan.

Cometa Sandy Loam (140)

This map unit consists of approximately 85 percent Cometa soil, five percent of Kaseberg soil, five percent of Fiddymment soil, four percent of San Joaquin soil, and one percent of Alamo soil. The Cometa soil is a well-drained soil forming in alluvium deposits that are derived from granite.

Cometa-Fiddymment Complex (141)

This map unit consists of approximately 50 percent Alamo soil, 30 percent Fiddymment soil, with the remaining 20 percent composed of a mixture of San Joaquin sandy loam, Comenta sandy loam, and Kaseberg loam. The Alamo soil is poorly drained clay at a moderate depth over hardpan.

Cometa-Ramona Sandy Loams (142)

This map unit consists of about 50 percent Cometa soil and 30 percent Ramona soil with the remainder composed of San Joaquin sandy loam, Fiddymment loam, and Alamo clays. The Ramona soil is a very deep, well-drained soil forming in alluvium from predominantly granitic sources. The Cometa soil is discussed above.

Fiddymment Loam (146)

The Fiddymment soil is moderately deep silty and clayey loam over hardpan. The soils above the hardpan tend to be silts and clays to an approximate depth of 28 inches.

Fiddymment-Kaseberg Loams (147)

This map unit consists of approximately 50 percent Fiddymment soil and 30 percent Kaseberg soil. The Kaseberg soil is a well-drained soil that is shallow over hardpan. Fiddymment soil is discussed above.

Kilaga Loam (162)

This map unit consists of approximately 80 percent Kilaga soil, five percent San Joaquin soil, five percent Cometa soil, five percent Ramona soil, four percent Xerofluvents, and one percent unnamed. Kilaga soil is a well-drained loam.

⁸ National Resources Conservation Service, 2015. Custom Soil Resource Report for Placer County, California, Western Part. Available: <http://websoilsurvey.nrcs.usda.gov>. Accessed May 4, 2015.

Ramona Sandy Loam (175)

This map unit consists of approximately 80 percent Ramona soil, ten percent Kilaga soil, five percent Cometa soil, three percent Xerofluvents, and two percent unnamed. Ramona soil is a well-drained sandy loam.

San Joaquin Sandy Loam (181)

This map unit consists of approximately 80 percent San Joaquin soil, ten percent Cometa soil, five percent Fiddyment loam, three percent unnamed, and two percent Alamo soil. San Joaquin soil is a well-drained claypan soil that is moderately deep over hardpan.

San Joaquin-Cometa Sandy Loams (182)

This map unit consists of approximately 40 percent San Joaquin soil, 30 percent Cometa soil, 10 percent Fiddyment loam, and the remaining 20 percent is composed of Kaseberg loam, Ramona sandy loam, Alamo clay, and Kilaga loam. San Joaquin soil is a well-drained claypan soil that is moderately deep over hardpan.

Xerofluvents, Occasionally Flooded (193)

This map unit consists of small, moderately well-drained, loamy sand to fine sandy loam in minor drainage ways and terraces.

Xerofluvents, Frequently Flooded (194)

This map unit consists of small, somewhat poorly drained loamy alluvium in minor drainage ways and terraces.

Xerofluvents, Hardpan Substratum (195)

This map unit consists of small, fairly poorly drained loamy alluvium in minor drainage ways and terraces.

Water (198)

This map unit consists solely of 100 percent water.

Geologic Constraints***Slope Instability***

Slope stability and landslides are uncommon to the project area because of the relatively flat topography and gently oscillating terrain. Neither the ENGEO report (prepared for Area A),⁹ the MatriScope Report (prepared specifically for Windsor Cove area),¹⁰ nor the 2050 General Plan¹¹ found any issues with slope instability for the Plan Area.

⁹ ENGEO Incorporated, 2013. Geotechnical Feasibility Report: Lincoln Village 5, Special Use District B, Placer County, California. August 19, 2013.

¹⁰ MatriScope Engineering Laboratories, Inc., 2015. Geotechnical Engineering Investigation Report: Proposed Moore Road Property Site Development, 3440 Moore Road, Lincoln, CA. January 23, 2015.

¹¹ City of Lincoln, 2008. City of Lincoln 2050 General Plan. Adopted March 25, 2008.

Subsidence

Subsidence occurs when the ground surface sinks, largely as a result of the withdrawal of the groundwater or some other subsurface collapse or extraction. The 2050 General Plan does not identify any significant subsidence or related constraints to development as a result of subsidence.¹²

Subsidence can also occur from immediate settlement, consolidation, shrinkage of expansive soil, and liquefaction (discussed below). Immediate settlement occurs when a load from a structure or placement of new fill material is applied, causing distortion in the underlying materials. This settlement occurs quickly and is typically complete after placement of the final load.

Consolidation settlement occurs in saturated clay from the volume change caused by squeezing out water from the pore spaces. Consolidation occurs over a period of time and is followed by secondary compression, which is a continued change in void ratio under the continued application of the load. Soils tend to settle at different rates and by varying amounts depending on the load weight or changes in properties over an area, which is referred to as differential settlement.

Seismicity

Regional Faults

As described earlier, the Plan Area is located within the Great Valley geomorphic province of California which is not associated with high seismic activity. However, the neighboring provinces, Coast ranges and the Sierra Nevada range, both contain historic seismic activity. According to the 2050 General Plan, the nearest active fault to the planning area is the Cleveland Hills Fault, which is approximately 40 miles to the north of the Lincoln planning area.¹³ Thus, the Lincoln planning area does not contain, nor intersected, by an active fault as delineated under the Alquist-Priolo Earthquake Fault Zoning Act.¹⁴

Local Faults

The nearest faults to the planning area, include several faults such as the Spenceville, Deadman, and Maid faults which are part of the Sierra Nevada Foothill fault zone.¹⁵ According to the 2050 General Plan, the peak ground acceleration based on a 10 percent exceedance in 50 years within the City of Lincoln could range between 0.10 g to 0.30 g (the unit g refers to spectral acceleration

¹² Ibid.

¹³ Ibid.

¹⁴ An “active” fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 11,000 years). A “potentially active” fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. “Sufficiently active” is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches (Hart, 2007). Hart, E.W., *Fault-Rupture Hazard Zones in California: Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps*, California Geological Survey, Special Publication 42, 1990, interim revision 2007.

¹⁵ Jennings, C.W. and Bryant, W.A., compilers, California Geological Survey, 2010. *2010 Fault Activity Map of California*, CGS Geologic Data Map No. 6. Available: www.quake.ca.gov/gmaps/FAM/faultactivitymap.html.

due to Earth's gravity, which is equivalent to g-force).¹⁶ The Cleveland Hills Fault last experienced an earthquake at a magnitude of 5.7 on the Richter scale in 1975 near Oroville, but no major earthquakes have been recorded in the Lincoln planning area.¹⁷

The last geologic activity greater than an intensity of four on the Richter scale occurred on April 21, 1892, with an epicenter in Yolo County, between the cities of Winters and Vacaville.¹⁸

Although inactive faults have not recently experienced displacement, it is possible for an inactive fault to reactivate or resume displacement in the future. While the likelihood of displacement occurring on an inactive fault is quite low, it cannot be ruled out as impossible.

Secondary Seismic Hazards

Liquefaction

Liquefaction involves the loss of unconsolidated, granular, and saturated soil strength as a result of seismic forces acting upon water-saturated soils. In other words, these weakened soils are subjected to ground motion, resulting in quicksand conditions that can cause multiple forms of ground failure. Typically, low lying areas, areas in which the water table is less than 20 feet below the ground surface, and areas containing predominately clean soils and/or relatively uniform low-density sands are the most likely areas to suffer from liquefaction. Usually clayey types of soils do not deal with liquefaction. While the City of Lincoln and areas surrounding the Plan Area do not have a substantial risk of liquefaction, the geotechnical studies have been required to assess specific liquefaction potential, in order to determine appropriate design needs for buildings, roadways, and general infrastructure at the Plan Area. The MatriScope Report did not identify liquefaction as an issue for the 90-acre Windsor Cove site,¹⁹ but the ENGEO Report concluded that, based on the soils present, the risk of liquefaction to Area A during an earthquake would be low or negligible.²⁰

Soil Characteristics

Soils within and surrounding the Plan Area consist mainly of alluvial deposits derived from the Sierra Nevada range to the east. Limitations in the soil can involve slow or very slow permeability, a limited ability to support a load, high shrink-swell, moderate depth to hardpan, and low depth to bedrock. NRCS has located and identified soils within Placer County including characteristics that can affect the behavior of the soil. Important characteristics to note for soils within the Plan Area include:

¹⁶ City of Lincoln, 2008. City of Lincoln 2050 General Plan. Adopted March 25, 2008.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ MatriScope Engineering Laboratories, Inc., 2015. Geotechnical Engineering Investigation Report: Proposed Moore Road Property Site Development, 3440 Moore Road, Lincoln, CA. January 23, 2015.

²⁰ ENGEO Incorporated, 2013. Geotechnical Feasibility Report: Lincoln Village 5, Special Use District B, Placer County, California. August 19, 2013. p. 8.

Permeability: the ability of a soil to transmit water or air. Permeability is considered in the design and construction of soil drainage systems, where the rate of water movement under saturated conditions affects the behavior of water movement through the soil.

Shrink-swell Potential: the potential for volume change in a soil with a loss or gain in moisture. If the shrink-swell potential is rated moderate to high, damage to buildings, roads, and other structures can occur.

Runoff: the volume of rainwater directly leaving an area in surface drainage, as opposed to the volume that seeps out as groundwater.

Erosion: the susceptibility of a soil to water (rainfall) or wind transport.

The NRCS identifies soil characteristics and engineering properties in the Soil Survey Placer County, California, Western Part (1980), explaining which specific characteristics could constrain development in the proposed project. This resource has been utilized for the impact analysis portion of this EIR. **Table 3.8-1** presents these characteristics. In particular, this table describes the specific nature of constraint (such as tendency for flooding or wetness, high shrink-swell or expansion potential, among others) and determines the level of constraint (either slight, moderate, high, or severe) for four types of construction activities that are planned to occur in the Plan Area. Activities include the excavation and shallow foundation structural support; the excavation and foundation support for dwellings not containing basements and smaller commercial buildings; the construction of local roads; and the construction of grassed waterways.

Expansive Soils

Expansive soils, such as clay or silt, are soils that swell upon absorbing water and shrink upon drying out. Expansion can lead to damage to building foundations, concrete slabs, hardscape features, underground infrastructure, pavement, and other surface or near-surface improvements. The MatriScope Report did not consider soils included in Windsor Cove area to have significant expansion potential,²¹ but the ENGEO Report found clay layers throughout the majority of Area A within the Plan Area.²²

Mineral Resources

According to the 2050 General Plan, the California Mining and Geology Board classifies the Lincoln planning area, which includes the Plan Area, as MRZ-4, which is defined as an area where available information is inadequate to determine whether any mineral resources are present or not.²³

²¹ MatriScope Engineering Laboratories, Inc., 2015. Geotechnical Engineering Investigation Report: Proposed Moore Road Property Site Development, 3440 Moore Road, Lincoln, CA. January 23, 2015.

²² ENGEO Incorporated, 2013. Geotechnical Feasibility Report: Lincoln Village 5, Special Use District B, Placer County, California. August 19, 2013.

²³ City of Lincoln, 2008. City of Lincoln 2050 General Plan. Adopted March 25, 2008.

**TABLE 3.8-1.
SOIL DATA**

Soil Name and Map Symbol	Physical Properties	Shallow Excavations	Dwellings, Small Commercial Buildings	Local Roads and Streets	Grassed Waterways (to protect against erosion)
104 Alamo-Fiddymnt complex, 0 to 5 percent slopes	Very slow permeability, high shrink-swell potential, slow runoff, slight erosion hazard.	Severe to moderate (wetness, shallow depth to rock, clayey, cemented pan)	Severe (wetness, shrink-swell)	Severe (wetness, shrink-swell, low strength)	Wetness, cemented pan, slow percolation, erodes easily, depth to rock
140 Cometa sandy loam, 1 to 5 percent slopes	Very slow permeability, low to high shrink-swell potential, slow runoff, slight erosion hazard.	Moderate to severe (depth to rock, shrink-swell, clayey)	Severe (low strength, shrink-swell)	Severe (shrink-swell, low strength)	Slow percolation, erodes easily, depth to rock
141 Cometa-Fiddymnt complex, 1 to 5 percent slopes	Very slow permeability, low to high shrink-swell potential, slow runoff, slight erosion hazard.	Moderate to severe (depth to rock, shrink-swell, clayey)	Severe (low strength, shrink-swell)	Severe (shrink-swell, low strength)	Slow percolation, erodes easily, depth to rock
142 Cometa-Ramona sandy loams, 1 to 5 percent slopes	Very slow to moderate permeability, low to high shrink-swell potential, slow to medium runoff, slight erosion hazard.	Severe (clayey)	Severe (shrink-swell, low strength)	Severe (shrink-swell, low strength)	Slow percolation, erodes easily
147 Fiddymnt-Kaseberg loams, 2 to 9 percent slopes	Very slow to moderate permeability, low to high shrink-swell potential, slow to medium runoff, slight to moderate erosion hazard.	Moderate to severe (depth to rock, clayey, cemented pan)	Severe (shrink-swell, depth to rock)	Severe (shrink-swell, low strength, cemented pan, depth to rock)	Erodes easily, depth to rock
162 Kilaga loam	Slow permeability, low to high shrink-swell potential, slow runoff, well drained, slight erosion hazard.	Moderate to severe (depth to rock, shrink-swell, clayey)	Severe (low strength, shrink-swell)	Severe (shrink-swell, low strength)	Slow percolation, cemented pan
174 Ramona sandy loam, 0 to 2 percent slopes	Very slow permeability, low to high shrink-swell potential, slow runoff, slight erosion hazard.	Severe (cemented pan, clayey)	Severe (shrink-swell, low strength)	Severe (shrink-swell, low strength)	Slow percolation, cemented pan
175 Ramona sandy loam, 2 to 9 percent slopes	Very slow permeability, low to high shrink-swell potential, slow runoff, slight erosion hazard.	Severe (cemented pan, clayey)	Severe (shrink-swell, low strength)	Severe (shrink-swell, low strength)	Slow percolation, cemented pan
181 San Joaquin sandy loam, 1 to 5 percent slopes	Very slow permeability, low to high shrink-swell potential, slow runoff, slight erosion hazard.	Severe (cemented pan, clayey)	Severe (shrink-swell, low strength)	Severe (shrink-swell, low strength)	Slow percolation, cemented pan
182 San Joaquin-Cometa sandy loams, 1 to 5 percent slopes	Very slow permeability, low to high shrink-swell potential, slow runoff, slight erosion hazard.	Severe (cemented pan, clayey)	Severe (shrink-swell, low strength)	Severe (shrink-swell, low strength)	Slow percolation, cemented pan

**TABLE 3.8-1.
SOIL DATA**

Soil Name and Map Symbol	Physical Properties	Shallow Excavations	Dwellings, Small Commercial Buildings	Local Roads and Streets	Grassed Waterways (to protect against erosion)
193 Xerofluvents, occasionally flooded	Moderate slow permeability, slight erosion potential, slow runoff, slight erosion hazard.	Severe (floods, wetness)	Severe (floods, wetness)	Moderate (wetness, floods)	Cemented pan
194 Xerofluvents, frequently flooded	Moderate slow permeability, slight erosion potential, slow runoff, slight erosion hazard.	Severe (floods, wetness)	Severe (floods, wetness)	Moderate (wetness, floods)	Cemented pan
195 Xerofluvents, hardpan substratum	Moderate slow permeability, slight erosion potential, slow runoff, slight erosion hazard.	Severe (floods, wetness)	Severe (floods, wetness)	Moderate (wetness, floods)	Cemented pan
198 Water	--	--	--	--	--

SOURCE:

1. National Resources Conservation Service, 2015. Custom Soil Resource Report for Placer County, California, Western Part. Available: <http://websoilsurvey.nrcs.usda.gov>. Accessed May 4, 2015.

3.8.2 Regulatory Setting

The following section describes federal, state, and local regulations involving geological resources, soils, and seismicity.

Federal

Earthquake Hazards Reduction Act

In 1977, the United States Congress passed the Earthquake Hazards Reductions Act (EHRA) (44 U.S. Code Section 7701 et seq.) to minimize the risks to lives and properties from future earthquakes and seismic activity on the national level by creating an effective earthquake hazards reduction program. To achieve this, the National Earthquake Hazards Reduction Program (NEHRP) was implemented. Congress adopted the National Earthquake Hazards Reduction Program Act (NEHRPA) to amend the NEHRP in November 1990 to refine the description of agency responsibilities, program goals, and objectives, and reauthorized the act in 2004.

The NEHRP has a mission that consists of improved understanding, characterization, and prediction of hazards vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; increased mitigation capacity; and accelerated application of research findings. The NEHRPA assigns the Federal Emergency Management Agency (FEMA) the role of lead agency of this program to assign numerous planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, the National Science Foundation, and the United States Geological Survey (USGS).

State

State Alquist-Priolo Earthquake Fault Zoning Act

In 1972, the Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) was passed (PRC Sections 2621-2630) to mitigate the effects of surface faulting on structures designed for human occupancy. This law was mainly intended to prevent the construction of buildings for human occupancy directly on the surface trace of active faults. This law only addresses the hazard of surface fault rapture and is not intended to discuss other seismic hazards. For the Alquist-Priolo Act, the State Geologist is required to establish regulatory zones, known as Earthquake Fault Zones, around the surface traces of active faults and issue maps accordingly. The maps are to be provided to all affected cities, counties, and California agencies to assist with planning decisions. If a development is within a designated Alquist-Priolo Earthquake Fault Zone, the city or county must require a geologic investigation to prove that the proposed structures would not be constructed across active faults prior to approving any development.

National Pollutant Discharge Elimination System Permit

In California, the State Water Resources Control Board (SWRCB) administers the Clean Water Act (33 U.S. Code Section 1301 et seq.) and its associated regulations promulgated by the U.S. Environmental Protection Agency (U.S. EPA) (40 Code of Federal Regulations [CFR] Section

122 et seq.) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). The SWRCB's jurisdiction is administered through nine regional water quality control boards. Under the federal Clean Water Act and the California Porter-Cologne Act, an operator must obtain coverage under the General Construction Permit²⁴ for any construction or demolition activity (i.e., clearing, grading, excavation) that results in a land disturbance of one acre or more. The General Permit requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and to control erosion. One element of compliance with the NPDES permit is preparation of a storm water pollution prevention plan (SWPPP) that addresses control of water pollution, including sediment, in runoff during construction (see Section 3.10, Hydrology, Drainage, and Water Quality, for more information about the NPDES and SWPPPs.).

California Building Standards Code

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. The State of California provides minimum standards for building design through the 2013 California Building Code (CBC) (CCR Title 24). Where no other building codes apply, Chapter 29 of the CBC regulates excavation, foundations, and retaining walls.

The 2013 CBC is based on the 2012 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments, which are based on reference standards obtained from various technical committees and organizations such as the American Society of Civil Engineers (ASCE), the American Institute of Steel Construction (AISC), and the American Concrete Institute (ACI). ASCE Minimum Design Standards 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California and have been adopted by the City of Lincoln by Municipal Code.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project as described in Chapter 16 of the CBC. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault). Design specifications are then

²⁴ State Water Resources Control Board Order No. 2009-0009-DWQ, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ.

determined according to the SDC in accordance with Chapter 16 of the CBC. The CBC philosophy focuses on “collapse prevention,” meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Chapter 16 of the CBC specifies exactly how each seismic design category is to be determined on a site-specific basis through the site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls. This chapter regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of the depth to groundwater table. Chapter 18 also requires an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity, as well as mitigation measures to be considered in structural design. Mitigation measures may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions. Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18.

Finally, Appendix J of the CBC regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

California Surface Mining and Reclamation Act

The California Surface Mining and Reclamation Act (SMARA) (California PRC Section 2710 et seq.) was enacted by the California Legislature in 1975 to regulate activities related to mineral resource extraction. The act requires the prevention of adverse environmental effects caused by mining, the reclamation of mined lands for alternative land uses, and the elimination of hazards to public health and safety from the effects of mining activities. At the same time, SMARA encourages both the conservation and the production of extractive mineral resources, requiring the State Geologist to identify and attach levels of significance to the state’s varied extractive resource deposits. Under SMARA, the mining industry in California must plan adequately for the reclamation of mined sites for beneficial uses and provide financial assurances to guarantee that the approved reclamation will actually be implemented. The requirements of SMARA must be implemented by the local lead agency with permitting responsibility for the proposed mining project.

Local

City of Lincoln 2050 General Plan

The following goals and policies from the 2050 General Plan are relevant to geology, soils, and seismicity.

Goal OSC-1 To designate, protect, and encourage natural resources, open space, and recreation lands in the city, protect and enhance a significant system of interconnected natural habitat areas, and provide opportunities for recreation activities to meet citizen needs.

Policies

OSC-1.1 **Protect Natural Resources.** The City shall strive to protect natural resource areas, fish and wildlife habitat areas, open space areas, and parks from encroachment or destruction by incompatible development.

OSC-1.5 **Protection of Minerals.** The City will protect mineral resources such as groundwater and clay deposits, as well as groundwater recharge areas from urban development.

OSC-1.6 **Soil Erosion.** The City shall require new development to implement measures that minimize soil erosion from wind and water related to construction. Measures may include, but not be limited to, the following:

- Grading requirements that limit grading to the amount necessary to provide stable areas for structural foundations, street rights-of-ways, parking facilities, or other intended uses; and/or
- Construction techniques that utilize site preparation, grading, and best management practices that provide erosion and sediment control to prevent construction-related contaminants from leaving development sites and polluting local waterways.

OSC-1.7 **Soil Erosion and Site Planning.** The City shall require all development to minimize soil erosion by maintaining compatible land uses, suitable building designs, and appropriate construction techniques. Contour grading, where appropriate, and revegetation shall be required to mitigate the appearance of engineered slopes and to control erosion.

Goal HS-2 To minimize exposure of persons and property to damage resulting from geologic and seismic hazards.

Policies

HS-2.1 **Seismic Safety of Structures.** The City shall require that new structures intended for human occupancy are designed and constructed to minimize risk to the safety of occupants due to ground shaking.

HS-2.2 **Limit Hillside Development.** To limit development in areas with severe slopes.

HS-2.3 **Development in Areas Subject to Geologic Hazards.** The City shall discourage incompatible land uses from being located in areas subject to geologic or seismic hazards (e.g., liquefaction and expansive soils).

HS-2.4 **California Building Standard Code.** The City shall continue to require that alterations to existing buildings and all new buildings be built according to the seismic requirements of the California Building Standard Code.

The relationship of these 2050 General Plan policies to the V5SP is included in Chapter 5, General Plan Consistency.

3.8.3 Analysis, Impacts, and Mitigation

Significance Criteria

For the purposes of this EIR, impacts to geology, soils, and seismicity are considered significant if the proposed project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
 - ii) Strong seismic ground shaking;
 - iii) Seismic-related ground failure, including liquefaction; or
 - iv) Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in the CBC (2013),²⁵ creating substantial risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Methodology and Assumptions

This analysis primarily focuses on the review of the 2013 ENGEO Report, the 2015 MatriScope Report, and the 2050 General Plan to determine the possible impacts of the proposed project relating to geology, soils, and seismicity.

Impacts Not Analyzed Further in This EIR

- **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.** There are no known active faults in the Lincoln planning area or within this area of western Placer County, and the Plan Area is not located in an Alquist-Priolo Earthquake Fault Zone.²⁶ Therefore, project implementation would not occur in any Alquist-Priolo Earthquake Fault Zones and there would be no impact. As a result, this issue is not further discussed in this EIR.
- **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.** Earthquake-induced landslides on steep

²⁵ The CEQA Guidelines Appendix G checklist specifically refers to Table 18-1-B of the Uniform Building Code (1994). However, the Uniform Building Code is no longer used as the basis for the California Building Code, but the CEQA Guidelines Appendix G checklist was never updated to reflect this. Nonetheless, the current building code (CBC 2013) does include defining criteria for expansive soils which is not substantively different to the Uniform Building Code. The CBC is used as the threshold for analysis purposes.

²⁶ California Geological Survey, 2015. Alquist-Priolo Earthquake Fault Zones. Available: www.quake.ca.gov/gmaps/WH/regulatorymaps.htm. Accessed May 4, 2015.

slopes can occur in either bedrock or unconsolidated deposits. The Plan Area is relatively flat with gently rolling hills, and the elevations range from 95 to 115 feet ASML. Therefore, project implementation would not expose people or structures to landslides. As a result, this issue is not evaluated further in this EIR.

- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.** The proposed project would be served by a municipal sewer collection system that would connect to the lines that convey wastewater to the City of Lincoln Wastewater Treatment and Reclamation Facility (WWTRF) on Fiddymont Road, located immediately south of the Plan Area. No septic tanks or alternative wastewater disposal systems would be used as part of the project. Therefore, project implementation would not involve or affect septic tanks or alternative wastewater technologies and this issue is not evaluated further in this EIR.

Impacts and Mitigation Measures

Impact 3.8-1: The proposed project would not expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death due to strong seismic ground shaking or liquefaction.

Full Specific Plan and Area A

Placer County is generally considered to have a low potential for seismic activity, and no active faults are presently known to exist within or in the vicinity of the western portion of the County. The potential for liquefaction throughout the area could vary and would depend on site-specific data including depth to groundwater and composition (including densities) of underlying materials; however, the preliminary geotechnical report concluded that the risk of liquefaction is low or negligible in Area A.²⁷ Nonetheless, to minimize the safety risks related to seismic hazards and general structural damage from ground shaking or liquefaction, whether for residential housing or infrastructure, the City of Lincoln requires that all new buildings must be constructed in accordance with the current (2013) CBC standards and local building design requirements, as administered by the City of Lincoln Community Development Department (which houses the Planning and Building Division). Detailed geotechnical engineering investigations for specific developments would be necessary to more accurately evaluate seismic hazards, including the potential for liquefaction, and provide seismic design standards to withstand a maximum credible earthquake. Prior to approval of a building permit, these geotechnical investigations are required by the CBC requirements to contain seismic design criteria that must be incorporated into project design to ensure that improvements can withstand anticipated ground shaking from maximum credible earthquakes. In particular, Chapter 16 of the CBC establishes General Design Requirements, guiding construction efforts to ensure seismically resistant construction (in Division IV of Chapter 16). According to the preliminary geotechnical report, the Plan Area is considered to be in Seismic Design Category D, indicating that there is

²⁷ ENGEO Incorporated, 2013. Geotechnical Feasibility Report: Lincoln Village 5, Special Use District B, Placer County, California. August 19, 2013.

seismic vulnerability, but with compliance with CBC requirements, proposed improvements could withstand anticipated groundshaking.²⁸ Recommendations and design considerations would include site preparation measures to ensure that subsurface materials and any fill materials used meet compaction requirements and foundation design systems whether spread footings, mat foundation, would be most appropriate for the site conditions and proposed improvements.

Given the relatively low potential for seismic shaking and the low potential for soils susceptible to liquefaction in Area A and throughout the Specific Plan, the potential to expose people or structures to potential adverse effects due to strong ground shaking or liquefaction is considered low with adherence to building code requirements. Therefore, any seismic hazards identified from final site-specific geotechnical evaluations would be minimized through implementation of design level geotechnical recommendations in accordance with industry standards and building code requirements. As a result, this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 3.8-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.

Full Specific Plan and Area A

Construction

Erosion is a natural and inevitable geologic process whereby earth materials are loosened, worn away, decomposed, or dissolved and are removed from one place and transported to another location. Precipitation, running water, and wind are all factors that contribute to erosion. Ordinarily, erosion proceeds very slowly as to be imperceptible, but when the natural equilibrium of the environment is changed, the rate of erosion can be greatly accelerated. Accelerated erosion within an urban area can cause damage by undermining structures, blocking storm sewers and depositing silt, sand, or mud in roads and tunnels. Consequently, these erosion effects can result in a variety of aesthetic and engineering problems. Earthwork activities during construction can expose soils otherwise protected by vegetation to the effects of wind and water erosion. Erosion and the loss of topsoil can be accelerated during construction due to disturbance of vegetation cover and soil. Stormwater runoff from an unstabilized construction site can result in the loss of approximately 35 to 45 tons of sediment per acre per year.²⁹

While the proposed project would result in common construction practices that would disturb surface soils, BMPs would be included within an SWPPP as required by the NPDES Construction

²⁸ Ibid.

²⁹ U.S. Environmental Protection Agency. 2007. *Developing Your Stormwater Pollution Prevention Plan*.

General Permit. The SWPPP would include various BMPs that have proven effective in minimizing the potential for erosion and topsoil loss.

The Plan Area features limited topographic relief and variation, which generally reduces the potential for erosion, and the proposed project would not expose soil to erosion through extensive hillside cuts. In addition, the proposed project would also implement the required fugitive dust control methods given by Placer County Air Quality Management District (PCAQMD), and the City of Lincoln would monitor these construction practices throughout the construction process. See Section 3.3, Air Quality, for additional discussion and analysis of the fugitive dust control measures to be used in the proposed project. These dust control methods include the use of an operational watering truck, setting an opacity requirement of no greater than 40 percent, the removal of silt, dirt, mud, and debris from public thoroughfares adjacent to the construction areas, the limit of traffic speeds within unpaved surfaces to 15 miles per hour (mph) or less, using covering methods to prevent fugitive dust from escaping the Plan Area, applying water to mitigate dust track out, suspending grading work when wind speeds exceed 25 mph, and covering dirt stockpiles. Nonetheless, soil erosion impacts during construction would be **potentially significant**.

Operation

Upon completion of the construction stage, previously disturbed areas would ultimately be protected through placement of structures, roadways, landscaping, and other hardscaping, which would substantially minimize any long-term erosion possibilities. As discussed more fully in Section 3.10, Hydrology, Drainage, and Water Quality, the City implements the NPDES Phase II MS4 requirements through a storm water management plan (SWMP) and the Post-Construction Stormwater Runoff Ordinance, which require implementation of post-construction stormwater quality improvements. As part of these drainage control requirements, the proposed project would be required to include ongoing maintenance activities to ensure long term operational stormwater management is protective of water quality objectives. Thus, the potential for erosion or loss of topsoil during project operation would be reduced to **less than significant levels**.

Mitigation Measures

Mitigation Measure 3.8-2(a) (Full Specific Plan and Area A)

Implement Mitigation Measure 3.10-1(a) and (b).

- a) *Prior to the issuance of grading permits, the project applicant shall prepare and submit to the City Public Works Department and CVRWQB, a Storm Water Pollution Prevention Plan (SWPPP) detailing measures to control soil erosion and waste discharges during construction. The SWPPP shall include an erosion control and restoration plan, a water quality monitoring plan, a hazardous materials management plan, and post-construction BMPs. The BMPs shall be maintained until all areas disturbed during maintenance have been adequately stabilized.*

Prior to the commencement of any construction activities (as they are phased), including grading, the project applicant shall submit of a Notice of Intent (NOI) to the State Water Resources Control Board for coverage under the 2012-0006-DWQ Permit.

- i. The specific BMPs that would be incorporated into the SWPPP shall be determined during the final stages of the proposed Project design. The SWPPP shall include specific practices to minimize the potential that pollutants will leave the site during construction. Such practices include establishing designated equipment staging areas, minimizing disturbance of soils and existing vegetation, protection of spoils and soil stockpile areas, and equipment exclusion zones prior to the commencement of any construction activity; designating equipment washout areas; and establishing proper vehicle fuel and maintenance practices.*
- ii. The applicant shall require contractors using and/or storing hazardous materials, such as vehicle fuels and lubricants, to do so in designated staging areas located away from surface waters according to local, state, and federal regulations as applicable.*
- iii. All contractors conducting maintenance-related work shall be required to prepare and implement a SWPPP to control soil erosion and waste discharges of other maintenance-related contaminants. The general contractor and subcontractor(s) conducting the work shall be responsible for preparing or implementing the SWPPP, regularly inspecting measures, and maintaining the BMPs in good working order. Maintenance vehicles and equipment shall be checked daily for leaks and shall be properly maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease.*
- iv. Methods and materials used for herbicide and pesticide application shall be in accordance with label directions, DWR's most current guidelines on herbicide and pesticide use, and with laws and regulations administered by the Department of Pesticide Regulation.*
- v. Prior to approval of a grading or building permit, the applicant shall cause a the preparation of and implementation of a Spill Prevention and Control Plan (SPCP). The SPCP shall be accessible on site at all times prior to initiation of maintenance activities, and throughout the activities. The SPCP shall identify the spill control materials that must be fully stocked on site at all times and include a plan for the emergency cleanup of any spills of fuel or other materials that may be released. Maintenance Yard staff shall be provided the necessary information from the SPCP to prevent or reduce the discharge of*

pollutants to waters prior to commencement of construction activities and provide all necessary protocols to contain any spill that might occur. Any such spills, and the cleanup efforts, shall be reported by the on site contractor in an incident report to Placer County Environmental Health as the Certified Unified Program Agency or as directed by Environmental Health.

- vi. *Any in-water work shall be conducted in accordance with requirements as contained in the Clean Water Act Section 401 and 404 permits, California Fish and Game Code section 1602 Streambed Alteration Agreement, and any other applicable regulatory permits or agreements.*
- b) *Prior to approval of final improvement plans, the project applicant shall prepare a Water Quality Management Plan that meets all the requirements described below.*
- i. *The Water Quality Management Plan shall include the proposed water quality facilities and shall be prepared in accordance with Section 8.60.400 of the City's Municipal Code for City review and approval. The Water Quality Management Plan shall be consistent with goals and standards established under federal and state non-point source National Pollutant Discharge Elimination System regulations, the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin water quality objectives, the City's Post-Construction Stormwater Runoff Control Ordinance, and Low-Impact Development (LID) alternatives for stormwater quality control per Public Facilities and Services Implementation Measure 3.0 of the adopted 2050 General Plan.*
 - ii. *The Water Quality Management Plan shall include a description of all non-structural BMPs and include Covenants, Codes, and Restrictions (CC&Rs), or similar regulatory mechanism, to enforce implementation of non-structural BMPs. Non-structural BMPs shall include, but not be limited to, "good housekeeping" practices for materials storage and waste management, storm drain system stenciling, landscape chemical use guidelines, and street sweeping.*
 - iii. *The Water Quality Management Plan shall also include the method or methods for funding the long-term maintenance of the proposed water quality facilities during project operation, which the City shall consider and implement.*
 - iv. *All BMPs for water quality protection, source control, and treatment control shall be developed in accordance with the Stormwater Quality Design*

Manual³⁰ adopted by the City for the project. The BMPs shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff. Flow or volume based post-construction BMPs shall be included for long-term maintenance of BMPs and shall be designed at a minimum in accordance with the Section 10, Drainage, of the City of Lincoln Design Criteria and Procedures Manual and the Placer County Flood Control and Water Conservation District's Stormwater Management Manual. All BMPs shall reflect the Best Available Technologies (BAT) available at the time of implementation and shall reflect site-specific limitations. The City shall make the final determinations as to the appropriateness of the BMPs proposed for the proposed project and the City shall ensure future implementation, operation, and maintenance of the BMPs.

- v. *To comply with the requirements of the Placer County Mosquito and Vector Control District, all BMPs shall be designed to discharge all waters within 96 hours of the completion of runoff from a storm event. All graded areas must drain so that no standing water can accumulate for more than 96 hours within water quality facilities.*
- vi. *Stormwater runoff from the proposed project's impervious surfaces (including roads) shall be collected and routed through specially designed water quality treatment facilities (BMPs) for removal of pollutants of concern (i.e. sediment, oil/grease, etc.), as approved by the City. Examples of these BMPs include, but are not limited to, grass strips, bioretention, bioswales, composite/treatment train BMPs, detention basins (surface/grass-lined), media filters (mostly sand filters), porous pavement, retention ponds (surface pond with a permanent pool), wetland basins (basins with open water surface), a combined category including both retention ponds and wetland basins, and wetland channels (swales and channels with wetland vegetation). The Water Quality Plan shall include plans for the maintenance of proposed BMPs. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.*

Impact Significance After Mitigation: Implementation of these mitigation measures would ensure BMPs designed to protect water quality are implemented and monitored for their effectiveness which would also be protective of erosion and prevent loss of topsoil. This would reduce potential construction and operational erosion potential and loss of topsoil to a **less-than-significant** level.

³⁰ Note that the City of Lincoln intends to adopt the West Placer design manual but at the time of this writing has not yet been finalized.

Impact 3.8-3: The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Full Specific Plan and Area A

The Plan Area covers a relatively large area that is underlain by a variety of different materials, but is primarily characterized by gentle rolling topography that ranges between 95 to 115 feet AMSL.³¹ Thus the Plan Area is relatively flat and does not contain any steep grades or sudden changes in elevation. As described above, development under the proposed project would be required to adhere to City building code requirements which include the preparation of a site-specific geotechnical investigation by a state licensed geotechnical engineer. The required geotechnical report for any new development would determine the susceptibility of the subject site to landslide, lateral spreading, subsidence (settlement), liquefaction and collapse. Any identified geotechnical hazards or unstable units in Area A or within the Plan Area would be prescribed appropriate engineering techniques for reducing its effects. Where settlement and/or differential settlement is predicted, site preparation measures—such as use of engineered fill, surcharging, wick drains, deep foundations, structural slabs, hinged slabs, flexible utility connections, and utility hangers—could be used. These measures would be evaluated and the most effective, feasible, and economical measures recommended in a geotechnical report and incorporated into site design in accordance with building code requirements. Engineering recommendations included in the project engineering and design plans would be reviewed and approved by the City. Therefore, with adherence to building code requirements the potential for unstable soils to adversely affect proposed improvements would be reduced to **less-than-significant levels**.

Mitigation Measure

None required.

Impact 3.8-4: The proposed project could be located on expansive soil, as defined in California Building Code (2013),³² creating substantial risks to life or property.

Full Specific Plan

Expansive soils increase in volume when their moisture content becomes elevated. Over time, structures built on expansive soils could experience foundation cracking as a result of seasonal

³¹ ENGEO Incorporated, 2013. Geotechnical Feasibility Report: Lincoln Village 5, Special Use District B, Placer County, California. August 19, 2013.

³² The CEQA Guidelines Appendix G checklist specifically refers to Table 18-1-B of the Uniform Building Code (1994). However, the Uniform Building Code is no longer used as the basis for the California Building Code, but the CEQA Guidelines Appendix G checklist was never updated to reflect this. Nonetheless, the current building code (CBC 2013) does include defining criteria for expansive soils which is not substantively different to the Uniform Building Code. The CBC is used as the threshold for analysis purposes.

expanding and contracting of soils. According to the ENGEO Report, clay layers were found throughout the 1,456 acre Area A site, exhibiting high to very high expansion potential,³³ whereas the MatriScope Report reported that the site soils analyzed in Windsor Cove are not considered as having significant expansion potential.³⁴ Regardless, building damage due to volume changes associated with expansive soils can be reduced through proper foundation design. Replacement of native soils with engineered fill or addition of soil amendments are effective means of mitigating expansive soils. As a requirement of the CBC, the applicant(s) would be required to complete a final geotechnical investigation that includes site-specific recommendations for the mitigation of potentially expansive soils.

The site-specific analysis of site foundation soils guides the recommended building foundation design, such that damage from expansive soils is minimized and reduced to levels that can be accommodated by the final design. Therefore, implementation of standard geotechnical engineering practices and adherence to building code requirements would reduce potential impacts from expansive soils to **less-than-significant levels**.

Area A

The ENGEO geotechnical report stated that clay layers were identified in the majority of the previous explorations on the site. The typical reported clay thicknesses are 1 to 3 feet at various depths within the upper 8 feet. Previous laboratory tests show the clay soil exhibits high to very high expansion potential. As a result, the report recommended that all potentially expansive soils within Area A be compacted at “a slightly lower relative compaction at a moisture content well over optimum.”³⁵ Standard engineering practices, in accordance with the CBC and the City of Lincoln building code standards would ensure that the potential impacts from expansive soils would be minimized. As indicated above, the development of Area A would be required to comply with the geotechnical recommendations in a final design level site specific geotechnical report for Area A, per the City’s building permit process. Therefore, this impact would be **less than significant**.

Mitigation Measure

None required.

³³ ENGEO Incorporated, 2013. Geotechnical Feasibility Report: Lincoln Village 5, Special Use District B, Placer County, California. August 19, 2013.

³⁴ MatriScope Engineering Laboratories, Inc., 2015. Geotechnical Engineering Investigation Report: Proposed Moore Road Property Site Development, 3440 Moore Road, Lincoln, CA. January 23, 2015.

³⁵ ENGEO Incorporated, 2013. Geotechnical Feasibility Report: Lincoln Village 5, Special Use District B, Placer County, California. August 19, 2013.

Cumulative Impacts

The cumulative context for the geologic conditions at the Plan Area is the buildout of the 2050 Lincoln General Plan, because the City of Lincoln is responsible for regulating the safe construction of its villages and structures within its city boundary.

Impact 3.8-5: Implementation of the proposed project along with other cumulative development would not contribute to a cumulative exposure of people or structures to potential substantial adverse effects, including risk of loss, injury, or death due to major geologic hazards, such as strong seismic ground shaking, liquefaction, or slope failure.

Placer County is generally considered to be an area of relatively low seismic activity, with no active faults known to exist within or near the western portion of the County. The City of Lincoln envisions six other villages, some of which are similar in size to the proposed project, to develop in the vicinity of the city limits and the Plan Area in accordance with the 2050 City of Lincoln General Plan. The impact of the risks associated with exposure to potential geological and soils hazards is generally localized because of the dependence on site specific conditions and would not affect the immediate vicinity surrounding the proposed project area. The proposed project and the related projects would all be constructed in accordance with the most recent version of the CBC seismic safety requirements and recommendations contained in the project area specific geotechnical reports. Site-specific geotechnical studies required by the City would determine how current and future development projects could be designed to minimize exposure of people to any seismic or geologic hazards. Therefore, current and future development would be constructed to more current standards which could potentially provide greater protection than those of older structures within the region.

Therefore, potential exposure to geological and soils hazards resulting from construction and operation of the proposed project would not result in a cumulatively considerable impact and the cumulative impact would be **less than significant**.

Mitigation Measure

None required.

Impact 3.8-6: The proposed project combined with other cumulative development would not contribute to a cumulative increase in substantial soil erosion or the loss of topsoil.

The City of Lincoln and surrounding environs, including the Plan Area, features limited topographic relief and variation, and the proposed project would not expose soil to erosion through extensive hillside cuts. Little of the Lincoln planning area contains hills or major changes in elevation as a whole. Erosion within the planning area would mainly take the form of earth disturbance based on site clearing, land compaction, and grading, and in these instances water or wind could erode the soil. As such, the City of Lincoln, and the development of its other villages,

has generally found geologic hazards to not be substantial issues. The proposed project, like all projects that would disturb more than one acre in the City of Lincoln, would be required to adhere to the erosion control requirements of the NPDES Construction General Permit. The permit requires construction projects to implement BMPs to control earthwork activities and prevent erosion. The proposed project as well as other current and future projects would implement BMPs and would also adhere to the NPDES Phase II MS4 drainage control requirements during the operational phases. Through these actions, the overall contribution to topsoil loss, along with erosion, would be minimal and the project's contribution would be less than considerable. Therefore, this impact would be cumulatively **less than significant**.

Mitigation Measure

None required.

Impact 3.8-7: The proposed project combined with other cumulative development would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in a cumulative on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

The City of Lincoln envisions six other villages, some of which are similar in size to the proposed project, to develop in the vicinity of the city limits and the Plan Area in accordance with the 2050 City of Lincoln General Plan. While the Plan Area features relatively gentle topography, the expansive soil conditions vary within the city's sphere of influence, and as a result, different strategies would need to be implemented to ensure safe conditions on a case by case basis. As an example, the geotechnical report prepared for the proposed project recommended all "single- or multi-family wood-frame residential buildings [should] be supported on post-tensioned mat foundations bearing on competent native soil or compacted fill, or that conventional footings with slabs-on-grade can be used if the upper two feet of the buildings pads can be constructed with select fill with low expansion potential."³⁶ The Initial Study for Village 1, however, did not feature unstable soils³⁷ and thus, did not need to employ the same level of construction precautions to counter unstable soils as the proposed project. It is also possible that other villages would not need the same level of soil mitigation. In either case, standard engineering practices, in accordance with the CBC, and the City of Lincoln standards would ensure that the impacts from construction on all types of soil would be minimized and that each development meets the requirements. These procedures would minimize the possibilities of soils creating unstable conditions in the Plan Area, significantly minimizing the contribution of soil instability impacts relative to the planning area. This would result in a **less-than-significant cumulative impact**.

³⁶ Ibid.

³⁷ City of Lincoln, 2012. Draft Environmental Impact Report for the Village 1 Specific Plan. May 2012.

Mitigation Measure

None required.

Impact 3.8-8: The proposed project in combination with other cumulative development could be located on expansive soil, as defined in the California Building Code (2013),³⁸ creating substantial cumulative risks to life or property.

The City of Lincoln envisions six other villages, some of which are similar in size to the proposed project, to develop within the city's sphere of influence (SOI) in accordance with the 2050 City of Lincoln General Plan. The presence of expansive soils can only be determined through site-specific evaluations; however it is possible that other proposed villages within the city's SOI may have expansive soils. If present, expansive soils represent site-specific hazards and do not combine to become cumulatively considerable. Regardless of the soil conditions in other proposed village developments, other projects, similar to the proposed project, would adhere to project-specific geotechnical report recommendations to ensure that any potentially expansive soils be conditioned or replaced in accordance with geotechnical standards and building code requirements. Standard engineering practices, in accordance with the CBC and the City of Lincoln standards would ensure that any potential impacts from expansive soils would be minimized. This would result in a **less-than-significant cumulative impact**.

Mitigation Measure

None required.

³⁸ The CEQA Guidelines Appendix G checklist specifically refers to Table 18-1-B of the Uniform Building Code (1994). However, the Uniform Building Code is no longer used as the basis for the California Building Code, but the CEQA Guidelines Appendix G checklist was never updated to reflect this. Nonetheless, the current building code (CBC 2013) does include defining criteria for expansive soils which is not substantively different to the Uniform Building Code. The CBC is used as the threshold for analysis purposes.

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3.9 Hazards/Hazardous Materials

This section addresses the potentially adverse impacts of encountering hazardous materials and contaminated soils as a result of the development of the V5SP. For this section, the following hazards are to be evaluated: the transportation, storage, and use of hazardous materials, soil and groundwater contamination, and hazardous waste. Possible hazards involving toxic air contaminant emissions and odors are discussed in Section 3.3, Air Quality.

This chapter also addresses the potential impacts relating to airport safety and wildland fires and the potential for impacts on emergency access and response plans and on service levels by fire personnel and other emergency responders.

Comments related to airport safety received during the public comment period on the NOP for the EIR mentioned a concern regarding airport land use compatibility, in relation to neighboring Lincoln Regional Airport and whether the V5SP would abide by the Airport Land Use Compatibility Plan (ALUCP) policy of compatibility, which is subject to future consistency review and conditions. The section discussing airport safety, later in this chapter, will address these specific issues.

The analysis provided in this section was developed based on project-specific construction and operational features, along with data provided in the City of Lincoln 2050 General Plan (hereafter referred to as the 2050 General Plan), the City of Lincoln 2050 General Plan Environmental Impact Report (hereafter referred to as the 2050 General Plan EIR), the Placer County Airport Land Use Compatibility Plan, a Phase I Environmental Site Assessment for a 1,460-acre property (hereafter referred to as the 2013 ESA) within the Plan Area and prepared by ENGEO (included in Appendix G), a Phase I Environmental Site Assessment for a 90—acre property on Moore Road within Area J (hereafter referred to as the Windsor Cove ESA)¹ prepared by MatriScope Engineering Laboratories (included in Appendix G), and a search of government databases for listings of known contaminated sites located within or in the vicinity of the Plan Area.

3.9.1 Environmental Setting

Hazardous materials, in addition to other safety hazards, commonly occur in urban settings and have the potential to affect local residential and working populations, as well as visitors within and surrounding the Plan Area. With the possibility of accidental releases, such as spills, people and the environment could risk being exposed as a result of contamination of the soil or groundwater due to past uses at properties located within or surrounding the Plan Area. The transport of hazardous materials through or adjacent to the Plan Area could also potentially risk exposing the local population and the environment.

¹ The Moore Road property is a small portion of Area J as described in the Village 5 Specific Plan, referred to as Windsor Cove in this EIR.

“Hazardous material” is a term that features several meanings based on the regulatory agencies and programs that define it. For this EIR, the definition of “hazardous material” to be used is analogous to the definition presented in the California Health and Safety Code, Section 25501, which defines these as materials that, “because of their quantity, concentration, or physical or chemical characteristics, pose a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.” These materials can be classified as biohazardous materials, hazardous non-radioactive chemical materials, and radioactive materials. There are presently no biohazardous or radioactive materials within the Plan Area; thus, there is no further discussion of these hazardous materials in this chapter.

Among hazardous materials, there also exists a subset known as “hazardous waste.” For this EIR, the definition of “hazardous waste” to be used is practically identical to the definition found in the California Health and Safety Code, Section 25517, and in the California Code of Regulations (CCR), Title 22, Section 66261.2, which defines this this type of waste as one in which, “because of their quantity, concentration, or physical, chemical, or infectious characteristics, may either cause or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.”

The following section identifies and describes existing and proposed land uses that could potentially cause the accidental release of hazardous materials or pose other health impacts to localized sensitive receptors in the Plan Area, and provides relevant hazardous materials management programs. The term “hazardous materials” hereafter refers to both hazardous wastes and substances.

Project Site and Environs

Historic and Current Uses

The approximately 4,787-acre Plan Area is located in western Placer County, bordering the City of Lincoln to the west. The Plan Area is also located near Lincoln Regional Airport to the north and the City of Lincoln Wastewater Treatment and Reclamation Facility the south. Generally, the Plan Area is bounded by Nicolaus Road on the north, but the other boundaries of the Plan Area are irregular in nature. The eastern boundary is largely comprised of portions of Nelson Lane, the Village 7 Specific Plan, and Fiddymont Road. The southern boundary of the Plan Area is bounded by portions of Moore Road and Auburn Ravine. The western boundary contains the Lincoln High School Farm Property and extends north to Nicolaus Road. The Plan Area is traversed by Auburn and Markham Ravines and bisected by State Route (SR) 65. Currently, the land use within the Plan Area consists of grazing, rice farming, small ranches, and some rural residential houses. Apart from these uses, the Plan Area remains predominately undeveloped. Historically, since 1941, agriculture and few residences have characterized the Plan Area.

Hazards Associated with Surrounding Land Uses

Lincoln Regional Airport directly borders the Plan Area along Nicolaus Road. The sole runway for the airport, Runway 33, is located approximately 0.25 miles north of the Plan Area, and one mile north of Area A. In relation to the City of Lincoln, the airport is located approximately three miles west of Downtown Lincoln, with SR 65 wrapping around the airport to the west and south. The airport was built during World War II, and it is 775 acres in size.²

At Lincoln Regional Airport, approximately 74,400 annual aircraft operations take place, with 203 average daily operations, which include take-offs and landings, occurring throughout the year. Based on 2033 future projections, as many as 138,000 operations could occur at Lincoln Regional Airport, along with 378 average daily operations. Aircraft operations currently consist of approximately 47 percent single-engine fixed prop, 36 percent single-engine variable prop, four percent twin-engine reciprocating, four percent twin-engine turboprop, three percent business jet, and less than one percent helicopter activities.³ Additionally, there is a privately-owned, 60-foot wide, one-mile long dirt aircraft landing strip that runs north-south, commencing south of Dowd Road and ending north of Moore Road. This airstrip is used approximately two to three times a year for purposes of crop dusting. The applicant proposes to purchase the airstrip and abandon the existing easement.

Hazards Associated with Wildland Fires

Wildland fires pose a serious threat throughout California, especially during the dry and hot summer season and in more isolated locations, where hazardous conditions are complicated further by steep topography, difficult or limited access, and the loading of heavy fuel. The California Department of Forestry and Fire Protection (CAL FIRE) has created a severity system to rank fire hazards and examine wildland fire potential across the state. These zones found on CAL FIRE maps account for the speed and intensity of potential fires, ability of embers to spread and multiply, loading of fuel, topographic conditions, and local climate (e.g. temperature and likelihood of strong winds). In total, there are three CAL FIRE designations for fire hazards, which are moderate, high, and very high. Typically, homes that are located within high or very high CAL FIRE zones are considered lacking in adequate wildland or structural fire protection. The Plan Area primarily consists of agricultural uses, such as dry crop farmland and rice paddies, with substantial amounts of undeveloped open space currently being used as grazing land and pastures. The Plan Area is not located in a moderate, high, or very high fire hazard severity zone, and is located within portions of Local Responsibility Areas (LRA), both incorporated and unincorporated.⁴

² Placer County, 2014. Placer County Airport Land Use Compatibility Plans– Containing Individual Plan for: Auburn Municipal Airport, Blue Canyon Airport, Lincoln Regional Airport. Adopted February 26, 2014. p. 9-5, Exhibit 9A. Available: <http://pctpa.net/aluc/resources/>.

³ Ibid.

⁴ California Department of Forestry and Fire Protection, 2007. 2007. Fire Hazard Severity Zones in SRA–Placer County: Adopted by CAL FIRE on November 7, 2007. Sacramento, CA. November 7, 2007.

Phase I Environmental Site Assessment for Lincoln Village 5/Special Use District

As described in the beginning of this section, ENGEO prepared the 2013 Phase I ESA for the V5SP. Specifically, the 2013 Phase I ESA looked at approximately 1,460 acres within the Plan Area containing 13 different parcels and covering a large portion of Area A (the initial area to be constructed within the Plan Area).⁵ The historical reports show that from 1893 to 1910, the site was undeveloped open space. Over time, small structures were built and farms were established in the area, becoming more predominately irrigated farmlands with some more structures in the 1960s and 1970s. Ultimately, the 2013 Phase I ESA concluded there was no documentation or physical evidence of soil or groundwater impairments associated with the agricultural use of the property assessed.⁶ In particular, the 2013 Phase I ESA found no evidence (such as chemical storage drums or soil discoloration) that past pesticide use for the site has resulted in soil or groundwater contamination.

Based on earlier analysis,⁷ a 600-gallon aboveground storage tank once existed on the Morse Property at 200 South Dowd Road and reportedly stored gasoline. Another undisclosed aboveground diesel storage tank also reportedly existed on the same site, but was moved to an unspecified location approximately one-half mile from the property.⁸ The 2013 Phase I ESA confirmed that the former storage tank was removed and that there was no staining or other evidence of environmental impacts at the site.⁹

There was no documentation of hazardous materials or discharge on the property, and no contaminated facilities, recognized environmental conditions (RECs) or historical RECs were identified for the property.¹⁰

Phase I Environmental Site Assessment for Windsor Cove

As described in the beginning of this section, MatriScope Engineering Laboratories, Inc. prepared a Phase I ESA and conducted research in 2015 for a property located at 3440 Moore Road (APN 021-490-002, now known as Windsor Cove), an approximately 90-acre property covering a large portion of Area J within the Plan Area. Up until 1941, the Windsor Cove site consisted of open space and undeveloped land, with limited development nearby.¹¹ In 1952, the site featured a farmhouse built on the property, and a residence developed on the property in 1981. Apart from

⁵ ENGEO Incorporated, 2013. Phase I Environmental Site Assessment: Lincoln Village 5/Special Use District, Placer County, California. September 11, 2013.

⁶ Ibid.

⁷ ENGEO Incorporated, 2004. Phase I Environmental Site Assessment Report, Morse Property, Placer County, California. February 10, 2004.

⁸ ENGEO Incorporated, 2013. Phase I Environmental Site Assessment: Lincoln Village 5/Special Use District, Placer County, California. September 11, 2013. p. 6.

⁹ Ibid., p. 14.

¹⁰ Ibid.

¹¹ MatriScope Engineering Laboratories, Inc., 2015. Phase I Environmental Site Assessment (ESA) Report for Proposed Moore Road Property Site Development, 3440 Moore Road, Lincoln, CA. January 23, 2015.

residences being reportedly constructed on the northwestern neighboring property in 1992, no other changes were reported in the Windsor Cove ESA.¹² Similarly, the 2013 Phase I ESA concluded that there was no documentation or physical evidence of soil or groundwater impairments associated with the use of the property assessed. There was also no documentation of hazardous materials or discharge on the property, and no contaminated facilities, recognized environmental conditions (RECs) or historical RECs were identified for the property.¹³

Transportation of Hazardous Materials Within and Adjacent to the Plan Area

Generally, the transport of hazardous materials occurs through rail or trucks on roadways. Apart from a few exceptions, Section 31303 of the California Vehicle Code, along with the United States Department of Transportation (DOT) regulations, prohibit the transportation of hazardous materials through residential districts, thoroughfares, or places where crowds are assembled. Further, the transport of hazardous materials is required to be transported along routes that take the shortest travel time.

SR 65 is a major truck route between Roseville and Marysville. It would cut through the north and east of the Plan Area, and along the northern border of Area A. Aside from some high-level radioactive materials, poisons, and explosives, all other classes of hazardous materials are legally permitted to be transported on major roadways both adjacent to and within the Plan Area. Although state and federal regulations require transport to occur along routes with the least overall travel time, local streets may still be utilized for the delivery and pick-up of hazardous materials.

No railway is located within the immediate vicinity of the Plan Area. However, there is a rail line located approximately 1.5 miles to the east of the Plan Area.

3.9.2 Regulatory Setting

This section describes federal, state, and local regulations involving hazardous materials and contamination.

Federal

Several federal agencies manage the regulation of hazardous materials. In particular, the United States Environmental Protection Agency (U.S. EPA), DOT and the Occupational Safety and Health Administration (OSHA). Titles 10, 29, 40, and 49 of the Code of Federal Regulations (CFR) contain the primary applicable federal regulations relating to hazardous materials.

¹² Ibid.

¹³ Ibid.

Hazardous Waste Handling

The U.S. EPA has given authorization to the California Department of Toxic Substances Control (DTSC) to preside over the enforcement of hazardous waste laws and regulations within California. The requirements place a “cradle to grave” responsibility on hazardous waste generators to ensure appropriate hazardous waste disposal. These generators must dispose of hazardous waste properly, and by law, waste streams also feature particular disposal requirements, such as the prohibition of dumping hazardous waste in landfills.

Hazardous Materials Transportation

The Federal Hazardous Materials Transportation Law (Federal Hazmat Law, Title 49, U.S. Code, Section 5101 et seq.) presents the federal regulatory foundation for the transportation of hazardous materials in the United States of America. In addition to designating materials as hazardous and classifying various groups of hazards, Section 5103 regulates the safe transportation and security of hazardous materials in intrastate, interstate, and foreign commerce. The DOT provides regulations for the transportation of hazardous materials and wastes for all transportation modes. The United States Postal Service (USPS) has also developed regulations for the transport of hazardous materials by mail. The DOT provides specific packaging requirements for different types of materials. The U.S. EPA has also promulgated regulations for the transport of hazardous wastes. These more stringent requirements include tracking shipments with manifests to ensure that wastes are delivered to their intended destinations.

Asbestos

The federal government considers asbestos a toxic air contaminant. Several federal laws and regulations have been created to control the use, removal and disposal of asbestos containing materials. Such laws and regulations include the Toxic Substance Control Act (15 U.S. Code Section 2601 et seq.), Clean Air Act (42 U.S. Code Section 7401 et seq.), and Title 40 CFR Part 763 and 61.

Airspace Safety

Part 77 of the Federal Aviation Regulations, “Objects Affecting Navigable Airspace,” has been adopted as a means of monitoring and protecting the airspace required for safe operation of aircraft and airports. Objects that exceed certain specified height limits constitute airspace obstructions. Federal Aviation Regulations Section 77.13 requires that the Federal Aviation Administration (FAA) be notified of proposed construction or alteration of certain objects within a specified vicinity of an airport, including:

1. Any construction or alteration of more than 200 feet in height above the ground level at its site.
2. Any construction or alteration of greater height than an imaginary surface extending outward and upward at [a slope of] 100 to 1 for horizontal distance of 20,000 feet from the nearest point of the nearest runway of each [public-use airport, public-use airport under

construction, or military airport] with at least one runway more than 3,200 feet in actual length, excluding heliports.

The FAA is responsible for enforcement of 14 CFR 139, which prescribes rules regarding operation of airports used by aircraft with seating capacity of more than 30 passengers. The FAA roles and responsibilities relating to wildlife hazards and their associated human health and safety concerns are addressed in 14 CFR 139.337, “Wildlife Hazard Management.” An ecological study must be prepared by the certificate holder and submitted to the FAA when multiple birds or other wildlife are struck by aircraft or ingested into aircraft engines, or if sufficient birds or other wildlife are present in an airport flight pattern as to result in such hazards. The FAA determines whether a wildlife hazard management plan is needed. The FAA’s Office of Airport Safety and Standards has published Advisory Circulars and Program Policy and Guidance Directives that further clarify this information. An Advisory Circular dated August 28, 2007, titled “Hazardous Wildlife Attractants on or Near Airports,” provides guidance on locating certain land uses having the potential to attract hazardous wildlife to or in the vicinity of public-use airports.¹⁴ The FAA recommends the following separations when siting wildlife attractants (e.g., waste disposal operations, wastewater treatment facilities, wetlands):

- 5,000 feet from airports serving piston-powered aircraft,
- 10,000 feet from airports serving turbine-powered aircraft, and
- 5 statute miles from airports where the wildlife attractant may cause hazardous wildlife movement into or across the approach or departure airspace.¹⁵

Hazardous wildlife species or groups expected to use the Plan Area for foraging include rock pigeon, blackbirds, European starling, sparrows, hawks, geese, and egrets. These species and groups have been identified by FAA as among those that present the highest risk for aircraft-wildlife strikes in the United States.¹⁶ Other hazardous wildlife species could also be present on-site. Species considered hazardous are expected to be present throughout the year, but the diversity and abundance of hazardous wildlife is likely to be highest between October and April, when the inactive agricultural fields, grasslands, and wetlands within the Plan Area provide foraging habitat for a wide diversity of resident and migratory birds.

Exhibit 2.5 of the V5SP illustrates specific proposed land uses amid the compatibility zones.

State

The California Environmental Protection Agency (Cal/EPA) and the Office of Emergency Services (OES) establish regulations governing the use of hazardous materials in the state. The

¹⁴ Federal Aviation Administration, 2007. FAA Advisory Circular 150/5200-33B, “Hazardous Wildlife Attractants on or Near Airports.” August 28, 2007.

¹⁵ Ibid.

¹⁶ Ibid.

California Highway Patrol (CHP) and the California Department of Transportation (Caltrans) are the enforcement agencies for hazardous materials transportation regulations. Transporters of hazardous materials and waste are responsible for complying with all applicable packaging, labeling, and shipping regulations. These State agencies, working in concert with the DOT, create and enforce the standards for driver training, load-labeling, and specifications for containers and shipments. Section 31303 of the California Vehicle Code explicitly defines the standards for transporting hazardous materials, clarifying that residential districts, major roads, and large concentrations of people must be avoided.

Within Cal/EPA, the DTSC has primary regulatory responsibility for hazardous waste management and cleanup. Enforcement of regulations has been delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law. State regulations applicable to hazardous materials are contained in Title 22 of the CCR. Title 26 of the CCR is a compilation of those sections or titles of the CCR that are applicable to hazardous materials management.

The DTSC and State Water Resources Control Board (SWRCB) are the two primary state agencies responsible for issues pertaining to hazardous materials release sites. The California Legislature has enacted legislation to establish a regulatory process to address the release of hazardous substances that could be harmful to public health and the environment. This process, which is consistent with federal regulations, requires responsible parties to clean up contamination. The regulatory guidelines, standards, and methods established as part of that process to evaluate potential risks and identify the need for remedial action at contaminated sites are relevant and were used in this section to support the conclusions regarding existing and potential future risks to human health and the environment as a result of past uses in the V5SP Area.

Hazardous Materials Management Plans

In January 1996, Cal/EPA adopted regulations implementing a “Unified Hazardous Waste and Hazardous Materials Management Regulatory Program” (Unified Program). The Unified Program has six elements including (1) hazardous waste generators and hazardous waste on-site treatment, (2) underground storage tanks, (3) above-ground storage tanks, (4) hazardous material release response plans and inventories, (5) risk management and prevention program, and (6) Uniform Fire Code hazardous materials management plans and inventories. The Unified Program is implemented at the local level by a local agency – the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction. The Placer County Department of Environmental Health Services (PCDEHS) is the CUPA for Placer County.

State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to human health or the environment. California’s Hazardous Materials Release Response Plans and Inventory Law, sometimes called the “Business

Plan Act,” aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on site, to prepare an emergency response plan, and to train employees to use the materials safely.

Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. For example, manufacturers are to appropriately label containers, Material Safety Data Sheets are to be available in the workplace, and employers are to properly train workers. In addition, Cal/OSHA regulates worker exposure to asbestos during testing and abatement.

School Siting

The V5SP would include a total of five schools—three elementary schools, one middle school, and one high school. Please see Section 3.14, Public Services and Recreation, for more information about the schools to be designed within the Plan Area.

For a public school, the California Department of Education maintains specific guidelines regarding the placement of school facilities that are at times more stringent than other types of development. Additionally, if the proposed school land use requires any state school bonds, then the school district must prepare site assessments and any other DTSC-ordered studies to ensure safety on the school site. The results of the evaluation would be subject to review by the DTSC prior to development of the parcel. If the DTSC determines that no further investigation is needed, the site would be cleared for DTSC approval. However, if the DTSC does not approve the Phase I, a Preliminary Environmental Assessment (PEA) would be required. The evaluation of the school site would also be subject to a subsequent CEQA review process by the school district upon purchase or intent to purchase the identified site due to these potential impacts and because approval of the school falls under a separate jurisdiction.

Section 17213 of the Education Code establishes the regulatory framework for school districts to expand existing schools and construct future schools, notably highlighting that schools must be located away from current or former hazardous waste or solid waste disposal sites, hazardous substance release sites, or sites containing pipelines that contain hazardous materials (apart from a natural gas supply to the surrounding community). Section 17213.1 of the Education Code requires that a Phase I ESA be conducted for the site of the proposed school site prior to construction.

Several portions of Section 21151 of the Public Resources Code (PRC) require specific actions to be made relating to siting in order for schools to be constructed or altered. PRC Section 21151.2 requires governing boards for school districts operating within the State to consult with the local planning commission to provide notice and allow the planning commission to report on the proposed action and/or acquisition. Following the planning commission report, 30 days must pass before the school district can take any action.

Section 21151.4 states that no environmental document can be approved or certified involving a the construction or alteration of a school site within a quarter mile of a school site until both the lead agency responsible for the preparation of the environmental document has consulted with the affected school district and that the school district has been notified at least 30 days prior to certification or approval of the document.

Section 21151.8 establishes the particular levels of analysis that are necessary for any environmental document involving the purchase of an existing school site or the construction of a new school site. In particular, the environmental document must present information regarding whether or not the proposed site is or was a hazardous waste disposal site, a solid waste disposal site, a hazardous substance release site, a site containing pipelines that contain hazardous materials (apart from a natural gas supply to the surrounding community), or a site that is located within 500 feet from the edge of a freeway or other busy traffic corridor.

The California Education Code, section 17213 specifies that a school district may not approve a project involving the acquisition of a school site unless it determines that the property to be purchased or built upon does not contain a pipeline situated underground or aboveground that carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line used only to supply that school or neighborhood. The CCR Title 5, section 14010(h) states that, “the site shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional.”

California State Aeronautics Act

The State Aeronautics Act, Public Utilities Code (PUC) Section 21001, et seq., is the foundation for the Caltrans’ Division of Aeronautics aviation policies. The Division issues permits for, and annually inspects, hospital heliports and public-use airports, makes recommendations regarding proposed school sites within two miles of an airport runway, and authorizes helicopter landing sites at or near schools. Aviation system planning provides for the integration of aviation into transportation system planning on a regional, statewide, and national basis. The Division of Aeronautics administers noise regulation and land use planning laws that foster compatible land use around airports and encourages environmental mitigation measures to lessen noise, air pollution, and other impacts caused by aviation. The Division of Aeronautics also provides grants and loans for safety, maintenance, and capital improvement projects at airports.

Local

Placer County Department of Environmental Health Services

The PCDEHS is responsible for promoting a safe and healthy environment in the County and for monitoring the proper use, storage, and clean-up of hazardous waste. The County also provides the necessary permits required for hazardous materials storage and use; monitoring wells; removal for leaky underground storage tanks; and permits for the collection, transport, use, or disposal of refuse. The PCDEHS, Fire Safety, Sheriff, and Emergency Services are responsible for implementing various aspects of the County's emergency plan. The plan includes the Hazardous Materials Response Program, which is done in conjunction with the City of Roseville, City of Auburn, and City of Truckee.

Hazardous Materials Management Plan

Hazardous waste laws and regulations are enforced locally by the PCDEHS. The proposed institutional buildings (school campus and community center) would file a Hazardous Materials Business Plan with the PCDEHS. This information would be updated when there is a substantial change in operations. Should the facilities handle certain very hazardous substances, they would be required to undertake a systematic analysis of their operations, study the potential consequences of possible worst-case accidents, and prepare Risk Management Plans to reduce apparent risks. As currently proposed, the remaining uses within project would not trigger such a plan. PDCEHS would also notify local emergency services for fire code regulations pertaining to hazardous materials storage.

Placer County Local Hazard Mitigation Plan

The Placer County Local Hazard Mitigation Plan (Placer County LHMP), adopted in April 2010, offers guidance for hazard mitigation planning to ensure more adequate protection for the people and property within Placer County from the effects of hazard events.¹⁷ This document was a result of the collaboration of the following 15 jurisdictions, along with Placer County:

- City of Auburn
- City of Colfax
- Town of Loomis
- City of Lincoln
- City of Rocklin
- Alpine Springs County Water District
- Foresthill Fire Protection District
- Nevada Irrigation District
- North Tahoe Fire Protection District
- Placer County Flood Control & Water Conservation District
- Placer County Water Agency
- Placer Hills Fire Protection District
- Squaw Valley Public Service District
- Tahoe-Truckee Unified School District
- Tahoe City Public Utilities District

¹⁷ Placer County. 2010. Placer County Local Hazard Mitigation Plan. Adopted April 2010.

The planning process developed within this document was prepared pursuant to the Disaster Mitigation Act of 2000 to grant Placer County eligibility in Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation and Hazard Mitigation Grant programs. In total, the hazard mitigation planning committee for Placer County identified the following six goals for the Placer County LHMP, which are to: (1) prevent future hazard related losses of life and property; (2) increase public awareness/action of vulnerability to hazards; (3) improve community emergency services/management capability; (4) implement and complete identified high priority projects listed in the Placer County LHMP; (5) pursue multi-objective opportunities whenever possible; and (6) maintain FEMA eligibility and position jurisdictions for grant funding. To achieve these six goals, the Placer County LHMP outlines 112 recommended actions for Placer County to undertake. The Placer County LHMP must be updated every five years; the update has been submitted to State OES and FEMA for review and approval and is expected to be adopted in 2016.¹⁸

Annex C of the Placer County LHMP provides a summary containing a background analysis of the City, a listing of potential hazards, an inventory of assets and critical infrastructure. In addition, this section also looks closely at growth trends and a vacant land inventory, dated from the 2050 General Plan. Annex C also provides an analysis of the regulatory, administrative and fiscal capabilities for mitigation against hazard events.

Placer County Airport Land Use Compatibility Plan

The Placer County Airport Land Use Compatibility Plan (Placer County ALUCP)¹⁹ was adopted on February 26, 2014 to contain the individual compatibility plan for the three public-use airports that are located within Placer County—these include Auburn Municipal Airport, Blue Canyon Airport, and Lincoln Regional Airport. All projects that occur within the airport influence areas of these three airports require evaluation from the Airport Land Use Commission to determine their ALUCP compatibility. Lincoln Regional Airport is located approximately 0.25 miles north of the Plan Area, while a large amount of the Plan Area is located within various the compatibility zones.

Lincoln Emergency Operations Plan

The 2006 Emergency Operations Plan (EOP) is a planning document for the City that coordinates planning and actions in the event of an emergency. It provides operational guidance for the City to respond to and mitigate emergencies and disasters within the City of Lincoln, and establishes policies and a framework through which the City can operate during a disaster. In particular, the EOP has been developed into four parts: first, a basic plan that identifies the roles and structure of the Emergency Management Organization (EMO) and explains the ways in which other

¹⁸ Davis, Mike, Fire Chief, City of Lincoln Fire Department, electronic communication, August 19, 2015.

¹⁹ Placer County, 2014. Placer County Airport Land Use Compatibility Plans– Containing Individual Plan for: Auburn Municipal Airport, Blue Canyon Airport, Lincoln Regional Airport. Adopted February 26, 2014. Available: <http://pctpa.net/aluc/resources/>.

jurisdictions can connect with Lincoln through the Standardized Emergency Management System (SEMS); second, procedures, which discusses the methodology for the Emergency Operations Center (EOC) and its activation and extended operations; third, a series of annexes that more clearly identifies specific roles and responsibilities for every group associated with emergency management within the EOC; and fourth, a series of contingency plans provide detailed plans for specific types of hazards and disasters, with attachments to clarify operations guidance, procedures, and resources available.²⁰

Lincoln Fire Department

The Lincoln Fire Department, a first-responder to emergency calls, provides hazardous materials incident response services. The PCDEHS Hazardous Materials Division, the Placer Operational Area OES, and the California Department of Forestry (CDF) also provide additional hazardous materials incident emergency response to the unincorporated communities in the county, including the Plan Area. Other agencies, such as the State OES, the CDF, and the CHP, may be called upon if additional resources are necessary to respond to a hazardous materials incident that could affect the properties within the Plan Area.

City of Lincoln Building Safety

Chapter 5, General Plan Policy Consistency, includes a consistency review of the adopted 2050 General Plan goals and policies that relate to hazardous materials. Please see Chapter 5 for more information on consistency with General Plan goals and policies. No inconsistencies with policies were identified. However, while City staff has done its best to ascertain consistency, the City Council makes the ultimate decision regarding consistency with the General Plan.

City of Lincoln 2050 General Plan

The following goals and policies from the 2050 General Plan are relevant to hazardous materials, airport safety, and wildland fires.

Goal LU-2 To designate, protect, and provide land to ensure sufficient residential development to meet community needs and projected population growth.

Policies

LU-2.10 **Airport Buffer.** Protect existing and planned local air transportation facilities from encroachment by potentially incompatible land uses and require developers to file an avigation easement with the City if a proposed development or expansion of an existing use is located in an area subject to a compatibility zone within the Placer County Airport Land Use Compatibility Plan (ALUCP).

Goal PFS-8 To provide adequate fire and police protection facilities and services to ensure the safety of residents and the protection of property in the city.

Policies

PFS-8.6 **Emergency Access.** The City shall require all new developments to provide adequate emergency access features, including secondary access points.

²⁰ City of Lincoln, 2006. Emergency Operations Plan. August. p. 1-2.

Goal HS-1 To minimize the danger of natural and human-made hazards and to protect residents and visitors from the dangers of earthquake, fire, flood other natural disasters, and man-made dangers.

Policies

HS-1.1 **Engineering Analysis of Potential Hazards.** The City shall require engineering analysis of new development proposals in areas with possible soil instability, flooding, earthquake faults, or other hazards, and to prohibit development in high danger areas.

Goal HS-4 To minimize the possibility of the loss of life, injury, or damage to property as a result of airport hazards.

Policies

HS-4.1 **Airport Land Use Compatibility Plan.** The City shall require that development around the Lincoln Regional Airport be consistent with the safety policies and land use compatibility guidelines contained in the adopted Placer County Airport Land Use Compatibility Plan and any subsequent amendments to the Plan.

HS-4.2 **Compliance with FAA Regulations.** The City shall ensure that development within the airport approach and departure zones are in compliance with Part 77 of the Federal Aviation Administration Regulations (FAA regulations that address objects affecting navigable airspaces).

Goal HS-5 To protect residents and property from the use, transport and disposal of hazardous materials.

Policies

HS-5.1 **Transporting Hazardous Materials.** The City shall strive to ensure that hazardous materials are used, transported, and disposed within the City in a safe manner and in compliance with local, state and federal safety standards.

HS-5.4 **Disclosure of Hazardous Materials.** The City shall require disclosure of hazardous materials with the County Environmental Health Department by those using them within the city or proposing to use them in new industrial or commercial activities.

HS-5.5 **Treatment of Industrial Waste.** The City will discourage the location of firms in the planning area which require treatment of industrial waste, unless the waste is pre-treated to a secondary stage level as defined by the State of California.

HS-5.6 **Hazardous Waste Facility Siting.** The City shall ensure that new hazardous waste facilities and those commercial and industrial land uses that use or produce hazardous waste are sited in an appropriate manner.

HS-5.7 **Contamination Prevention.** The City shall protect soils, surface water and groundwater from contamination.

HS-5.8 **Increase Public Awareness.** The City will work to educate the public as to the types of household hazardous waste and the proper method of disposal.

HS-5.9 **Household Hazardous Waste.** The City shall encourage household hazardous waste to be disposed of properly.

HS-5.10 **Designated Routes for Hazardous Materials.** The City shall require that hazardous materials transported within the City be restricted to routes that have been designated for such transport.

HS-5.11 **County Hazardous Waste Management Plan.** The City shall review all proposed development projects that involve the manufacturing, use, or transporting of hazardous materials to ensure compliance with the County Hazardous Waste Management Plan or equivalent guidance.

- HS-5.12 **Hazardous Materials Inventory.** The City may require, as a component of the environmental review process, a hazardous materials inventory for the site, including an assessment of materials and operations for any applications for land use entitlements.
- HS-5.13 **Hazardous Materials Studies.** The City shall ensure that the proponents of development projects (including new, redevelopment, remodel, or demolition projects) address existing hazardous materials concerns through the preparation of Phase I or Phase II hazardous materials studies for each identified site as part of the design phase for each project. Particular attention should be paid to land that contained past agricultural uses. Recommendations outlined in the studies will be implemented as part of the construction phase for each project.
- HS-5.14 **School Siting Hazards.** The City may require, as a component of the environmental review process, a hazardous materials inventory for the site, including an assessment of materials and operations for any applications for land use entitlements.

Goal HS-7 To minimize the risk of life and property to from urban and wildland fires.

Policies

- HS-7.1 **Enforce Code / Ordinances.** The City shall enforce the City building code, fire code, and ordinances in regard to fire safety and fire protection.
- HS-7.2 **Educate Residents of Fire Hazards.** The City shall educate residents of urban and wildland fire hazards and safety measures.
- HS-7.3 **Wildland Fire Management Plans.** The City shall require the development of wildland fire management plans for projects adjoining significant areas of open space that may have high fuel loads.
- HS-7.4 **Buffer Zones for Fire Protection.** The City shall require new development to incorporate additional greenbelts, fuel breaks, fuel reduction and buffer zones around communities to minimize potential fire losses.
- HS-7.5 **Weed Abatement.** The City shall maintain a weed abatement program to ensure clearing of dry brush areas. Weed abatement activities shall be conducted in a manner consistent with all applicable environmental regulations.

Goal HS-9 To ensure the maintenance of the Emergency Response Plan in order to maintain its effectiveness in preparing and responding to a natural or human-made disaster.

Policies

- HS-9.1 **Emergency Response Plan.** The City shall continue to update and ensure that the Emergency Response Plan meets current federal, State, and local emergency requirements.
- HS-9.2 **Coordinate Emergency Response Services with Local Agencies.** The City shall continue to coordinate emergency response services with Placer County, other cities within Placer County, special districts, service agencies, voluntary organizations, and state and federal agencies.
- HS-9.3 **Educate Public on Emergency Response.** The City shall conduct training programs for staff in disaster preparedness.
- HS-9.4 **Coordinate with Placer County.** The City will strive to work with other local agencies including Placer County and cities within the County to develop coordinated geographical information systems (GIS) planning for emergency response services.
- HS-9.5 **String of Critical Emergency Responses.** The City shall ensure that the siting of critical emergency response facilities such as hospitals, fire stations, police offices, substations, emergency operations centers and other emergency service facilities and utilities have minimal exposure to flooding, seismic and geological effects, fire, and explosions.

The relationship of these 2050 General Plan policies to the V5SP is included in Chapter 5, General Plan Consistency.

3.9.3 Analysis, Impacts, and Mitigation

Significance Criteria

For the purposes of this EIR, consistent with Appendix G of the CEQA Guidelines, impacts to hazards and hazardous materials are considered significant if the proposed project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Methodology and Assumptions

This analysis primarily focuses on the review of the Phase I ESA for Lincoln Village 5/Special Use District that ENGEO conducted in 2013, the Phase I ESA for the 3340 Moore Road Property (also referred to as Windsor Cove) that MatriScope conducted in 2015, and the review of the Placer County ALUCP, to determine the possible impacts of the V5SP relating to hazardous materials and waste, wildland fires, and airport safety.

Impacts and Mitigation Measures

Impact 3.9-1: The proposed project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Full Specific Plan and Area A

Construction

Implementation of the V5SP would involve the construction of residential, commercial, and public facilities on a largely agricultural and undeveloped area to the west of Lincoln. During the construction phase, relatively small portions of some construction related products would contain materials defined as hazardous, such as fuels, solvents, cements and adhesives, paints, cleansers, degreasers, and asphalt mixtures, which are all commonly used in construction. In general, aside from refueling needs for heavy equipment, the hazardous materials typically used on a construction site are brought onto the site packaged in consumer quantities and used in accordance with manufacturer recommendations. The overall quantities of these materials on the site at any one time would not result in large bulk amounts that could represent a potential significant hazard to the public or environment. Refueling activities of heavy equipment would be conducted in a controlled dedicated area complete with secondary containment and protective barriers to minimize any potential hazards that might occur with an inadvertent release. Given the required protective measures (i.e., best management practices (BMPs) as defined in a Storm Water Pollution Prevention Plan (SWPPP) as required by the National Pollutant Discharge Elimination System (NPDES) Construction General Permit) and the limited quantities of hazardous materials typically needed for construction projects such as buildout of the V5SP, the threat of exposure to the public or environment from construction-related hazardous materials is considered **less than significant**.

Operation

During operation of the V5SP, land uses would include the transport, use, and disposal of common household and commercial hazardous materials that could include cleansers, solvents, oils, fuels, adhesives, pesticides, and herbicides. However, considering the land uses planned for the V5SP, the aforementioned materials would not be in large enough quantities to produce a substantial impact on the environment. Activities such as automobile or building maintenance, as well as landscaping, can become sources of releases of hazardous materials. However, general commercial/retail and household hazardous materials are typically handled and transported in small quantities, and because the health effects associated with them are generally not as serious as those compared to industrial uses. Commercial/retail uses would be required to adhere to the regulatory framework covering the use, storage, and disposal of any hazardous materials and wastes. As required by PCDEHS and the Hazardous Materials Management Program, any businesses that would store hazardous materials and/or waste at its business site would be required to submit business information and hazardous materials inventory forms contained in a Hazardous Materials Management Plan and Hazardous Materials Business Plan. The City requires all new commercial and other users to follow applicable regulations and guidelines regarding storage and handling of hazardous waste. All hazardous materials are required to be

stored and handled according to manufacturer's directions and local, state and federal regulations. With adherence to existing regulatory requirements, impacts related to the routine use or disposal of hazardous materials during operation would be **less than significant**.

Additionally, any transport of hazardous materials or wastes within the Plan Area would be subject to applicable local, state, and federal regulations to minimize the risk of upset. Thus, the risk related to the transport, use, and disposal of hazardous materials to cause a health hazard is low.

SR 65 is a major truck route between Roseville and Marysville. Aside from some high-level radioactive materials, poisons, and explosives, all other classes of hazardous materials are legally permitted to be transported on SR 65 and major roadways both adjacent to and within the Plan Area. Although the V5SP would not include additional roadway design hazards nor provide land uses that would substantially increase the amount of hazardous waste being produced or transported along SR 65 and other major surrounding roadways, the proposed land uses would increase the amount of people in close proximity to SR 65. The specific types and quantities of hazardous materials to be transported along SR 65 could vary daily, as is the case throughout many surrounding roadways and highways. In addition, there is a rail line about 1.5 miles to the east of the Plan Area. This rail line would continue to transport hazardous materials routinely, unrelated to the V5SP.

However, the V5SP would meet the requirements of Section 31303 of the California Vehicle Code, in accordance with Title 49 of the U.S. Code, Section 5101 et seq., to ensure that no hazardous materials would be transported through the residential districts and major roads within the Plan Area, in addition to places within the Plan Area where crowds could assemble. The transport of hazardous materials would remain generally confined to specially designated state and /or interstate highways, such as SR 65, which are preferred as a safer and more efficient mode of transportation for hazardous materials.

In the event of a rail line spill that releases hazardous materials in the vicinity of the project, a coordinated response would occur at the federal, state, and local levels. The City of Lincoln would coordinate with federal and state authorities while also following the regional guidelines of the Placer County LHMP, which was adopted in April 2010 and is anticipated to be updated in 2016. The Placer County LHMP offers Lincoln detailed and unified guidance for mitigating hazard events, and ensures response efforts are thoroughly coordinated on a local, Placer County-wide level. In addition, the probability of such a release occurring in the vicinity of the project is relatively remote given historic safety data.

As a result, the V5SP would not cause a substantial increase in the risk of exposing future occupants to intentional or unintentional releases of hazardous materials, either within the Plan Area or along adjacent transport corridors, such as SR 65 or rail lines. Thus, this would be a **less-than-significant** impact.

Mitigation Measure

None required.

Impact 3.9-2: The proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Full Specific Plan and Area A

Construction

Implementation of the V5SP would involve the construction of residential, commercial, and public facilities on a largely agricultural and undeveloped area to the west of Lincoln. In addition, five new bridges would be built across the major waterways within the Plan Area (two bridges over Auburn Ravine and two bridges over Markham Ravine) as part of the V5SP. These bridges would be constructed over and within the ravine waterways. During construction, several construction vehicles and materials would be used to construct these bridges, including materials that could be potentially hazardous such as asphalt slurry, lubricants, and oils. There is potential for an accidental release of hazardous materials from bridge construction into Auburn Ravine and/or Markham Ravine. While relatively small portions of hazardous materials are anticipated to be used during the construction period, the improper management of these materials could also lead to an accidental release of hazardous materials in other areas of the Plan Area, which in turn could expose the site and its occupants to contamination from hazardous materials. As provided in the Regulatory Setting, the U.S. EPA and the DTSC manage the regulation of hazardous materials handling and disposal. As discussed more thoroughly in Section 3.10 Hydrology, Drainage, and Water Quality, construction activities would also be required to adhere to a SWPPP, which would include BMPs that would minimize the potential for a release and provide onsite measures to control any accidental release should it occur. In addition, the Placer County LHMP provides the City of Lincoln with detailed and unified guidance for mitigation hazard events, and ensures a coordinated response on a more local, Placer County-wide level with surrounding jurisdictions in the event of an emergency related to hazards. While there are several laws and regulations that govern the release of hazardous materials and response to accident conditions, an accidental release of hazardous materials during construction activities could have an adverse effect on the public or the environment. Therefore, this impact would be **potentially significant**.

Operation

Operation of the V5SP would involve a mixture of residential, commercial, and public facilities. Small quantities of common household and commercial hazardous materials, such as cleansers and agents, would be used within the Plan Area. As noted above, PCDEHS's Hazardous Materials Management Program requires all businesses that would store hazardous materials and/or waste at its business site to submit a Hazardous Materials Management Plan and

Hazardous Materials Business Plan. The City requires all new commercial and other users to follow applicable regulations and guidelines regarding storage and handling of hazardous waste. All hazardous materials are required to be stored and handled according to manufacturer's directions and local, state and federal regulations. Adherence to these existing regulatory requirements would minimize the potential for accidental release.

In addition, regardless of whether the development of the V5SP does occur, an accident involving an unintentional or intentional release of hazardous materials along SR 65, which passes through northern portions of the Plan Area, or the rail line, which is located to the east of the Plan Area, could occur. In the event of this type of emergency, there is a coordinated federal, state, and local emergency response system in place. As described in the Regulatory Setting, the U.S. EPA and either the DTSC or Regional Water Quality Board (RWQCB) manage the regulation of hazardous materials handling and disposal. These federal and state agencies create and enforce the standards for the handling, storage, and spill response requirements of all hazardous materials. Further, the City maintains a coordinated system of hazard mitigation planning on a more regional level with the Placer County LHMP, which is anticipated to be updated in 2016. The Placer County LHMP provides the City of Lincoln with detailed and unified guidance for mitigation hazard events, and ensures a coordinated response on a more local, Placer County-wide level with surrounding jurisdictions in the event of an emergency related to hazards. While there are several laws and regulations that govern the release of hazardous materials and response to accident conditions, an accidental release of hazardous materials during project operation could have an adverse effect on the public or the environment. Therefore, this impact would be **potentially significant**.

Mitigation Measure

Mitigation Measure 3.9-2 (Full Specific Plan and Area A)

- a) *Prior to final project design or if none is required, any earth-disturbing activities at the project site, the City shall require that the applicant conduct a Phase I Environmental Site Assessment (Phase I ESA) areas that are not already evaluated in an existing Phase I ESA. The Phase I ESA shall be prepared by a Registered Environmental Assessor (REA) or other qualified professional to assess the potential for contaminated soil or groundwater conditions at the project site. The Phase I ESA shall include a review of appropriate federal and State hazardous materials databases, as well as relevant local hazardous material site databases for hazardous waste on-site and off-site locations within a one-quarter mile radius of the area of analysis. The Phase I ESA shall also include a review of existing or past land uses and aerial photographs, summary of results of reconnaissance site visit(s), and review of other relevant existing information that could identify the potential existence of contaminated soil or groundwater. If no contaminated soil or groundwater is identified, or the Phase I*

ESA does not recommend any further investigation, then no further action is required.

- b) If existing hazardous materials contamination is identified during the execution of Mitigation Measure 3.9-2(a), and the future Phase I ESA recommends further review, the applicant shall retain an REA to conduct follow-up sampling to characterize the contamination and to identify any required remediation that shall be conducted, consistent with applicable regulations prior to any earth-disturbing activities. The environmental professional shall prepare a report that includes, but is not limited to, activities performed for the assessment, a summary of anticipated contaminants and contaminant concentrations at the proposed construction site, and recommendations for appropriate handling of any contaminated materials during construction. These recommendations shall be implemented and the site shall be deemed remediated by the appropriate agency (e.g., DTSC, PCDEHS) or the County shall issue a No Further Action (NFA) letter prior to earth disturbance continuing in the vicinity of the contamination.*
- c) If unidentified or suspected contaminated soil or groundwater (stained soil, noxious odors) is encountered during site preparation or construction activities, work shall stop in the area of potential contamination, and the type and extent of contamination shall be identified by an REA or qualified professional. The REA or qualified professional shall prepare a report that includes, but is not limited to, activities performed for the assessment, summary of anticipated contaminants and contaminant concentrations, and recommendations for appropriate handling and disposal. Site preparation or construction activities shall not recommence within the contaminated areas until remediation is complete and a “no further action” letter is obtained from the applicable regulatory agency.*

Impact Significance after Mitigation: Mitigation Measures 3.9-2(a) and (b) would ensure that additional site investigation would occur prior to final project design and any earth-disturbing activities within the Plan Area. This would reduce the likelihood of unanticipated discovery during project construction, and reduce the potential effects on construction workers and the environment. With the implementation of Mitigation Measure 3.9-2(c), the risk of contamination to any previously unidentified hazardous materials would be minimized by requiring all construction work to stop until the appropriate analysis has occurred to determine the type and extent of contamination. With the implementation of these measures listed above, this impact would be reduced to a **less-than-significant** level.

Impact 3.9-3: The proposed project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Full Specific Plan and Area A

The V5SP, upon completion, would involve development of residential and commercial land uses and public and open space facilities on a largely agricultural and undeveloped area to the west of the City of Lincoln. As explained in Impact 3.9-1, the construction of the V5SP would not involve any hazardous materials apart from such construction related products as fuels, solvents, cements and adhesives, paints, cleansers, degreasers, and asphalt mixtures, which are all commonly used in construction. Upon operation, the V5SP would involve the use of some common household and commercial hazardous materials.

Currently, the Lincoln High School farm property along the western edge of the Plan Area is the only school site located within the Plan Area. However, the school does not provide traditional school services. The site provides high school students with coursework relating to agriculture and natural resources. In addition to lessons in these fields, students are given the opportunity to work with farm animals and farming equipment. Creekside Oaks Elementary School is approximately 0.4 miles to the northeast of the Plan Area (closest to Area B) and Lincoln Crossing Elementary School is approximately 0.9 miles to the east of the Plan Area (closest to Area J). However, upon completion of the V5SP, there would be five schools in the Plan Area—three elementary schools, one middle school, and one high school - built within the Plan Area. These five schools, as depicted in Figure 2-4, in Chapter 2, Project Description, would primarily be located within the western half of the Plan Area to ensure consistency with the ALUCP.

No industrial or other land uses are proposed where substantive hazardous emissions are expected to occur. Further, the amount of hazardous materials that would be used on the Plan Area would be stored, handled, and disposed of in accordance with regulatory requirements that minimize emissions. The V5SP, which includes the construction of five school sites, would adhere to the requirements of Section 17213 of the Education Code and Section 21151 of the PRC to ensure that schools are adequately sited, Phase I ESAs are provided for these sites, and that all potential hazards are identified and forms of mitigation are appropriately applied. At the time that WPUSD sites a school, WPUSD would comply with Education Code and PRC requirements involving the siting of schools. Schools to be located within the Plan Area would not be sited on pipelines containing hazardous materials, fuel storage tanks, or within 500 feet of SR 65. In addition, as mentioned in Impacts 3.9-1 and 3.9-2, compliance with the several regulations related to the transport and handling of hazardous materials, along with cooperation with the numerous agencies associated with hazard mitigation, would ensure that the any potential risk associated with the increased use of hazardous materials during construction and operation would be minimized to the fullest extent possible. Therefore, this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 3.9-4: The proposed project could be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List) and, as a result, create a significant hazard to the public or the environment.

Full Specific Plan

The Plan Area contains approximately 4,787 acres. As discussed in the Environmental Setting, two Phase I ESAs were prepared for different locations within the Plan Area. The 2013 Phase I ESA, prepared by ENGEO and covering portions of Area A and other areas, analyzed 13 different parcels totaling 1,460 acres. The 2015 Phase I ESA analyzed the 90-acre Windsor Cove site within Area J. In their examination of the sites, both Phase I ESAs determined no documentation of hazardous materials or discharge, contaminated facilities, recognized environmental conditions (RECs) or historical RECs for either of the properties. In addition, no orchards that could be associated with past pesticide use were determined to exist previously on either site and the Phase I ESAs found no evidence of contamination from past pesticide use.

There are also no identified sites listed on the Envirostor or Geotracker databases, which include sites with known contamination, within or near the Plan Area.²¹ There is no additional information currently known about the possible presence of hazards on the remainder of the site. Based on the findings of the Phase I ESAs that have been completed for large areas of the site combined with a recent database search, there are no identified sites of past releases of hazardous materials that could have an adverse effect on future proposed land uses. However, based on the site history of agricultural use, which can include the use of fuel storage tanks, it is possible that construction activities could encounter areas of past releases of petroleum hydrocarbons. This would be considered a **potentially significant impact**.

Area A

Area A contains approximately 799 acres. As discussed in the Environmental Setting, the 2013 Phase I ESA, prepared by ENGEO covered the majority of Area A as well as other areas totaling 1,460 acres. However, not all of Area A's acreage was covered in this analysis. In its examination of the 13 parcels, the 2013 Phase I ESA determined no documentation of hazardous materials or discharge, contaminated facilities, recognized environmental conditions (RECs) or historical RECs for any of the properties.

There are also no identified sites listed on the Envirostor or Geotracker databases within or near Area A.²² However, based on the site history of agricultural use, which can include the use of fuel storage tanks, it is possible that construction activities could encounter areas of past releases of petroleum hydrocarbons. As a result, hazardous materials may still be present and accident

²¹ Department of Toxic Substances Control. 2015. Envirostor: Hazardous Waste and Substances List. p. 7 of 12 (576 Records Found). Available: <http://www.envirostor.dtsc.ca.gov/public/>. Accessed August 3, 2015.

²² Ibid.

conditions involving the release of hazardous materials may still be possible. This would be considered a **potentially significant impact**.

Windsor Cove

The 2015 Phase I ESA for the Windsor Cove property concluded that although the existing house on the 90-acre Moore Road Property has an onsite septic system, one pole-mounted transformer, and could contain asbestos and/or lead-based paint, these issues do not pose a significant impact to the proposed project because of their relatively small quantities.²³ Ultimately, the 2015 Phase I ESA recommended having these items removed from the site, in accordance with state and local requirements. There is no documentation of hazardous materials or discharge, contaminated facilities, RECs or historical RECs for the site. In addition, no orchards that could be associated with past pesticide use were determined to exist previously on the site and the Phase I ESA found no evidence of contamination from past pesticide use.

However, the 2013 Phase I ESA concluded that a Phase II ESA should be conducted on the Morse Property at 200 South Dowd Road (APN 021-081-008) in order to sample the underlying soil beneath a concrete saddle that formerly supported an above-ground diesel tank and the footprint of a former barn that included an above ground gasoline tank.²⁴ While an earlier 2004 Phase I ESA²⁵ noted no visual staining or other evidence of impacts at this site, the 2013 Phase I ESA recommended the Phase II ESA to make a more detailed determination.

There are also no identified sites listed on the Envirostor or Geotracker databases within or near Windsor Cove.²⁶ However, based on the site history of agricultural use, which can include the use of fuel storage tanks, it is possible that construction activities could encounter areas of past releases of petroleum hydrocarbons. As a result, hazardous materials may still be present and accident conditions involving the release of hazardous materials may still be possible. This would be considered a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.9-4(a) (Full Specific Plan, Area A and Windsor Cove)

During construction, the contractor shall cease any earthwork activities upon discovery of any suspect soils or groundwater (e.g., petroleum odor and/or discoloration) during construction in accordance with a Soil and Groundwater Management Plan prepared for

²³ MatriScope Engineering Laboratories, Inc., 2015. Phase I Environmental Site Assessment (ESA) Report for Proposed Moore Road Property Site Development, 3440 Moore Road, Lincoln, CA. January 23, 2015.

²⁴ ENGEO Incorporated, 2013. Phase I Environmental Site Assessment: Lincoln Village 5/Special Use District, Placer County, California. September 11, 2013.

²⁵ ENGEO Incorporated, 2004. Phase I Environmental Site Assessment Report, Morse Property, Placer County, California. February 10, 2004.

²⁶ Department of Toxic Substances Control. 2015. Envirostor: Hazardous Waste and Substances List. p. 7 of 12 (576 Records Found). Available: <http://www.envirostor.dtsc.ca.gov/public/>. Accessed August 3, 2015.

the project by a qualified environmental consultant and approved by the Placer County Department of Environmental Health Services (PCDEHS). The contractor shall notify the PCDEHS upon discovery of suspect soils or groundwater and retain a qualified environmental firm to collect soil and/or groundwater samples to confirm the level of contamination that may be present. If contamination is found to be present, any further proposed groundbreaking activities within areas of identified or suspected contamination shall be conducted according to a site specific health and safety plan, prepared by a California state licensed professional. Any contaminants identified as exceeding human health risk levels, shall be delineated, removed, and disposed of offsite in compliance with the receiving facilities requirements under the direction of PCDEHS. The contractor shall follow all procedural direction given by PCDEHS and in accordance with the Soil and Groundwater Management Plan prepared for the site to ensure that suspect soils are isolated, protected from runoff, and disposed of in accordance with Section 31303 of the California Vehicle Code and the requirements of the licensed receiving facility.

Mitigation Measure 3.9-4(b) (Windsor Cove)

Conduct a Phase II Environmental Site Assessment on the Morse Property at 200 South Dowd Road (APN 021-081-008) in order to sample the underlying soil beneath a concrete saddle that formerly supported an above ground diesel tank and the footprint of a former barn that included an above ground gasoline tank. Follow the recommendations in the Phase II ESA.

Impact Significance After Mitigation: With implementation of Mitigation Measures 3.9-4(a) and (b), any encountered subsurface contamination would be identified and remediated in a manner that is protective of human health and the environment such that the impacts would be **less than significant**.

Impact 3.9-5: The proposed project could result in a safety hazard for people residing or working in the project area for a project located within an airport land use plan.

Full Specific Plan

Several portions of the Plan Area currently contain agricultural practices involving rice production, which is known to be a major bird attractant. There are approximately 1,191 acres of rice production currently within the Plan Area, which currently comprises nearly 25 percent of the Plan Area. As discussed earlier, birds, along with other wildlife, are a major hazard that can affect airspace safety in and around Lincoln Regional Airport. Rice production yields a variety of foraging birds and can pose a risk of bird strikes to aircraft arriving at and departing from Lincoln Regional Airport. However, the V5SP would result in the conversion of most of these agricultural land uses into more urban uses, thus reducing the amount of rice production and bird attractants in the vicinity of the Plan Area.

The Placer County ALUCP does not encourage development of detention basins within any of the airport compatibility zones. As a result, the Placer County ALUCP designates detention and retention ponds as a conditional use. The detention ponds would be designed, engineered, constructed, and maintained for a maximum 48-hour detention period after the design storm and remain completely dry between storms in accordance with FAA Advisory Circular (AC) 150/5200-33B. Additionally, per AC 150/5200-33B, because Lincoln Regional Airport serves piston-powered aircraft, the V5SP would also comply with the two perimeter requirements for wildlife hazards: (1) a separation of 5,000 feet from the airport runway to any land use that could attract wildlife hazards (namely, bird strikes) and (2) a separation of five statute miles from the aircraft operations area (AOA) to any land use that could cause hazardous wildlife movement into or across the approach or departure space at the airport.²⁷

Upon full buildout, the V5SP would have a total of 21 detention basins located throughout the Plan Area that would total approximately 72.0 acres. The Plan Area comprises approximately 4,787 acres. **Table 3.9-1** provides the detention basin identification number, the approximate area (in acres), and the corresponding compatibility zone where the pond is located.

While the V5SP would include 72.0 acres of detention basins, a potential wildlife attractant, a significantly larger portion of the existing agricultural lands would be developed and would no longer contain as many wildlife attractants, mainly bird strike hazards, as previously. Further, the addition of these detention basins would not be significant in relation to the site and would not increase the amount of bird strike hazards in the vicinity of Lincoln Regional Airport beyond existing conditions.

Among these 21 detention basins, a total of four of the detention basins (M1 at 1.3 acres, M2 at 2.2 acres, M3 at 1.7 acres, and M4 at 3.8 acres) would be located less than 5,000 feet from the runway of Lincoln Regional Airport. Although detention basins are discouraged from areas within 5,000 feet of the AOA per FAA regulations, these four detention basins would be conditionally allowed per the Placer County ALUCP. Further, the total acreage that these four detention basins would occupy—approximately nine acres—would be considerably smaller in size than the vast acreage of farmland, largely involving rice production, that currently exists within the Plan Area and attract wildlife hazards within 5,000 feet of the AOA. As such, impacts from potential bird strikes would be **less than significant**.

As seen in **Figure 3.9-1**, the Plan Area covers several portions of Compatibility Zones A, B1, C1, C2, and D at Lincoln Regional Airport, as outlined in the Placer County ALUCP. In other words, almost the entire project (excluding some portions of Areas G, H, and J) falls in some Compatibility Zone. Any land use that creates visual or electronic hazards to flight is incompatible across all compatibility zones. In Compatibility Zone A, the allowable maximum

²⁷ Federal Aviation Administration, 2007. FAA Advisory Circular 150/5200-33B, "Hazardous Wildlife Attractants on or Near Airports." August 28, 2007.

**TABLE 3.9-1.
LINCOLN VILLAGE 5 DETENTION BASINS**

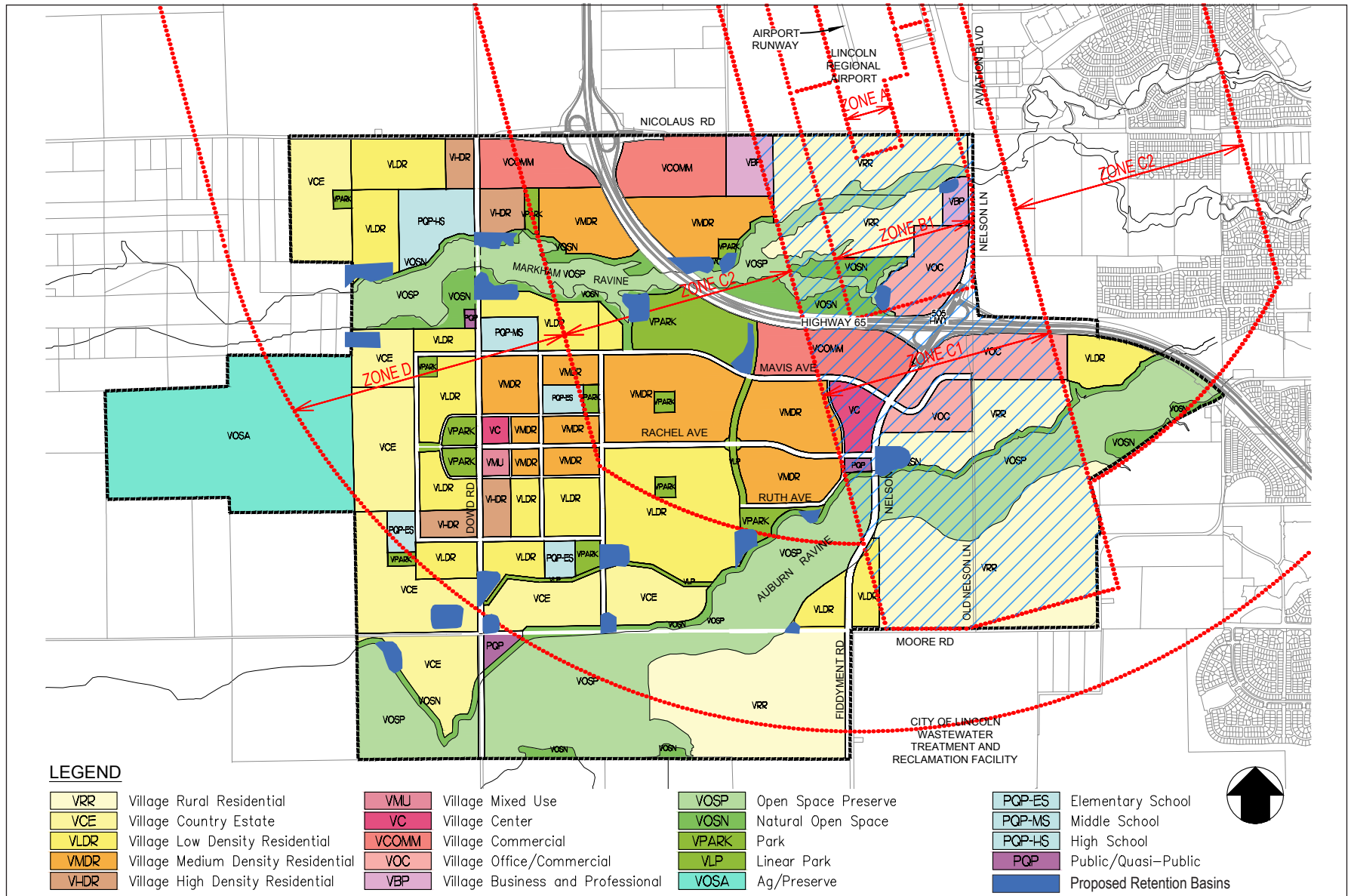
Detention Basin ID	Lincoln Regional Airport Compatibility Zone	Pond Top Area (Acres)
Area A		
A2	D	1.5
A4	C2	1.5
A5	C2	4.0
A6	D	4.5
A7	D	2.0
M8	C2	3.0
M9	C2	4.5
Area A Total	--	21.0
Areas B-J		
A1	C1	6.3
A8	D	4.2
A9	Outside	5.6
A10	D	2.0
A11/A12	Outside	3.8
M1	B1	1.3
M2	B1	2.2
M3	C2	1.7
M4	C2	3.8
M5	C2	0.8
M6	D	4.0
M7	D	5.9
M10	D	5.3
M11	D	4.1
Areas B-J Total	--	51.0
Full Buildout		
A1	C1	6.3
A2	D	1.5
A4	C2	1.5
A5	C2	4.0
A6	D	4.5
A7	D	2.0
A8	D	4.2
A9	Outside	5.6
A10	D	2.0
A11/A12	Outside	3.8
Auburn Ravine Shed Total	--	35.4
M1	B1	1.3
M2	B1	2.2
M3	C2	1.7
M4	C2	3.8
M5	C2	0.8
M6	D	4.0
M7	D	5.9
M8	C2	3.0
M9	C2	4.5
M10	D	5.3
M11	D	4.1
Markham Ravine Shed Total	--	36.6
Buildout Total	--	72.0

NOTES:

- The "A" designation is for detention ponds that connect to Auburn Ravine and the "M" designation is for detention ponds that connect to Markham Ravine.
- The overall basin footprint area is based on the working assumption of six feet of storage depth.

SOURCE:

- Cunningham Engineering. 2016. Drainage System and Flood Control Analysis for Village 5 Specific Plan. May 13, 2016, Table 5A on p. 12 and Table 5B on p. 13.



SOURCE: C nning a Engineering, 2015

Lincoln Village 5 EIR . 130368

Figure .9-1
Land Use Airport Co pati ility ones

site-wide average intensity and single acre intensity is 0 people per acre, and all remaining land is required to remain open land. In the Plan Area, a portion of Area D is located within Compatibility Zone A and has a land use designation of Village Rural Residential (VRR), which allows for a residential density of 0.2 to 0.5 dwelling units per acre (du/ac). However, these VRR uses within Compatibility Zone A existed prior to the V5SP, and development of the V5SP would not increase any residential uses, residential density, or non-residential density within Compatibility Zone A.

Portions of Areas C and D fall within Compatibility Zone B1. Compatibility Zone B1 allows a maximum site-wide average intensity of 60 people per acre and a maximum single acre intensity of 120 people per acre, with a minimum of 25 percent of the land to remain open. The land uses planned for the portions of the Plan Area within Compatibility Zone B1 are VRR, Village Office/Commercial (VO/C), Village Business and Professional (VBP), Village Open Space Preserve (VOSP), and Village Natural Open Space (VOSN). Compatibility Zone B1 allows an average density of 0.1 du/ac, which is less than the Village Rural Residential density range of 0.2-0.5 du/ac. However, as is the case with the VRR structures within Compatibility Zone A, the V5SP would not increase the residential density beyond the existing conditions. While local and major retail uses are considered incompatible in the Placer County ALUCP, limited retail has a conditional floor area ratio (FAR) of 0.34, personal and miscellaneous facilities have a conditional FAR of 0.28, and offices have a conditional FAR of 0.30. The VO/C designation has a target FAR of 0.30 and the VBP designation has a target FAR of 0.25, but the Specific Plan explains that these FAR factors could vary based on the location and conditions of the specific parcel, particularly with respect to the compatibility zones. There are also VOSP and VOSN designations that are located within Compatibility Zone B1. Natural land areas, water bodies, and agriculture uses are all conditionally permitted within Compatibility Zone B1, as long as new features that attract birds are avoided or mitigation measures consistent with FAA regulations are achieved. The V5SP, however, would not add new features to these designated areas, but would instead maintain and preserve existing, natural open space features, which mainly include Markham Ravine.

Portions of Areas A, B, C, D, E, and J fall within Compatibility Zone C1. Compatibility Zone C1 allows a maximum site-wide average intensity of 150 people per acre and a maximum single acre intensity of 450 people per acre, with 15 percent of the land to remain open. The land uses planned for the portions of the Plan Area within Compatibility Zone C1 are Village Medium Density Residential (VMDR), Village Low Density Residential (VLDR), VRR, Village Center (VC), Village Commercial (VCOMM), VO/C, VBP, Public/Quasi-Public (PQP), VOSP, and VOSN. Compatibility Zone C1 allows an average density of 0.5 du/ac, which meets the Village Rural Residential density range of 0.2-0.5 du/ac. However, this same average density requirement is less than the VLDR range of 3.0-5.9 du/ac and the VMDR range of 6.0-12.9 du/ac. However, these affected VMDR and VLDR segments are actually small portions of much larger VMDR and VLDR parcels that are primarily located within Compatibility Zone C2, where multi-family residential uses are normally compatible. The V5SP would ensure that appropriate residential

densities are maintained within the affected VMDR and VLDR parcels. In Compatibility Zone C1, all of the following commercial, office, and service uses are conditional in the Placer County ALUCP, as long as intensity criteria are met: major retail (with a capacity greater than 300 people per building) has a conditional FAR of 0.38, local retail (with a capacity less than or equal to 300 people per building) has a conditional FAR of 0.59, eating and drinking establishments have a conditional FAR of 0.21, limited retail and wholesale has a conditional FAR of 0.86, offices have a conditional FAR of 0.74, and personal and miscellaneous services have a conditional FAR of 0.69. VC has a target FAR of 0.35, VO/C has a target FAR of 0.30, and both VCOMM and VBP have target FARs of 0.25. The V5SP would ensure that the FAR standards with each of the commercial uses remain within the maximum allowable intensities for Compatibility Zone C1. There are also VOSP and VOSN designations that are located within Compatibility Zone C1. Natural land areas are normally compatible, and water bodies and agriculture uses are conditionally permitted within Compatibility Zone C1, as long as new features that attract birds are avoided or mitigation measures consistent with FAA regulations are achieved. The V5SP, however, would not add new features to these designated areas, but would instead maintain and preserve existing, natural open space features, which mainly include Auburn Ravine.

Portions of Areas A, B, D, E, F, I, and J, fall within Compatibility Zone C2. Compatibility Zone C2 allows a maximum site-wide average intensity of 300 people per acre and a maximum single acre intensity of 1,200 people per acre, with 15 percent of the land to remain open. The land uses planned for the portions of the Plan Area within Compatibility Zone C1 are VMDR, VLDR, VRR, VCOMM, VO/C, VBP, Elementary School (PQP-ES), Park (VPARK), Village Linear Park (VLP), VOSP, and VOSN. Compatibility Zone C2 designates single-family and multi-family residential uses as normally compatible. In Compatibility Zone C2, local retail (with a capacity less than or equal to 300 people per building) is normally compatible. All of the following commercial, office, and service uses are conditional in the Placer County ALUCP, as long as intensity criteria are met: major retail (with a capacity greater than 300 people per building) has a conditional FAR of 0.76, eating and drinking establishments have a conditional FAR of 0.41, limited retail and wholesale has a conditional FAR of 1.72, offices have a conditional FAR of 1.48, and personal and miscellaneous services have a conditional FAR of 1.38. As mentioned earlier, VO/C has a target FAR of 0.30 and both VCOMM and VBP have target FARs of 0.25. The V5SP would ensure that the FAR standards with each of the commercial uses remain within the maximum allowable intensities for Compatibility Zone C2. There are also VPARK, VLP, VOSP, and VOSN designations that are located within Compatibility Zone C2. Local parks and outdoor non-group recreation uses are normally compatible in Compatibility Zone C2, but outdoor group recreation uses (such as athletic fields) are conditional as long as intensity criteria are met and the uses are not intended primarily for children. The parks planned within Compatibility Zone C2 would involve athletic fields that would be utilized by both children and adults. Natural land areas are normally compatible, and water bodies and agriculture uses are conditionally permitted within Compatibility Zone C2, as long as new features that attract birds are avoided or mitigation measures consistent with FAA regulations are achieved. The V5SP, however, would not add new features to these designated areas but would instead maintain and

preserve existing natural open space features, which contain portions of Auburn and Markham Ravine.

Portions of Areas A, F, G, H, I, and J fall within Compatibility Zone D. Compatibility Zone D has no maximum site-wide average intensity or maximum single acre intensity limits and no open land requirement either. The land uses planned for the portions of the Plan Area within Compatibility Zone D are Village High Density Residential (VHDR), VMDR, VLDR, Village Country Estate (VCE), VRR, Village Mixed Use (VMU), VC, VCOMM, High School (PQP-HS), Middle School (PQP-MS), PQP-ES, PQP, VPARK, VLP, VOSP, VOSN, and Village Open Space Ag/Preserve (VSOA). All single-family and multi-family residential uses are normally compatible within Compatibility Zone D, and all educational and institutional facilities (apart from an indoor major assembly facility with a capacity greater than or equal to 1,000 people, which is conditional) are also normally compatible. All commercial uses are normally compatible within Compatibility Zone D, and apart from hazardous materials production and storage and heavy industrial uses, which are conditional, other industrial, manufacturing, and storage uses are normally compatible within Compatibility Zone D. Parks, recreation areas, and natural land areas are normally compatible, and water bodies, agriculture, and livestock, are conditionally permitted within Compatibility Zone D, as long as new features that attract birds are avoided or mitigation measures consistent with FAA regulations are achieved. The V5SP, however, would not add new features to these designated areas but would instead maintain and preserve existing natural open space features, which contains portions of Auburn and Markham Ravine. Outdoor major assembly facilities (with a capacity greater than or equal to 1,000 people) are conditionally permitted within Compatibility Zone D as well. The V5SP does not specifically envision a large outdoor assembly facility of this type, but would ensure that the concentration levels required within Compatibility Zone D are met.

Overall, the Specific Plan states that land uses would become or remain compatible with the standards established in the Placer County ALUCP. As established in the V5SP, the proposed land use plan would respond to these development constraints by locating specific commercial, office and rural residential uses within the more restrictive compatibility zones. As a result, the V5SP would remain consistent not conflict with the compatibility zones or the Placer County ALUCP. Therefore, this impact would be **less than significant**.

Area A

Several portions of Area A currently contain agricultural practices involving rice production, which is known to be a major bird attractant. As discussed earlier, birds, along with other wildlife, are a major hazard that can affect airspace safety in and around Lincoln Regional Airport. The V5SP would result in the conversion of most of these agricultural land uses into more urban uses, thus reducing the amount of rice production and bird attractants in the vicinity of Area A and the Plan Area as a whole.

The Placer County ALUCP does not encourage development of detention basins within any of the airport compatibility zones. As a result, the Placer County ALUCP designates detention and retention ponds as a conditional use. However, in accordance with FAA AC 150/5200-33B, detention ponds would be designed, engineered, constructed, and maintained for a maximum 48-hour detention period after the design storm and remain completely dry between storms. Additionally, per AC 150/5200-33B, because the Lincoln Regional Airport serves piston-powered aircraft, the V5SP would also comply with the two perimeter requirements for wildlife hazards: (1) a separation of 5,000 feet from the airport runway to any land use that could attract wildlife hazards (namely, bird strikes) and (2) a separation of five statute miles from the AOA to any land use that could cause hazardous wildlife movement into or across the approach or departure space at the airport.²⁸

Upon completion of this segment, seven detention basins would be built in Area A that would total approximately 21 acres (see Table 3.9-1). Area A comprises approximately 799 acres. Much of Area A is currently used for agricultural uses, including rice fields, which create a number of attractants across the segment. While Area A would include 21 acres of detention basins, a potential wildlife attractant, a significantly larger portion of the existing agricultural lands would be developed and would no longer contain as many wildlife attractants, mainly bird strike hazards. The addition of these detention basins would not be significant in relation to the site and would not increase the amount of bird strike hazards in the vicinity of Lincoln Regional Airport beyond existing conditions. Impacts from potential bird strikes would be **less than significant**.

As seen in Figure 3.9-1, the entirety of Area A is located within Compatibility Zones C1, C2, and D at Lincoln Regional Airport, as outlined in the Placer County ALUCP. Any land use that creates visual or electronic hazards to flight is incompatible across all compatibility zones.

Portions of Area A fall within Compatibility Zone C1. Compatibility Zone C1 allows a maximum sitewide average intensity of 150 people per acre and a maximum single acre intensity of 450 people per acre, with 15 percent of the land to remain open. The land uses planned for the portions of Area A within Compatibility Zone C1 are VMDR, VC, VCOMM, PQP, VOSP, and VOSN. Compatibility Zone C1 allows an average density of 0.5 du/ac, which is less than the VMDR range of 6.0-12.9 du/ac. However, these affected VMDR segments are actually small portions of a much larger VMDR parcels that are primarily located within Compatibility Zone C2, where multi-family residential uses are normally compatible. The V5SP would ensure that appropriate residential densities are maintained within the affected VMDR parcels in Area A. In Compatibility Zone C1, all of the following commercial, office, and service uses are conditional in the Placer County ALUCP, as long as intensity criteria are met: major retail (with a capacity greater than 300 people per building) has a conditional FAR of 0.38, local retail (with a capacity less than or equal to 300 people per building) has a conditional FAR of 0.59, eating and drinking establishments have a conditional FAR of 0.21, limited retail and wholesale has a conditional

²⁸ Ibid.

FAR of 0.86, offices have a conditional FAR of 0.74, and personal and miscellaneous services have a conditional FAR of 0.69. VC has a target FAR of 0.35 and VCOMM has a target FAR of 0.25. The V5SP would ensure that the FAR standards with each of the commercial uses remain within the maximum allowable intensities for Compatibility Zone C1. There are also VOSP and VOSN designations that are located within Compatibility Zone C1. Natural land areas are normally compatible, and water bodies and agriculture uses are conditionally permitted within Compatibility Zone C1, as long as new features that attract birds are avoided or mitigation measures consistent with FAA regulations are achieved. The V5SP, however, would not add new features to these designated areas, but would instead maintain and preserve existing, natural open space features, which mainly includes Auburn Ravine.

Portions of Area A fall within Compatibility Zone C2. Compatibility Zone C2 allows a maximum sitewide average intensity of 300 people per acre and a maximum single acre intensity of 1,200 people per acre, with 15 percent of the land to remain open. The land uses planned for the portions of the Plan Area within Compatibility Zone C1 are VMDR, VLDR, VCOMM, PQP-ES, VPARK, VLP, VOSP, and VOSN. Compatibility Zone C2 designates single-family and multi-family residential uses as normally compatible. In Compatibility Zone C2, local retail (with a capacity less than or equal to 300 people per building) is normally compatible. All of the following commercial, office, and service uses are conditional in the Placer County ALUCP, as long as intensity criteria are met: major retail (with a capacity greater than 300 people per building) has a conditional FAR of 0.76, eating and drinking establishments have a conditional FAR of 0.41, limited retail and wholesale has a conditional FAR of 1.72, offices have a conditional FAR of 1.48, and personal and miscellaneous services have a conditional FAR of 1.38. As mentioned earlier, VCOMM has a target FAR of 0.25. The V5SP would ensure that the FAR standards with each of the commercial uses remain within the maximum allowable intensities for Compatibility Zone C2. There are also VPARK, VLP, VOSP, and VOSN designations that are located within Compatibility Zone C2. Outdoor major assembly facilities (capacity greater than or equal to 1,000 people) or large assembly facilities (capacity between 300 and 999 people) which include spectator-oriented outdoor stadiums, amphitheaters, fairgrounds, race tracks, water parks, and zoos are conditionally permissible if intensity criteria are met. The intensity criteria impose a maximum sitewide average intensity (people/acre) of 300, and a maximum single-acre intensity of 1,200. The 71-acre Regional Sports Park when fully utilized is expected not to exceed those intensity requirements.

Local parks and outdoor non-group recreation uses are normally compatible in Compatibility Zone C2, but outdoor group recreation uses (such as athletic fields) are conditional as long as intensity criteria are met and the uses are not intended primarily for children. The parks planned within Compatibility Zone C2 would involve athletic fields that would be utilized by both children and adults. Within Compatibility Zone C2, all outdoor major facilities, as well as outdoor group recreational facilities are conditionally permitted. In addition, natural land areas and local parks such as neighborhood parks and playgrounds are normally compatible, while water bodies and agriculture uses are conditionally permitted within Compatibility Zone C2, as

long as new features that attract birds are avoided or mitigation measures consistent with FAA regulations are achieved. The V5SP, however, would not add new features to these designated areas but would instead maintain and preserve existing natural open space features, which contain portions of Auburn and Markham Ravine.

The electronic message center proposed to be located adjacent to SR 65 and within the Regional Sports Park would also be within Compatibility Zone C2. During nighttime illumination, this electronic message center would not cause distraction for pilots because it would be positioned to face auto traffic on SR 65 and not face up towards aircraft. Since the electronic message center would be located within Compatibility Zone C2, it would be designed and constructed meet all height and lighting requirements. For additional analysis of potential light and glare caused by the electronic message center, see Section 3.1, Aesthetics and Visual Quality.

Portions of Area A fall within Compatibility Zone D. Compatibility Zone D has no maximum sitewise average intensity or maximum single acre intensity limits and no open land requirement either. The land uses planned for the portions of the Plan Area within Compatibility Zone D are VMDR, VLDR, VCE, VC, PQP-ES, VPARK, VLP, VOSP, and VOSN. All single-family and multi-family residential uses are normally compatible within Compatibility Zone D, and all educational and institutional facilities (apart from an indoor major assembly facility with a capacity greater than or equal to 1,000 people, which is conditional) are also normally compatible. All commercial uses are normally compatible within Compatibility Zone D, and apart from hazardous materials production and storage and heavy industrial uses, which are conditional, other industrial, manufacturing, and storage uses are normally compatible within Compatibility Zone D. Parks, recreation areas, and natural land areas are normally compatible, and water bodies, agriculture, and livestock, are conditionally permitted within Compatibility Zone D, as long as new features that attract birds are avoided or mitigation measures consistent with FAA regulations are achieved. The V5SP, however, would not add new features to these designated areas, but would instead maintain and preserve existing, natural open space features, which contain portions of Auburn and Markham Ravine. Outdoor major assembly facilities (with a capacity greater than or equal to 1,000 people) are conditionally permitted within Compatibility Zone D as well. Area A does not specifically envision a large outdoor assembly facility of this type, but would ensure that the concentration levels required within Compatibility Zone D are met.

Overall, the Specific Plan illustrates that land uses within Area A would become or remain compatible with the standards established in the Placer County ALUCP. As established in the Specific Plan, the land use plan for the V5SP would respond to these development constraints by locating specific commercial, office and rural residential uses within the more restrictive compatibility zones. As a result, development of Area A would remain consistent and not conflict with the compatibility zones or the Placer County ALUCP. Therefore, this impact would be **less than significant**.

Mitigation Measure

None required.

Impact 3.9-6: The proposed project would not result in a safety hazard for people residing or working in the project area for a project within the vicinity of a private airstrip.

Full Specific Plan and Area A

There currently is an approximately one-mile long and 60-foot wide easement for a private airstrip within the Plan Area that is used a few times a year for crop dusting activities on the boundary line of Areas A and I. (See Figure 3.11-1 in Section 3.11, Land Use and Planning.) Despite the limited use of this airstrip easement, if left in place, its usage could cause a safety hazard to new, nearby residents by spraying pesticides on or around new homes or placing new homes in or near an active flight path. Therefore, this impact would be **potentially significant**.

Mitigation Measure**Mitigation Measure 3.9-6 (Full Specific Plan and Area A)**

Prior to issuance of the first building permit within 500 feet of the airstrip, the project applicant shall purchase and/or relocate the easement and upon purchase or relocation, abandon the airstrip by filing the appropriate documentation with the Placer County Recorder's Office.

Impact Significance After Mitigation: Implementation of Mitigation Measure 3.9-6 would ensure that no safety hazards to new Plan Area residents would occur due to the use of the airstrip easement because it would ensure the removal and abandonment of the airstrip prior to the construction of new homes within hazard distance (500 feet) of the airstrip. As a result, this impact would be considered **less than significant**.

Impact 3.9-7: The proposed project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Full Specific Plan and Area A

As discussed in the Regulatory Setting and Impact 3.9-1, the City of Lincoln maintains a coordinated system of hazard mitigation planning on a more regional level with the Placer County LHMP, which was last adopted in 2010 and is anticipated to be updated in early 2017. The Placer County LHMP provides the City of Lincoln with detailed and unified guidance for mitigating hazard events, and ensures a coordinated response on a more local, Placer County-wide level with surrounding jurisdictions in the event of an emergency related to hazards. In addition, the 2006 EOP provides the City of Lincoln with a City-specific planning framework through which

agencies that serve the City can mitigate and respond to disasters and emergencies that occur within the City. The V5SP is expected to be constructed over several phases, and each of the 10 areas (A-J) can be built independent of each other, following the initial area, Area A. The V5SP would provide emergency access through the entire Plan Area during the operation phase with a variety of access points and streets, and would not impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan. Construction within the Plan Area could result in temporary lane closures on certain roads, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services. This could create a **potentially significant impact**.

Mitigation Measures

Mitigation Measure 3.9-7 (Full Specific Plan and Area A):

Prior to construction, the applicant for any phase of construction shall require the construction contractor(s) to prepare and enforce a traffic control plan to minimize traffic impacts on all roadways at and near the work site affected by construction activities. This traffic control plan shall reduce potential traffic safety hazards and ensure adequate access for emergency responders. The applicant and construction contractor(s) shall coordinate development and implementation of this traffic control plan with the City of Lincoln, as appropriate. To the extent applicable, this traffic control plan shall conform to the 2014 California Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control).²⁹ The traffic control plan shall provide, but not be limited to, the following elements:

- *Circulation and detour plans to minimize impacts on local road circulation during road and lane closures. Flaggers and/or signage shall be used to guide vehicles through and/or around the construction zone.*
- *Identifying truck routes designated by Placer County, where applicable. Haul routes that minimize truck traffic on local roadways shall be utilized to the extent possible.*
- *Sufficient staging areas for trucks accessing construction zones to minimize the disruption of access to adjacent existing public right-of-ways.*
- *Controlling and monitoring construction vehicle movement through the enforcement of standard construction specifications by onsite inspectors.*
- *Scheduling truck trips outside the peak morning and evening commute hours to the extent possible.*

²⁹ California Department of Transportation. 2014. California Manual on Uniform Traffic Control Devices: 2014 Edition. November 7, 2014.

- *Limiting the duration of road and lane closures to the extent possible.*
- *Storing all equipment and materials in designated contractor staging areas on or adjacent to the worksite, such that traffic obstruction is minimized.*
- *Implementing roadside safety protocols. Advance “Road Work Ahead” warning and speed control signs (including those informing drivers of State legislated double fines for speed infractions in a construction zone) shall be posted to reduce speeds and provide safe traffic flow through the work zone.*
- *Coordinating construction administrators of police and fire stations (including all fire protection agencies). Operators shall be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures, where applicable.*
- *Repairing and restoring affected roadway rights-of way to their original condition after construction is completed.*

Impact Significance after Mitigation: With the implementation of Mitigation Measure 3.9-7, the risk of interference with emergency vehicle access during the construction within the Plan Area would be minimized by requiring all construction work to adhere to the aforementioned traffic control plan. The specified elements outlined in this mitigation measure would ensure that construction within the Plan Area would not impose a significant amount of interference or impairment with emergency response mechanisms or emergency vehicle access. This mitigation measure would additionally ensure that the traffic control plan would be in conformance with the 2014 California MUTCD, Part 6 (Temporary Traffic Control). Based on these actions and requirements listed above, this impact would be reduced to a **less-than-significant level**.

Impact 3.9-8: The proposed project could expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Full Specific Plan and Area A

The Plan Area is composed largely of agricultural land uses and contains some perennial grasslands and oak woodlands, which could still be vulnerable to wildland fire. The V5SP would convert this area to primarily developed uses, which would minimize the amount of grassland and woodland areas as well as increase the amount of irrigated land less susceptible to fire. Wildland fires could still occur in grasslands within and adjacent to the Plan Area. Although the V5SP would result in an increased population residing in and visiting the Plan Area, where fires could occur, existing and future fire protection services would be provided to serve the Plan Area. See Section 3.14, Public Services and Recreation, for a detailed discussion of fire services. With a vast majority of the Plan Area planned to have buildings and irrigated landscaping features, a

substantial amount of the Plan Area would become less prone to wildfire. Thus, the impact would be **less than significant**.

Mitigation Measure

None required.

Cumulative Impacts

The cumulative context for the possibility of hazardous materials, contaminated soils, and wildland fires is the buildout of the 2050 Lincoln General Plan, because the City of Lincoln is responsible for offering each of these services within its city limits. For airport safety, the cumulative context is the area within and surrounding the compatibility zones of the Lincoln Regional Airport Land Use Compatibility Plan Compatibility Zones contains, which includes portions of the City of Lincoln and unincorporated areas of Placer County to the north and northeast of the Plan Area.

Impact 3.9-9: The proposed project, combined with other cumulative development, could cumulatively create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

As mentioned in Impact 3.9-1, construction and operation of the V5SP would involve the limited transport, use, and disposal of hazardous materials during both the construction and operation phases. Caltrans and the CHP oversee the regulation of the roadways used for the transport of hazardous materials, and DTSC regulates the use of hazardous materials. Future developments for the buildout of the Lincoln 2050 General Plan, including the V5SP, would involve the limited transport, use, and disposal of hazardous materials during both the construction and operation phases but would be required to adhere to the regulatory requirements for the safe transport, use, and disposal of hazardous materials during both the construction and operation periods, and subsequently obtain the proper permitting from the appropriate regulatory agencies. Most of the transport of hazardous materials would occur on the major roadways, SR 65 (located in the northern portion of the Plan Area), and the rail line 1.5 miles to the east of the Plan Area, and would continue to occur regardless of the V5SP. The rail line, in particular, passes through several built out portions of Lincoln currently, including the Downtown area. Based on the nature of the land uses envisioned within the Plan Area and other similar villages, the increased usage of hazardous materials would be minimal, and even more minimal in relation to the City of Lincoln. Thus, this would cause a **less-than-significant cumulative** impact.

Mitigation Measure

None required.

Impact 3.9-10: The proposed project, combined with other cumulative development, could increase upset and accident conditions resulting in the release of hazardous materials into the environment.

As mentioned in Impact 3.9-2, the V5SP would involve the construction of residential, commercial, and public facilities on a largely agricultural and undeveloped area to the west of Lincoln, and small portions of hazardous materials would be used during the construction and operation phases. There is a chance that improper management of these materials could lead to an accidental release. This same probability would exist for any of the proposed villages to be built as part of the 2050 General Plan buildout. In addition, there is a possibility that an accident involving an unintentional or intentional release of hazardous materials along SR 65, which passes through northern portions of the Plan Area, or the rail line, which is located to the east of the Plan Area, could occur regardless of whether or not the V5SP is developed. As described in the Regulatory Setting, the U.S. EPA and the DTSC manage the regulation of hazardous materials handling and disposal. Further, the City coordinates hazard mitigation planning regionally through the Placer County LHMP, which provides detailed and unified guidance for mitigation hazard events, and ensures a more local, Placer County-wide response with surrounding jurisdictions in the event of an emergency related to hazards. Based on the nature of the land uses envisioned within the Plan Area and the regulatory measures to ensure coordinated and effective hazard response in the event of an accidental release, the increased likelihood of there being an accidental release of hazardous materials would be minimal and not significant, and additionally minimal in relation to the City of Lincoln. Thus, this would cause a **less-than-significant cumulative** impact.

Mitigation Measure

None required.

Impact 3.9-11: The proposed project, combined with other cumulative development, could increase emissions of hazardous materials, substances, or waste within one-quarter mile of existing and proposed schools.

As described in Impact 4.9-3, the V5SP, upon completion, would involve residential and commercial land uses and public and open space facilities on a largely agricultural and undeveloped area to the west of the City of Lincoln. The construction of the V5SP would not involve any hazardous materials apart from such construction related products as fuels, solvents, cements and adhesives, paints, cleansers, degreasers, and asphalt mixtures, which are all commonly used in construction. Upon operation, uses within the Plan Area would involve the use of some common household and commercial hazardous materials that would be managed in accordance with existing regulatory requirements similar to the land uses across the six other villages envisioned for the 2050 General Plan buildout. As a result, emissions would be minimized and unlikely to combine to become cumulatively considerable.

Currently, the Lincoln High School farm property along the western edge of the Plan Area is the only school site located within the Plan Area. Creekside Oaks Elementary School is approximately 0.4 miles to the northeast of the Plan Area (closest to Area B) and Lincoln Crossing Elementary School is approximately 0.9 miles to the east of the Plan Area (closest to Area J). The closest existing schools are therefore more distant than a quarter of a mile from the Plan Area. However, upon buildout of the V5SP, there would be five schools in the Plan Area—three elementary schools, one middle school, and one high school built within the Plan Area (see Figure 2-4 in Chapter 2, Project Description). Overall, no hazardous emissions are expected to occur resulting from the implementation of the V5SP or the implementation of future projects relating to the buildout of the 2050 General Plan. Further, the amount of hazardous materials that would be used throughout the Plan Area and would not combine to create a significant increase in the amount of exposure to persons on or off site to hazardous materials or emissions. In addition, as mentioned in Impacts 3.9-1 and 3.9-2, compliance with the several regulations related to the transport and handling of hazardous materials, along with cooperation with the numerous agencies associated with hazard mitigation, would ensure that the any potential risk associated with the increased use of hazardous materials during construction and operation of these projects would be minimized. As a result, the existing schools surrounding Village 5 and the five schools to be built as part of the V5SP would be minimally affected by hazardous materials as the 2050 General Plan buildout occurs. Therefore, this would be considered a **less-than-significant cumulative** impact.

Mitigation Measure

None required.

Impact 3.9-12: The proposed project, combined with other cumulative projects, could develop on areas included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List), which could resulting in a hazard to the public or the environment.

As discussed above, the Plan Area does not include any identified sites with known historical releases. In general, sites with documented releases of hazardous materials are site-specific and generally do not combine to become cumulatively considerable. Sites with documented releases are overseen by PCDEHS, DTSC, or the Regional Water Quality Control Board to ensure that the appropriate cleanup occurs, if necessary, such that no threat to human health or the environment remains. Due to the site-specific nature of previously known hazardous materials sites, the cumulative impact would be **less than significant**.

Mitigation Measure

None required.

Impact 3.9-13: The proposed project, combined with other cumulative development, could result in a safety hazard for people residing or working within an airport land use plan.

As discussed in Impact 3.9-5, the Plan Area contains mainly agricultural uses and is located in several portions of Compatibility Zones A, B1, C1, C2, and D at Lincoln Regional Airport, as outlined in the Placer County ALUCP. The City of Lincoln also envisions six other villages, some of which are similar in size to the V5SP, to develop in the vicinity of the city limits and the Plan Area in accordance with the 2050 City of Lincoln General Plan. Surrounding the eastern, northern, and western edges of Lincoln Regional Airport, portions of the City of Lincoln (which is developed), Village 3, Special Use District A (SUD-A), and Village 4 would be within the remaining portions of the compatibility zones. The surrounding agricultural uses in SUD-A and Villages 3 and 4 currently contain a significant amount of wildlife attractants. None of SUD-A or Villages 3 and 4 have been developed or planned at a site-specific level, and these areas are also predominantly agricultural. It is anticipated that these areas would be annexed and developed within the City of Lincoln upon buildout by 2050.

Concerning wildlife hazard attractants and movement outlined in FAA AC 150/5200-33B, while the Plan Area would include 72.0 acres of detention basins, a potential wildlife attractant, a significantly larger portion of the existing agricultural lands would be developed and would no longer contain as many wildlife attractants, mainly bird strike hazards, as previously. Further, it is anticipated that the future development of SUD-A and Villages 3 and 4, as with the other proposed Villages for Lincoln, would involve the conversion of a substantial amount of agricultural uses and wildlife hazards to a variety of residential, commercial, and public uses that would generally minimize the amount of wildlife hazards within the compatibility zones for Lincoln Regional Airport. The addition of detention basins within surrounding development would therefore not be significant in relation to the wider area surrounding Lincoln Regional Airport and would not increase the amount of bird strike hazards in the vicinity of Lincoln Regional Airport beyond existing conditions. Therefore, this would be considered a **less-than-significant cumulative** impact.

As mentioned earlier, the Plan Area is covered by portions of Compatibility Zones A, B1, C1, C2, and D at Lincoln Regional Airport, as outlined in the Placer County ALUCP, and SUD-A and Villages 3 and 4 cover the remaining portions of the compatibility zones. The Specific Plan states that land uses would become or remain compatible with the standards established in the Placer County ALUCP. Further, it is anticipated that the development of SUD-A and Villages 3 and 4 would remain consistent with the requirements outlined in each of the compatibility zones. As established in the V5SP, the proposed land use plan would respond to these development constraints by locating specific commercial, office and rural residential uses within the more restrictive compatibility zones. Therefore, this would be considered a **less-than-significant cumulative** impact.

Mitigation Measure

None required.

Impact 3.9-14: The proposed project, combined with other cumulative development, could impair the implementation of or physically interference with an adopted emergency response plan or emergency evacuation plan.

Construction of the V5SP would generate additional traffic and could cause limited road closures in the Plan Area. The City of Lincoln also envisions six other villages, some of which are similar in size to the V5SP, to develop in the vicinity of the city limits and the Plan Area in accordance with the 2050 City of Lincoln General Plan. Each of these other projects could result in similar traffic issues and lane closures across different areas near the City of Lincoln and the Plan Area. While construction schedules would ensure that short-term transportation impediments are temporary and minimal in nature, with appropriate detouring and alternatives for site access to be in place throughout the construction period, emergency vehicle access could still be precluded in certain portions of the Plan Area and other proposed villages. The limitation of emergency vehicle access is considered a significant cumulative impact. Due to the size of the V5SP, the potential obstruction of emergency vehicle access near the Plan Area would be considerable, therefore resulting in a **potentially significant cumulative** impact.

Mitigation Measure

Mitigation Measure 3.9-14 (Full Specific Plan and Area A):

Implement Mitigation Measure 3.9-7.

Impact Significance after Mitigation: With the implementation of Mitigation Measure 3.9-14, the risk interference with emergency vehicle access during the construction within the Plan Area would be minimized by requiring all construction work to adhere to the aforementioned traffic control plan. The specified elements outlined in this mitigation measure would ensure that construction within the Plan Area would minimize interference or impairment with emergency response mechanisms or emergency vehicle access, thereby ensuring safe access in concert with the other proposed developments for the greater buildout of the Lincoln 2050 General Plan. This mitigation measure would additionally ensure that all areas of the Plan Area, during construction, would be in conformance with the 2014 California MUTCD, Part 6 (Temporary Traffic Control). See Section 3.15, Transportation and Circulation, for specific transportation and circulation issues relating to the V5SP, and a traffic control measures for the construction and operation stages of the V5SP. Based on these actions and requirements listed above, the V5SP's contribution to the impact would be mitigated to a less-than-significant level, and the impact would be reduced to a **less-than-significant cumulative** level.

Impact 3.9-15: The proposed project, combined with other cumulative development, could result in a significant cumulative exposure of people or structures to a significant risk of loss, injury or death involving wildland fires.

The Plan Area, much like the other six villages envisioned for the 2050 General Plan buildout, is located within a largely rural area of Placer County to the immediate south, west, and north, with much of the land to the east and further south developed. Like the Plan Area, these areas are located in a local responsibility zone and not located in a moderate, high, or very high fire hazard severity zone.³⁰ Fire services and fire suppression personnel are available to serve the Plan Area and the surrounding area from Placer County Fire Department, Lincoln Fire Department, Roseville Fire Department, and Rocklin Fire Department. Due to the fact that none of the Plan Area, surrounding areas, or the villages proposed are located within a high or very high fire hazard zone, and coupled with the fact that adequate fire suppression services currently and would in the future exist, the V5SP would result in a **less-than-significant cumulative** impact.

Mitigation Measure

None required.

³⁰ California Department of Forestry and Fire Protection, 2007. 2007. Fire Hazard Severity Zones in SRA–Placer County: Adopted by CAL FIRE on November 7, 2007. Sacramento, CA. November 7, 2007.

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CHAPTER 4

Other CEQA Required Considerations

4.1 Introduction

Section 15126 of the State CEQA Guidelines requires that all phases of a project must be considered when evaluating its impact on the environment, including planning, acquisition, construction, and operation. Further, the evaluation of significant impacts must consider direct and reasonably foreseeable indirect effects of the project over the short-term and long-term. As part of this analysis, the EIR must identify (1) significant environmental effects of the proposed project, (2) mitigation measures proposed to minimize significant effects, (3) significant environmental effects that cannot be avoided if the proposed project is implemented, (4) significant irreversible environmental changes that would result from implementation of the proposed project, (5) growth-inducing impacts of the proposed project, (6) potential urban decay effects caused by economic competition created by the project, and (7) alternatives to the proposed project.

Chapter ES, Executive Summary, and Sections 3.1 through 3.15 provide a comprehensive presentation of the proposed project's environmental effects, proposed mitigation measures, and conclusions regarding the level of significance of each impact both before and after mitigation.

Chapter 6, Alternatives, presents a comparative analysis of alternatives to the proposed project.

The other CEQA-required analyses described above are presented in this section.

4.2 Significant and Unavoidable Impacts

Section 15126.2(b) of the State CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures. Project-specific and cumulative impacts that cannot be avoided if the project is approved as proposed include:

4.2.1 Project-Specific Significant and Unavoidable Impacts

Impact 3.1-1: Implementation of the proposed project would impact scenic vistas in the project area.

Impact 3.1-2: Implementation of the proposed project would alter the existing visual character or quality of the Plan Area and its surroundings.

Impact 3.1-3: The proposed electronic message center would alter the existing visual character or quality of the Plan Area and its surroundings.

Impact 3.1-4: Implementation of the proposed project would introduce light and glare into the project area.

Impact 3.2-1: Implementation of the proposed project would result in conversion of Important Farmland to non-agricultural use.

Impact 3.3-2: Construction of land uses under the proposed project would generate criteria pollutant emissions that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions. (V5SP and Area A)

Impact 3.3-3: Operational activities associated with development under the proposed project would result in emissions of criteria air pollutants at levels that would substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions. (V5SP and Area A)

Impact 3.3-6: Land uses to be developed under the proposed project would result in exposure of substantial persons to objectionable odors. (V5SP and Area A)

Impact 3.5-1: Construction and operation of the proposed project would result in a cumulatively considerable increase in greenhouse gas (GHG) emissions that could conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing GHG emissions.

Impact 3.6-1: Implementation of the proposed project would adversely impact historic architectural resources directly through demolition or substantial alteration, or indirectly through changes to historical setting. (V5SP only)

Impact 3.11-1: Implementation of the proposed project would conflict with adjacent land uses.

Impact 3.11-2: Implementation of the proposed project would create conflicting land uses within the Plan Area.

Impact 3.12-2: Construction of the proposed project would result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Impact 3.12-3: Implementation of the proposed project would expose noise-sensitive land uses to noise levels in excess of the City of Lincoln General Plan noise standard or result in a substantial permanent increase in ambient transportation-related noise above existing levels. (V5SP only)

Impact 3.12-6: Implementation of the proposed project would expose on-site noise-sensitive land uses to noise generated by commercial, educational and recreational activities in excess of the City of Lincoln General Plan noise standard or result in an increase in ambient noise.

Impact 3.13-1: The proposed project would induce substantial population growth in an area.

Impact 3.15-1: Implementation of the proposed project would increase traffic levels at intersections under the City of Lincoln's jurisdiction operating at an acceptable LOS under existing conditions.

Impact 3.15-3: Implementation of the proposed project would increase traffic levels at future City of Lincoln intersections in Village 5.

Impact 3.15-4: Implementation of the proposed project would increase traffic levels at intersections under the County of Placer's jurisdiction.

Impact 3.15-6: Implementation of the proposed project would increase traffic levels at intersections maintained by Caltrans.

4.2.2 Cumulative Significant and Unavoidable Impacts

Impact 3.1-6: Implementation of the proposed project would contribute to cumulative impacts on scenic vistas in the Plan Area.

Impact 3.1-7: Implementation of the proposed project would contribute to cumulative changes in the visual character of areas surrounding the Plan Area.

Impact 3.1-8: Implementation of the proposed project would contribute to a cumulative increase in light and glare in the vicinity of the Plan Area.

Impact 3.2-4: Implementation of the proposed project would contribute to cumulative conversion of Important Farmland to non-agricultural use.

Impact 3.2-5: Implementation of the proposed project would contribute to cumulative pressure to convert agricultural land to non-agricultural use.

Impact 3.3-7: The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Impact 3.6-5: The proposed project, in conjunction with past, present, and reasonably foreseeable future projects, would result in significant cumulative impacts on historic architectural resources.

Impact 3.12-9: Increases in traffic from the proposed project in combination with other development, would result in cumulatively considerable noise increases.

Impact 3.13-3: The proposed project would cumulatively induce substantial population growth in an area, either directly (by proposed new homes and businesses) or indirectly (through the extension of roads or other infrastructure).

Impact 3.15-14: Implementation of the proposed project would contribute to cumulative traffic levels at intersections under the City of Lincoln's jurisdiction operating at an acceptable LOS under cumulative no project conditions.

Impact 3.15-16: Implementation of the proposed project would contribute to cumulative traffic levels at future City of Lincoln intersections in Village 5.

Impact 3.15-17: Implementation of the proposed project would contribute to cumulative traffic levels at intersections under the County of Placer's jurisdiction.

Impact 3.15-18: Implementation of the proposed project would contribute to cumulative traffic levels at intersections under the City of Roseville's jurisdiction.

Impact 3.15-19: Implementation of the proposed project would contribute to cumulative traffic levels at intersections maintained by Caltrans.

Impact 3.15-20: Implementation of the proposed project would contribute to cumulative traffic levels on study roadway segments in Placer County.

Impact 3.15-22: Implementation of the proposed project would contribute to cumulative traffic levels on study freeway facilities maintained by Caltrans.

Impact 3.16-7: The proposed project would contribute to cumulative increases in demand for water supply that could result in the need for new or expanded treatment, storage or conveyance facilities.

Impact 3.16-8: Implementation of the proposed project and other cumulative development would contribute to cumulative additional wastewater flows that would result in the expansion or construction of new facilities.

4.3 Significant Irreversible Environmental Effects

Under CEQA, an EIR must analyze the extent to which a project's primary and secondary effects would generally commit future generations to the allocation of nonrenewable resources and to irreversible environmental damage (State CEQA Guidelines sections 15126.2(c); 15127). Specifically, section 15126.2(c) states:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Development of the proposed project would result in the dedication of the Plan Area to mixed-use urban development, thereby precluding other conflicting uses for the lifespan of the project. As described in Section 3.2, Agriculture and Forestry Resources, implementation of the proposed project would convert agricultural land to urban uses. Once agricultural land is graded, paved, and developed, the loss of agricultural capabilities would be permanent as it is highly unlikely that the land would be restored for use as open space or agricultural land.

The State CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the project. While the proposed project could result in the use, transport, storage, and disposal of hazardous wastes during construction and operation, as described in Section 3.9, Hazards/Hazardous Materials, all activities would comply with applicable state and federal laws related to hazardous materials, which significantly reduce the likelihood and severity of accidents that could result in irreversible environmental damage.

Implementation of the proposed project would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts are intensification of the visual character of the project site (see Section 3.1, Aesthetics and Visual Quality), increased generation of pollutants from vehicle travel and stationary operations (see Section 3.3, Air Quality), and the short-term commitment of non-renewable and/or slowly renewable natural and energy resources, such as water resources during construction activities (see Section 3.16, Utilities and Infrastructure). Operations associated with future uses would also consume natural gas and electrical energy. Although the overall level of resource consumption on the project site would increase, resource consumption would be minimized through adherence to building codes

and General Plan policies. The unavoidable consequences of the proposed project are described in the appropriate sections in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures.

As is described in Section 3.7, Energy Resources, resources that would be permanently and continually consumed by project implementation include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources. With respect to operational activities, compliance with all applicable building codes, including Title 24 Energy Efficiency Standards, as well as mitigation measures, planning policies, and standard conservation features, would ensure that natural resources are conserved to the maximum extent possible. It is also possible that, over time, new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the reliance upon nonrenewable natural resources. Nonetheless, construction activities related to the proposed project would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment.

Over the past decade, our understanding of global climate change and the role that communities can play in addressing it has grown tremendously. There is large scientific consensus that recent increases in global temperatures are associated with corresponding increases of greenhouse gases (GHGs). This temperature increase is beginning to affect regional climates and is expected result in impacts to our region and the world. Climate change has profound implications for the availability of the natural resources on which economic prosperity and human development depend. Although the relative contribution of the proposed project to global warming is not currently possible to determine, this issue is explored in Section 3.5, Climate Change.

4.4 Growth-Inducing Effects

As required by section 15126.2(d) of the State CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth. The purpose of this section is to evaluate the potential growth-inducing effects resulting from the implementation of the proposed project in the City of Lincoln, and throughout the region. Additional analysis of the growth-inducing effects of the proposed project is provided in Section 3.13, Population, Employment, and Housing.

In general, a project may foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of the new access to an area; a change in zoning or general plan amendment approval);

or economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion, etc.). These circumstances are further described below:

- **Elimination of Obstacles to Growth:** This refers to the extent to which a proposed project removes infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of project approval.
- **Economic Effects:** This refers to the extent to which a proposed project could cause increased activity in the local or regional economy. Economic effects can include such effects as the Multiplier Effect. A “multiplier” is an economic term used to describe inter-relationships among various sectors of the economy. The multiplier effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect acknowledges that the onsite employment and population growth of each project is not the complete picture of growth caused by the project.

4.4.1 Elimination of Obstacles to Growth

The elimination of either physical or regulatory obstacles to growth is considered a growth-inducing effect. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including growth and development policies, could result in new growth.

The proposed project would develop residential, commercial/office, recreational, school, public, and park/open space uses in the City of Lincoln’s Sphere of Influence. The project site is currently used for agricultural operations and contains very few homes and no commercial, office, or retail operations. The primary existing growth obstacles in the project area include:

- Limited roadway access within and adjacent to the Plan Area;
- Lack of public stormwater drainage facilities within the Plan Area;
- Limited potable water infrastructure;
- Limited wastewater conveyance infrastructure;

Implementation of the proposed project would result in the elimination of these growth obstacles because it would construct and install the infrastructure necessary to serve development of the proposed project. However, development of the Plan Area was anticipated in the City of Lincoln’s General Plan. While implementation of the proposed project would include infrastructure required for the proposed project, some infrastructure systems, such as wastewater, would be anticipated to be utilized by future development. The additional areas anticipated to utilize infrastructure installed for the proposed project would include areas within the City’s Sphere of Influence and anticipated for development in the City’s General Plan. While project-related infrastructure would be used for future development, future development areas have

already been identified by the City in the City's General Plan. As such, the proposed project would not facilitate unforeseen growth.

4.4.2 Economic Effects

Increased Demand on Secondary Markets

Development (residential or employment-generating uses) typically generates a secondary or indirect demand for other goods and services. The secondary or economic change can be quantified by an economic multiplier, which is an economic term used to describe the interrelationships among various sectors of the economy. One aspect of the multiplier effect is the potential catalytic force a project can have on satellite or follow-up development because it creates a demand or market to be served (e.g., neighborhood commercial development around residential development).

In addition to the direct employment growth generated by the proposed project, additional local employment could be generated through what is commonly referred to as the "multiplier effect." The multiplier effect refers to the secondary economic effects caused by spending from project-generated residents and employees. The multiplier effect tends to be greater in regions with larger diverse economies due to a decrease in the requirement to import goods and services from outside the region, as compared to the effects of spending in smaller economies where goods and services must be imported from elsewhere.

Two different types of additional employment are tracked through the multiplier effect. *Indirect* employment includes those additional jobs that are generated through the expenditure patterns of residents and direct employment associated with the project. For example, future residents and workers in the office, hotel and retail portions of the proposed project would spend money in the local economy, and the expenditure of that money would result in additional jobs. Indirect jobs tend to be in relatively close proximity to the places of employment and residence.

The multiplier effect also calculates *induced* employment. Induced employment follows the economic effect of employment beyond the expenditures of the employees within the proposed project area to include jobs created by the stream of goods and services necessary to support businesses within the project area. For example, when a manufacturer buys products or sells products, the employment associated with those inputs or outputs are considered induced employment. Another example is when an employee from the project goes out to lunch, the person who serves the project employee lunch holds a job that was indirectly caused by the proposed project. When the server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered induced.

The multiplier effect also considers the secondary effect of employee expenditures. Thus, it includes the economic effect of the dollars spent by those employees who support the employees of the project.

As discussed in Section 3.13, Population, Employment, and Housing, implementation of the proposed project would add approximately 4,602,600 square feet of commercial/office space, three elementary schools, a middle school, a high school, and public facilities. This development would result in approximately 11,296 new jobs within the Plan Area.

As is presented below, in **Table 4-1**, the indirect and induced employment growth associated with the increased employment from the proposed project would add an additional 4,611 jobs to the regional economy, bringing the total increase in jobs associated with the proposed project to 15,906 jobs.

**TABLE 4-1.
INDIRECT AND INDUCED EMPLOYMENT**

Employment Type	Direct Employment	Indirect		Induced		Total Indirect + Induced Employment	Total Employment
		Type I Multiplier ¹	Change from Direct	Type II Multiplier ¹	Change from Indirect		
Retail	5,589	1.154972	866	1.356762	1,128	1,994	7,583
Office	5,656	1.182174	1,030	1.459057	1,566	2,596	8,252
Hotel	50	1.205765	10	1.411799	11	21	71
Total	11,295		1,906		2,705	4,611	15,906

NOTES:

1. IMPLAN 2013 dataset for Placer County.

SOURCE: ALH Urban & Regional Economics, 2015. Village 5 Specific Plan Area Urban Decay Analysis. April 2015; ESA, 2015.

New employees in the Plan Area would create an economic incentive for future projects by increasing the surrounding property values. Under the multiplier effect, additional dollars spent for goods and services within the Plan Area are eventually re-spent on additional goods and services. Therefore, the anticipated increase in spending on secondary and support services could increase growth pressures in the region. However, given the existing urbanization of the rest of the City of Lincoln, most goods and services are already available and would be expanded in response to regional growth, not solely as a result of the proposed project.

Increased Pressure on Land Use Intensification

Unforeseen future development can be spurred by the construction of certain projects that have the effect of creating unique and currently unmet market demands, or by causing economic incentives for future projects by substantially increasing surrounding property values. These types of impacts are most often identified for projects developed in areas that are currently lacking a full-spectrum of economic activity. For example, newly developing office areas may be lacking in a full range of support commercial uses; this support commercial demand can cause increased pressure for rezones or general plan amendments aimed at providing adequate land to accommodate businesses seeking to serve the unmet demand.

Implementation of the proposed project would result in the construction of employment-generating uses, including commercial, retail, office, schools, public services, and recreation uses. Approximately 11,296 new jobs would be created within the Plan Area. Because there are many areas surrounding the Plan Area that are agricultural land and not currently developed, these areas could be subject to increased development pressure.

While implementation of the proposed project could increase pressure for intensification of land uses adjacent to the Plan Area, most of the surrounding area is already planned for future development. As shown in Figure 2-2 in Chapter 2, Project Description, SUD A continues from within the Plan Area north of the site along SR 65 and is within the City's Sphere of Influence. SUD C is located due south of the Plan Area. The City's General Plan identifies SUD designation as an area for master planned, mixed commercial projects.¹ Because these SUD areas are already anticipated for future development, the likelihood that implementation of the proposed project would create land use intensification pressure in this area would be minimal.

Adjacent along the northern boundary of the Plan Area, Village 4 is also within the City's Sphere of Influence. The southwest corner of the Plan Area includes a small portion of land within Village 6. The remainder of Village 6 is located south and southwest of the Plan Area. Like the proposed project, the Village designation is intended to promote mixed-use residential projects focused around a Village core that contains a mix of high-density residential and neighborhood commercial uses.² Because these Village areas are already anticipated for future development, the likelihood that implementation of the proposed project would create land use intensification pressure in this area would be minimal.

Other areas surrounding the plan are already developed or have been approved for development. The City's wastewater treatment and reclamation facility is located adjacent to the southeast edge of the Plan Area, at the southeastern quadrant of the intersection of Moore Road and Fiddymont Road. Part of the wastewater treatment plan facility and SUD C are within the 1-mile buffer area of the Western Regional Sanitary Landfill (WRSL) located at the southeast quadrant of the intersection of Athens Avenue and Fiddymont Road. Land uses within the buffer area are limited to avoid conflicts between the landfill and surrounding uses. Because these areas adjacent to the Plan Area have been developed, have been approved for development, or would be subject to development limitations, the likelihood that implementation of the proposed project would create land use intensification pressure in this area would be minimal.

4.4.3 Environmental Effects of Induced Growth

While economic and employment growth in the Plan Area is an intended consequence of the proposed project, growth induced directly and indirectly by the proposed project could also affect the greater Sacramento region. Potential effects caused by induced growth in the region could

¹ City of Lincoln, 2008. City of Lincoln 2050 General Plan – Land Use and Community Design Element. Adopted March 25, 2008. p. 4-7.

² Ibid. pp. 4-6 through 4-7.

include: increased traffic congestion; increased air pollutant emissions; loss of agricultural land and open space; loss of habitat and associated flora and fauna; increased demand on public utilities and services, such as fire and police protection, water, recycled water, wastewater, solid waste, energy, and natural gas; and increased demand for housing.

Specifically, an increase in housing demand in the greater Sacramento region could cause significant environmental effects as new residential development would require governmental services, such as schools, libraries, and parks. Indirect and induced employment and population growth would further contribute to the loss of open space because it would encourage conversion to urban uses for housing, commercial space, and infrastructure.

4.5 Urban Decay

4.5.1 Economic and Social Effects

Under CEQA, economic or social effects are not considered significant effects on the environment. Rather, these effects are considered in the context of their potential linkage or indirect connections between the proposed project and physical environmental effects. More specifically, the direction for treatment of economic and social effects is stated in section 15131(a) of the State CEQA Guidelines:

Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on physical changes.

A social or economic change also may be considered in determining whether the physical change is significant (State CEQA Guidelines section 15382).

4.5.2 Urban Decay

As used in CEQA, the term “urban decay” was introduced by the Court of Appeal in the case entitled *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184 (*Bakersfield Citizens*). In that decision, the court required the City of Bakersfield to revise and recirculate two EIRs for two proposed Wal-Mart stores because the documents both failed to address the possible indirect physical effects flowing from the direct economic effects of the two projects. Though the court did not expressly define “urban decay,” the court seemed to equate the concept with a “chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake.”³ For the purposes of this assessment and consistent with the above described court decision, “urban decay” is not simply a

³ *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, p. 1204.

condition in which buildings become vacant as businesses compete with each other in the normal course of the market-based economy, nor is it a condition where a building may be vacated by one business or use and reused by a different business or for alternative purposes. Rather, under CEQA “urban decay” is defined as physical deterioration of properties or structures that is so prevalent, substantial, and lasting a significant period of time that it impairs the proper utilization of the properties and structures, and the health, safety, and welfare of the surrounding community. Physical deterioration includes abnormally high business vacancies, abandoned buildings, boarded doors and windows, parked trucks and long-term unauthorized use of the properties and parking lots, extensive or offensive graffiti painted on buildings, dumping of refuse or overturned dumpsters on properties, dead trees and shrubbery, and uncontrolled weed growth or homeless encampments.

The conditions that were present in the *Bakersfield Citizens* case are distinguishable from the conditions related to the proposed project. In the former, two proposed Wal-Mart stores were proposed just a mile apart, and the question of urban decay related to the potential adverse effect of additional retail supply on existing retail stores in the same market area. In the case of the proposed project, the conditions are different in that the City of Lincoln has been recognized as one of the fastest growing cities and has the potential to support millions of square feet of additional commercial and industrial space.⁴

This assessment of the potential for urban decay is based on the *Village 5 Specific Plan Area Urban Decay Analysis* prepared by the urban economics firm ALH Urban & Regional Economics. The full report is contained in Appendix I of this EIR.

4.5.3 Methodology

The analysis of potential urban decay associated with implementation of the proposed project is based on an assessment of the market supply of, and demand for, retail/commercial space included in the proposed project. The analysis involved the following steps:

- Conduct site and field reconnaissance
- Estimate volume of existing Lincoln retail and office inventory
- Identify Lincoln General Plan-based maximum retail, office, and industrial potential
- Estimate internally-generated retail demand
- Characterize Lincoln’s retail, office, and hotel bases
- Project long-term resident and regional retail supportability
- Assess regional supportability remaining after full development of the proposed project
- Identify urban decay implications of the proposed project’s retail space
- Assess the context of the proposed project’s planned and office and hotel space

⁴ ALH Urban & Regional Economics, 2015. *Village 5 Specific Plan Area Urban Decay Analysis*. April 2015. p. 2.

The analysis assumes four incremental time periods of development: Phases 1 and 2, completed by 2022; Phase 3, completed by 2024; Phase 4A, completed by 2032; and Phase 4B, comprising buildout, at 2042. As cited in the Specific Plan, development is anticipated to take up to 25 years. Therefore, ALH Economics assumes Phase 1 development commences by 2017. While the timing of Phases 1 and 2 are identical, Phase 1 will comprise all residential development while Phase 2 will comprise all retail development, i.e., Village Commercial.

A complete description of the market analysis can be found in Appendix I.

4.5.4 Retail Market Area

The definition of the market area for the proposed project is based on the principle that most consumers will travel to the shopping destination most convenient to their homes given the type of goods available. A market area is the geographic area from which the majority of a business' demand is anticipated to originate. For the purposes of this analysis, the project primary market area is defined as property falling with three zip codes: 95648 (Lincoln), 95681 (Sheridan), and 95692 (Wheatland).⁵ Thus, the primary market area includes the City of Lincoln, its Sphere of Influence, and the nearby communities of Sheridan and Wheatland.

The analysis prepared by ALH included identification of a secondary market area to capture consumers that may patronize Lincoln businesses from areas outside of the primary market area. Because the City of Lincoln shares a border with the City of Rocklin, there are some areas of Rocklin that are closer to commercial nodes in Lincoln than in Rocklin. Additionally, new commercial nodes within Lincoln may be able to intercept shoppers from the Marysville/Yuba City area that would normally travel to Roseville for some commercial needs. Therefore, the secondary market area includes the following zip codes: 95677 and 95765 (Rocklin); 95901 (Marysville); 95961 (Olivehurst and Plumas Lake CDPs); and 95991 and 95993 (Yuba City).⁶

4.5.5 Retail Base Characterization

The analysis characterized the retail sales base of the proposed project's primary market area with regard to the extent to which it attracts or leaks retail demand generated by its household base. Toward this end, the analysis uses a retail model that estimates retail spending potential for an area based upon household counts, income, and consumer spending patterns. The model then computes the extent to which the area is or is not capturing this spending potential based upon taxable sales data.

For any study area, retail categories in which spending by locals is not fully captured are called "leakage" categories, while retail categories in which more sales are captured than are generated by residents are called "attraction" categories. This type of analysis is generically called a retail demand, sales attraction, and spending leakage analysis, or retail gap analysis. Generally,

⁵ Ibid., p. 25.

⁶ Ibid., p. 32.

attraction categories signal particular strengths of a retail market while leakage categories signal particular weaknesses. The model used for the analysis compares projected spending to actual sales.

The two primary inputs for conducting this type of analysis are estimated retail sales for the area under study and estimated retail demand generated by the area households. The proposed project's primary market area includes areas for which the California State Board of Equalization (BOE) does not publish taxable sales data. To account for this lack of published data, ALH Economics developed an approach to estimating the sales in the full primary market area, inclusive of the zip codes encompassing areas outside of Lincoln. This approach, which is documented in Exhibits B-7 through B-10 of Appendix I, entailed obtaining retail sales estimates in the three primary market area zip codes from Nielson, a national resource for demographic estimates and projections, and then benchmarking the Sheridan and Wheatland zip code areas to the Lincoln zip code area, to obtain estimates of the share of sales in the Sheridan and Wheatland zip codes relative to the Lincoln zip code. The resulting increments by retail sector were applied to the Lincoln retail sales base predicated upon BOE data to derive an estimate of total primary market area sales.

For the analysis, ALH Economics assumed the following 2014 demographic characteristics:⁷

- 22,573 households
- Average household income of \$77,166
- Estimated household retail spending rate of 33 percent of average income

As calculated in Exhibits 20 and 21 of Appendix I, total 2014 household spending within the primary market area is \$574,823,928. Due to the small amount of retail space within the primary market area, specifically the City of Lincoln, leakage is estimated to total \$109,830,084, or 19.1 percent. This data indicates that much of the primary market area's retail spending leaves the primary market area and is spent elsewhere. Based upon the dollar amount of leakage for each retail category, ALH Economics calculated the area of retail space that could be supported by existing households, determining that approximately 730,000 square feet of retail space could be supported based on 2014 spending data (see Exhibit 22 of Appendix I). This indicates a strong opportunity for new, regional-serving retail outlets to recapture sales leakage and increase the local retail base.

4.5.6 Future Household Retail Demand

To determine the extent to which primary market demand could support the portion of the proposed project's retail space not supported by proposed project residents and employees, ALH Economics prepared a projection of population growth and retail demand. The number of primary market area households (excluding the proposed project) is expected to grow by 14,340

⁷ Ibid., p. 28.

households between 2014 and 2042.⁸ At full buildout (approximately year 2042), the proposed project would add 7,746 new households to the primary market area. Combined, the proposed project and expected growth in the primary market area would total 22,086 new households between 2014 and 2042.

Based on the estimated increase in the number of households, new growth within the primary market area (excluding the proposed project) would generate \$365.2 million in retail spending.⁹ The amount of retail space that could be supported by the additional household spending (excluding the proposed project) would total 980,000 sf by 2042.¹⁰ Adding the amount of retail that could currently be supported (730,000 sf) to the amount that would be supported by future planned growth (980,000 sf), the primary market area could support an additional 1,710,000 sf of retail use by 2042.

ALH Economics calculated the area of retail that could be supported by development of the proposed project. Based on an ultimate buildout of 7,746 new households under the proposed project, implementation of the proposed project could support 623,400 sf of retail use by 2042.¹¹ Together with the retail area that could be supported by existing growth projections, implementation of the proposed project would help support 2,333,400 sf of new retail space.¹²

In the long term, beyond the 2042 proposed project buildout assumption, there will be the potential for generation of yet more primary market area demand. Using the same assumptions regarding retail demand generation as for the primary market area growth to 2042, ALH Economics estimated the additional amount of retail demand that could be generated as a result of full population buildout of the City of Lincoln. The additional households that could be generated under full buildout of the City of Lincoln would be 7,489 households. As depicted in Exhibit 27 of Appendix I, these additional households would have the potential to support an additional 510,000 sf of retail space.¹³

The secondary market areas would also contribute to the area of retail development that could be supported. From existing development in the Yuba City/Marysville area, demand would support 270,000 sf of retail space.¹⁴ From existing development in the Rocklin area, demand would support 170,000 sf of retail space.¹⁵ For new development in these secondary areas, the analysis assumes capture of fifty percent of new demand.¹⁶ Based on growth projections for the Yuba

⁸ Ibid., p. 30.

⁹ Ibid., p. 31.

¹⁰ Ibid.

¹¹ Ibid., Table 10, p. 31.

¹² Ibid.

¹³ Ibid., p. 31.

¹⁴ Ibid., p. 33.

¹⁵ Ibid.

¹⁶ Ibid., Exhibit 34, note 7.

City/Marysville and Rocklin areas, Lincoln would capture 440,000 sf and 145,000 sf of retail demand, respectively.¹⁷

Overall, based on ALH's calculations of existing and future retail demand from the proposed project, the primary market area, and the secondary market area, the retail demand for Village 5 retail would be 3,125,900 sf (see **Table 4-2**).

**TABLE 4-2.
RETAIL DEMAND (SF) FOR VILLAGE 5 RETAIL**

Project-Generated Demand	390,900
Primary Market Area Demand	1,710,000
Secondary Market Existing Demand Capture	440,000
Secondary Market Future Demand Capture	585,000
Total	3,125,900

SOURCE: ALH Urban & Regional Economics, 2015. Village 5 Specific Plan Area Urban Decay Analysis. April 2015. Exhibit 34. (see Appendix I of this EIR)

4.5.7 Proposed Project Impact Analysis

The total retail area that would be developed under the proposed project would be 3,105,220 sf.¹⁸ Based on demand from residents and employees of the proposed project, the amount of demand from the primary and secondary market areas needed to support the proposed project is 2,484,176 sf.¹⁹ As calculated in **Table 4-3** below, implementation of the proposed project would result in an unmet demand of 641,724 sf.

**TABLE 4-3.
SUPPLY AND DEMAND FINDINGS**

Village 5 Retail Requiring Support from Primary and Secondary Areas	2,484,176 sf
Total Demand	3,125,900 sf
Remaining Unmet Demand	641,724 sf

SOURCE: ALH Urban & Regional Economics, 2015. Village 5 Specific Plan Area Urban Decay Analysis. April 2015. Exhibit 34. (see Appendix I of this EIR)

4.5.8 Urban Decay Implications

As presented earlier, urban decay is defined as extended long term business vacancies, directly or indirectly resulting in physical deterioration to properties or structures that is so prevalent, substantial, and lasting a significant period of time that it impairs the proper utilization of the properties and structures, and the health, safety, and welfare of the surrounding community.

¹⁷ Ibid., Exhibit 34.

¹⁸ Ibid.

¹⁹ Ibid.

Physical deterioration includes abandoned buildings, boarded doors and windows, parked trucks and long-term unauthorized use of the properties and parking lots, extensive or offensive graffiti painted on buildings, dumping of refuse or overturned dumpsters on properties, dead trees and shrubbery, and uncontrolled weed growth. Based on the preceding descriptions regarding urban decay, therefore, ALH Economics' analysis examined whether there was sufficient market demand to support the proposed project's planned retail space without affecting existing retailers so severely such as to lead to a downward spiral toward decay of the existing physical environment.

Prevailing Retail Market Conditions

Once a sleepy bedroom community, Lincoln experienced unprecedented growth in the late 1990s and early 2000s. Much of this growth was sparked by the development of Del Webb Sun City Lincoln Hills. Breaking ground in 1999, this community for residents 55 and older now contains over 6,500 homes. In addition, city annexation and new home construction in parts of South Lincoln spurred population growth.

Like many older towns in California, Lincoln boasts an Historic Downtown District. This district is characterized by specialty merchants and small-town charm. The Downtown consists of many civic and community uses, restaurants, services, offices, and a mix of both "mom and pop" and chain retail. The retail stock in South Lincoln is newer, spurred by the development of the 2000s.

Sheridan is a small census designated place approximately eight miles northwest of Lincoln. This is a relatively rural community with no commercial center. There is one small convenience store in Sheridan with a range of general merchandise including groceries, a meat and deli counter, hardware, sporting goods, and auto supplies. Wheatland, which is 11.5 miles northwest of Lincoln, has more substantial retail offerings, but all primarily local serving.

At the end of the 3rd quarter 2014, Lincoln's vacancy rate was 9.1 percent, which is generally on par with the Sacramento region's average of 8.7 percent.²⁰ Lincoln's retail vacancy rate is lower than in Rocklin and Marysville, both of which have larger retail bases, but is higher than the vacancy rate in nearby Roseville and somewhat more distant Yuba City, both of which also have larger retail bases, considerably larger in the case of Roseville.²¹ Thus, within the immediate region, Lincoln's retail base is within the mid-range of market performance. Moreover, a vacancy rate between 5.0 percent and 10.0 percent is typically considered to be indicative of a healthy retail market. Therefore, with a vacancy rate of 9.1 percent, Lincoln's market appears to be overall operating within industry accepted healthy parameters. Furthermore, a survey of recent lease activity indicates that Lincoln's retail market is characterized by a modest amount of momentum, generally maintaining market stability.²²

²⁰ Ibid., p. 37.

²¹ Ibid.

²² Ibid.

Village 5 Retail Impacts and Urban Decay Determination

The retail demand analysis reflected in the preceding analysis assumes that the proposed project's regional-serving retail space successfully meets the regional shopping needs of Lincoln, other primary market area, as well as secondary market area households. It further assumes that development in both Wheatland and Lincoln occurs consistent with respective General Plan provisions. Preparation of the demand capture rate analysis assumed that the proposed project's retail space would become the dominant regional-serving retail node in Lincoln as intended by the project applicant. This means the proposed project will need to attract retailers not already present in Lincoln as well as Yuba City, Marysville, or Rocklin, ensuring the ability to draw demand from these secondary market area locations. Based on these assumptions, the demand analysis presented in Exhibit 34 of the ALH urban decay analysis document (see Appendix I) indicated that inclusive of all demand components, successful absorption of the proposed project retail space could result in yet additional market area demand remaining that could be satisfied by other regional-serving retail outlets. If this occurs, then development of the proposed project alone is not anticipated to negatively impact existing retailers to the extent that increased retail vacancy will occur, especially vacancy sustained over a long period of time. Accordingly, development of the proposed project alone is not anticipated to cause or contribute to urban decay and deterioration.

Cumulative Projects

Project-based urban decay analyses typically also consider cumulative impacts associated with other planned and proposed projects. They generally include consideration of projects that are under construction, approved for development, or engaged in the entitlements process. These are the type of projects that generally have a foreseeable expectation of being developed during the same development horizon as the project under study given knowledge and information about their development cycle status.

For this analysis, ALH Economics identified nine projects in Lincoln with prospective retail development by the year 2042. These planned projects, identified in Exhibit 36 of Appendix I, represent development near existing retail nodes in Lincoln as well as more peripheral locations. Altogether, the nine projects listed in Exhibit 36 of Appendix I have the potential for 1,262,675 square feet of retail space. ALH Economics adjusted this amount to account for tertiary market support, resulting in the assumption of 1,108,193 sf.²³

The primary market area for the proposed project also includes the communities of Sheridan and Wheatland. There are no known retail projects planned for the Sheridan area of Placer County. There are some pending and approved development projects in Wheatland, but these are mostly residential projects. Wheatland Planning officials suggest that retail space that might be developed would likely be local-serving.²⁴ As such, the long-term retail demand projection for

²³ Ibid., p. 42.

²⁴ Ibid., p. 41.

Wheatland, and the portion of demand included in the analysis for the proposed project, is more regional-retail oriented, and thus any retail development included in identifiable projects currently known to the City of Wheatland would not comprise cumulative projects relative to the proposed project. There may be future potential for more regional-serving retail development in Wheatland, depending upon the type and timing of future transportation improvements, but such development is speculative at present, and thus does not warrant consideration in this analysis.

The secondary market area includes the communities of Marysville, Yuba City, and Rocklin. There are no known projects with retail components planned in the City of Marysville. In Yuba City, there are five projects identified with a total 114,470 sf. In Rocklin, there are six projects identified, totaling 362,407 sf. As shown in Exhibit 37 of Appendix I, the total supply expected from the secondary market would total 476,877 sf. For the secondary market areas, the analysis assumes only 50 percent of the cumulative retail in this area will be competitive with the proposed project's retail development.²⁵

The summary of the primary and secondary market area cumulative retail projects is presented in **Table 4-4**.

**TABLE 4-4.
SUMMARY OF CUMULATIVE FUTURE RETAIL**

Location	Retail Area (sf)
City of Lincoln and Sphere of Influence	1,108,193 sf
Marysville	0 sf
Yuba City	57,235 sf
Rocklin	181,204 sf
Total	1,346,631 sf

SOURCE: ALH Urban & Regional Economics, 2015. *Village 5 Specific Plan Area Urban Decay Analysis*. April 2015. Exhibit 38. (see Appendix I of this EIR)

In the cumulative context, demand for retail includes demand generated by the proposed project and within the primary and secondary market areas, residual demand from the proposed project, and cumulative Lincoln retail and office projects employee retail demand. As calculated in Table 4-2 above, the total project and market area demand totals 3,125,990 sf. Residual project demand includes demand generated by proposed project households and employees estimated to be captured by local retail outlets not associated with the proposed project, and totals 232,500 sf.²⁶ The cumulative Lincoln retail and office employees retail demand totals 93,371 sf.²⁷

²⁵ Ibid., p. 42.

²⁶ Ibid., Exhibit 39, note 7.

²⁷ Ibid., Exhibit 40.

Overall, based on ALH's calculations, the forecasted retail demand for Village 5 retail would be 3,451,771 sf, as shown in **Table 4-5**.

**TABLE 4-5.
FORECASTED RETAIL DEMAND (SF)**

Project and Market Area Demand	3,125,900 sf
Residual Project Demand	232,500 sf
Cumulative Lincoln Retail and Office Projects Employees Retail Demand	93,371 sf
Total	3,451,771 sf
SOURCE: ALH Urban & Regional Economics, 2015. <i>Village 5 Specific Plan Area Urban Decay Analysis</i> . April 2015. Exhibit 39. (see Appendix I of this EIR)	

Table 4-6 summarizes the supply and demand findings related to cumulative retail analysis.

**TABLE 4-6.
CUMULATIVE IMPACTS OF VILLAGE 5 AND CUMULATIVE RETAIL PROJECTS**

Retail Supply	
Village 5 Retail Space Supported by Primary and Secondary Market Areas	2,484,176 sf
Cumulative Retail	1,346,631 sf
Total	3,830,807 sf
Forecasted Retail Demand	
Project and Market Area Demand	3,125,900 sf
Residual Project Demand	232,500 sf
Cumulative Lincoln Retail and Office Projects Employees Retail Demand	93,371 sf
Total	3,451,771 sf
Additional Demand Needed to Support Cumulative Retail Supply	379,036 sf
SOURCE: ALH Urban & Regional Economics, 2015. <i>Village 5 Specific Plan Area Urban Decay Analysis</i> . April 2015. Exhibit 39. (see Appendix I of this EIR)	

As shown in Table 4-6, the cumulative project impacts generally indicate there could be insufficient demand to support 379,036 sf of the planned projects. This 379,036-square-foot figure comprises the amount of retail space that could experience sales impacts if Village 5 and the cumulative projects perform at the sales levels projected in the analysis (see Exhibit 22 of Appendix I). If sales performance is lower, then the amount of sales impact would decline, meaning that demand would be expressed over a larger volume of retail space. In addition, if the rate of Village 5 and cumulative project development is slower, or if the amount of Village 5 retail developed is less, then these impacts would also decline. Alternatively, some of this vacancy could comprise unfilled space at any of the planned retail projects, pending stabilized occupancy. Of note, given the proposed project's anticipated regional-serving retail orientation, any of the impacts that occur are likely to be among regional- or sub-regional serving retailers, and not the smaller specialty type retailers such as are located in Downtown Lincoln. In this

context, Downtown is relatively insulated, both in terms of the composition of its retail base as well as its location central to the existing and future population base of Lincoln.

Not all these impacts would necessarily be experienced in Lincoln, as not all of the cumulative additions to retail supply are located in Lincoln. However, including the proposed project, over 90 percent of the planned supply of new retail included in the analysis would be located in Lincoln. This, therefore, suggests that the bulk of the impacts would likewise be experienced in Lincoln. Other factors contributing to the majority of these impacts likely being experienced in Lincoln include the relative distribution of household growth, with Lincoln comprising the highest growth area, and the proposed project's anticipated regional-serving retail orientation, with ultimately the bulk of this type of space being located in Lincoln relative to the market area, especially the primary market area.

By the time the proposed project and other planned supply are developed, Lincoln's retail base will be much greater than the current 1.6 million sf. With the addition of the proposed project and the identified planned supply in Lincoln, the retail base in Lincoln could increase to close to 6,000,000 sf. It is speculative to estimate what the vacancy rate would be for this retail base. However, ALH's analysis indicates that if all of the proposed project's impacts are experienced in Lincoln, then the retail vacancy rate in Lincoln could increase by 6.4 percent.²⁸

Typically, a retail vacancy rate of 5 percent to 10 percent is considered indicative of a healthy retail market, with space available to facilitate movement and expansion within the marketplace. Vacancy rates in excess of 10 percent are not optimal, as they indicate potential market weaknesses. However, vacancy rates above 10 percent are not necessarily indicators of a struggling or eroding retail market, as many other factors are also relevant to this determination, such as the underlying condition of the real estate base and its functionality.

Even with the potential increase in retail market vacancy attributable to the proposed project's and cumulative additions to the retail supply, the Lincoln retail market could be operating within traditional expectations of a healthy retail market at the proposed project's anticipated buildout year of 2042. Thus, the cumulative project impacts may not comprise an excessive impact on the market. Further, in the long run, the estimated 379,036 sf retail area surplus could be offset by additional retail demand generated by accelerated full residential buildout of Lincoln, which was previously estimated to generate yet additional demand for 510,000 square feet of retail space.²⁹ Consideration of this potential additional retail demand would more than offset the demand deficit, resulting in a modest amount of unmet demand totaling 130,964 sf.³⁰ With this offset,

²⁸ Ibid., p. 44.

²⁹ Ibid., Exhibit 27.

³⁰ Ibid., p. 45.

therefore, the estimate of unmet demand would result in no significant impact, and would not create a hardship on the retail base.³¹

Urban Decay Determination

In developing a conclusion regarding the potential for urban decay, ALH Economics relied on the definition presented earlier in this chapter, which focused on determining whether or not physical deterioration would likely result from the development of the proposed project's retail space, as well as other cumulative retail developments.

ALH Economics believes the cumulative project findings indicate that more retail is planned in Lincoln than will likely be sustainable by 2042, the proposed project's assumed buildout year. This is specially the case if projects with unknown timeframes are also developed by 2042. Therefore, if the cumulative projects are developed based upon the project definitions included herein, the result will be the potential for a large increment of retail space in Lincoln to become vacant, or stay vacant prior to stabilization. The analysis suggests this increment could be about 379,036 square feet. If the proposed project or any of the cumulative projects achieves a larger regional demand base than assumed in the urban decay analysis report, the increment of potential vacant space will decline. While this may be possible depending upon the project's tenant mix, the potential for this to occur is indeterminate at this juncture.

Future demand offsets resulting from accelerated General Plan population buildout could reduce this level of impact to a nominal level, with no negligible resulting vacancy impacts. Even if the full estimated 379,036 sf of impacts occur, however, the result on the retail market has the potential to be within the realm of reasonable market performance. If all cumulative retail developments and the proposed project are developed consistent with the study assumptions, the maximum impact coincident with the proposed project's buildout year would be a 6.4 percent increase in Lincoln's retail vacancy rate, applied to all retail space built at that time. This amount of vacancy in itself is within the realm of market performance indicative of a healthy retail market. Thus, if the underlying vacancy rate at the time the proposed project and all cumulative projects are developed is relatively low, there is no reason to anticipate that urban decay would result.

Moreover, while Lincoln is a relatively new retail market, and the market has limited experience with long-term vacancies, the larger vacancies that have occurred in recent years appear to backfill quickly, with new tenants operational within approximately one year. Thus, at least the current retail market in Lincoln has demonstrated resiliency and the ability to backfill vacant retail spaces. While the future retail market would have a very different composition and distribution of retail space, this current performance is an indicator of the inherent ability of the Lincoln retail market to backfill vacancies and maintain properties in good physical condition. In addition, Lincoln's Municipal Code requires property owners to maintain their properties so as to

³¹ Ibid.

avoid nuisances and by creating a condition that reduces property values and promotes blight and neighborhood deterioration. Enforcement of these ordinances would help prevent physical deterioration due to any long-term closures of retail spaces. At this time, such enforcement appears effective in Lincoln, with little-to-no visible signs of litter, graffiti, weeds, or rubbish associated with existing commercial nodes in Lincoln, and with most violations resolved within 2-3 weeks. This suggests if the City of Lincoln maintains a long-term commitment to code enforcement, with the requisite staffing, that code enforcement would continue to help ensure that urban decay would not occur in Lincoln.

Overall, in light of the findings of this study, ALH Economics believes it is likely that some of the planned retail space may not get built, as there may be insufficient demand to support the space. However, the analysis suggests that if these reasonably foreseeable approved and entitled projects are built within the timeframe identified, including the proposed project, urban decay would not result, since the impacts on the future retail market are within the realm of reasonable expectations for a healthy retail market.

4.5.9 Analysis of Office and Hotel Space

In addition to providing a new homes and retail uses, the proposed project would also include a strong employment-generating component. This includes up to 1,413,880 square feet of office space and a 100-room hotel.³² This level of development would establish the Plan Area as a strong employment node, but also position the City of Lincoln within a regional context for these uses. Currently, employment in Lincoln totals approximately 9,000.³³ In 2014, employment throughout Placer County totaled approximately 154,360.³⁴ Thus, Lincoln's employment base comprises a scant 5.8 percent of the county total.

County employment data indicates that service industries make up 21 percent of the 2014 employment base, retail and office sectors comprise 17 percent of the employment base, medical comprises 13 percent of the employment base, and industrial comprises 14 percent of the employment base.³⁵ The three remaining industry sectors all comprise less than 10 percent of the county's employment base, including food at 8 percent, and government and education at 6 percent each.³⁶ Employment in all these sectors requires different types of space to conduct operations, including the type of office space that could be developed under the proposed project. Based on SACOG's employment projections, employment in Placer County is projected to increase by 30 percent between 2014 and 2032, or the time period coincident with the prospective office development by the proposed project.³⁷ This reflects a 1.5 percent annual average growth rate.

³² Ibid., p. 47.

³³ Ibid.

³⁴ Ibid., Exhibit 41.

³⁵ Ibid.

³⁶ Ibid.

³⁷ Ibid.

These growth figures indicate that the proposed project's office and hotel space would be developed in a growth-oriented environment. It is difficult to assess how Lincoln and the Plan Area would be positioned relative to the county as a whole, or other regional growth trends, especially given the long time horizon involved in the anticipated development of the Plan Area. However, the following analyses for office and hotel development provide context for assessing the regional context of the prospective office and hotel space within the Plan Area.

Office Development

The City of Lincoln currently has a limited supply of office space, estimated to total just over 300,000 sf.³⁸ This market focuses on small offices and medical services, none of which is Class A office space. Lincoln has no large, high rise, or corporate style office space options. The downtown corridor offers mixed-use options, but is primarily limited to niche type office space or medical services of a few thousand square feet. The largest available contiguous space in Lincoln is roughly 11,656 sf and is primarily focused on medical and financial services. Lincoln's existing office inventory appears to be in good to moderately good condition, with no visible signs of decay or deterioration.

Lincoln's office market is also small in comparison to other nearby communities. Office inventory data indicates that Lincoln has an average of 15 occupied square feet of office space per household (sf/hh).³⁹ In contrast, Roseville, with the most substantial office base in the nearby region, averages 167 occupied square feet of office space per household.⁴⁰ Occupied area per household averages for other cities include 94 sf/hh for Rocklin, 47 sf/hh for Yuba City, and 96 sf/hh for Marysville.⁴¹

While Lincoln's existing office base is limited, the City of Lincoln has a long-term vision for Lincoln to become more of an employment center. Given existing land use designations, there is a great deal of potential for future office development from a land use perspective, totaling in the millions of square feet. While the proposed project's office space buildout of 1.4 million square feet would comprise a substantial addition to the City of Lincoln, this level of development is well within the envelope of the City of Lincoln's prospective vision regarding office development and office-based employment growth.⁴²

The office demand projections identify 5.85 million square feet of new demand for Placer County between 2014 and 2032, with an additional 1.2 million square feet in demand projected between 2032 and 2035.⁴³ In total, office demand projections identify over 7 million square feet of new office demand.

³⁸ Ibid., Exhibit 42.

³⁹ Ibid., p. 48.

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid., pp. 48-49.

⁴³ Ibid., Exhibit 43.

While the Placer County office growth and associated space demand is substantial, the projections for Lincoln are much more modest. Between 2014 and 2035, a total of 825,000 square feet of new office demand would occur within Lincoln.⁴⁴ While based upon SACOG projections, these levels of growth do not appear to take planned Lincoln development into account. For example, the proposed project office employment estimate totals 5,656 office employees by 2032.⁴⁵ This level of employment growth substantially exceeds the SACOG-based projection of 4,600 over the same time period.⁴⁶ Thus, if growth occurs as projected by SACOG, Lincoln will need to substantially increase its share of Placer County growth, or change the trajectory of growth for the whole county.

The proposed project is not the only planned project that could change the nature of Lincoln's office base. Altogether, six identified projects total 782,114 square feet of potential office space.⁴⁷

The City of Lincoln General Plan, adopted March 25, 2008, anticipates a financially self-sustaining community of over 100,000 people, with supportive commercial and industrial development.⁴⁸ Toward this end, the General Plan's Economic Development Element established the goals, policies, and implementation programs for directing economic growth toward targeted City objectives, including increasing the jobs to housing balance, attracting targeted business, and providing for a financially self-sustaining community.⁴⁹ As noted in the General Plan, a key factor in shaping the future for Lincoln will be the niche within the regional economy Lincoln chooses to fill regarding its future development.

The City of Lincoln General Plan's Economic Development Element includes six economic development goals. One of these six goals is as follows: "Goal ED-3, To promote a diverse and balanced mix of employment and residential opportunities within the City." A parallel goal includes "Goal ED-4, To retain existing businesses and attract new businesses to provide jobs for current and future residents." Recognizing that the Great Recession hampered growth in the City of Lincoln, the City's Economic Development Committee (EDC) prepared a "Strategic Economic Development Action Plan" in February 2013. The Action Plan was created to help guide the City as it grows and emerges from the Great Recession. As stated in this plan, Lincoln's EDC had the following vision and mission:

Our Vision is to be the regional hub of economic growth for South Placer County. We will achieve this Vision through leveraging our physical and geographical assets, and our community's quality of life. We will build upon our historic downtown, the Regional Airport, in-place infrastructure, our transportation grid and our capacity for

⁴⁴ Ibid.

⁴⁵ Ibid., p. 50.

⁴⁶ Ibid.

⁴⁷ Ibid., Exhibit 44.

⁴⁸ Ibid., p. 50.

⁴⁹ Ibid.

growth. Our economic Mission is to promote a strong economic environment that encourages business retention and expansion, and new commercial and industrial growth.⁵⁰

Lincoln will need to achieve this mission if the proposed project's planned office space is developed and achieves occupancy. There is no local market precedent to support the development of this amount of space. However, the region as a whole is projected to require a substantial amount of new office space by 2032, coincident with the anticipated timing of the proposed project's office space. Lincoln will need to successfully leverage this demand to support the amount of office space planned for the Plan Area, as well as the cumulative projects. The degree to which Lincoln can achieve this will depend upon the city's economic development efforts and the overall health of the regional economy.

The most likely scenario if Lincoln does not attract the number of businesses and amount of employment necessary to support the office space planned for the Plan Area and the cumulative projects is that these projects would be downscaled or delayed, as warranted by market conditions. Given the cost of new office construction, it is unlikely that such development would occur on a speculative basis. The existing office base in Lincoln is so small and centrally located (especially relative to all future Village development that surrounds the existing core) that negative impacts on these properties to the point of resulting in urban decay and deterioration are unlikely and not foreseen. As newer, Class A space is built, the older, smaller properties would continue to be attractive to small, price sensitive operations. Such properties would provide opportunities for new businesses to evolve and incubate, at which point growth could support relocation to some of the newer Class A space in Lincoln, enabling businesses to stay local while achieving business success. Based on the preceding description of urban decay, therefore, ALH Economics concluded that the office space planned for the proposed project, as well as the cumulative projects, would not cause or contribute to office-related urban decay.⁵¹

Hotel Development

There are essentially two hotels in the City of Lincoln. One is the 87-room Holiday Inn Express located adjacent to the Lincoln Crossing Marketplace retail center. The other is the Thunder Valley Casino Resort hotel, with 297 rooms. While this resort is an Indian Casino and technically not located in the City of Lincoln, its location west of SR 65 near Twelve Bridges Drive is immediately adjacent to the City of Lincoln.

Information about the occupancy rate at the Holiday Inn Express is not available, but ALH Economics assumes occupancy is 75 percent, which is consistent with the average annual occupancy rate for the wider market that includes Lincoln, as well as Roseville and Rocklin.⁵² Visual observation, including an overnight stay at the facility, indicates that the hotel is in good

⁵⁰ City of Lincoln, 2013. Economic Development Committee 12 to 18 Month Strategic Action Plan for Economic Growth. February 12, 2013. p. 3.

⁵¹ ALH Urban & Regional Economics, 2015. Village 5 Specific Plan Area Urban Decay Analysis. April 2015. p. 51.

⁵² Ibid.

physical condition with no visible signs of litter, graffiti, weeds or rubbish. The Thunder Valley Casino Resort hotel reports that its hotel sells out virtually every night, with an effective occupancy rate of 98 percent.⁵³ This hotel is also in good physical condition.

ALH Economics prepared a hotel and supply demand analysis, assuming the addition of the proposed project's prospective 100-room hotel. This analysis is presented in Exhibit 45 of Appendix I, and is predicated upon estimates of supply, existing occupancy, and a range of projected demand growth rates. The analysis is very conservative, as it is based upon just the upper midscale Holiday Inn Express hotel. This analysis excludes the more upscale Thunder Valley Casino Resort because Thunder Valley creates its own hotel room demand, with the majority of overnight guests visiting the casino and resort. As such, it does not seem appropriate to grow this demand over time, as the Thunder Valley Casino Resort hotel is a fixed facility with no current plans to expand. However, it is possible that some overflow demand may be expressed for other nearby hotel facilities.

Based on Holiday Inn Express having 87 hotel rooms in Lincoln, there is an annual supply of 31,755 room nights in Lincoln. Applying the assumed 75 percent occupancy rate results in an annual demand estimate of 23,816 room nights in 2014. This room night of demand estimate is very conservative, as it does not take into account demand for room nights that may be satisfied by lodging facilities located outside of Lincoln because the Lincoln supply is constrained. This is instead a measure of met demand, as the hotel room supply is very limited. Thus, hotel patrons seeking a different type of lodging experience yet desiring to stay near Lincoln will seek other lodging options, most likely in Roseville. There are close to 20 hotels in Roseville and Rocklin that serve a range of market segments, all of which are relatively close to Lincoln. Thus, it is highly likely that hotel guests seeking either more upscale or more economic accommodations would direct their demand to nearby Roseville or Rocklin hotels.

ALH Economics prepared three different hotel demand trends, each based upon a different economic or demographic growth projection. These rates are 3.0 percent, 3.8 percent, and 4.5 percent. The 3.0 percent rate is considered a baseline rate, and reflects the average annual household growth rate for Lincoln as presented in Exhibit 18 of Appendix I. Hotel demand comprises several segments, including leisure, business, and tourist. Demand can be driven by household growth as well as area employment growth. Accordingly, it is relevant to consider Lincoln's employment growth rate in the forecasted hotel demand growth rate. However, as demonstrated above, the employment growth rate reflected in SACOG's employment estimates appears low, and does not even reflect the anticipated growth at the Plan Area. Thus, for analytical purposes ALH Economics assumes employment growth would further increase the demand growth rate, and thus Exhibit 45 of Appendix I also includes demand estimates based upon a growth rate 75 percent higher than the base line rate and 150 percent higher than the baseline growth rate, resulting in the 3.8 percent and 4.5 percent growth estimates. These three rates were applied to the estimated 2014 demand figure of 20,958 to result in annual demand

⁵³ Ibid.

projections from 2015 through 2032. The 2032 year was selected because it comprises the first benchmark year for Village 5 following the 2024 benchmark year when the hotel is assumed to be added to the supply.

The resulting annual demand estimates range from 32,007 to 36,986 room nights of demand in 2024, when the proposed project's hotel would be added to the supply, increasing to 40,546 to 52,598 room nights of demand in 2032.⁵⁴ Per the comment above regarding the analysis being benchmarked to meet demand, these figures should be considered minimum estimates that do not fully take into account demand that would occur if more hotel options were available in Lincoln. Moreover, additional demand may be generated by overflow demand from Thunder Valley Casino Resort.

The projected annual estimated occupancy rates by year are also depicted in Exhibit 45 of Appendix I. As these figures indicate, by 2024, the first year of occupancy for the proposed project's hotel, annual average occupancy among the two competitive hotels, including the proposed project, is estimated to range from 46.9 percent to 54.2 percent.⁵⁵ This range is projected to increase to 59.4 percent to 77.1 percent by 2032. The low rates in 2024 suggest that introduction of a 100-room hotel in 2024 may be ahead of the market demand. However, the estimated occupancy rates in 2023, ranging from 97.9 percent to 111.5 percent, are a strong indicator that some additional hotel development would be warranted, as these are rates that are not sustainable for a single hotel, especially when the average exceeds 100 percent, which means that prospective guests would be turned away on nights characterized by high demand.⁵⁶ Moreover, these occupancy rates are likely suppressed because they are benchmarked to meet demand in 2014, rather than actual demand that may include hotel stays diverted to other locations due to lack of supply.

In 2009 and 2010, at the height of the Great Recession, hotels in Roseville and Rocklin operated at average occupancy rates of 50.4 percent and 56.5 percent, respectively.⁵⁷ These rates are not too dissimilar from the conservatively projected rates in Lincoln during the initial years of the proposed project's hotel operations, especially assuming growth at the higher end of the analytical range. Occupancy in Roseville and Rocklin increased after 2010, but was maintained below 65 percent through 2012, and only recently reached the above-cited 75 percent average occupancy rate.⁵⁸ During this time, especially the 2009 and 2010 timeframe, ALH Economics is not aware of any hotels closing or becoming characterized by poor maintenance and lackluster operations. Thus, market precedence suggests that reduced occupancy in the range of 50 percent is sustainable for a limited period of time without resulting in existing hotel closure. Moreover,

⁵⁴ Ibid., p. 52.

⁵⁵ Ibid.

⁵⁶ Ibid., p. 53.

⁵⁷ Ibid.

⁵⁸ Ibid.

the occupancy rates will likely be higher than these analytically derived rates, given the potential for overflow demand from Thunder Valley.

Based on these findings, ALH Economics concludes that it is likely that the existing Holiday Inn Express in Lincoln can sustain a short term decline in occupancy without risk of closure following the anticipated 2024 introduction of the proposed project's hotel, and that it should be able to sustain physical conditions in a state of good repair, and thus not contribute to any downward spiral toward urban decay and deterioration. Moreover, as cited repeatedly above, the overall occupancy following introduction of the proposed project's hotel is very likely to be higher than projected, due to the increase in demand resulting from more lodging options. Based on the preceding description of urban decay, therefore, ALH Economics concluded that the proposed project's hotel as well as cumulative projects, of which none were identified in Lincoln, would not cause or contribute to hotel-related urban decay.⁵⁹

⁵⁹ Ibid.

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CHAPTER 5

General Plan Consistency

5.0 Introduction to the Analysis

The Lincoln City Council approved the City’s 2050 General Plan in March 2008. This chapter is provided for informational purposes and is intended to evaluate the proposed project’s consistency with the adopted General Plan goals and policies to identify any potential that could result in a *physical impact* on the environment. It should be noted that while City staff has done its best to ascertain consistency, the City Council makes the ultimate decision regarding consistency with the General Plan. For purposes of this analysis, the proposed project is the entire V5SP and accompanying GDP.

Applicable general plan goals and policies from the adopted 2050 General Plan that are relevant to the proposed project are listed below, followed by a consistency analysis.

5.1 Consistency Analysis

5.1.1 Aesthetics and Visual Quality

The following goals and policies from the 2050 General Plan are relevant to aesthetics and visual quality.

Goal LU-9 To ensure high quality appearance and harmony between existing and new uses, while avoiding repetitive style, height, and mass.

Policies

LU-9.3 **Spatial Attributes.** The City shall promote development that creates and enhances positive spatial attributes of major public streets, open spaces, cityscape and mountain sight lines and important “gateways” into the city.

LU-9.7 **Visual Compatibility.** The City shall encourage development that is visually and functionally compatible with the surrounding neighborhoods by:

- Maintaining a height and density of development that is compatible with adjacent developed neighborhoods; and
- Accenting entrances to new neighborhoods with varied landscaping, hardscaping, and signage treatment.

LU-9.8 **Integrate Natural Features.** The City shall emphasize Lincoln’s natural features as the visual framework for new development and redevelopment.

Goal LU-11 To encourage site design that is sensitive to residents' and businesses' needs for privacy, security, and buffering from other uses and activities.

Policies

LU-11.3 **Control of Light and Glare.** The City shall require that all outdoor light fixtures, including street lighting, externally illuminated signs, advertising displays, and billboards, use low energy, shielded light fixtures that direct light downward (i.e., lighting shall not emit higher than a horizontal level). Up-lighting of architectural features or landscaping can be allowed in compliance with the California Title 24 Energy Standards (as amended) and based on City design review. Additionally, the City shall continue to improve and maintain proper lighting in park facilities and fields without undue nuisance light and glare spillage on adjoining residential areas. Where public safety would not be compromised, the City shall encourage the use of low intensity lighting for all outdoor light fixtures.

Goal LU-12 To enhance the urban form while maintaining visual and physical access to distinctive environmental features.

Policies

LU-12.3 **Open Space Views.** To enhance views of hillsides, open space, and other distinctive views within the community, proposed project designs will be expected to maintain some viewsheds by regulating building orientation, height, and mass.

LU-12.4 **Creek Natural Edges.** Where feasible, the City should preserve the existing natural edges along the city's creek system and wetland areas and restore impacted creeks by planting natural vegetation.

LU-12.6 **Visual Access to Creeks and Wetland Areas.** Wherever practical, the City will encourage new development to be oriented towards adjacent creeks and wetland areas and provide visual access to these areas.

Consistency Analysis

Implementation of the proposed project would include protection and preservation of the Auburn Ravine and Markham Ravine corridors, maintaining views of these areas for public viewing and access. Roadways, neighborhoods, public spaces, and commercial centers within the Plan Area would be designed to enhance the natural and built features of the Plan Area, consistent with Policies LU-9.3, LU-9.8, LU-12.3, LU-12.4, and LU-12.6.

The proposed project would develop a broad variety of structures, including one-and two-story single-family residential units, multi-story multi-family residential units, large concrete tilt-up commercial and office structures, and open space. The proposed project would develop the highest density of structures at the project core, with uses becoming less intense and buildings more spaced out moving away from the core. Transitioning to lower density at the fringes of the project site would place single-family residential units on large (2-5 acre) lots at the project site boundaries, providing a transition to the 5-10 acre rural residential parcels that border the project site. Thus, the proposed project would be consistent with Policy LU9.7.

Lighting within the Plan Area would be designed to conform to the General Plan and applicable City ordinances and zoning regulations. During the design review process, development plans would be reviewed for consistency with lighting and design standards. Mitigation Measure 3.1-3 below would help control light and glare consistent with Policy LU-11.3.

5.1.2 Agricultural Resources

The following goals and policies from the 2050 General Plan are relevant to agricultural resources.

Goal LU-5 To retain rural designations for large parcels of land outside the city limits but within the Planning Area, until annexed to the city.

Policies

- LU-5.3 **Protect Agriculture.** The City shall ensure that agricultural land uses are not prematurely terminated by protecting the continued operation of agricultural land uses.
- LU-5.4 **Agricultural Buffers.** The City shall require that agricultural land uses designated for long-term protection (i.e., in a Williamson Act contract or under a conservation easement) shall be buffered from urban land uses through the use of techniques including, but not limited to, greenbelts, open space setbacks, soundwalls, fencing and berming.
- LU-5.5 **Agricultural Disclosure.** Residential developments locating next to active agricultural areas will have a notice included in the deed notifying buyers of the agricultural use.

Goal OSC-2 To cooperate with Placer County in preserving agricultural operations which are located outside the City's planning boundaries.

Policies

- OSC-2.1 **Agricultural Buffers.** The City will provide for open space or other appropriate buffers, to protect agricultural operations located adjacent to the City planning boundaries, when reviewing land use plans for such areas.
- OSC-2.2 **Agricultural Disclosures.** The City will require that developers of residential projects, which are within general proximity of agricultural operations in the County, provide notification to new homeowners within their deeds, of the County's right to farm ordinance.
- OSC-2.3 **Coordinate with Neighboring City/County Agricultural Objectives.** The City shall support policies adopted by neighboring cities and Placer County to promote the viability of agriculture in the county.

Consistency Analysis

The proposed project is consistent with the City's goal of retaining rural designations for large parcels outside the city limit until annexed to the City because the proposed project includes annexation of the entire project site. The potential for incompatible uses, including disclosure of agricultural operations, is included in Section 3.11, Land Use and Planning.

5.1.3 Air Quality

The following goals and policies from the 2050 General Plan are relevant to air quality.

Goal HS-3 To reduce the generation of air pollutants and promote non-polluting activities to minimize impacts to human health and the economy of the City.

Policies

- HS-3.4 **Transportation Demand Management.** The City shall encourage public and private businesses to implement employee use of rideshare programs, public transportation, NEV's, and/or alternatives to motorized transportation such as bicycling or walking to work.
- HS-3.5 **Development Requirements.** The City shall require developments, where feasible, to be located, designed, and constructed in a manner that would minimize the production of air pollutants and avoid land use conflicts.
- HS-3.7 **Transportation Management Program.** The City shall require as a condition of approval for industrial, commercial, and office projects a Transportation Management Program that is consistent with the City's circulation policies of the General Plan.
- HS-3.8 **Air Quality Analysis.** The City may require an analysis of potential air quality impacts associated with significant new developments through the environmental review process, and identification of appropriate mitigation measures prior to approval of the project development.
- HS-3.9 **Dust Suppression Measures.** The City shall require contractors to implement dust suppression measures during excavation, grading, and site preparation activities. Techniques may include, but are not limited to, the following:
- Site watering or application of dust suppressants,
 - Phasing or extension of grading operations,
 - Covering of stockpiles,
 - Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and
 - Revegetation of graded areas.
- HS-3.10 **Travel Demand Measures.** Coordinating with the PCAPCD, the City shall require large development projects to mitigate air quality impacts. As feasible, mitigations may include, but are not limited to the following:
- Providing bicycle access and bicycle parking facilities,
 - Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles (including neighborhood electric vehicles or NEVs), and
 - Establishing telecommuting programs or satellite work Centers.
- HS-3.11 **Woodburning.** The City shall require the use of natural gas or the installation of low emission, EPA-certified fireplace inserts in all open hearth fireplaces in new homes. The city shall promote the use of natural gas over wood products in space heating devices and fireplaces in all new homes and existing homes considering remodeling plans.
- HS-3.12 **Employment-Intensive Development.** The City shall encourage employment-intensive development with a high floor area ratio where adequate community transit services are planned, and discourage such development where adequate community transit service is not planned.
- HS-3.13 **Location of Support Services.** The City shall support the location of ancillary employee services (including, but not limited to, child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.
- HS-3.14 **Parking Control.** The City shall provide disincentives for single-occupant vehicle trips through parking supply and pricing controls in areas where supply is limited and alternative transportation modes are available.

- HS-3.15 **Infill near Employment.** The City shall identify and adopt incentives for planning and implementing infill development projects within urbanized areas near job centers and transportation nodes.
- HS-3.17 **Street Design.** The City shall promote street design that provides an environment which encourages neighborhood electric vehicles, transit use, biking and walking.
- HS-3.18 **Design for Transportation Alternatives.** The City shall encourage all new development to be designed to promote pedestrian and bicycle access and circulation (including the use of NEVs), to the greatest extent feasible.
- HS-3.19 **Working with Employers.** The City shall encourage employers to provide transit subsidies, bicycle facilities, and alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking for carpools/vanpools.
- HS-3.20 **Transportation Management Associations.** The City shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations.

Consistency Analysis

The air quality impact analyses included in Section 3.3 satisfy Policy HS-3.8. In regards to transportation, sections 5.3 through 5.8 of the Specific Plan describe the bicycle, pedestrian, neighborhood electric vehicle (NEV), transit, and travel reduction measures in the Plan. The Specific Plan's Mobility Plan (Chapter 5, Exhibit 5.3) also identifies the location of bicycle facilities, including on-street bike lanes and multi-use trails along the edges of Markham Ravine and Auburn Ravine, and roadways connecting residential areas to parks, commercial, shopping, and employment centers. Additional measures include provision of sidewalks along roadways and local neighborhood streets, on-street bicycle lanes, and park and ride lots. Although the City's bus service and Placer County Transit do not currently serve the area, the Plan includes bus turnouts and shelters, and a bus transfer facility will be considered as part of a joint use park-and-ride lot. The street sections also have been developed to include NEV lanes on multi-lane arterial and collector streets. These traffic and transportation considerations of the Plan address Policies HS-3.4, HS-3.7, HS-3.10, HS-3.17, HS-3.18, and HS-19. Furthermore, smart growth planning and land use density and diversity included in the Specific Plan would satisfy Policies HS-3.5, HS-3.12, HS-3.13, and HS-3.15. Finally, several Policies would be addressed by mitigation measures such as Measure 3.3-2 (Policy HS-3.9), 3.3-3a (Policy HS-3.11), and 3.3-3b (Policies HS-3.14 and HS-3.20).

5.1.4 Biological Resources

The following goals and policies from the 2050 General Plan are relevant to biological resources.

Goal OSC-1. To designate, protect, and encourage natural resources, open space, and recreation lands in the city, protect and enhance a significant system of interconnected natural habitat areas, and provide opportunities for recreation activities to meet citizen needs.

Policies

- OSC-1.1 The City shall strive to protect natural resource areas, fish and wildlife habitat areas, scenic areas, open space areas and parks from encroachment or destruction by incompatible development.

- OSC-1.3 In new development areas, the City shall encourage the use of open space or recreational buffers between incompatible land uses.
- OSC-1.6 The City shall require new development to implement measures that minimize soil erosion from wind and water related to construction. Measures may include, but not be limited to the following:
- Grading requirements that limit grading to the amount necessary to provide stable areas for structural foundations, street rights-of-way, parking facilities, or other intended uses; and/or
 - Construction techniques that utilize site preparation, grading, and best management practices that provide erosion and sediment control to prevent construction-related contaminants from leaving development sites and polluting local waterways.
- OSC-1.7 The City shall require all development to minimize soil erosion by maintaining compatible land uses suitable building designs and appropriate construction techniques. Contour grading, where appropriate, and revegetation shall be required to mitigate the appearance of engineered slopes and to control erosion.

Goal OSC-4. To preserve and enhance local streams, creeks, and aquifers.

Goal OSC-5. To preserve and protect existing biological resources including both wildlife and vegetative habitat.

Policies

- OSC-5.1 The City shall support the preservation of heritage oaks and threatened or endangered vegetative habitat from destruction. A heritage oak shall be defined as a tree with a diameter of 36 inches measured at a point 4.5 feet above grade level (i.e., diameter at breast height or DBH).
- OSC-5.2 The City shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats. Such communities shall be restored or expanded, where possible and as appropriate.
- OSC-5.3 The City will continue to coordinate with Placer County and the Placer Legacy Open Space and Conservation Program to protect habitat areas that support endangered species and other special-status species.
- OSC-5.4 The City shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained.
- OSC-5.5 The City shall require that new development in areas that are known to have particular value for biological resources be carefully planned and where possible avoided so that the value of existing sensitive vegetation and wildlife habitat can be maintained.
- OSC-5.6 The City will maintain a policy of no net loss of wetlands on a project-by project basis, which may include an entire specific plan area. For the purpose of identifying such wetlands, the City will accept a map delineating wetlands which has been accepted by the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act of 1972. The term “no net loss” may include mitigation implemented through site mitigation bank or similar mitigation mechanism acceptable to the City and permitting agencies.
- OSC-5.7 The City may require project proponents to obtain 404 Permits, and prepare mitigation plans for, or provide for the avoidance, preservation, and maintenance of identified wetlands prior to submitting applications for land use entitlements.
- OSC-5.8 The City may, but need not, accept a Corps of Engineers disclaimer of any jurisdiction over the project of a Corps of Engineers 404 permit as the City's own plan for the achievement of a project's no net loss of wetlands.

- OSC-5.9 All preserved wetlands shall be dedicated to the City or a non-profit organization acceptable to the City and preserved through perpetual covenants enforceable by the City or other appropriate agencies, to ensure their maintenance and survival. With respect to areas dedicated to the City, acceptance shall be conditioned upon establishment of a lighting and landscaping district or other public or private funding mechanisms acceptable to the City.
- OSC-5.11 Prior to project (i.e., specific plan or individual project) approval, the City shall require a biological study to be prepared by a qualified biologist for any proposed development within areas that contain a moderate to high potential for sensitive habitat. As appropriate, the study shall include the following activities: (1) inventory species listed in the CNPS Manual of California Vegetation, (2) inventory species identified by the USFWS and CDFG, (3) inventory special status species listed in the California NDDDB, and (4) field survey of the project site by a qualified biologist.
- OSC-5.12 The City shall consider using appropriate mitigation measures for future projects (i.e., specific plans or individual projects) based on mitigation standards or protocols adopted by the applicable statute or agency (e.g., USFWS, CDFG, etc.) with jurisdiction over any affected sensitive habitats or special status species.
- OSC-5.13 The City shall ensure that lighting in residential areas and along roadways shall be designed to prevent artificial lighting from reflecting into adjacent natural or open space areas.

Consistency Analysis

The project has been designed to protect some many of the natural resources present on the site, including all of the Auburn Ravine and Markham Ravine, per policies OSC-1.1 and OSC-5.5. During construction, sensitive areas would be fenced in order to limit temporary impacts to biological resources in accordance with all applicable project permits. Following construction, and during project operation, permanent fencing and educational signage would be installed around all open space preserves to protect sensitive areas from human or vehicular encroachment and to educate the community about the biological resources located within the open space, consistent with the PCCP and with any project-level permits obtained from the resource agencies. Sensitive areas include wetlands or other protected waters, protected trees, or habitats for special-status plants and wildlife. As described Impact 3.10-1 in Section 3.10, Hydrology, Drainage, and Water Quality, project mitigation includes BMPs to reduce impacts from soil erosion and sedimentation during construction and project operation, per policies OSC 1.6 and 1.7. The project would include a substantial amount of undeveloped open space and parkland that would preserves a variety of natural features including vernal pools and other wetland areas, in compliance with Policy OSC-5.2. Because there are no heritage trees present in the Plan Area, implementation of the project would not adversely affect these resources, per Policy OSC-5.1. The project would impact a total of 21.77 acres of potentially jurisdictional wetlands and other waters of the U.S. in Area A, and up to 7.675 acres of potentially jurisdictional wetlands and other waters of the U.S. in Area J. Implementation of Mitigation Measure 3.4-1 for Areas A and J would ensure no net loss of wetlands, meeting the intent of policies OSC-5.6, OSC-5.7, OSC-5.8, and OSC-5.9. The need for pre-construction surveys and appropriate mitigation for sensitive species is addressed in Mitigation Measures 3.4-2 through 3.4-6, which implements policies OSC-5.11 and OSC-5.12.

5.1.5 Climate Change

The following goals and policies from the 2050 General Plan are relevant to climate change.

Goal LU-1 To grow in orderly pattern consistent with the economic, social, and environmental needs of Lincoln.

Policies

LU-1.6 Transportation Choices. The City will promote the application of land use layouts and community designs that provide residents with transportation choices to walk, ride bicycles, ride transit services, as well as utilize a vehicle, including neighborhood electric vehicles.

LU-1.8 Compact Development. The City will promote the use of development patterns that are more compactly build and use space in an efficient but aesthetic manner to promote more walking, biking, and use of public transit.

Goal LU-15 To organize new development areas to create vibrant, mixed-use villages characterized by a mix of land uses, pedestrian and transit accessibility, and neighborhood identity.

Policies

LU-15.9 Alternative Fuels Vehicle Parking. The City shall prioritize parking within commercial and retail areas for electric vehicles, hybrid vehicles, and alternative fuel vehicles as well as provide electric charging stations.

Goal OSC-3 To encourage energy conservation in new and existing developments throughout the City.

Policies

OSC-3.1 Energy Conservation Measures. The City shall require the use of energy conservation features in new construction and renovation of existing structures in accordance with state law. New features that may be applied to construction and renovation include:

- Green building techniques (such as use of recycled, renewable, and reused materials; efficient lighting/power sources; design orientation; building techniques; etc.)
- Cool roofs

OSC-3.2 Landscape Improvements for Energy Conservation. The City shall encourage the planting of shade trees along all City streets to reduce radiation heating.

OSC-3.7 Passive and Active Solar Devices. The City shall encourage the use of passive and active solar devices such as solar collectors, solar cells, and solar heating systems into the design of local buildings.

OSC-3.8 Solar Orientation and Building Design. The City shall encourage work that building and site design take into account the solar orientation of buildings during design and construction.

OSC-3.9 Shade Tree Planting. The City will encourage the planting of shade trees within residential lots to reduce radiation heating and encourage the reduction of greenhouse gases.

OSC-3.10 Shade Tree Parking Lot Requirements. The City will require commercial and retail parking lots will have 50% tree shading within 15 years to reduce radiation and encourage the reduction of greenhouse gases.

OSC-3.11 Energy Efficient Buildings. The City will encourage the development of energy-efficient buildings and communities.

- OSC-3.12 **Solar Photovoltaic Systems.** The City will promote voluntary participation in incentive programs to increase the use of solar photovoltaic systems in new and existing residential, commercial, institutional and public buildings.
- OSC-3.13 **Energy Efficient Master Planning.** The City will encourage the incorporation of energy-efficient site design such as proper orientation to benefit from passive solar heating and cooling into master planning efforts when feasible.
- OSC-3.14 **Early Planning for Energy Efficiency.** The City will include energy planners and energy efficiency specialists in appropriate pre-application discussions with property owners and developers to identify the potential for solar orientation and energy efficient systems, building practices and materials.
- OSC-3.15 **California Title 24 Energy Efficiency Standards.** The City will explore offering incentives such as density bonus, expedited process, fee reduction/waiver to property owners and developers who exceed California Title 24 energy efficiency standards.

Goal HS-3 To reduce the generation of air pollutants and promote non-polluting activities to minimize impacts to human health and the economy of the City.

Policies

- HS-3.4 **Transportation Demand Management.** The City shall encourage public and private businesses to implement employee use of rideshare programs, public transportation, NEV's, and/or alternatives to motorized transportation such as bicycling or walking to work.
- HS-3.7 **Transportation Management Program.** The City shall require as a condition of approval for industrial, commercial, and office projects a Transportation Management Program that is consistent with the City's circulation policies of the General Plan.
- HS-3.10 **Travel Demand Measures.** Coordinating with the PCAPCD, the City shall require large development projects to mitigate air quality impacts. As feasible, mitigations may include, but are not limited to the following:
- Providing bicycle access and bicycle parking facilities,
 - Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles (including neighborhood electric vehicles or NEVs), and
 - Establishing telecommuting programs or satellite work Centers.
- HS-3.12 **Employment-Intensive Development.** The City shall encourage employment-intensive development with a high floor area ratio where adequate community transit services are planned, and discourage such development where adequate community transit service is not planned.
- HS-3.13 **Location of Support Services.** The City shall support the location of ancillary employee services (including, but not limited to, child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.
- HS-3.14 **Parking Control.** The City shall provide disincentives for single-occupant vehicle trips through parking supply and pricing controls in areas where supply is limited and alternative transportation modes are available.
- HS-3.15 **Infill Near Employment.** The City shall identify and adopt incentives for planning and implementing infill development projects within urbanized areas near job centers and transportation nodes.
- HS-3.17 **Street Design.** The City shall promote street design that provides an environment which encourages neighborhood electric vehicles, transit use, biking and walking.

- HS-3.18 **Design for Transportation Alternatives.** The City shall encourage all new development to be designed to promote pedestrian and bicycle access and circulation (including the use of NEVs), to the greatest extent feasible.
- HS-3.19 **Working with Employers.** The City shall encourage employers to provide transit subsidies, bicycle facilities, and alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking for carpools/vanpools.
- HS-3.20 **Transportation Management Associations.** The City shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations.

Consistency Analysis

The V5SP is designed to promote compact development centered around neighborhood villages and town centers, with a land use layout and community design that locates residents near services without the need to use a vehicle, consistent with policies LU-1.6, LU-1.8, HS-3.17, and HS-3.18. A mix of low-, medium-, and high-density residential uses centered around a mixed use village with commercial uses, park amenities, and an elementary school would create a distinctive neighborhood with access to transit, consistent with Goal LU-15. The V5SP's interconnected transportation network would include accessibility to serve automobiles, transit, NEVs, bikes, and pedestrians, allowing for mode choice throughout the Plan Area.

Intensive commercial and office uses, particularly the Village Commercial and Village Office/Commercial designations, would be located along SR 65 where transit accessibility is high, consistent with Policy HS-3.12. Commercial and office uses would be required to provide parking and charging stations for electric, hybrid, and alternative fuel vehicles and provide bicycle parking facilities, consistent with policies LU-15.9 and HS-3.10. Shopping centers, office complexes, parks and public places will have preferentially located parking spaces and charging stations for NEVs, consistent with Policy LU-15.9. Transportation management programs for industrial, commercial, and office projects would be prepared in adherence to City policies, including Policy HS-3.7.

The V5SP incorporates energy efficiency measures and promotes renewable energy resources, which will reduce dependence on non-renewable energy and energy-related greenhouse gas emissions. Specifically, GHG emissions would be reduced by lowering energy demand, improving water and energy efficiency, and increasing the amount of electricity and heat generated from renewable energy sources.

All new buildings constructed in the Plan Area would feature smart energy meters, solar hot water heaters, Energy Star appliances and be "solar-ready," consistent with policies OSC-3.1, OSC-3.7, OSC-3.11, and OSC-3.12. Buildings would be oriented to benefit from passive solar heating and cooling, where feasible, consistent with policies OSC-3.8 and OSC-3.13.

Street trees would be planted throughout the Plan Area to reduce radiation heating. Similarly, residential properties would be encouraged to plant shade trees. Parking lots in commercial and office areas would be planted with shade trees such that parking areas would be 50% shaded

within 15 years to reduce heat island radiation (consistent with policies OSC-3.2, OSC-3.9, and OSC-3.10).

5.1.6 Cultural Resources

The following goals and policies from the 2050 General Plan are relevant to cultural resources.

Goal OSC-6 To preserve and protect existing archaeological, historical, and paleontological resources for their cultural values.

Policies

- OSC-6.1 **Evaluation of Historic Resources.** The City shall use appropriate State and Federal Standards in evaluating the significance of historical resources that are identified in the City.
- OSC-6.7 **Discovery of Archaeological/Paleontological Resources.** In the event that archaeological/paleontological resources are discovered during ground disturbing activities, the City shall require that grading and construction work within 100 feet of the find shall be suspended until the significance of the features can be determined by a qualified professional archaeologist/paleontologist as appropriate. The City will require that a qualified archeologist/paleontologist make recommendations for measures necessary to protect the find; or to undertake data recovery, excavation, analysis, and curation of archaeological/paleontological materials, as appropriate.
- OSC-6.8 **Archaeological Resource Surveys.** Prior to project approval, the City shall require project applicant to have a qualified professional archeologist conduct the following activities within the area of potential effects (APE): (1) conduct a record search at the North Central Information Center located at California State University Sacramento and other appropriate historical repositories to determine the extent of previously recorded sites and surveys within the project area, and to develop a historical context within which sites can be evaluated for significance, (2) conduct a field survey to locate, map, and record prehistoric and historic resources, and (3) prepare cultural resource inventory and evaluation reports meeting California Office of Historic Preservation Standards to document the results of the record search and field survey, and to provide significance evaluations and management recommendations for any identified historical resources within the APE.
- OSC-6.9 **Native American Resources.** The City shall consult with Native American representatives, including appointed representatives from United Auburn Indian Community, to discuss concerns regarding potential impacts to cultural resources and to identify locations of importance to Native Americans, including archeological sites and traditional cultural properties. Coordination with the Native American Heritage Commission should begin at the onset of the review of a proposed project.
- OSC-6.10 **Discovery of Human Remains.** Consistent with CEQA Guidelines (Section 15064.5), if human remains are discovered during project construction, it is necessary to comply with state laws relating to prohibitions on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (California Health and Safety Code Section 7050.5). If any human remains are discovered or recognized in any location on the project site, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
- A. The Placer County Coroner / Sheriff has been informed and has determined that no investigation of the cause of death is required; and
 - If the coroner determines that the remains are of Native American origin,
 1. The coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours.
 2. The NAHC shall identify the person or persons it believes to be the most likely descendent (MLD) from the deceased Native American.

3. The MLD shall have an opportunity to make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.
- B. Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.
 - C. The County has notified the United Auburn Indian Community (UAIC) Tribal Council and solicited their input.

Consistency Analysis

During preparation of this Draft EIR, archival research and field surveys were conducted for the 799-acre Area A and a 90-acre Windsor Cove subsection of Area J. As the remainder of the Plan Area is proposed for development, additional surveys would be required, consistent with policies OSC-6.1 and OSC-6.8. Should any previously unknown archaeological or paleontological resources or human remains be discovered during project implementation, nearby work would cease and the appropriate authorities, including the Native American Heritage Commission (NAHC) and County Coroner would be notified as required by law and reinforced in mitigation measures imposed on the proposed project, consistent with policies OSC-6.7 and OSC-6.10. During preparation of this Draft EIR, ECORP Consulting, Inc. coordinated consultation between Native American groups and the lead agency for the entire Plan Area, consistent with Policy OSC-6.9.

5.1.7 Energy and Mineral Resources

The following goals and policies from the 2050 General Plan are relevant to energy and mineral resources.

Goal LU-15 To organize new development areas to create vibrant, mixed-use villages characterized by a mix of land uses, pedestrian and transit accessibility, and neighborhood identity.

Policies

LU-15.9 **Alternative Fuels Vehicle Parking.** The City shall prioritize parking within commercial and retail areas for electric vehicles, hybrid vehicles, and alternative fuel vehicles as well as provide electric charging stations.

OSC-1.5 **Protection of Minerals.** The City will protect mineral resources such as groundwater and clay deposits, as well as groundwater recharge areas from urban development.

Goal OSC-3 To encourage energy conservation in new and existing developments throughout the City.

Policies

OSC-3.1 **Energy Conservation Measures.** The City shall require the use of energy conservation features in new construction and renovation of existing structures in accordance with state law. New features that may be applied to construction and renovation include:

- Green building techniques (such as use of recycled, renewable, and reused materials; efficient lighting/power sources; design orientation; building techniques; etc.)
- Cool roofs

- OSC-3.2 **Landscape Improvements for Energy Conservation.** The City shall encourage the planting of shade trees along all City streets to reduce radiation heating.
- OSC-3.7 **Passive and Active Solar Devices.** The City shall encourage the use of passive and active solar devices such as solar collectors, solar cells, and solar heating systems into the design of local buildings.
- OSC-3.8 **Solar Orientation and Building Design.** The City shall encourage work that building and site design take into account the solar orientation of buildings during design and construction.
- OSC-3.9 **Shade Tree Planting.** The City will encourage the planting of shade trees within residential lots to reduce radiation heating and encourage the reduction of GHGs.
- OSC-3.10 **Shade Tree Parking Lot Requirements.** The City will require commercial and retail parking lots will have 50% tree shading within 15 years to reduce radiation and encourage the reduction of GHGs.
- OSC-3.11 **Energy Efficient Buildings.** The City will encourage the development of energy-efficient buildings and communities.
- OSC-3.12 **Solar Photovoltaic Systems.** The City will promote voluntary participation in incentive programs to increase the use of solar photovoltaic systems in new and existing residential, commercial, institutional and public buildings.
- OSC-3.13 **Energy Efficient Master Planning.** The City will encourage the incorporation of energy-efficient site design such as proper orientation to benefit from passive solar heating and cooling into master planning efforts when feasible.
- OSC-3.14 **Early Planning for Energy Efficiency.** The City will include energy planners and energy efficiency specialists in appropriate pre-application discussions with property owners and developers to identify the potential for solar orientation and energy efficient systems, building practices and materials.
- OSC-3.15 **California Title 24 Energy Efficiency Standards.** The City will explore offering incentives such as density bonus, expedited process, fee reduction/waiver to property owners and developers who exceed California Title 24 energy efficiency standards.
- Goal HS-3 To reduce the generation of air pollutants and promote non-polluting activities to minimize impacts to human health and the economy of the City.**

Policies

- HS-3.4 **Transportation Demand Management.** The City shall encourage public and private businesses to implement employee use of rideshare programs, public transportation, NEV's, and/or alternatives to motorized transportation such as bicycling or walking to work.
- HS-3.7 **Transportation Management Program.** The City shall require as a condition of approval for industrial, commercial, and office projects a Transportation Management Program that is consistent with the City's circulation policies of the General Plan.
- HS-3.10 **Travel Demand Measures.** Coordinating with the PCAPCD, the City shall require large development projects to mitigate air quality impacts. As feasible, mitigations may include, but are not limited to the following:
- Providing bicycle access and bicycle parking facilities,
 - Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles (including neighborhood electric vehicles or NEVs), and
 - Establishing telecommuting programs or satellite work Centers.

- HS-3.12 **Employment-Intensive Development.** The City shall encourage employment-intensive development with a high floor area ratio where adequate community transit services are planned, and discourage such development where adequate community transit service is not planned.
- HS-3.13 **Location of Support Services.** The City shall support the location of ancillary employee services (including, but not limited to, child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.
- HS-3.14 **Parking Control.** The City shall provide disincentives for single-occupant vehicle trips through parking supply and pricing controls in areas where supply is limited and alternative transportation modes are available.
- HS-3.15 **Infill Near Employment.** The City shall identify and adopt incentives for planning and implementing infill development projects within urbanized areas near job centers and transportation nodes.
- HS-3.17 **Street Design.** The City shall promote street design that provides an environment which encourages neighborhood electric vehicles, transit use, biking and walking.
- HS-3.18 **Design for Transportation Alternatives.** The City shall encourage all new development to be designed to promote pedestrian and bicycle access and circulation (including the use of NEVs), to the greatest extent feasible.
- HS-3.19 **Working with Employers.** The City shall encourage employers to provide transit subsidies, bicycle facilities, and alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education, and preferential parking for carpools/vanpools.
- HS-3.20 **Transportation Management Associations.** The City shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations.
- Goal T-4 To provide and maintain viable alternate modes of transportation for community that will relieve congestion and improve environmental conditions.**
- T-4.7 **Electric Golf Carts.** Through the use of Golf Transportation Plans, the City shall support the use of electric golf carts within the City, and providing the necessary infrastructure to support them, when feasible.
- T-4.8 **Neighborhood Electric Vehicles.** Through the implementation of the Neighborhood Electric Vehicle Plan, the City shall support the use of Neighborhood Electrical Vehicles (NEV) and similar vehicles by providing where possible for street classifications that provide for their use and ensure connectivity throughout the City.
- Goal T-5 To provide an interconnected system of bikeways that would provide users with direct linkages at a city and regional level.**
- T-5.6 **Trails and Pathways to Retail and Employment Centers.** The City shall promote pedestrian convenience and safety through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping, and employment centers. Where feasible, trails will be looped and interconnected.
- T-5.9 **Pedestrian Access.** The City shall encourage specific plans and development plans to include design of pedestrian access that enables residents to walk from their homes to places of work, recreation, and shopping.
- T-5.10 **Review Site Plans for Pedestrian Accessibility.** The City shall review site plans to determine if residential, commercial, and office land uses are designed for pedestrian access. Future developments shall contain an internal system of trails that link schools, shopping centers, and other public facilities with residences in order to provide pedestrians with sufficient internal access.

Goal PFS-6 To ensure that adequate and efficient public utilities are provided to meet the needs of residents of the city.

PFS-6.3 **Renewable Energy.** The City shall support the use of renewable energy sources, such as solar, in residential, commercial, and industrial developments.

Consistency Analysis

The V5SP is designed to promote compact development centered around neighborhood villages and town centers, with a land use layout and community design that locates residents near services without the need to use a vehicle, consistent with policies LU-1.6, LU-1.8, HS-3.17, HS-3.18, T-4.7, T-4.8, T-5.9, and T-5.10. The V5SP's interconnected transportation network would include accessibility to serve automobiles, transit, NEVs, bikes, and pedestrians, allowing for mode choice throughout the Plan Area, consistent with Policy T-5.6. The decreased reliance on automobiles in the Plan Area would result in transportation trip reductions and thus transportation fuel conservation, consistent with policies HS-3.4, HS-3.7, HS-3.10, HS-3.12 through HS-3.15, and HS-3.17 through HS-3.20.

Intensive commercial and office uses, particularly the Village Commercial and Village Office/Commercial designations, would be located along SR 65 where transit accessibility is high, consistent with Policy HS-3.12. Commercial and office uses would be required to provide parking and charging stations for electric, hybrid, and alternative fuel vehicles and provide bicycle parking facilities, consistent with policies LU-15.9 and HS-3.10. Shopping centers, office complexes, parks and public places will have preferentially located parking spaces and charging stations for NEVs, consistent with Policy LU-15.9. Transportation management programs for industrial, commercial, and office projects would be prepared in adherence to City policies, including Policy HS-3.7.

The V5SP incorporates energy efficiency measures and promotes renewable energy resources, which will reduce dependence on non-renewable energy. All new buildings constructed in the Plan Area would feature smart energy meters, solar hot water heaters, Energy Star appliances and be "solar-ready," consistent with policies OSC-3.1, OSC-3.7, OSC-3.11, and OSC-3.12. Buildings would be oriented to benefit from passive solar heating and cooling, where feasible, consistent with policies OSC-3.8 and OSC-3.13.

Street trees would be planted throughout the Plan Area to reduce radiation heating. Similarly, residential properties would be encouraged to plant shade trees. Parking lots in commercial and office areas would be planted with shade trees such that parking areas would be 50% shaded within 15 years to reduce heat island radiation (consistent with policies OSC-3.2, OSC-3.9, and OSC-3.10).

5.1.8 Geology, Soils, and Seismicity

The following goals and policies from the 2050 General Plan are relevant to geology, soils, and seismicity.

Goal OSC-1 To designate, protect, and encourage natural resources, open space, and recreation lands in the city, protect and enhance a significant system of interconnected natural habitat areas, and provide opportunities for recreation activities to meet citizen needs.

Policies

OSC-1.1 **Protect Natural Resources.** The City shall strive to protect natural resource areas, fish and wildlife habitat areas, open space areas, and parks from encroachment or destruction by incompatible development.

OSC-1.5 **Protection of Minerals.** The City will protect mineral resources such as groundwater and clay deposits, as well as groundwater recharge areas from urban development.

OSC-1.6 **Soil Erosion.** The City shall require new development to implement measures that minimize soil erosion from wind and water related to construction. Measures may include, but not be limited to, the following:

- Grading requirements that limit grading to the amount necessary to provide stable areas for structural foundations, street rights-of-ways, parking facilities, or other intended uses; and/or
- Construction techniques that utilize site preparation, grading, and best management practices that provide erosion and sediment control to prevent construction-related contaminants from leaving development sites and polluting local waterways.

OSC-1.7 **Soil Erosion and Site Planning.** The City shall require all development to minimize soil erosion by maintaining compatible land uses, suitable building designs, and appropriate construction techniques. Contour grading, where appropriate, and revegetation shall be required to mitigate the appearance of engineered slopes and to control erosion.

Goal HS-2 To minimize exposure of persons and property to damage resulting from geologic and seismic hazards.

Policies

HS-2.1 **Seismic Safety of Structures.** The City shall require that new structures intended for human occupancy are designed and constructed to minimize risk to the safety of occupants due to ground shaking.

HS-2.2 **Limit Hillside Development.** To limit development in areas with severe slopes.

HS-2.3 **Development in Areas Subject to Geologic Hazards.** The City shall discourage incompatible land uses from being located in areas subject to geologic or seismic hazards (e.g., liquefaction and expansive soils).

HS-2.4 **California Building Standard Code.** The City shall continue to require that alterations to existing buildings and all new buildings be built according to the seismic requirements of the California Building Standard Code.

Consistency Analysis

Buildings constructed in the Plan Area would be built to the California Building Code standards, consistent with Policy HS-2.4. As shown in the Land Use Plan, proposed development would be set back from both Auburn and Markham ravines, preserving the waterways and preventing soil erosion along the ravines, consistent with Goal OSC-1 and policies OSC-1.1, OSC-1.6, and OSC-1.7. The potential for liquefaction and expansive soils to cause damage to proposed buildings would be addressed prior to site planning, consistent with Policy OSC-2.3.

5.1.9 Hazards/Hazardous Materials

The following goals and policies from the 2050 General Plan are relevant to hazardous materials, airport safety, and wildland fires.

Goal LU-2 To designate, protect, and provide land to ensure sufficient residential development to meet community needs and projected population growth.

Policies

LU-2.10 Airport Buffer. Protect existing and planned local air transportation facilities from encroachment by potentially incompatible land uses and require developers to file an avigation easement with the City if a proposed development or expansion of an existing use is located in an area subject to a compatibility zone within the Placer County Airport Land Use Compatibility Plan (ALUCP).

Goal PFS-8 To provide adequate fire and police protection facilities and services to ensure the safety of residents and the protection of property in the city.

Policies

PFS-8.6 Emergency Access. The City shall require all new developments to provide adequate emergency access features, including secondary access points.

Goal HS-1 To minimize the danger of natural and human-made hazards and to protect residents and visitors from the dangers of earthquake, fire, flood other natural disasters, and man-made dangers.

Policies

HS-1.1 Engineering Analysis of Potential Hazards. The City shall require engineering analysis of new development proposals in areas with possible soil instability, flooding, earthquake faults, or other hazards, and to prohibit development in high danger areas.

Goal HS-4 To minimize the possibility of the loss of life, injury, or damage to property as a result of airport hazards.

Policies

HS-4.1 Airport Land Use Compatibility Plan. The City shall require that development around the Lincoln Regional Airport be consistent with the safety policies and land use compatibility guidelines contained in the adopted Placer County Airport Land Use Compatibility Plan and any subsequent amendments to the Plan.

HS-4.2 Compliance with FAA Regulations. The City shall ensure that development within the airport approach and departure zones are in compliance with Part 77 of the Federal Aviation Administration Regulations (FAA regulations that address objects affecting navigable airspaces).

Goal HS-5 To protect residents and property from the use, transport and disposal of hazardous materials.

Policies

HS-5.1 Transporting Hazardous Materials. The City shall strive to ensure that hazardous materials are used, transported, and disposed within the City in a safe manner and in compliance with local, state and federal safety standards.

HS-5.4 Disclosure of Hazardous Materials. The City shall require disclosure of hazardous materials with the County Environmental Health Department by those using them within the city or proposing to use them in new industrial or commercial activities.

- HS-5.5 **Treatment of Industrial Waste.** The City will discourage the location of firms in the planning area which require treatment of industrial waste, unless the waste is pre-treated to a secondary stage level as defined by the State of California.
- HS-5.6 **Hazardous Waste Facility Siting.** The City shall ensure that new hazardous waste facilities and those commercial and industrial land uses that use or produce hazardous waste are sited in an appropriate manner.
- HS-5.7 **Contamination Prevention.** The City shall protect soils, surface water and groundwater from contamination.
- HS-5.8 **Increase Public Awareness.** The City will work to educate the public as to the types of household hazardous waste and the proper method of disposal.
- HS-5.9 **Household Hazardous Waste.** The City shall encourage household hazardous waste to be disposed of properly.
- HS-5.10 **Designated Routes for Hazardous Materials.** The City shall require that hazardous materials transported within the City be restricted to routes that have been designated for such transport.
- HS-5.11 **County Hazardous Waste Management Plan.** The City shall review all proposed development projects that involve the manufacturing, use, or transporting of hazardous materials to ensure compliance with the County Hazardous Waste Management Plan or equivalent guidance.
- HS-5.12 **Hazardous Materials Inventory.** The City may require, as a component of the environmental review process, a hazardous materials inventory for the site, including an assessment of materials and operations for any applications for land use entitlements.
- HS-5.13 **Hazardous Materials Studies.** The City shall ensure that the proponents of development projects (including new, redevelopment, remodel, or demolition projects) address existing hazardous materials concerns through the preparation of Phase I or Phase II hazardous materials studies for each identified site as part of the design phase for each project. Particular attention should be paid to land that contained past agricultural uses. Recommendations outlined in the studies will be implemented as part of the construction phase for each project.
- HS-5.14 **School Siting Hazards.** The City may require, as a component of the environmental review process, a hazardous materials inventory for the site, including an assessment of materials and operations for any applications for land use entitlements.
- Goal HS-7 To minimize the risk of life and property to from urban and wildland fires.**

Policies

- HS-7.1 **Enforce Code / Ordinances.** The City shall enforce the City building code, fire code, and ordinances in regard to fire safety and fire protection.
- HS-7.2 **Educate Residents of Fire Hazards.** The City shall educate residents of urban and wildland fire hazards and safety measures.
- HS-7.3 **Wildland Fire Management Plans.** The City shall require the development of wildland fire management plans for projects adjoining significant areas of open space that may have high fuel loads.
- HS-7.4 **Buffer Zones for Fire Protection.** The City shall require new development to incorporate additional greenbelts, fuel breaks, fuel reduction and buffer zones around communities to minimize potential fire losses.

HS-7.5 **Weed Abatement.** The City shall maintain a weed abatement program to ensure clearing of dry brush areas. Weed abatement activities shall be conducted in a manner consistent with all applicable environmental regulations.

Goal HS-9 To ensure the maintenance of the Emergency Response Plan in order to maintain its effectiveness in preparing and responding to a natural or human-made disaster.

Policies

HS-9.1 **Emergency Response Plan.** The City shall continue to update and ensure that the Emergency Response Plan meets current federal, State, and local emergency requirements.

HS-9.2 **Coordinate Emergency Response Services with Local Agencies.** The City shall continue to coordinate emergency response services with Placer County, other cities within Placer County, special districts, service agencies, voluntary organizations, and state and federal agencies.

HS-9.3 **Educate Public on Emergency Response.** The City shall conduct training programs for staff in disaster preparedness.

HS-9.4 **Coordinate with Placer County.** The City will strive to work with other local agencies including Placer County and cities within the County to develop coordinated geographical information systems (GIS) planning for emergency response services.

HS-9.5 **String of Critical Emergency Responses.** The City shall ensure that the siting of critical emergency response facilities such as hospitals, fire stations, police offices, substations, emergency operations centers and other emergency service facilities and utilities have minimal exposure to flooding, seismic and geological effects, fire, and explosions.

Consistency Analysis

The proposed project would be required to address hazards and hazardous materials consistent with the above-referenced goals and policies of the City of Lincoln General Plan. While certain hazardous materials would be transported through or near the project site, appropriate measures would be taken to ensure that these materials are handled in the appropriate manner and the appropriate emergency measures would also be taken.

5.1.10 Hydrology, Drainage, and Water Quality

The following goals and policies from the 2050 General Plan are relevant to hydrology, drainage, and water quality.

Goal OSC-4 To preserve and enhance local streams, creeks, and aquifers.

Policies

OSC-4.3 **Protect Surface Water and Groundwater.** The City shall ensure that new development projects do not degrade surface water and groundwater.

OSC-4.4 **Protection and Management of Flood Plains.** The City shall encourage the protection of 100 year floodplains and where appropriate, obtain public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access and recreation.

OSC-4.5 **Use of Reclaimed Water.** The City shall encourage the use of reclaimed water, in place of treated potable water for landscaping and other suitable applications.

OSC-4.6 **Best Management Practices.** The City shall continue to require the use of feasible and practical best management practices (BMPs) to protect surface water and groundwater from the adverse effects of construction activities and urban runoff. Additionally, the City shall require, as part of its Storm Water NPDES Permit and ordinances, to implement the Pollution Prevention Plan (SWPP) during construction activities for any improvement projects, new development and redevelopment projects for reducing pollutants to the maximum extent practicable.

Goal HS-6 To minimize the risk of life and property of the City's residents from flood hazards.

Policies

HS-6.3 **Master Drainage Plans.** The City shall require master drainage plans as a condition of approval for large development projects.

HS-6.4 **New Residential Construction.** The City shall require new residential construction to have its lowest habitable floor elevated above the base flood level elevation, determined by FEMA standards.

HS-6.5 **Stream Channels.** The City shall prohibit development along stream channels that would reduce the stream capacity, increase erosion, or cause deterioration of the channel.

Goal PFS-4 To ensure provision and sizing of adequate storm drainage facilities to accommodate existing and planned development.

Policies

PFS-4.1 **Adequate Storm Drainage Facilities.** The city will provide adequate storm drainage facilities with sufficient capacity to protect the public and private property from stormwater damage. The facilities will also be implemented in a manner that reduces all public safety and/or environmental impacts associated with the construction, operation, or maintenance of any required drainage improvements (i.e., drainage basins, etc.)

PFS-4.2 **Development Requirements.** The City shall encourage project designs that minimize drainage concentration and impervious coverage and avoid floodplain areas and, where feasible, be designed to provide a natural water course appearance.

PFS-4.6 **Pre-Project Conditions.** The City will require new development to provide storm-water detention sufficient to limit outflow per Figure 7-1 of the City's Stormwater Management Manual (February 1994), or as revised.

Master Drainage Plans shall be designed to require new development to provide, or contribute towards, stormwater detention to reduce post-development peak flow from a 100 year event to pre-development flow rate less 10 percent of the difference between the estimated pre-development and the post-development unmitigated peak flow rates. The Master Drainage Plan shall identify appropriate locations to achieve such post-development flows. This criterion is principally designed to address the 100-year event with appropriate consideration given for the feasibility of mitigating 2-year and 10-year events.

PFS-4.7 **Stormwater Runoff.** The City shall require new development to provide stormwater-retention sufficient for the incremental runoff from an eight-day 100 year storm.

PFS-4.8 **Discharge of Urban Pollutants.** The City shall require appropriate runoff control measures as part of future development proposals to minimize discharge of urban pollutants (such as oil and grease) into area drainages.

PFS-4.9 **100-year Floodplain.** The city will discourage development or major fill or structural improvements (except for flood control purposes) within the 100-year floodplain as regulated by FEMA. Requests for fill and improvements within the floodplain may be approved by the City based upon a detailed hydraulic volumetric analysis prepared to evaluate impacts and provide for any mitigation measures to be provided as a part of the development to the satisfaction of the City

Engineer/Public Works Director. Recreational activities that do not conflict with habitat uses may be permitted within the floodplain.

PFS-4.10 **Erosion Control Measures.** The City shall require adequate provision of erosion control measures as part of new development to minimize sedimentation of streams and drainage channels.

PFS-4.11 **Stormwater Management Manual.** The City shall require drainage designs and practices to be in accordance with the Stormwater Management manual of the Placer County Flood Control District unless alternative methods are approved by the City Engineer.

Consistency Analysis

The proposed project includes a master drainage plan for the entire Plan Area, and, therefore, is consistent with policy HS-6.3. The results of the drainage analysis and recommendations for mitigation for stormwater flows and volumes were developed within the framework of policies PFS-4.2, PFS-4.6, PFS-4.7, and PFS-4.11.

The project is required to comply with stringent state and local requirements to include a variety of LID measures and BMPs to ensure that development does not degrade surface or groundwater, in compliance with policies OSC-4.3, OSC-4.6, PFS-4.8, and PFS-4.10.

Impacts on groundwater (policy OSC-4.3) are not expected to occur due to relatively impermeable soil conditions, as discussed in Section 3.10.3.

Consistent with policy OSC-4.5, the project includes a reclaimed water system, which is outlined in the Reclaimed Water Master Plan for V5SP.

Portions of the Plan Area are located within the 100-year floodplain. However, consistent with policy PFS-4.9, no major fill or structures will be placed within the 100-year floodplain. No development is proposed along the banks of either Auburn Ravine or Markham Ravine. Storm drain outfalls and the new Nelson Lane Bridge are the only project components that would be located within the 100-year floodplain (policy HS-6.4). The project would implement a restoration program along Auburn and Markham ravines, meeting the intent of policy HS-6.5.

5.1.11 Land Use and Planning

The following goals and policies from the 2050 General Plan are relevant to land use and planning.

Goal LU-1 To grow in orderly pattern consistent with the economic, social, and environmental needs of Lincoln.

Policies

LU-1.1 **Mixed Use Development.** The City shall promote efficient use of larger vacant parcels and vacant areas of the city by encouraging mixed use development.

LU-1.4 **Buffer.** The City shall require buffer areas between development projects and significant watercourses, riparian vegetation, and wetlands.

- LU-1.6 **Transportation Choices.** The City will promote the application of land use layouts and community designs that provide residents with transportation choices to walk, ride bicycles, ride transit services, as well as utilize a vehicle, including neighborhood electric vehicles.
- LU-1.7 **Housing Choices.** The City will promote the application of land use designs that provide a variety of places where residents can live, including apartments, condominiums, townhouses, and single-family attached and detached.
- LU-1.8 **Compact Development.** The City will promote the use of development patterns that are more compactly built and use space in an efficient but aesthetic manner to promote more walking, biking and use of public transit.
- LU-1.10 **Mixed Land Uses.** Within the designated Village areas, the City will promote a mixed land use designed to place homes together with smaller businesses, institutional, and community land uses. The Village Core area will utilize the Mixed Use (MU) designation. Mixed land uses could include vertical as well as horizontal design allowing for differing land uses within the same building, as well as within the same project area.
- LU-1.11 **Natural Resource Conservation.** To promote a high quality of life within the community, the City will in conjunction with related policies in other general plan elements, promote the retention of natural open space areas, greenbelts, and the provision of adequate parks as part of approving new land use designs.
- LU-1.12 **Quality Design.** Through the design review process, apply design standards that promote the use of high quality building materials, architectural and site designs, landscaping signage and amenities. The City will continue to develop and apply design standards that result in efficient site and building designs, pedestrian friendly projects that stimulate the use of alternative modes of transportation, and a functional relationship between adjacent developments.
- LU-1.13 **Form Based Zoning.** In order to implement smart growth principles, the City will utilize form based zoning in the designated Village areas.
- LU-1.14 **Land Use Conflicts.** The City shall continue to apply the regulations and procedures of the City’s Zoning Ordinance and shall use the environmental process to prevent or mitigate land use conflicts.
- Goal LU-2 To designate, protect, and provide land to ensure sufficient residential development to meet community needs and projected population growth.**

Policies

- LU-2.1 **Prevent Incompatible Uses.** The City shall prevent the intrusion of new incompatible activities and land uses (i.e., traffic, noise) and environmental hazards (i.e., flood, soil instability) into existing residential areas.
- LU-2.6 **Land Use Designations.** The City shall provide a variety of residential land use designations that will meet the future needs of the city.
- LU-2.8 **Innovative Development.** The City shall promote flexibility and innovation in residential land use through the use of planned unit developments, developer agreements, specific plans, mixed use projects, and other innovative development and planning techniques.
- LU-2.10 **Airport Buffer.** Protect existing and planned local air transportation facilities from encroachment by potentially incompatible land uses and require developers to file an avigation easement with the City if a proposed development or expansion of an existing use is located in an area subject to a compatibility zone within the Placer County Airport Land Use Compatibility Plan (ALUCP).
- Goal LU-3 To designate adequate commercial land for and promote development of commercial uses compatible with surrounding land uses to meet the present and future needs of Lincoln residents, the regional community, and visitors and to maintain economic vitality.**

Policies

- LU-3.2 **Commercial Land Use.** The City shall designate sufficient commercial land to meet the future needs of the city.
- LU-3.4 **Grouping of Commercial Land Uses.** The City shall avoid “strip commercial” land uses in new development areas by encouraging grouping of commercial land uses in core areas.
- LU-3.5 **Mitigate Land Use Conflicts.** The City shall mitigate conflicts between new commercial land uses and other land uses, especially residential, park, and recreational uses.
- LU-3.6 **Buffer Commercial Land Uses.** The City shall require that commercial land uses be buffered from incompatible land uses and protected from encroachment by incompatible uses through the use of techniques including, but not limited to, landscaping, soundwalls, berms, fencing, open space setbacks, greenbelts, and building orientation.
- LU-3.7 **Innovative Development.** The City shall promote flexibility and innovation in commercial land use through the use of planned unit developments, developer agreements, specific plans and other innovative development and planning techniques.
- LU-3.8 **Regional Commercial Opportunities.** The City will identify and preserve appropriate areas (based on size and location) for development of regional commercial opportunities.
- Goal LU-5 To retain rural designations for large parcels of land outside the city limits but within the Planning Area, until annexed to city.**

Policies

- LU-5.3 **Protect Agriculture.** The City shall ensure that agricultural land uses are not prematurely terminated by protecting the continued operation of agricultural land uses.
- LU-5.4 **Agricultural Buffers.** The City shall require that agricultural land uses designated for long-term protection (i.e., in a Williamson Act contract or under a conservation easement) shall be buffered from urban land uses through the use of techniques including, but not limited to, greenbelts, open space setbacks, soundwalls, fencing and berming.
- LU-5.5 **Agricultural Disclosure.** Residential developments locating next to active agricultural areas will have a notice included in the deed notifying buyers of agricultural use.

Consistency Analysis

Impact 3.11-3 and Table 3.11-1 in Section 3.11, Land Use and Planning, evaluates the proposed project’s consistency with each of the above goals and policies.

The City of Lincoln’s 2050 General Plan designates the Plan Area as Village 5/SUD B. As required by the City of Lincoln, the applicant has prepared a Specific Plan and General Development Plan for Village 5. If adopted, the Specific Plan would be the primary land use, policy, and regulatory document used to guide the overall development of the project area.

As presented, the Specific Plan establishes a development framework for land use, mobility, utilities and services, resource protection and implementation. The Specific Plan is intended to (and must be) consistent with the Lincoln General Plan. The GDP functions as the zoning code and design guidelines for the Specific Plan to help ensure that projects within the Specific Plan are developed in a cohesive and well-planned manner.

The zoning land use designations that are proposed for Village 5 are defined below.

Village Rural Residential (VRR). This designation provides for large rural lots and is applied to parcels around the airport in order to reduce potential conflicts with air traffic operations. Development within this classification will usually include larger-than-average houses with accessory buildings such as barns. Residential densities shall be in the range of 1 dwelling unit(s) per 2 to 5 gross acres.

Village Country Estates (VCE). This designation provides for very low-density residential development. This classification accommodates the needs of residents who desire large parcels and the feeling of open space integrated with a suburban lifestyle. This designation provides for single-family detached units, and similar and compatible uses. Residential densities shall be in the range of 1.0 to 2.9 units per gross acre.

Village Low Density Residential (VLDR). The purpose of this designation is to provide areas for single-family detached residential uses and activities normally associated with single-family neighborhoods. Where found appropriate, innovative single-family design alternatives are encouraged. This designation provides for single-family detached and attached homes, secondary residential units, public and quasi-public uses, and similar and compatible uses. Residential densities shall be in the range of 3.0 to 5.9 units per gross acre.

Village Medium Density Residential (VMDR). The purpose of this designation is to provide areas for a variety of moderate intensity single family uses including detached and attached single-family housing, mobile home parks, and cluster developments. This designation is applied in areas of predominantly single-family character where a greater diversity of housing type is intended. This designation is located in transitional areas between higher intensity uses and lesser intensity single family areas. Residential densities shall be in the range of 6.0 to 12.9 units per gross acre.

Village High Density Residential (VHDR). The purpose of this designation is to allow for multifamily housing at densities greater than other residential designations. This designation is intended to allow for those structural forms that promote moderate and higher density living styles. This designation provides for condominiums, townhouses, triplexes, fourplexes, multi-family residential units, group quarters, and similar and compatible uses. Residential densities shall be in the range of 13.0 to 20.0 units per gross acre.

Village Mixed Use (VMU). The purpose of this designation is to provide for a mixed use commercial core that is applicable to the City's Downtown and for the Village Center areas. This land use category provides for creative infill projects that include the functional integration of retail or service commercial, professional office, or recreational uses with residential units. This category allows for both vertical (different uses stacked above one another) and horizontal (different ground level uses on a single parcel) mixed use opportunities. Residential uses in this

designation will meet the requirements for HDR. The FAR for non-residential uses shall not exceed 4.00.

Village Business and Professional (VBP). The purpose of this designation is to provide areas for professional and administrative services and offices. Uses permitted under this designation generally include: medical offices and clinics; law firms; accountant offices; insurance, real estate, and financial; governmental offices; social services; and non-profit organizations. Retail commercial activities that complement or are accessory to the primary uses of the designation are also appropriate. The FAR shall not exceed 0.45.

Village Parks (VPark). The VPark designation would provide locations in the Plan Area for recreation and community gathering. Parks of varying sizes would be provided to meet neighborhood, community, and regional needs. This designation would be intended to provide locations for parks and other public services and uses. Both active and passive recreational activities would be permitted.

The largest VPark site would be approximately 70 acres in size and would accommodate a regional sports park with 12 lighted soccer fields, a fieldhouse, offices, lockers, multi-purpose rooms, a café, gardens, play structures, lawn areas, natural trails, maintenance facility, and parking. It would also permit a digital messaging center along SR 65. There would also be a community park approximately 16 acres in size located at the southern edge of Area A, which would include tennis courts, baseball fields, connector trails, basketball courts, gazebos with picnic areas, and restrooms. The smallest VPark site would be the neighborhood parks, which would vary in size from two to five acres. The neighborhood parks would include ball fields, basketball courts, and play structures, as well as lawns and small parking area or street parking.

Village Linear Park (VLP). The VLP land use category would provide for corridors of varying widths (between approximately 40 feet and 100 feet) that would link the pedestrian and bikeway trail network and provide passive recreation opportunities, as well as regional parks to community parks. Linear parkways may also provide space for compatible recreation amenities, such as benches and gathering areas for the adjacent community.

Ag Preserve (VOSA). The VOSA category is exclusively for the existing approximately 280-acre Lincoln High School Farm (LHS Farm) property. There is a habitat conservation easement currently in place for on 126 acres of the property. This facility consists of educational farming projects and wildlife habitat on the site, with classrooms and workshops on the easternmost area. Expansion of the LHS Farm on site may expand the educational uses on this site as well as maintaining the emphasis on farming and habitat uses.

Village Open Space (VOSP and VOSN). The Open Space category would include two types of open space: Village Open Space Preserve (VOSP) and Natural Open Space (VOSN). The VOSP designation would be applied to the natural resources within the Plan Area, including creeks, seasonal wetlands, vernal pools, swales, and marshes, as well as oak trees and other natural

vegetation. VOSP would correspond with the current working draft version of the Placer County Conservation Plan (PCCP),¹ the Placer County Aquatic Resources Program (CARP) and coincide with the Auburn and Markham Ravine corridors.² Uses within and access into the VOSP areas would be restricted pursuant to the PCCP. The PCCP is still in draft form and has not yet been reviewed under the National Environmental Policy Act (NEPA) or CEQA, and it has not yet been considered for adoption by Placer County or state and federal regulatory agencies.

The VOSN designation would be applied to areas adjacent to the VOSP open space preserves. The Plan Area would set aside areas of VOSN in order to preserve wetland and aquatic resource features that contribute to the integrity of the watersheds encompassed within the VOSP areas. Uses within the VOSN may include wetland creation (with appropriate buffers) and may also provide space for compatible passive recreation amenities such as trails, benches and viewing areas to enhance the Auburn and Markham Ravine corridors for the adjacent community.

Public/Quasi-Public (P/QP). The P/QP land use designation would provide for the establishment of public and quasi-public uses, such as safety facilities, utilities, local government offices and facilities, public schools (schools, colleges, and universities), community centers, and other similar uses. The intent of this designation is to identify appropriate locations for these uses without impacting, disrupting, or otherwise removing other lands for residential or other uses.

The City's General Plan also includes direction for the SUDs. The SUDs contain land uses that are consistent with the restrictions of the Placer County Airport Land Use Compatibility Plan for the Lincoln Regional Airport and are intended to assist the City in providing for the economic development opportunities identified in the fiscal and economic analysis prepared for the General Plan.³ SUD A is envisioned to be a commercial area for activities that require large areas for facilities or operations but with few persons per acre as required by the airport regulations.⁴ SUD B is envisioned to have commercial land use at the four quadrants of SR 65 Bypass and Nelson Road interchange.⁵

Additionally, the applicant is proposing that the City create an Agricultural Overlay (AO) District over the entire Plan Area to allow for buffering of agricultural uses (for those farmers who wish to continue farming into the foreseeable future) from new development (i.e., homes, parks, commercial centers and schools). (See GDP section 3.4.13.) In short, agricultural uses in existence when the property is annexed to the City may continue in perpetuity so long as the operations comply with the agricultural overlay requirements outlined in Section 3.4.13 of the GDP.

¹ Placer County, 2016. Placer County Conservation Plan. Working Draft. March 2016. At the time of this Draft EIR, the PCCP has not been adopted and no public draft is currently available.

² City of Lincoln, 2016. Lincoln Village 5 Specific Plan. August 12, 2015. p. 4-11.

³ City of Lincoln, 2008. City of Lincoln 2050 General Plan. Adopted March 25, 2008. p. 4-41.

⁴ Ibid., p. 4-42.

⁵ Ibid., p. 4-43.

5.1.12 Noise and Vibration

The following goals and policies from the 2050 General Plan are relevant to noise and vibration.

Goal HS-8 To protect residents from health hazards and annoyance associated with excessive noise levels.

Policies

HS-8.1 Noise Sensitive Receptors. The City will allow the development of new noise-sensitive land uses (which include but are not limited to residential, health care facilities and schools) only in areas exposed to existing or projected levels of noise which satisfy the levels specified in Table 8.1. Noise mitigation measures spaces to levels specified in Table 8.1.

**TABLE 8.1
LAND USE COMPATIBILITY GUIDELINES FOR DEVELOPMENT (L_{DN})
CITY OF LINCOLN GENERAL PLAN NOISE ELEMENT**

Locations	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Unacceptable
Residential - Low Density Single Family, Duplex, Mobile Homes	≤ 60	61 - 70	71 - 75	≥ 75
Residential - Multiple Family, Group Homes	≤ 60	61 - 70	71 - 75	≥ 75
Motels/Hotels	≤ 60	61 - 70	71 - 80	≥ 80
Schools, Libraries, Churches, Hospitals, extended Care Facilities	≤ 60	61 - 70	71 - 80	≥ 80
Auditoriums, Concert Halls, Amphitheaters	≤ 65	NA	66 - 70	≥ 70
Sports Arenas, Outdoor Spectator Sports	≤ 70	NA	71 - 75	≥ 75
Playgrounds, Neighborhood Parks	≤ 70	NA	NA	≥ 70
Golf Courses, Riding Stables, Water Recreation, Cemeteries	≤ 70	NA	71 - 80	≥ 80
Office Buildings, Business Commercial and Professional	≤ 65	66 - 75	75 - 81	NA
Industrial, Manufacturing, Utilities, Agriculture	≤ 70	71 - 80	≥ 81	NA

NOTES:

1. Normally Acceptable: Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
2. Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed insulation features have been included in the design.
3. Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.
4. Unacceptable: New construction or development should not be undertaken.

SOURCE: City of Lincoln General Plan, Noise Element.

HS-8.2 Protect Residential Areas. The City will strive to achieve exterior noise levels for existing and future dwellings in residential areas that do not exceed exterior noise levels of 60 dBA L_{dn}/CNEL and interior noise levels of 45 dBA L_{dn}/CNEL.

HS-8.8 Construction Noise. The City will provide guidelines to developers for reducing potential construction noise impacts on surrounding land uses.

- HS-8.9 **Noise Compatibility Guidelines.** The City shall use adopted noise compatibility guidelines to evaluate compatibility of proposed new development and ensure compatibility between residential, commercial and other surrounding land uses (See Table 8-1, Maximum Allowable Noise Exposure by Land Use).
- HS-8.10 **Sound Attenuation Features.** The City shall require sound attenuation features such as walls, berming, and heavy landscaping between commercial and industrial uses and residential uses to reduce noise and vibration. Setback distances may also be used to reduce noise.
- HS-8.11 **Noise Buffering.** The City shall require a variety of sound attenuation features (including noise buffering or insulation) in new development along major streets and highways, and along railroad tracks.
- HS-8.14 **Noise Analysis.** The City shall require noise analysis of proposed development projects as part of the environmental review process and to require mitigation measures that reduce noise impacts to acceptable levels. The noise analysis shall:
- Be the responsibility of the applicant;
 - Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
 - Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;
 - Estimate existing and projected noise levels in terms of Ldn/CNEL and compare the levels to the adopted policies of the City’s General Plan;
 - Recommend appropriate mitigation to achieve compatibility with the adopted noise policies and standards of the City’s General Plan. Where the noise source in question consists of intermittent single events, the acoustical analysis must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance;
 - Estimate noise exposures after the prescribed mitigation measures have been implemented. If the project does not comply with the adopted standards and policies of the City’s General Plan, the analysis must provide acoustical information for a statement of overriding considerations for the project; and,
 - Describe a post-project assessment program, which could be used to evaluate the effectiveness of the proposed mitigation measures.
- HS-8.15 **Limiting Construction Activities.** The City shall establish restrictions regarding the hours and days of construction activities throughout the City.

Consistency Analysis

As discussed in Impact 3.12-3, the proposed project would locate sensitive residential receptors in areas where they would be exposed to future traffic noise that would exceed the City of Lincoln’s normally acceptable land use compatibility noise standards. To reduce future traffic noise levels, Mitigation Measure 3.12-3 is recommended, which requires the applicant to construct noise barriers (where feasible), design residential buildings so that their external activity areas are not within line-of-sight of major roadways and paving roadways with “quiet” pavement types. Although Mitigation Measure 3.12-3 would reduce traffic noise levels, it is likely that these measures in most cases would be infeasible to implement or would not be fully effective, primarily for off-site receptors, due to factors associated with existing land use development. The proposed project would not be consistent with policies HS-8.1, HS-8.2 and HS-8.9.

As discussed in Impact 3.12-1, construction of the proposed project would result in the exposure of existing and future residences to noise levels that would result in a substantial noise increase. However, with implementation of Mitigation Measure 3.12-1, construction impacts would be reduced to a less than significance. Therefore, the proposed project would be consistent with policies HS-8.8 and HS-8.15.

As previously discussed, the project would require the applicant to construction noise barriers, sound attenuation features and noise buffering as part of the Mitigation Measure 3.12-3 to reduce traffic noise levels. Therefore, the proposed project would be consistent with policies HS-8.10, HS-8.11 and HS-8-14.

5.1.13 Population, Employment, and Housing

The following goals and policies from the 2050 General Plan are relevant to population, employment, and housing.

Goal ED-3 To promote a diverse and balanced mix of employment and residential opportunities within the City.

Policies

ED-3.1 **Business Expansion and Attraction.** The City shall zone sufficient land for the expansion of existing businesses and attraction of new businesses.

ED-3.2 **Workplace Alternatives.** The City shall facilitate the establishment and expansion of workplace alternatives, including home-based businesses and telecommuting, through land use designations and zoning ordinances.

ED-3.3 **Provide for a Diversity of Housing Choices.** The City shall provide for a range of housing choices for current and future residents through land use designations and zoning ordinances.

ED-3.4 **Provide Live / Work Environments.** The City will look to provide for live / work environments in its historic downtown and in Village centers.

Goal ED-4 To retain existing businesses and attract new businesses to provide jobs for current and future residents.

Policies

ED-4.3 **Attract New Businesses.** The City shall encourage new businesses to locate in the following areas: downtown Lincoln; along the future Highway 65 Bypass; at the Lincoln Regional Airport; and in the business park surrounding the airport.

ED-4.5 **Retail Market.** The City shall identify a range of retail development sites and opportunities in order to promote a stronger local and regional retail market which meets the needs of the growing Lincoln population and complements the Lincoln downtown.

ED-4.6 **Regional Commercial.** The City will reserve appropriately zoned property along the State Highway 65 Bypass for future regional commercial land uses such as a regional shopping center, auto mall, or other vehicle sales and services.

Goal ED-6 To preserve, enhance, and expand the existing downtown so that it remains the psychological center of Lincoln.

Policies

ED-6.8 **Urban Decay.** The City recognizes and supports downtown retail development as part of the City’s downtown revitalization strategy. The City also recognizes the importance of healthy neighborhood retail centers throughout the City to meet the shopping needs of Lincoln’s population. As Specific Plans with retail and/or commercial land uses are submitted for approval, the City will analyze the potential for local urban decay and regional blight.

Goal LU-1 To grow in orderly pattern consistent with the economic, social, and environmental needs of Lincoln.

Policies

LU-1.7 **Housing Choices.** The City will promote the application of land use designs that provide a variety of places where residents can live, including apartments, condominiums, townhouses and single family attached and detached.

LU-1.10 **Mixed Land Uses.** Within the designated Village areas, the City will promote a mixed land use designed to place homes together with smaller businesses, institutional, and community land uses. The Village Core area will utilize the Mixed Use (MU) designation. Mixed land uses could include vertical as well as horizontal design allowing for differing land uses within the same building, as well as within the same project area.

Goal LU-2 To designate, protect, and provide land to ensure sufficient residential development to meet community needs and projected population growth.

Policies

LU-2.8 **Innovative Development.** The City shall promote flexibility and innovation in residential land use through the use of planned unit developments, developer agreements, specific plans, mixed use projects, and other innovative development and planning techniques.

Goal LU-3 To designate adequate commercial land for and promote development of commercial uses compatible with surrounding land uses to meet the present and future needs of Lincoln residents, the regional community, and visitors and to maintain economic vitality.

Policies

LU-3.2 **Commercial Land Use.** The City shall designate sufficient commercial land to meet the future needs of the city.

LU-3.8 **Regional Commercial.** The City will identify and preserve appropriate areas (based on size and location) for development of regional commercial opportunities.

Goal LU-7 To designate, protect, and provide land to ensure sufficient residential development to meet community needs and projected population growth.

Policies

LU-7.1 **Jobs-Housing Balance.** The City shall consider the effects of land use proposals and decisions on the South Placer area and the efforts to maintain a jobs-housing balance.

Goal HE-1 Accommodate new housing to meet the needs of present and future Lincoln residents at all income levels.

Policies

1 Provide sufficient land zoned for a variety of housing types to accommodate the City’s regional housing needs allocation under the January 1, 2013–October 31, 2021 Sacramento Area Council of Governments (SACOG) Regional Housing Needs Plan.

- 2 Facilitate the construction of a variety of housing types affordable to all income levels.

Goal HE-3 Address special housing needs in Lincoln.

Policies

- 7 Address the physical, financial, and lifestyle needs of older adults in the city.
- 9 Address the special housing needs of large families to alleviate overcrowding in the city.

Goal HE-4 Promote equal housing opportunities.

Policies

- 13 Support equal housing opportunities for all city residents.

Consistency Analysis

Development of the V5SP would continue the development of the city in a thoughtful, logical, and balanced way, supporting the economic, social, and environmental needs of Lincoln, consistent with Goal LU-1. The proposed project would develop a full complement of uses including residential, commercial, office, educational, parks and open space uses to expand the city and provide new residential and employment opportunities for residents, consistent with goals ED-3, LU-1, LU-2, and HE-1, and policies ED-4.3, ED-4.4, ED-4.5, LU-1.7, LU-1.10, LU-3.2, LU-3.8, and LU-7.1. The V5SP would incorporate a variety of housing types to address multiple needs and income levels, including senior housing, consistent with goals ED-3, HE-1, and HE-3 and policies ED-3.3, LU-1.7, HE-7, HE-9, and HE-13. The proposed project would develop regional commercial and office centers near SR 65, consistent with policies ED-4.3, ED-4.6 and LU-3.8. Development of a village center, with the opportunity for neighborhood and locally-oriented retail and service uses, civic, public and quasi-public uses and similar, compatible uses would comply with policies ED-3.4, ED-4.5, and LU-1.10.

5.1.14 Public Services

The following goals and policies from the 2050 General Plan are relevant to public services.

Goal LU-1 To grow in orderly pattern consistent with the economic, social, and environmental needs of Lincoln.

Policies

- LU-1.11 **Natural Resource Conservation.** To promote a high quality of life within the community, the City will in conjunction with related policies in other general plan elements, promote the retention of natural open space areas, greenbelts and the provision of adequate parks as part of approving new land use designs.

Goal LU-12 To enhance the urban form while maintaining visual and physical access to distinctive environmental features.

- LU-12.5 **Access to Creek and Wetland Edges.** Where feasible (and not a significant impact to the natural resources), the City shall encourage the provision of access to creeks, wetlands, and other open space areas to pedestrian and bicycle access.

- LU-12.7 **Open Space Location.** When possible, the City shall locate open space and parks adjacent to creeks.
- Goal LU-15 To organize new development areas to create vibrant, mixed-use villages characterized by a mix of land uses, pedestrian and transit accessibility, and neighborhood identity.**
- LU-15.4 **Village Land Use Design.** The City will look to the village areas as the primary locations within which to apply the Sacramento Area Council of Governments (SACOG) smart growth policies, which include the following:
- Provide a variety of transportation choices
 - Offer housing choices and opportunities
 - Take advantage of compact development
 - Mixed land uses
 - Preserve open space and natural beauty through natural resources conservation, and preserve farmland in the surrounding unincorporated areas through design measures designed to avoid land use conflicts
 - Encourage distinctive, attractive communities with quality design
- LU-15.15 **Joint Use of Detention Facilities.** Detention facilities can be utilized in meeting part of a village's park requirements based on the usability of the basin for recreational purposes.
- LU-15.16 **Collocation with Schools.** The City shall promote the collocation of parks with school facilities for the purpose of enhancing available open space and recreation.
- LU-15.17 **Parkland Distribution.** Parks within each village should be distributed proportionally to match the distribution of population within the village. Park sizes and location will typically be in keeping with serving the population within a walking distance of the park (1/4 mile). At least one community park should be placed within walking distance (1/4 mile) of the Village Center Neighborhoods.
- LU-15.18 **Trail and Open Space Connections.** Each village, and the neighborhoods they contain, shall include trails, bikeways, and open spaces as an integral design component. These facilities shall create a network that links every neighborhood to each other and provide a convenient path to the Village Center.
- Goal PFS-1 To ensure that adequate public services and facilities are provided to meet the needs of residents of the city.**

Policies

- PFS-1.1 **Maintain Adequate Public Services.** The City shall ensure the provision of adequate public services and facilities to the existing areas of the city and to ensure that new development is served by a full range of public services.
- PFS-1.2 **Annexation Requirements.** The City shall require that prior to any annexations to the City a detailed public facilities and financing plan be completed that considers both capital facilities and the fiscal impacts to the City's ongoing operation and maintenance costs.
- PFS-1.3 **Conditions of Approval.** During the development review process, the City shall not approve new development unless the following conditions are met:
- The applicant can demonstrate that all necessary infrastructure will be installed or adequately financed;
 - Infrastructure improvements are consistent with City infrastructure plans; and

- Infrastructure improvements incorporate a range of feasible measures that can be implemented to reduce public safety and/or environmental impacts associated with the construction, operation, or maintenance of any required improvement.

Goal PFS-8 To provide adequate fire and police protection facilities and services to ensure the safety of residents and the protection of property in the city.

Policies

- PFS-8.1 **Fire Loss and Damage.** The City shall work to minimize fire loss and damage within the city.
- PFS-8.2 **Fire Protection.** The City shall expand fire protection services as needed to meet fire response times.
- PFS-8.3 **Public Awareness of Fire and Emergency Procedures.** The City shall promote public awareness of fire and emergency procedures by developing new and expanding existing public fire safety and emergency life support education programs.
- PFS-8.4 **Fire Response Times.** The City shall strive to maintain a firefighting capability sufficient to maintain a fire response time of five (5) minutes or less as a general guideline for service provision and locating new fire stations.
- PFS-8.5 **Provision of Fire Station Facilities and Equipment.** The City shall provide fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the City's service standards (ISO rating and response time).
- PFS-8.6 **Emergency Access.** The City shall require all new developments to provide adequate emergency access features, including secondary access points.
- PFS-8.8 **Police Protection.** The City shall expand police protection service consistent with community needs and provide an adequate level of service.
- PFS-8.9 **Building Design and Security.** The City shall continue to promote the use of site planning and building design as a means to decrease crime.
- PFS-8.11 **Provisions of Police Facilities.** For purposes of defining capital facilities investment for police facilities, the City shall base facility needs on a staffing ratio of 1.8 officers per 1,000 population.
- PFS-8.12 **Neighborhood Watch.** The City shall promote the establishment of citizen participation in safety programs, such as Neighborhood Watch and Citizens on Patrol programs.
- PFS-8.13 **Security Along Waterway and Trail.** The City shall implement a variety of public safety measures to address crime-related issues along City-owned trail areas. Public safety measures shall include, but not be limited to, active policing using pedestrian, bicycling, or equestrian patrols. Emergency call boxes or solar-powered telephones shall also be placed in appropriate places along trail corridors to provide prompt access to emergency services.
- PFS-8.14 **Police Response Time.** The City shall strive to maintain an average response time of five minutes or less for priority one calls.

Goal PFS-9 To ensure that adequate community facilities are provided and are conveniently located in order to meet the needs of residents of the city.

Policies

- PFS-9.1 **Adequate School Facilities.** The City shall ensure that in areas of new development, school facilities meeting adopted school district standards will be available.

- PFS-9.2 **Development of New Schools.** The City shall coordinate planning, siting, and construction of new schools with the appropriate school district to ensure that facilities are constructed.
- PFS-9.3 **Expand Library.** The City shall continue to expand library services, according to adopted City library standards (0.7 square feet per capita), to meet the educational, informational, and cultural needs of all community residents.
- PFS-9.4 **Funding Mechanism for Libraries.** The City shall provide a funding mechanism for the construction and operation of libraries within the city.
- PFS-9.5 **Siting of Libraries.** The City shall locate libraries near or adjacent to other City facilities, such as schools and parks, wherever possible.
- PFS-9.6 **Community Facilities.** The City shall ensure that community facilities, including a senior / adult services center, gymnasiums, aquatic center, and library, be planned and provided for future residents of the city.
- PFS-9.7 **Developer Fees for School Districts.** The City shall coordinate with the school district that adequate developer fees are collected in accordance with state law.
- PFS-9.8 **Collocation of Schools and Recreational Facilities.** The City shall coordinate with the Western Placer Unified School District to encourage the joint siting of schools with parks and community centers.
- PFS-9.9 **School Funding.** To the extent allowed by State law, the City will require new projects to mitigate impacts on school facilities, which could occur through a combination of new school site dedications and the use of developer fees. The City will also work with school districts, developers, and the public to evaluate alternatives to funding / providing adequate school facilities.

Goal OSC-7 To provide and maintain park facilities that provide recreational opportunities for all residents.

Policies

- OSC-7.1 **Park Facilities.** The City shall provide park facilities in accordance with following adopted park standards:

Parks	Standard
Parks without Development Agreements	5 acres/1,000 residents
Parks with Development Agreements	9 acres/1,000 residents
City-wide Park	3 acres/1,000 residents
Neighborhood/Community Park	3 acres/1,000 residents
Open Space	3 acres/1,000 residents

Note: 9 acres consist of 6 acres for active recreation and 3 acres for passive recreation. Please see Appendix B of the 2050 General Plan for additional information on park requirements.

- OSC-7.2 **Recreational Needs.** The City shall provide recreation facilities and programs that meet the needs of all its citizens. Facilities shall be developed in compliance with all applicable regulations designed to address public safety and environmental impacts that may result through the construction, operation, and maintenance of these facilities.
- OSC-7.3 **Volunteer Organizations.** The City shall support and cooperate with volunteer groups and organizations that provide recreation activities to young people.

- OSC-7.4 **Maintenance of Recreational Facilities.** The City shall support the continued maintenance and improvement of existing recreational facilities.
- OSC-7.5 **Funding for Recreational Areas and Facilities.** The City shall strive to make adequate funding available to improve and maintain existing parks as well as construct new facilities.
- OSC-7.6 **Dedication of Park Land.** The City will continue to collect park dedication fees, require the dedication of parkland, or a combination of both as a condition of development approval for the provision of new parks, or the rehabilitation of existing parks and recreational facilities in order to meet the City's parkland standards in Policy 7.1.
- OSC-7.7 **In-Lieu Fees.** The City shall provide for the payment of an in-lieu fee, in those instances where the City determines that park land dedication is not appropriate. The in-lieu fee shall reflect the cost of fully serviced vacant land.
- OSC-7.8 **Adopted Park Standards.** The amount and location of any future parkland to be developed within the city will be determined by adopted park standards and location guidelines.
- The City shall strive to provide the following recreational facilities:
- One multipurpose center per 10,000 population with the structural square footage to be determined by the City Council based on the evaluation of community needs.
 - One 50 meter swimming pool per 10,000 population based upon a determination of the City Council of community needs.
 - One mile of pedestrian/bicycle trails per 2,500 population.
- OSC-7.9 **Recreational Needs Surveys.** The City shall conduct surveys on a periodic basis to determine specific recreation needs of all age groups, the physically and mentally challenged, and special interest groups.
- OSC-7.10 **Park User Fees.** The City will continue to collect park user fees for the maintenance of existing park and recreation facilities.
- OSC-7.11 **Capital Improvement Program.** The City will continue to include park and recreation improvement and maintenance projects in its capital improvement programming.
- OSC-7.12 **Recreational Equipment.** The City will continue to provide equipment, such as picnic tables, benches, trash cans and drinking fountains, in city parks, and will adequately maintain or replace such equipment when necessary.
- OSC-7.13 **Revitalization Program.** The City will continue its long term revitalization program to beautify and upgrade all city parks.
- OSC-7.14 **Lighting and Landscape District.** The City will continue to use the lighting and landscape district to develop and maintain parks.
- OSC-7.15 **Maintain Wildlife Habitat Values.** The City shall maintain wildlife habitat values during design and ongoing maintenance of new park facilities through provision of open space and wildlife corridor areas, protection of native vegetation, and control of use of herbicides and pesticides.
- OSC-7.16 **Linear Parks and Trail Systems.** The City shall develop linear parks and trail systems along the City's creeks and wetlands, when such improvements are not prohibited by federal and state regulations.
- OSC-7.17 **Capital Improvement Fees.** The City will collect a capital facilities fee on new development to generate funding to construct park and recreation improvements in accordance with the requirements set forth in the City's adopted standards.

- OSC-7.18 **Park Construction.** The City will strive to have newly dedicated, mini and neighborhood parks, constructed by residential developers in conjunction with their project, such that new residents have immediate access to park facilities.
- OSC-7.19 **Pocket Parks.** As part of its urban design concept, the City will utilize the pocket park (approximately 0.25 to 0.50 acre) to establish a passive recreational and social gathering area in neighborhoods where it is deemed appropriate. Such parks are non-credited facilities toward parkland dedication requirements.
- OSC-7.20 **Design of Waterway and Trail Corridors.** The City shall design waterway and trail corridors to meet the recreational needs of the community, while maximizing public safety and access concerns. This includes locating trail corridors to ensure visibility along public roadways, where appropriate.
- OSC-7.21 **Maintenance of Waterway and Trail Corridors.** The City shall ensure that existing park maintenance activities incorporate applicable trail maintenance activities necessary to address public safety issues along City-owned trail areas. Trail maintenance activities shall be conducted in a manner consistent with all applicable environmental regulations and shall ensure emergency vehicle access along portions of the trail corridor where appropriate. Trail maintenance measures shall include, but not be limited to, vegetation or brush clearing and signage prohibiting inappropriate uses.

Goal HS-9 To ensure the maintenance of the Emergency Response Plan in order to maintain its effectiveness in preparing and responding to a natural or human-made disaster.

Policies

- HS-9.1 **Jobs-Housing Balance.** The City shall continue to update and ensure that the Emergency Response Plan meets current federal, State, and local emergency requirements.
- HS-9.2 **Coordinate Emergency Response Services with Local Agencies.** The City shall continue to coordinate emergency response services with Placer County, other cities within Placer County, special districts, service agencies, voluntary organizations, and state and federal agencies.
- HS-9.3 **Educate Public on Emergency Response.** The City shall conduct training programs for staff in disaster preparedness.
- HS-9.4 **Coordinate with Placer County.** The City will strive to work with other local agencies including Placer County and cities within the County to develop coordinated geographical information systems (GIS) planning for emergency response services.
- HS-9.5 **Siting of Critical Emergency Responses.** The City shall ensure that the siting of critical emergency response facilities such as hospitals, fire stations, police offices, substations, emergency operations centers and other emergency service facilities and utilities have minimal exposure to flooding, seismic and geological effects, fire, and explosions.

Goal HE-2 Conserve and improve the existing housing stock and residential neighborhoods.

Policies

- 6 Ensure that neighborhoods have adequate public services and facilities that comply with City standards.

Consistency Analysis

Implementation of the proposed project would ensure that required public service needs would be adequate funded and provided throughout the Plan Area, consistent with the 2050 General Plan. In addition, the proposed project would involve taking the appropriate actions to preserve open space and natural resources for the partial benefit of recreational enhancement within the City.

For police protection, the proposed project would provide funding to allow for Lincoln Police Department to offer an adequate level of service and create additional facilities as needed, consistent with policies PFS-8.8, PFS-8.9, 8.11, and 8.14. Accordingly, this increased police presence would extend along the trails throughout the Plan Area, including but not limited to Auburn and Markham ravines, consistent with Policy PFS-8.13. Lastly, the system of policing within the Plan Area would assist with the development of the existing neighborhood watch program, which includes Neighborhood Watch and Citizens on Patrol, in accordance with Policy PFS-8.12.

For fire protection, the proposed project would be required to provide funding to supplement the development of Lincoln Fire Department, consistent with policies PFS-8.1 and PFS-8.2. With assistance and consultation from the project applicant, the City has agreed to locate some additional facilities to provide improve response times, consistent with policies PFS-8.4 and PFS-8.5. The roadways and buildings within the proposed project would be constructed to meet the requirements of the Lincoln Municipal Code for emergency access, consistent with Policy PFS-8.6.

For schools, the proposed project would involve the construction of schools onsite, along with collocation with parks and other recreational facilities, ensuring adequate school facilities and services across the Plan Area, consistent with policies LU-15.16, PFS-9.1, PFS-9.2, and PFS-9.8. Further, the City and the developer would ensure that funding agreements and in-lieu fees would provide the adequate amount of funding to build new schools and facilities, consistent with policies PFS-9.7 and PFS-9.9.

For parks and recreation, the developer would provide the adequate and proportional level of parks, open space, and natural spaces throughout the project site to maintain sufficient and diverse recreational opportunities for the future inhabitants of the proposed project, consistent with policies LU-1.11, LU-15.4, and LU-15.17. In addition, the provision of parklands would include a the creation and maintenance of a variety of pocket parks, recreational buildings and equipment that satisfy local recreational needs and standards, and points of access to the detention basins and other major waterways within the project site, Auburn and Markham ravines, consistent with policies LU-12.5, LU-12.7, LU-15.15, LU-15.18, LU-9.6, OSC-7.2, OSC-7.4, OSC-7.8, OSC-7.9 OSC-7.12, OSC-7.19, and OSC-7.21. This would also involve a variety of accessible trails running adjacent to waterways and natural areas within the Plan Area, consistent with Policy OSC-7.20. Funding would be provided through in-lieu fees, park user fees, and capital improvement fees, which are enshrined in the City's Capital Improvement Program, consistent with policies OSC-7.5, OSC-7.10, OSC-7.11, and OSC-7.17.

For libraries, the proposed project would provide adequate funding, by way of in-lieu fees, to construct additional libraries (where necessary) in appropriate locations and according to the adopted City standard of 0.7 square feet per capita, consistent with policies PFS-9.3, PFS-9.4, and PFS-9.5.

5.1.15 Transportation and Circulation

The following goals and policies from the 2050 General Plan are relevant to transportation and circulation.

Goal T-2 Continue to ensure provision and maintenance of a safe and efficient system of streets to meet demands of existing and planned development.

Policies

- T-2.2 **New Development.** The City shall ensure that streets and highways will be available to serve new development by requiring detailed traffic studies and necessary improvements as a part of all major development proposals.
- T-2.3 **Level of Service for Local Streets and Intersections.** Strive to maintain a LOS C at all signalized intersections in the City during the p.m. peak hours. Exceptions to this standard may be considered for intersections where the city determines that the required road improvements are not acceptable (i.e., due to factors such as the cost of improvements exceeding benefits achieved, results are contrary to achieving a pedestrian design, or other factors) or that based upon overriding considerations regarding project benefits, an alternative LOS may be accepted. For purposes of this policy, City intersections along McBean Park Drive between East Avenue and G Street, and G Street between First Street and Seventh Street, are excluded from the LOS C standard, and will operate at a lower LOS.⁶
- T-2.4 **Level of Service for State Highways.** The City shall coordinate with Caltrans in order to strive to maintain a minimum LOS “D” for SR 65 and SR 193.
- T-2.5 **Monitor Intersections.** The City will identify and monitor critical intersections on a periodic basis and construct needed improvements in a timely manner, based upon available resources, if the LOS drops below “C”, unless a lower LOS has been established pursuant to Policy T-2.3. For purposes of this policy, critical intersections exclude those along McBean Park Drive between East Avenue and G Street, and G Street between First Street and Seventh Street.
- T-2.9 **SR 65 Bypass.** The City shall support construction of the SR 65 Bypass with interchanges provided at Ferrari Ranch Road, the realigned Nelson Lane, Nicolaus Road and Wise Road. The City will continue to place a very high priority on the construction of the Highway 65 Bypass and to aggressively pursue its funding and construction with Caltrans, SACOG, Placer County Transportation and Planning Agency, appropriate Federal agencies and private sources.
- T-2.14 **Developer Requirements.** The City shall require developers to construct at least the first two lanes of any road (including curbs, gutters and sidewalks) within their projects.
- T-2.19 **Capital Improvements Program.** The City shall implement street widening and other circulation improvements which are related to new development in conjunction with the City’s capital improvements program.
- T-2.20 **Coordinate with Neighboring Jurisdictions.** The City will coordinate with neighboring jurisdictions to determine if acceptable and compatible levels of service, consistent with the circulation elements and levels of service set forth in the affected jurisdiction’s general plan, on the roadways that extend into other jurisdictions can be achieved. The City will continue to participate in the South Placer Regional Transportation Authority (SPRTA) as part of an effort to develop interagency funding mechanisms to construct mutually acceptable regional transportation improvements. The City will require project developers to be responsible for a project’s fair share of all feasible physical improvements identified as part of the interagency funding program.

⁶ Note that G Street is also known as Lincoln Boulevard and/or “Old Highway 65.”

Goal T-4 To provide and maintain viable alternate modes of transportation for the community that will relieve congestion and improve environmental conditions.

Policies

T-4.3 **Promote Public Transit.** The City shall promote the use of public transit through development conditions requiring park-and-ride lots, bus turnouts and passenger shelters along major streets adjacent to appropriate land uses.

Goal T-5 To provide an interconnected system of bikeways that would provide users with direct linkages at a city and regional level.

Policies

T-5.1 **Develop Bike Lanes.** The City shall require bike lanes in the design and construction of major new street and highway improvements, and to establish bike lanes on those city streets wide enough to accommodate bicycles safely.

T-5.4 **Bicycle and Pedestrian Crossings.** The City shall provide pedestrian/bicycle crossings at appropriate intervals along new roadways that will adequately serve new large-scale commercial office, industrial development, and residential development as well as parks and schools.

T-5.6 **Trails and Pathways to Retail and Employment Centers.** The City shall promote pedestrian convenience and safety through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping, and employment centers. Where feasible, trails will be looped and interconnected.

T-5.7 **Trails and Pathways along Creeks and Wetland Areas.** The City shall encourage the development of trails and pathways along the edges of creeks and wetland areas. Where feasible, trails will be looped and interconnected.

T-5.9 **Pedestrian Access.** The City shall encourage specific plans and development plans to include design of pedestrian access that enables residents to walk from their homes to places of work, recreation and shopping.

Goal HS-3 To reduce the generation of air pollutants and promote non-polluting activities to minimize impacts to human health and the economy of the City.

Policies

HS-3.10 **Travel Demand Measures.** Coordinating with the PCAPCD, the City shall require large development projects to mitigate air quality impacts. As feasible, mitigations may include, but are not limited to, the following:

- Providing bicycle access and bicycle parking facilities,
- Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles (including neighborhood electric vehicles or NEVs), and
- Establishing telecommuting programs or satellite work centers.

HS-3.18 **Design for Transportation Alternatives.** The City shall encourage all new development to be designed to promote pedestrian and bicycle access and circulation (including the use of NEVs), to the greatest extent feasible.

Consistency Analysis

The traffic impact analysis and the proposed mitigation measures presented in section 3.15.3 are developed in the context of policies T-2.2, T-2.3, T-2.4, T-2.5, T-2.9, T-2.19, and T-2.20. The Specific Plan's Circulation Plan (Chapter 5, Exhibit 5.1) identifies the locations of collector and

arterial roadways that would be constructed in the proposed project. The accompanying street sections (Chapter 5, Exhibit 5.2) show that all roadways consist of at least two lanes, consistent with Policy T-2.14.

Policy T-2.3 establishes the City of Lincoln's level of service C policy for signalized intersections during the p.m. peak hour. Since the City does not have any similar level of service policy for unsignalized intersections or other time periods (i.e., a.m. peak hour), this study applies this LOS C standard to all City of Lincoln intersections during both the a.m. and p.m. peak hour, consistent with previous traffic analyses prepared for the City of Lincoln.

The City of Lincoln General Plan Policy T-2.4 also states that the City shall coordinate with Caltrans to strive to maintain a minimum of LOS D conditions for SR 65. This policy is applied to Caltrans ramp intersections where they intersect City of Lincoln roadways; however, Caltrans CSMP concept LOS is applied to the SR 65 freeway and highway segments within the City of Lincoln since they are under Caltrans jurisdiction and control.

Sections 5.3 through 5.8 of the Specific Plan describe the bicycle, pedestrian, NEV, transit, and travel reduction measures in the proposed project, consistent with policies T-4.3, T-5.1, T-5.4, T-5.6, T-5.7, T-5.9, HS-3.10, and HS-3.18. The Specific Plan's Mobility Plan (Chapter 5, Exhibit 5.3) also identifies the location of bicycle facilities, including on-street bike lanes (Policy T-5.1) and multi-use trails along the edges of Markham Ravine and Auburn Ravine, and roadways connecting residential areas to parks, commercial, shopping, and employment centers (policies T-5.6 and T-5.7). Additional measures include provision of sidewalks along roadways and local neighborhood streets, on-street bicycle lanes, and park and ride lots. Although the City's bus service and Placer County Transit do not currently serve the project, the proposed project includes bus turnouts and shelters, and a bus transfer facility will be considered as part of a joint use park-and-ride lot. The street sections also have been developed to include NEV lanes on multi-lane arterial and collector streets. NEVs will also be permitted to use roadways with a speed limit under 35 miles per hour.

5.1.16 Utilities and Infrastructure

The following goals and policies from the 2050 General Plan are relevant to utilities and infrastructure.

Goal PFS-2 Ensure provision of a water system with adequate supply transmission, distribution and storage facilities to meet the needs of existing and future development.

Policies

PFS-2.5 Development in Annexation Areas. The City shall not allow development within newly annexed areas until a potable water supply is obtained through Placer County Water Agency (PCWA) or Nevada Irrigation District (NID) or, where appropriate, other water districts. For purposes of this policy, potable water will be considered obtained when a written confirmation of supply of surface water is received from the appropriate water agency and a funding mechanism acceptable to the City is in place to pay for any improvements necessary for the delivery of treated water.

Applications for new development can be processed prior to obtaining appropriate will-serve documentation, but the project will not be approved prior to receiving this documentation.

- PFS-2.7 **Groundwater Supplies.** The City shall consider development of groundwater supplies in the western portions of the City’s sphere of influence to provide emergency back up and to supplement the domestic supply provided by the PCWA and NID.
- PFS-2.9 **Water Storage Requirements.** The City shall condition new development on availability of storage that meets the following parameters:
- Equalizing Storage (for meeting peak flows) – 25 percent of maximum day demand.
 - Fire Reserve – Provide fire reserve as required by the Insurance Services Office (ISO) or as required by the City Fire Chief and City Engineer.
 - Emergency Reserve – 33 percent of the total of Equalizing Storage and Fire Reserve.
- PFS-2.14 **Development Requirements.** The City shall require new development to be responsible for construction of water transmission and distribution lines less than 18 inches in diameter. Provision will be made allowing reimbursement from Third Parties should such lines result in an “over-sizing” for a particular development.
- PFS-2.17 **Water Conservation Measures for New Development.** The City shall require new development to use the best available technologies (BAT) for water conservation, including, but not limited to water-conserving water closets, showerheads, faucets, and water conserving irrigation systems.
- Goal PFS-3 Ensure provision of adequate sanitary sewers and wastewater treatment capacity to accommodate existing and future development in order to protect public health and safety.**

Policies

- PFS-3.10 **Sewer Lines for New Development.** The City shall require new development to be responsible for construction of all sanitary sewer lines serving such development. Provision will be made allowing reimbursement from Third Parties, or credits against City wastewater fees (as approved by the Director of Public Works) should such lines result in an “over-sizing” for a particular development.
- PFS-3.13 **Provisions of Buffers for Wastewater Treatment Facility.** The City shall continue to promote the provision of adequate buffers for the City’s regional wastewater facility, in order to prevent the encroachment of incompatible land uses, which could affect its long-term operations.

Policies

- LU-15.15 **Joint Use of Detention Facilities.** Detention facilities can be utilized in meeting part of a village’s park requirements based on the usability of the basin for recreational purposes.

- Goal PFS-4 To ensure provision and sizing of adequate storm drainage facilities to accommodate existing and planned development.**

Policies

- PFS-4.6 **Preproject Conditions.** The City will require new development to provide storm-water detention sufficient to limit outflow per Figure 7-1 of the City’s Stormwater Management Manual (February 1994), or as revised.

Master Drainage Plans shall be designed to require new development to provide, or contribute towards, stormwater detention to reduce postdevelopment peak flow from a 100 year event to pre-development flow rate less 10 percent of the difference between the estimated pre-development and the post-development unmitigated peak flow rates. The Master Drainage Plan shall identify appropriate locations to achieve such postdevelopment flows. This criterion is principally designed to address the 100-year event with appropriate consideration given for the feasibility of mitigating 2-year and 10-year events.

- PFS-4.11 **Stormwater Management Manual.** The City shall require drainage designs and practices to be in accordance with the Stormwater Management manual of the Placer County Flood Control District unless alternative methods are approved by the City Engineer.

Consistency Analysis

The proposed project would be required to address public utilities and infrastructure needs consistent with the entirety of the City of Lincoln. The proposed project would be required to ensure a water supply prior to annexation (Policy PFS-2.5), construct appropriately sized water pipelines (Policy PFS-2.14), and ensure adequate water storage (Policy PFS-2.9). The proposed project would provide adequate sewer service (Policy PFS-3.10) and adequate drainage and stormwater facilities to ensure pre-project conditions are met (policies PFS-4.6 and PFS-4.11). The proposed detention basins would be incorporated into the design of parks, where feasible, and designed to accommodate onsite stormwater flows (Policy LU-15.15). The proposed project is consistent with these policies.

CHAPTER 6

Alternatives

The purpose of the EIR alternatives analysis is to describe a range of reasonable alternatives to the proposed project or location of the project that could feasibly obtain most of the basic objectives of the project and to evaluate the comparative merits of the alternatives (State CEQA Guidelines, section 15126.6[a]). An EIR need not consider every conceivable alternative to a project, nor is it required to consider alternatives that are infeasible. The State CEQA Guidelines require that the discussion be focused on those alternatives that are capable of avoiding or substantially lessening any significant effects of the project, even if they impede the attainment of the project objectives to some degree or would be more costly (CEQA Guidelines section 15126.6[b]).

The State CEQA Guidelines indicate that several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include: (1) the nature of the significant impacts of the proposed project; (2) the ability of alternatives to avoid or lessen the significant impacts associated with the project; (3) the ability of the alternatives to meet the objectives of the project; and (4) the feasibility of the alternatives. These factors should be unique for each project. According to the State CEQA Guidelines, an EIR need only examine in detail those alternatives that could feasibly meet most of the basic objectives of the project. When addressing feasibility, CEQA states that “among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to alternative sites” (State CEQA Guidelines section 15126.6). The State CEQA Guidelines also specify that the alternatives discussion should not be remote and speculative; however, they need not be presented in the same level of detail as the assessment of the proposed project.

CEQA requires an EIR to identify project alternatives and to indicate the manner in which a project’s significant effects may be mitigated or avoided. However, it does not mandate that the EIR itself contain an analysis of the feasibility of the various project alternatives or mitigation measures that it identifies (Public Resources Code (PRC), sections 21002.1, subd (a): 21100 and subd (b) 4, 2004). As the lead agency, the City of Lincoln bears the responsibility for the decisions that have to be made before the project can go forward. These decisions include, but are not limited to, the determinations of feasibility and whether the benefits of the project outweigh its significant effects on the environment (PRC sections 21002.1, subd (b) and (c); section 21082).

The significant environmental impacts of the proposed project that the alternatives will seek to eliminate or reduce were determined and based upon the findings contained within each technical section evaluated in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, of this Draft EIR.

6.1.1 Project Objectives

The objectives of the proposed project are used to effectively evaluate the reasonableness and feasibility of each alternative. As presented in Chapter 2, Project Description, the project objectives are as follows:

1. Establish a 4,787+ acre mixed-use village that incorporates feasible, smart growth principles which results in an economically stable, sustainable community.
2. Provide a Land Use Plan which includes a broad range of compatible land uses, including residential, commercial, office, mixed-use, recreation and public/quasi-public which are organized around a compact core and provide appropriate land use transitions.
3. Provide a pedestrian friendly community environment that provides a safe and pleasant place for people to live, work and recreate.
4. Provide two Village Centers, located adjacent to key arterial streets, functioning as hubs of activity and source of sales tax revenue.
5. Establish a network of open space and recreation amenities for Plan Area and City residents with the potential for recreational tourism. Elements include a regional sports park, community parks, neighborhood parks, linear parkways, pedestrian and bike connections throughout the Plan Area.
6. Provide sites for a high school, a junior high school and three elementary schools, which are conveniently located to serve the Plan Area residents and surrounding Villages.
7. Preserve and protect the Auburn Ravine and Markham Ravine corridors as permanent open space and provide public access with perimeter trails and crossings, where feasible.
8. Provide regional and community scale retail and employment centers in locations with easy access and visibility from SR 65, offering employment opportunities for residents in the Plan Area and the City of Lincoln, resulting in a balanced ratio of jobs and housing and consistent with the City's General Plan.
9. Provide a Land Use Plan with a balance of uses and density that results in an adequate tax base which, at project build-out, generates a surplus to the General Fund and generates financial resources to pay for public services and infrastructure without financial burden to existing residents.
10. Provide a Land Use Plan, Design Standards & Guidelines which are consistent with Lincoln General Plan goals and policies, incorporate market acceptable design features and foster an attractive, well maintained community.
11. Establish a land use and circulation system that promotes convenient mobility, links Village 5 with other villages and the existing areas of Lincoln and provides a variety of

non-vehicular modes within a setting that is safe, accessible and convenient for all modes of travel.

12. Promote a diversity of housing opportunities responsive to the needs of Lincoln, the region and market conditions; including single-family dwellings, apartments, condominiums, townhouses and live-work units to serve a broad range of family incomes.
13. Provide a comprehensively planned infrastructure system which is sized to serve the entire Plan Area and adjacent planned Villages, which complements the city-wide infrastructure and ensures funding for the on-going maintenance needs of the parks, open space and storm water quality facilities, public services and infrastructure.

6.1.2 Significant Effects of the Proposed Project

The following significant and unavoidable impacts were identified for the proposed project:

Impact 3.1-1: Implementation of the proposed project would impact scenic vistas in the project area.

Impact 3.1-2: Implementation of the proposed project would alter the existing visual character or quality of the Plan Area and its surroundings.

Impact 3.1-3: The proposed electronic message center would alter the existing visual character or quality of the Plan Area and its surroundings.

Impact 3.1-4: Implementation of the proposed project would introduce light and glare into the project area.

Impact 3.1-6: Implementation of the proposed project would contribute to cumulative impacts on scenic vistas in the Plan Area.

Impact 3.1-7: Implementation of the proposed project would contribute to cumulative changes in the visual character of areas surrounding the Plan Area.

Impact 3.1-8: Implementation of the proposed project would contribute to a cumulative increase in light and glare in the vicinity of the Plan Area.

Impact 3.2-1: Implementation of the proposed project would result in conversion of Important Farmland to non-agricultural use.

Impact 3.2-4: Implementation of the proposed project would contribute to cumulative conversion of Important Farmland to non-agricultural use.

Impact 3.2-5: Implementation of the proposed project would contribute to cumulative pressure to convert agricultural land to non-agricultural use.

Impact 3.3-2: Construction of land uses under the proposed project would generate criteria pollutant emissions that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Impact 3.3-3: Operational activities associated with development under the proposed project would result in emissions of criteria air pollutants at levels that would substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.

Impact 3.3-6: Land uses to be developed under the proposed project would result in exposure of substantial persons to objectionable odors.

Impact 3.3-7: The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Impact 3.5-1: Construction and operation of the proposed project would result in a cumulatively considerable increase in greenhouse gas (GHG) emissions that could conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing GHG emissions.

Impact 3.6-1: Implementation of the proposed project would adversely impact historic architectural resources directly through demolition or substantial alteration, or indirectly through changes to historical setting.

Impact 3.6-5: The proposed project, in conjunction with past, present, and reasonably foreseeable future projects, would result in significant cumulative impacts on historic architectural resources.

Impact 3.11-1: Implementation of the proposed project would conflict with adjacent land uses.

Impact 3.11-2: Implementation of the proposed project would create conflicting land uses within the Plan Area.

Impact 3.12-2: Construction of the proposed project would result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Impact 3.12-3: Implementation of the proposed project would expose noise-sensitive land uses to noise levels in excess of the City of Lincoln General Plan noise standard or result in a substantial permanent increase in ambient transportation-related noise above existing levels.

Impact 3.12-6: Implementation of the proposed project would expose on-site noise-sensitive land uses to noise generated by commercial, educational and recreational activities in excess of the City of Lincoln General Plan noise standard or result in an increase in ambient noise.

Impact 3.12-9: Increases in traffic from the proposed project in combination with other development, would result in cumulatively considerable noise increases.

Impact 3.13-1: The proposed project would induce substantial population growth in an area.

Impact 3.13-3: The proposed project would cumulatively induce substantial population growth in an area, either directly (by proposed new homes and businesses) or indirectly (through the extension of roads or other infrastructure).

Impact 3.15-1: Implementation of the proposed project would increase traffic levels at intersections under the City of Lincoln's jurisdiction operating at an acceptable LOS under existing conditions.

Impact 3.15-3: Implementation of the proposed project would increase traffic levels at future City of Lincoln intersections in Village 5.

Impact 3.15-4: Implementation of the proposed project would increase traffic levels at intersections under the County of Placer's jurisdiction.

Impact 3.15-6: Implementation of the proposed project would increase traffic levels at intersections maintained by Caltrans.

Impact 3.15-14: Implementation of the proposed project would contribute to cumulative traffic levels at intersections under the City of Lincoln's jurisdiction operating at an acceptable LOS under cumulative no project conditions.

Impact 3.15-16: Implementation of the proposed project would contribute to cumulative traffic levels at future City of Lincoln intersections in Village 5.

Impact 3.15-17: Implementation of the proposed project would contribute to cumulative traffic levels at intersections under the County of Placer's jurisdiction.

Impact 3.15-18: Implementation of the proposed project would contribute to cumulative traffic levels at intersections under the City of Roseville's jurisdiction.

Impact 3.15-19: Implementation of the proposed project would contribute to cumulative traffic levels at intersections maintained by Caltrans.

Impact 3.15-20: Implementation of the proposed project would contribute to cumulative traffic levels on study roadway segments in Placer County.

Impact 3.15-22: Implementation of the proposed project would contribute to cumulative traffic levels on study freeway facilities maintained by Caltrans.

Impact 3.16-7: The proposed project would contribute to cumulative increases in demand for water supply that could result in the need for new or expanded treatment, storage or conveyance facilities.

Impact 3.16-8: Implementation of the proposed project and other cumulative development would contribute to cumulative additional wastewater flows that would result in the expansion or construction of new facilities.

6.1.3 Approach to Alternatives Analysis

In identifying alternatives to the proposed project, primary consideration was given to alternatives that could reduce significant unavoidable impacts resulting from the proposed project. Certain impacts that are identified as being significant and unavoidable under the proposed project (e.g., increase in air pollutants from project construction and operation, conversion of agricultural lands, increases in traffic) are due primarily to development activity in an area that is currently utilized for large-scale agricultural operations and rural residences. Some alternatives were considered, but dismissed from further analysis because they would not fulfill most of the project objectives, would not eliminate or substantially lessen environmental effects, and/or would otherwise be infeasible as discussed below in Section 6.1.4.

In accordance with the alternatives analysis requirement of CEQA, three alternative projects and a no project alternative were identified and analyzed. These alternatives represent viable options for development of the site, with varying densities of development. Each alternative was chosen as a way to potentially reduce one or more environmental impacts, while still achieving some or all of the project objectives. The rationale for the selection of these particular alternatives is explained in the following paragraphs.

In accordance with the requirements of the CEQA Guidelines and relevant case law, the presentation and analysis of alternatives is not as detailed as that of the proposed project. The presentation and analysis of alternatives, however, is designed to provide enough information to the public and decision-makers to allow for a reasoned, meaningful discussion of the relative merits of the alternatives versus the proposed project. Normally, alternatives analyses in CEQA documents do not include any diagrammatic representation of alternatives. The illustrations in this section are intended to clarify the concepts presented in the alternatives and encourage a meaningful deliberation on the merits. The alternative concepts, however, are feasible and, in general, could accommodate any relevant mitigation measures included within this EIR – perhaps in some slightly altered form.

6.1.4 Alternatives Considered But Rejected

The following project alternatives were considered but rejected for the reasons discussed below: (a) Reduced Density Alternative; and (b) Offsite Alternative.

The Reduced Density Alternative could potentially reduce impacts related to air pollutant emissions and traffic, but it would still require the conversion of farmland to non-agricultural use

and it would have the same impacts on biological resources without reaching the City's density goals. Additionally, a Reduced Density Alternative would not meet the project objectives relating to smart growth principles (because it would not include the high-density land use component), or providing a land use plan with a broad range of land uses, including high-density in the Village 5 core. Furthermore, the Reduced Density Alternative would adversely affect the jobs/housing ratio required by the City of Lincoln General Plan.

An Offsite Alternative was likewise considered but rejected mostly because the City's General Plan specifically requires that Village 5 be built out in accordance with General Plan principals and policies and no other land in Lincoln is available for processing a Village like Village 5. Moreover, an Offsite Alternative would likely have increased significant impacts on agriculture and biological resources given there are few other large contiguous areas which allow for the full preservation of Markham and Auburn Ravines while simultaneously allowing feasible development around these open spaces. Additionally, fulfilling project objectives of two Village Centers and a large Regional Sports Park in an area further away from the SR 65 corridor would be fiscally infeasible as these uses require highway frontage and/or close proximity to be financially viable.

6.1.5 Project Alternatives

This section lists the design characteristics of each alternative and provides explanations of deviations from the original project design. Impacts associated with each alternative, comparisons between alternatives, and a discussion of whether the alternative meets project objectives are also provided. The alternatives considered in this section include:

- Alternative 1: No Project/No Build
- Alternative 2: No Project/Existing Placer County General Plan
- Alternative 3: Reduced Footprint
- Alternative 4: No Development West of Dowd Road

Alternative 1: No Project/No Build

Alternative 1 is the No Project alternative as required by CEQA Guidelines section 15126.6(e). Under the No Project/No Build alternative, no building or development would occur on the project site. The site is assumed to remain in its existing condition. Areas that are actively farmed would remain in agricultural use. Areas along Auburn and Markham Ravines would remain in open space. Existing residences would remain unchanged. The existing Lincoln High School Farm would remain as an educational, agricultural facility.

Aesthetics and Visual Quality

Alternative 1 would not cause any changes to the existing visual character because there would be no development on the Plan Area. Views of the Plan Area from surrounding properties would remain that of open area dominated by agricultural operations with scattered one- and two-story

rural residences and two open space, riparian corridors. Under Alternative 1, there would be no new sources of glare or nighttime light on the Plan Area. Therefore, Alternative 1 would have no impact regarding aesthetics or visual quality.

Agriculture and Forestry Resources

Alternative 1 would not cause any changes to existing agricultural operations, including land designated as Important Farmland or land under a Williamson Act contract. Under this alternative, no agricultural land would be converted to non-agricultural use and there would be no conversion of land classified as Important Farmland under California's Farmland Mapping and Monitoring Program (FMMP). Because there would be no development under this alternative, no Williamson Act contracts would be canceled or identified for nonrenewal. Therefore, Alternative 1 would have no impact on agriculture and forestry resources.

Air Quality

Under Alternative 1, there would be no construction or development of new uses within the Plan Area. In the absence of construction activities, there would not be any short-term construction emissions or operational emissions associated with new vehicle trips or stationary sources. Because Alternative 1 would not generate any new air emissions, this alternative would result in no impacts related to air quality.

Biological Resources

Alternative 1 would not result in any land disturbance or development. In the absence of any construction activities or permanent development, there would be no fill of wetlands or waters of the United States, no loss of special-status species or their habitats, no disturbance to nesting birds, and no water quality impacts that could affect fish species. Therefore, Alternative 1 would have no impacts on biological resources.

Climate Change

Climate change impacts generally result from greenhouse gas (GHG) emissions from construction activities and project operation (e.g., vehicles). Under Alternative 1, there would be no construction and no new operations on the Plan Area. Because of the lack of construction or new uses, Alternative 1 would not result in any new GHG emissions and would therefore not result in any impacts related to climate change.

Cultural Resources

Impacts to known or unknown cultural resources generally occur during site disturbance. Under Alternative 1, there would be no construction and no new residential or commercial uses. Due to the lack of construction and new or expanded operations, Alternative 1 would not include any activities that could impact cultural resources. Therefore, Alternative 1 would have no impact on cultural resources.

Energy Resources

Under Alternative 1, no development of the Plan Area would occur. Without construction equipment or new residents that would use vehicles, Alternative 1 would not result in the use of fuel or an increase in VMT. Therefore, Alternative 1 would have no impact on energy resources.

Geology, Soils, and Seismicity

Alternative 1 would not include any construction activities or new structures. In the absence of development, this alternative would not place any structures at risk for seismic-related impacts, increased erosion, or risks related to unstable or expansive soils. Therefore, Alternative 1 would have no impacts related to geology, soils, and seismicity.

Hazards/Hazardous Materials

Under Alternative 1, there would be no development of the Plan Area. In the absence of any construction or development, there would not be any increased risk from the accidental upset or routine transport, use, or disposal of hazardous materials. Also, because there would not be any development, there would not be any potential safety hazards from the close proximity of the Lincoln Regional Airport. Without new construction of roadways and temporary detours or closures that could accompany construction activities, Alternative 1 would not interfere with emergency response. Finally, because there would not be any new structures developed under Alternative 1, this alternative would not place structures at risk from wildland fire. Therefore, Alternative 1 would result in no impacts related to hazards and hazardous materials.

Hydrology, Drainage, and Water Quality

Alternative 1 would not include any construction or development. As such, this alternative would not result in any violation of water quality standards resulting from construction activities. Additionally, the lack of development under this alternative would not deplete or impede groundwater, would not alter drainage patterns, and would not increase runoff or localized flooding. Because there would be no construction, there would be no new structures within the 100-year floodplain. Therefore, Alternative 1 would have no impacts related to hydrology and water quality.

Land Use and Planning

Under Alternative 1, there would be no new or changed land uses and the Plan Area would remain in primarily agricultural use. While land uses within the Plan Area would not change, it is possible that adjacent land uses could change and conflict with the Plan Area. Due to the lack of development under Alternative 1, there would not be any new internal land use conflicts. Under Alternative 1, the Plan Area would not be annexed to the City of Lincoln, but would remain under the jurisdiction of unincorporated Placer County and no impacts related to conflicts with the City's General Plan or LAFCO's annexation policies would occur.

Noise

Because Alternative 1 would not include any construction or development, this alternative would not generate any new noise or vibrations, nor would it add any noise-sensitive land uses to the Plan Area. Without construction or development, there would be no increase in temporary or permanent noise levels in the Plan Area. No new commercial or recreational uses would be built, so any existing sensitive receptors would not be impacted by noise from new commercial or recreational uses. No sensitive receptors would be added to the Plan Area, so there would not be any new impacts from aircraft or roadway noise. Therefore, Alternative 1 would have no impacts related to noise.

Population, Employment, and Housing

Population, employment, and housing impacts are generally related to new residents and employment uses. Alternative 1 would not add any new residents or structures, including employment uses. With no new jobs generated by this alternative, Alternative 1 would not alter the regional jobs-to-housing ratio. In the absence of any development, Alternative 1 is unlikely to induce growth in the Plan Area. Finally, because there would be no construction or development under Alternative 1, this alternative would not displace people or require replacement housing. Therefore, Alternative 1 would have no impacts related to population, employment, and housing.

Public Services

Alternative 1 would not add any new residents to the Plan Area. Without new residents, there would be no additional demand for police, fire, schools, parks or recreational facilities, libraries, or other public services or facilities. Without new residents, there would be no new impacts on or degradation of existing facilities. With no additional demand for these services, Alternative 1 would result in lesser impacts to public services as compared to the proposed project.

Transportation and Circulation

Because Alternative 1 would not involve any construction or development of the Plan Area, no new vehicle trips would be generated under this alternative. Without new vehicle trips from new residents or commercial development, there would be no impact to area intersections, roadways, and highways. As there would be no construction activities, there would not be any temporary road closures or detours due to project construction. Therefore, Alternative 1 would result in no impact related to transportation and circulation.

Utilities

Under Alternative 1, no new development would occur within the Plan Area. Without new development, there would be no additional need for water supply or new or expanded facilities for water, wastewater, or storm water. Additionally, without new development, there would not be an increase in the amount of solid waste generated within the Plan Area. Therefore, Alternative 1 would have no impacts on utilities.

Relationship to Project Objectives

Alternative 1 would not develop any new residential, commercial, recreation, or other uses and no infrastructure would be expanded through the Plan Area. Project objectives include development of a mixed-use village that includes residential, commercial, recreation, open space, and public facilities. Because none of those would be developed under Alternative 1, this alternative would not meet any of the project objectives.

Alternative 2: No Project/Existing Placer County General Plan

Under Alternative 2, the No Project/Existing Placer County General Plan alternative, the Village 5 Plan Area would develop according to the Existing Placer County General Plan and the Placer County Zoning Ordinance.

Under Alternative 2, development would occur under the following Placer County General Plan designations:

- Agriculture/Timberland 80-acre minimum,
- Agriculture/Timberland 40-acre minimum, and
- Rural Residential, 1- to 10-acre minimum.

The Placer County Zoning Ordinance zones the site as Farm-Building Site (F-B-X-SP) with 5-acre, 20-acre, or 80-acre minimums.

Under Alternative 2, residential development could intensify over existing conditions by allowing residential dwellings, farmworker dwellings, and secondary dwelling units. Agricultural uses would continue.

The number of primary dwelling units that could be constructed under Alternative 2 varies between 97 and 379 units. This variability is due to the approximately 313.20 acres in the Plan Area designated as Rural Residential, 1 to 10-acre minimum. If these properties are divided to 1-acre minimum size, there could be up to 313 dwelling units. If these properties are divided to have minimum lots size of 10 acres, then 31 dwelling units could be constructed. Up to 66 dwelling units could be constructed on each of the agriculture/timberland parcels, if the land is divided up to its minimum size. By using the higher potential dwelling unit count, the analysis of Alternative 2 would be more conservative.

Using the persons per household (pph) generation rate for rural residential, country estate, and low-density residential of 2.86 pph and assuming 379 new dwelling units, Alternative 2 could result in 1,084 new residents in the Plan Area. This development represents 95.3 percent fewer dwelling units than the proposed Specific Plan, and 94.4 percent fewer new residents.

Development under Alternative 2 would not include development of any commercial, business/professional, or park uses.

Aesthetics and Visual Quality

Under Alternative 2, the Plan Area could be developed according to existing Placer County General Plan designations and zoning which would allow up to a total of 379 residential dwellings and structures related to agricultural and rural designations. The average parcel size would be approximately 12.6 acres (4,787 acres/379 units) and would result in a level of development that would be much less dense than the proposed project. Under Alternative 2, views of the Plan Area from SR 65 could include scattered structures up to 36 feet in height with maximum site coverage of 25 percent. While the proposed project would alter the existing visual character from rural farmland to suburban development, under Alternative 2 the visual character of the Plan Area would remain rural and agricultural in character, with a visual landscape that would be dominated by natural and agricultural open spaces with limited scatter. Impacts related to scenic vistas and the visual character of the Plan Area would be significant and unavoidable under the proposed project but would be less than significant under Alternative 2.

Implementation of the proposed V5SP would have potentially significant impacts related to the creation of new nighttime lighting and daytime glare that could disturb existing residents and travelers through the area (see Impact 3.1-4). Alternative 2 would result in development at rural residential densities, which would result in small amounts of new nighttime lighting and daytime glare, but the light and glare would be similar in character to the existing rural and agricultural uses that are developed in the Plan Area. The reduced effects would leave the light and glare character of the Plan Area similar to existing conditions, and thus the impact on light and glare would be less than significant for Alternative 2. Mitigation Measure 3.1-4 would not be required for Alternative 2.

Agriculture and Forestry Resources

Alternative 2 would maintain existing agricultural operation, so conversion of Important Farmland would not occur due to this alternative. Also, no Williamson Act contracts would be canceled because of Alternative 2 because the land would remain primarily in agricultural production. Alternative 2 would maintain existing agricultural zoning. Therefore, Alternative 2 would result in no impact related to agriculture and forestry resources.

Air Quality

Air quality impacts generally result from new vehicle trips associated with development, as well as temporary construction impacts. Under Alternative 2, as many as 379 new residences could be constructed in compliance with Placer County land use designations and zoning. Given the minimum parcel sizes under existing zoning, Alternative 2 would not construct a substantial amount of new residential or agricultural structures that would result in significant air quality impacts during operation (see Impacts 3.3-1, 3.3-3, 3.3-4, and 3.3-5). Because of the small amount of construction that would occur at any particular time, construction air quality impacts would be less than significant (see Impact 3.3-2). Odor impacts (see Impact 3.3-6) that could result from Alternative 2 would consist of odor associated with agricultural and animal-keeping

operations that are permitted under the existing Placer County General Plan. Because the Plan Area is already actively farmed, it is unlikely that Alternative 2 would result in any significant new odors. Therefore, Alternative 2 would result in less-than-significant impacts related to air quality.

Biological Resources

Alternative 2 would allow up to 379 new residences within the Plan Area. Land disturbance and construction that could occur under Alternative 2 could result in fill of wetlands or waters of the U.S. Activities under Alternative 2 could also result in the loss of special-status species or their habitat and disturbance to nesting birds. Construction and development would be subject to Placer County storm water requirements, which would help protect water quality for fish species.

The V5SP would have potentially significant adverse impacts on special-status species and their habitat (see Impacts 3.4-2, 3.4-3, 3.4-4, 3.4-5, 3.4-6, 3.4-7, 3.4-8, and 3.4-9). Alternative 2 could result in new development within the Plan Area, albeit at a much lower rate than the proposed project. Development under Alternative 2 would be subject to all federal, state, and local regulations aimed at protecting special-status species and their habitat. Mitigation Measure 3.4-2 requires development of a comprehensive plan to mitigate for open space, agricultural land, and biological resources. Because Mitigation Measure 3.4-2 requires a comprehensive mitigation plan, it would not be applicable to the individual developments that could occur under Alternative 2. Thus, while development under Alternative 2 could result in adverse impacts to special-status species and their habitat, adherence to federal, state, and local requirements would reduce impacts to a less-than-significant level.

Development of the proposed project would result in impacts to jurisdictional waters (see Impact 3.4-1). Mitigation Measure 3.4-1 requires mitigation such that there would be no net loss of jurisdictional waters. Under Alternative 2, development of new residences could impact jurisdictional waters. As development is proposed for each new residence under Alternative 2, the property owner would be required to seek a permit through the U.S. Army Corps of Engineers and mitigate in compliance with requirements for no net loss. Therefore, Alternative 2 would likely result in less-than-significant impacts related to jurisdictional waters.

While development under Alternative 2 would not necessarily impact the Auburn Ravine and Markham Ravine corridors, it would not preserve these corridors in perpetuity like the proposed project would. However, because these corridors would remain and allow for the continued movement of species (see Impact 3.4-10), Alternative 2 would result in a less-than-significant-impact on wildlife movement.

As Alternative 2 would develop the Village 5 area in accordance with the existing Placer County General Plan, implementation would not be expected to conflict with approved plans that protect biological resources, including the proposed Placer County Conservation Plan (PCCP) (see Impacts 3.4-11 and 3.4-12).

Climate Change

Under Alternative 2, the Plan Area would be developed in accordance with existing Placer County land use and zoning designations, which would allow up to 379 new residences within the Plan Area. As discussed above, Alternative 2 would construct 95.3 percent fewer residences and no non-residential development as compared to the proposed project. Thus, the overall amount of development that would occur under Alternative 2 would be approximately 97 percent less than proposed project's anticipated development. Development of new residential uses would result in new sources of GHG emissions, which could result in impacts related to climate change (see Impact 3.5-1).

Section 3.5, Climate Change, of this Draft EIR quantified the expected construction and operational emissions that would result under the proposed project. The analysis determined that the proposed project would result in approximately 132,828.42 metric tons of carbon dioxide equivalent (CO₂e) per year (CO₂e MT/yr), exceeding PCAPCD's threshold of 1,100 CO₂e MT/yr. Because Alternative 2 would develop approximately three percent of the development anticipated under the proposed project, it would be expected that implementation of Alternative 2 would result in a proportionate amount of emissions. Thus, the anticipated emissions for the proposed project could be multiplied by 0.03 to estimate the emissions that would occur under Alternative 2, and would be 3,984.85 CO₂e MT/yr (132,828.42 x 0.03). This amount would exceed the PCAPCD threshold of 1,100 CO₂e MT/yr. Therefore, Alternative 3 would result in a potentially significant impact related to implementation of programs, plans, or policies aimed at reducing GHG emissions. Mitigation Measure 3.5-1 would be required for Alternative 3. However, implementation of those measures to reduce GHG emissions would not result in emissions below the PCAPCD threshold; thus, the impact would be significant and unavoidable.

Cultural Resources

Development under Alternative 2 would include as many as 379 new dwelling units. New construction would have the potential to impact historical architectural resources (see Impact 3.6-1), archaeological resources (see Impact 3.6-2), paleontological resources (see Impact 3.6-3), and previously unknown human remains (see Impact 3.6-4). As much of the Plan Area has not been surveyed, evaluations would need to be done of individual properties to determine whether cultural resources may be present within the site. Mitigation Measure 3.6-1 would apply to Alternative 2, but would not reduce the impact to less-than-significant because exact nature of future development and the eligibility of potentially affected resources is currently unknown. Therefore, impacts to eligible historic architectural resources would be significant and unavoidable.

While historic architectural resources can be surveyed and identified prior to construction, other cultural resources may be subsurface and not discovered until site disturbance. Mitigation Measures 3.6-2(a) and 3.6-2(b) provide guidance for the treatment of archeological resources discovered during site work. Mitigation Measure 3.6-3 would provide guidance for paleontological resources that may be discovered during site work. Mitigation Measure 3.6-4

would provide guidance for the treatment of human remains that may be discovered during site work. Collectively, these measures would reduce impacts of Alternative 2 to unknown resources to a less-than-significant level.

Energy Resources

Development of Alternative 2 would use fuels for construction equipment and employees, as well as new residents and workers that would be generated by new residential and potential agricultural structures. Alternative 2 would allow construction of up to 379 new dwelling units, which would be 95.3 percent fewer new residences than the proposed project. Also, Alternative 2 would not construct any non-residential development, which would be a 100 percent reduction compared to the proposed project. Overall, Alternative 2 represents a 97 percent reduction in development compared to the proposed project.

Construction of Alternative 2 would include fuel for construction equipment, delivery vehicles, and construction employee vehicles. Construction could result in unnecessary, wasteful, or inefficient use of fuels if construction equipment is not well maintained, if equipment is left to idle when not in use, or if haul trips are not planned efficiently (see Impact 3.7-1). The amount of electricity consumption that would be associated with energy consuming equipment and processes which will be used during construction of Alternative 2 is unknown and cannot be estimated as it would be too speculative given existing data. However, electricity demand during construction is not expected to be unnecessary, wasteful, or inefficient since unusually electrically intensive construction activities are not anticipated based on the general land uses proposed. In addition, PG&E provides efficient electricity with approximately half of its electrical power generated by renewable sources. To reduce impacts associated with potentially wasteful use of fuels, Mitigation Measure 3.7-1 would be included. This measure and actions to reduce the risk of wasteful or inefficient use of energy, and would reduce the impact to less than significant.

Vehicle miles traveled (VMT) per capita is an indicator is whether a project would result in wasteful or inefficient use of transportation energy because driving greater distances would mean using greater amounts of fuel (see Impact 3.7-2). Because Alternative 2 would include solely residential development and potentially accessory agricultural structures, there would not be any mix of uses. Thus, Alternative 2 would likely increase per capita VMT because of the lack of proximity to jobs, goods and services, recreational facilities and parks, and other amenities. VMT for Alternative 2 would be similar to existing conditions, approximately 15.94, which is a higher VMT than the 15.80 projected under proposed project conditions. As a result, Alternative 2 would consume approximately 793,000 gallons of gasoline and 7,000 gallons of diesel per year more than the proposed project for transportation fuel consumption. Combining a projected increase in per capita VMT with the lack of amenities within the Plan Area, it is likely that Alternative 2 would result in a potentially significant impact related to VMT. To decrease per capita VMT, additional development would be needed, particularly of commercial, office, retail, and recreational uses. Because Alternative 2 would develop under existing zoning, development of non-residential uses would not be permitted. Thus, the only mitigation for this impact would be

to develop non-residential uses, which is not feasible. Therefore, Alternative 2 would result in significant and unavoidable impacts related to per capita VMT.

Like all new building in California, development under Alternative 2 would be required to be consistent with the energy efficiency standards contained within Title 24 of the California Building Code (CBC). As such, Alternative 2 would result in a less-than-significant impact related to Title 24 energy standards (see Impact 3.7-3).

Geology, Soils, and Seismicity

Development of the Plan Area under Alternative 2 would allow for the construction of residential and agricultural structures. While there is a low potential for seismic activity in the Plan Area, new structures could be subjected to seismic activity (see Impact 3.8-1). Placer County requires that all new buildings must be constructed in accordance with the current (2013) CBC standards and local building design requirements which include seismic design standards designed to minimize seismic safety hazards. Therefore, Alternative 2 would result in less-than-significant impacts related to seismic activity.

The addition of new structures could also contribute to erosion both within and outside the Plan Area (see Impact 3.8-2). While implementation of Alternative 2 would result in common construction practices that would disturb surface soils, Mitigation Measure 3.8-2(a) directs implementation of Mitigation Measures 3.10-1(a) and (b) to include best management practices (BMPs) that would be included within a Storm Water Pollution Prevention Plan (SWPPP) as required by the National Pollution Discharge Elimination System (NPDES) Construction General Permit. County and state drainage control requirements would also ensure that management of storm water from introduced impervious surfaces would be managed in a manner that prevents erosion or loss of topsoil. Therefore, implementation of Alternative 2 would result in less-than-significant impacts related to erosion or loss of topsoil.

Development under Alternative 2 would be required to adhere to County building code requirements which include the preparation of a geotechnical investigation by a state licensed geotechnical engineer. The required geotechnical report for any new development would determine the susceptibility of the subject site to landslide, lateral spreading, subsidence (settlement), liquefaction and collapse (see Impact 3.8-3). Any identified geotechnical hazards or unstable units would be prescribed appropriate engineering techniques for reducing its effects. Therefore, Alternative 2 would result in less than significant effects related to unstable soils.

As discussed in Section 3.8, Geology, Soils, and Seismicity, the Plan Area may contain clay layers that may exhibit high to very high expansion potential (see Impact 3.8-4). As a requirement of the CBC, developers would be required to complete a final geotechnical investigation that includes site-specific recommendations for the mitigation of potentially expansive soils. Therefore, implementation of Alternative 2 would result in less-than-significant impacts related to expansive soils.

Hazards/Hazardous Materials

Under Alternative 2, residential and agricultural structures could be developed in accordance with Placer County land use designations and zoning. During construction activities, relatively small portions of some construction-related products would contain materials defined as hazardous, such as fuels, solvents, cements and adhesives, paints, cleansers, degreasers, and asphalt mixtures, which are all commonly used in construction. During operation of Alternative 2, land uses would include the transport, use, and disposal of common household and agricultural hazardous materials that could include cleansers, solvents, oils, fuels, pesticides, and herbicides. The overall quantities of these materials within the Plan Area at any one time would not result in large bulk amounts that could represent a potential significant hazard to the public or environment (see Impact 3.9-1). Thus, Alternative 2 would result in less-than-significant impacts related to the routine transport, use, or disposal of hazardous materials.

While relatively small portions of hazardous materials are anticipated to be used during the construction and operation, the improper management of these materials could lead to an accidental release of hazardous materials, which in turn could expose the site and its occupants to contamination from hazardous materials (see Impact 3.9-2). While several laws and regulations govern the release of hazardous materials and response to accident conditions, Alternative 2 could result in potentially significant impacts related to unforeseen and accidental conditions. Mitigation Measure 3.9-2 would reduce this impact to a less-than-significant level.

There are no schools currently within the Plan Area, and no schools would be located within the Plan Area under Alternative 2. Therefore, Alternative 2 would result in no impact related to hazardous materials use within one-quarter mile of an existing or proposed school (see Impact 3.9-3).

There are no identified sites listed on the Envirostor or Geotracker databases within or near the Plan Area (see Impact 3.9-4). However, based on the site history of agricultural use which can include the use of fuel storage tanks, it is possible that construction activities could encounter areas of past releases of petroleum hydrocarbons. With implementation of Mitigation Measure 3.9-4, the contractors would have protocols in place to implement in the event that contamination is discovered during construction, and this impact would be mitigated to less than significant.

The existing zoning of the Plan Area does not conflict with the Placer County Airport Land Use Compatibility Plan (ALUCP). The ALUCP includes Compatibility Zones that are designed to regulate use and intensity within areas near an airport to ensure safety of surrounding uses. Because Alternative 2 would implement existing zoning, it would comply with the ALUCP. While implementation of Alternative 2 would put new residences within the Compatibility Zones, development would not conflict with the ALUCP and this impact would be less than significant.

There is an aircraft landing strip easement within the Plan Area, approximately one-half mile east of Dowd Road and extending south from Markham Ravine. As this is an existing easement that is

used for small agricultural aircraft, development under Alternative 2 would not place any additional homes or structures any closer to the landing strip than what could already be permitted under existing regulations. As such, implementation of Alternative 2 would have a less-than-significant impact related to safety hazards from private airstrips (see Impact 3.9-6).

Alternative 2 would not be expected to result in road closures or changes to the existing circulation system during construction or operation because development would occur based on existing County General Plan designations. Therefore, Alternative 2 would have a less-than-significant impact related to interference with emergency access (see Impact 3.9-7).

Development under Alternative 2 could add up to 379 new dwelling units to the Plan Area and wildland fires would still have the potential to occur in grasslands within and adjacent to the Plan Area. As new homes are constructed, development fees would be paid to maintain existing level of fire service. Thus, Alternative 2 would result in less-than-significant impacts related to wildland fire (see Impact 3.9-8).

Hydrology, Drainage, and Water Quality

Alternative 2 would include the construction and use of residential and agricultural structures. Construction and operational activities under Alternative 2 would result in water quality impacts (see Impact 3.10-1 and 3.10-5), but would be subject to state and local regulations that seek to protect water quality. Groundwater recharge would still occur under Alternative 2, though in different areas and different volumes than under existing conditions (see Impact 3.10-2).

Development under Alternative 2 would alter existing drainage patterns and contribute runoff, but would do so in a very limited way because of the very low density of development under this alternative (see Impact 3.10-3 and Impact 3.10-5). Adherence to state and local regulations regarding water quality would ensure that implementation of Alternative 2 would not result in significant erosion or siltation impacts, or substantially impact storm water drainage facilities (see Impact 3.10-3). Alternative 2 could result in on-or offsite flooding because structures could be built which impede the drainage pattern of the area, alter the course of a stream, or increase the rate of surface water runoff without installing adequate drainage systems. Alternative 2 would not be expected to place new structures within the 100-year floodplain because of FEMA-imposed regulations on the placement of structures within floodplains. However, upgrades to drainage outfalls may be required and would be subject to state and local regulations (see Impact 3.10-7). While Alternative 2 would include a limited amount of residential development, adherence to state and local regulations would ensure that Alternative 2 would result in less-than-significant impacts.

Land Use and Planning

Under Alternative 2, development of the Plan Area would occur in compliance with existing land use and zoning designations and would result in the construction of as many as 379 new homes. While land uses within the Plan Area would not change under this alternative, it is possible that adjacent land uses could change and conflict with the Plan Area because Alternative 2 would not

preclude development of other areas designated for village development (see Impact 3.11-1). For example, Figure 3.11-2 shows that the City of Lincoln General Plan has designated an area adjacent to the northwest boundary of the Plan Area as Village 4, an area adjacent to the southwest as Village 6, and an area adjacent to the east as Village 7. If these areas develop under the village concept and the Plan Area is developed consistent with existing zoning, land use conflicts would occur. Mitigation to reduce such conflicts would be to prohibit development in these adjacent villages. As it is not feasible to prohibit development in these areas, impacts related to land use conflicts would be significant and unavoidable.

Because existing zoning for the entire Plan Area is farm of varying minimum acreage, buildout under Alternative 2 would not result in any new internal land use conflicts (see Impact 3.11-2). Under Alternative 2, the Plan Area would not be annexed to the City of Lincoln, but would remain under the jurisdiction of unincorporated Placer County and no impacts related to conflicts with the City's General Plan or LAFCO's annexation policies would occur (see Impacts 3.11-3 and 3.11-4). The existing zoning of the Plan Area does not conflict with the Placer County ALUCP. Because Alternative 2 would implement existing zoning, there would be no impacts related to conflicts with the ALUCP (see Impact 3.11-5). While the PCCP has not yet been adopted, there are draft maps showing areas that would be targeted for preservation under the PCCP. Alternative 2 would not develop any areas that are currently anticipated for future reserve areas. Therefore, Alternative 2 would result in less than significant effects related to the PCCP (see Impact 3.11-6).

Noise

Alternative 2 would allow for the development of the Plan Area in accordance with existing land use and zoning designations for farm and rural use. Construction of new structures permitted in the existing zoning could have temporary impacts to noise levels in the Plan Area and adjacent properties, and noise levels of such activities would be subject to Placer County's noise ordinance (see Impact 3.12-1). Mitigation Measure 3.12-1 shall be implemented, which would limit the hours of construction, would provide notice to nearby residents, and other actions designed to reduce construction noise. Because construction impacts would be temporary in nature and would adhere to the allowed construction hours in the City's Public Facilities Improvement Standards, the potential for a nuisance caused by project construction-related noise increases would be less noticeable over the existing daytime ambient. Therefore, implementation of Alternative 2 would result in a less-than-significant impact related to construction noise impacts to ambient noise levels.

Implementation of Alternative 2 could include excavation, site preparation work, foundation work and new building framing and finishing. These construction activities may generate perceptible vibration when heavy equipment or impact tools such as jackhammers or hoe rams are used in close proximity to occupied uses (see Impact 3.12-2). Mitigation Measure 3.12-2 would be included on Alternative 2, and would reduce the impact to a less-than-significant level.

Implementation of Alternative 2 would expose new residents to noise associated with the existing private airstrip within the Plan Area (Impact 3.12-5), but far fewer residents would be exposed and Mitigation Measure 3.12-5 would not be required. Development of Alternative 2 would expose new noise-sensitive land uses to transportation noise which could exceed Placer County thresholds (see Impact 3.12-3). However, Alternative 2 would only develop a maximum of 379 new dwelling units, which would generate approximately 1,084 new residents within the Plan Area. This small amount of development spread across the 4,787-acre Plan Area would not be expected to add a substantial amount of roadway traffic to the Plan Area. Without a substantial increase in roadway traffic within the Plan Area, Alternative 2 would not be expected to result in a substantial permanent increase in ambient noise levels for noise-sensitive land uses. Therefore, Alternative 2 would have a less-than-significant impact related to roadway noise.

Lincoln Regional Airport is located adjacent to the Plan Area. The Placer County ALUCP has established Compatibility Zones around the airport. These Compatibility Zones each have their own restrictions as to how many residential dwellings can be constructed in each zone, which is based on specific noise, safety, airspace protection, overflight and other compatibility policies created by the County (see Impact 3.12-4). Buildout under Alternative 2 would conform to the allowed uses set forth in the ALUCP. Therefore, implementation of Alternative 2 would not conflict with the Placer County ALUCP, resulting in less-than-significant impacts related to airport noise.

New residents within the Plan Area could be subject to an increase in ambient noise levels from commercial and recreational uses (see Impact 3.12-6). Because Alternative 2 would only include new residential development and no new non-residential or recreational development, there would not be any new non-residential or traffic-related noises that would impact the ambient noise level for noise-sensitive land uses within the Plan Area. Therefore, Alternative 2 would have no impact related to increases in ambient noise levels from commercial or recreational uses.

Population, Employment, and Housing

Population, employment, and housing impacts are generally related to new residents and employment uses. Alternative 2 would add an estimated 1,084 new residents and 379 new homes. The number of jobs that could be generated under this alternative would be small and would be unlikely to alter the regional jobs-to-housing ratio, maintaining an imbalanced jobs/housing ratio in the city. The minimum parcel size required by existing zoning would likely preclude growth inducement in the Plan Area. Finally, because of the amount of open land, this alternative would not displace people or require replacement housing. Therefore, Alternative 2 would have less than significant effects related to population, employment, and housing.

Public Services

Alternative 2 would add up to 379 new dwelling units in the Plan Area, which could result in approximately 1,084 new residents. New residents could trigger additional demand for police, fire, schools, parks and recreational facilities, and libraries.

Because the Plan Area would not be annexed into the City of Lincoln, Placer County Sheriff's Department would provide police protection under Alternative 2 (see Impact 3.14-1). According to Placer County's General Plan, the County's goal is to maintain one officer per 1,000 residents in unincorporated areas.¹ Given that ratio, Alternative 2 would require approximately one additional officer. However, adding an officer would not require new facilities to be constructed. Rather, the Sheriff's Department would continue to patrol the Plan Area as it currently does. As such, Alternative 2 would have a less-than-significant impact related to police services.

Under Alternative 2, CAL FIRE and Placer County Fire Department would retain primary responsibility for fire protection in the Plan Area (see Impact 3.14-2). Placer County General Plan Policies 4.I.1 and 4.I.2 encourage a fire response time of four minutes or less in an urban area, six minutes in suburban areas, and 10 minutes in rural areas. The addition of up to 379 new dwelling units and approximately 1,084 new residents within the Plan Area would not be expected to hinder existing response times because Alternative 2 would not construct additional new streets or any impediments to emergency response vehicles. Therefore, Alternative 2 would have a less-than-significant impact related to fire protection.

As shown in **Table 6-1**, Alternative 2 could result in approximately 221 new students within the Western Placer Unified School District (WPUSD). As development occurs, school impact fees would be paid to the County for each residential unit constructed. These fees would help fund additional school facilities if needed. Because construction of new dwelling units would include payment of school impact fees, implementation of Alternative 2 would have a less-than-significant impact related to school facilities (see Impact 3.14-3).

**TABLE 6-1.
ALTERNATIVE 2 PROBABLE STUDENT GENERATION**

Type of School	Single Family Units	Single Family Generation Rate (students/ dwelling unit)	Students Generated
Alternative 2			
Elementary (K-5)	379	0.373	142
Middle (6-8)	379	0.089	34
High (9-12)	379	0.118	45
Total			221

SOURCE: Calculated by ESA based upon information provided by Heather Steer, Facilities Coordinator, Western Placer Unified School District, electronic communication, October 2014; ESA 2015.

As building permit applications are processed for the development under Alternative 2, fees would be assessed on the properties to provide for parks and recreation facilities and libraries. Because new construction would pay fees to provide for these public services, Alternative 2

¹ Placer County, 1994. *Placer County General Plan Update*. Adopted on August 16, 1994. Last updated on May 21, 2013. p. 96, Policy 4.H.1.

would result in less-than-significant impacts (see Impact 3.14-4 and Impact 3.14-5). A new regional park would not be provided in the Plan Area, and the dedication of active parkland would not be required, although it's likely that in-lieu fees or passive parkland dedication would be necessary. However, under Alternative 2, there is no guarantee that Auburn or Markham ravines would be preserved in perpetuity like the proposed project.

Transportation and Circulation

Development of new residences and agricultural buildings that could occur under Alternative 2 could add vehicle trips within the Plan Area and add traffic to area intersections, roadways, and highways. Because of the minimum parcel sizes under existing zoning, Alternative 2 would develop a maximum of 379 new residential dwelling units with a projected population increase of 1,084. With a low number of new residents, the number of trips generated would also be small (although the trips would be much longer given the lack of commercial, office and retail uses in the area). Given the small number of new trips, it is unlikely that development of Alternative 2 would significantly affect traffic levels in the Plan Area and vicinity (see Impacts 3.15-1 through 3.15-9). Alternative 2 would not trigger the need for new bicycle, pedestrian or transit facilities as the area would remain largely rural (see Impacts 3.15-10 and 3.15-11). Alternative 2 would not trigger or include any roadway improvements, so there would not be any road closures or detours associated with Alternative 2 that could affect local traffic or emergency vehicle access (see Impacts 3.15-12 and 3.15-13).

Utilities

Alternative 2 would develop up to 379 new residential dwelling units in the Plan Area, which could result in approximately 1,084 new residents. New dwelling units and residents would trigger additional demand for potable water, wastewater facilities, storm water facilities, and solid waste disposal.

Implementation of Alternative 2 could require additional water supply entitlements or sources (see Impact 3.16-1), or new or expanded treatment, storage, and conveyance facilities (see Impact 3.16-2). Under this alternative, the Plan Area would not be annexed to the City of Lincoln, so development would occur under the existing Placer County General Plan. As such, development of the Plan Area in accordance with existing Placer County designations would not have a significant effect related to water supply because the necessary supply and infrastructure needed to implement the Placer County General Plan has already been accounted for under the Placer County General Plan.

While Implementation of Alternative 2 would result in new dwelling units, it is unlikely that these new units would require new or expanded wastewater facilities (see Impact 3.16-3). Because the density of development under Alternative 2 would be so low, it is likely that each parcel would require its own on-site wastewater treatment (i.e., septic) as the distance between connections would likely be cost-prohibitive.

Implementation of Alternative 2 would develop the Plan Area consistent with the Placer County General Plan. Given the extremely low density of development that could occur under this alternative, it is unlikely that any additional storm water facilities would be required (see Impact 3.16-4). Therefore, implementation of Alternative 2 would result in a less-than-significant impact related to storm water capacity and infrastructure.

Implementation of Alternative 2 could result in up to 1,084 new residents within the Plan Area, which would result in additional solid waste requiring disposal (see Impact 3.16-5). Using a per capita disposal rate of 4.5 pounds per resident per day,² Alternative 2 could result in up to 4,878 pounds per day of solid waste (or approximately 2.44 tons per day). Solid waste generated under Alternative 2 would be disposed of at the Western Regional Sanitary Landfill (WRSL), which receives on average 824 tons per day with a maximum capacity of 1,900 tons per day. This small increase in the amount of waste that would be disposed of at the WRSL would be insignificant compared to existing activity and capacity.

Relationship to Project Objectives

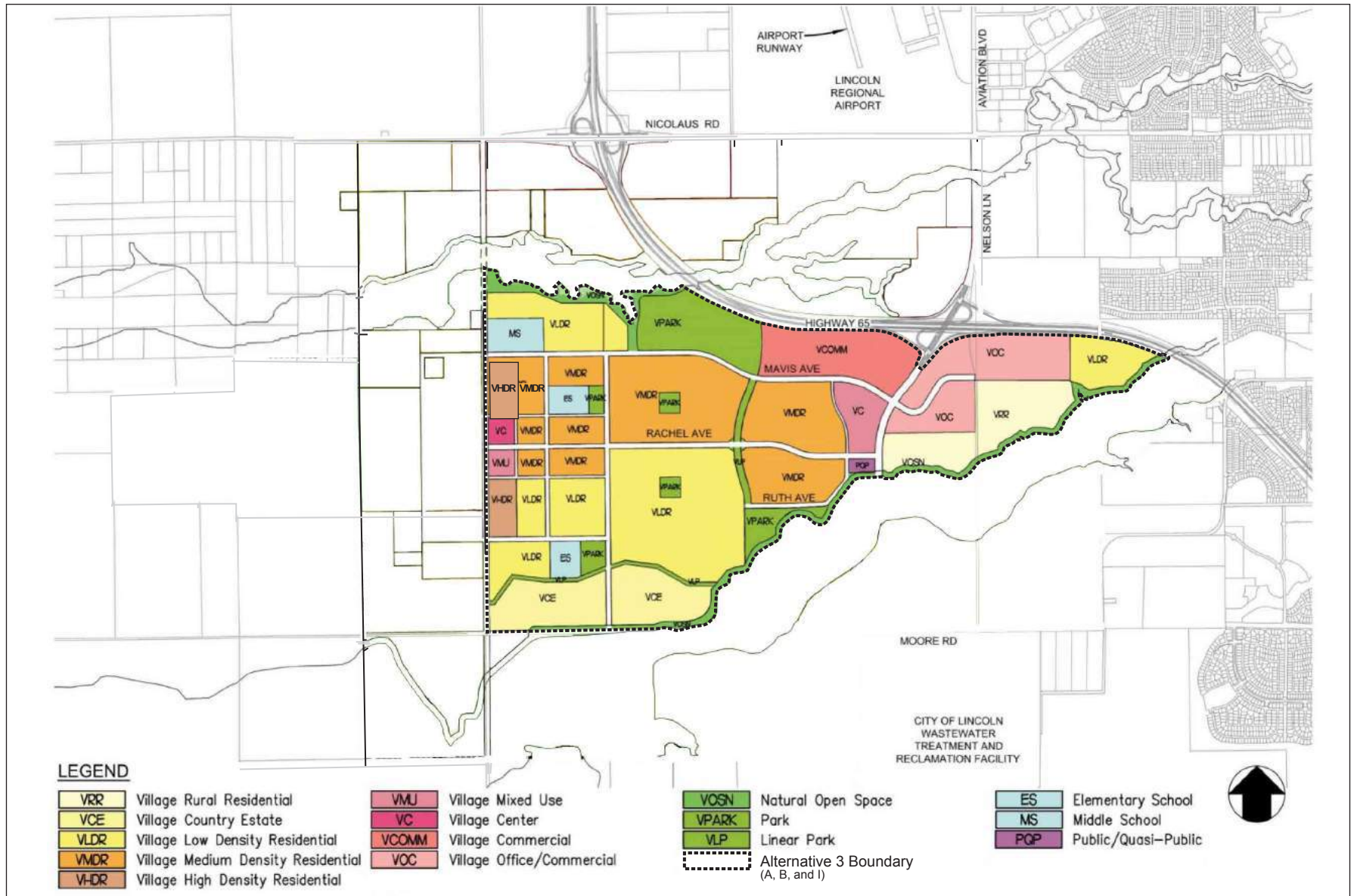
Alternative 2 would develop up to 379 new residences, but would not provide the diversity of housing options that would be developed by the proposed project. Alternative 2 would not include mixed-uses, employment centers, village centers, schools, or a compact core as discussed in the project objectives. Additionally, Alternative 2 would not expand utilities or roadway infrastructure within the Plan Area. Alternative 2 would not be consistent with the City of Lincoln 2050 General Plan. Because of its lack of development, Alternative 2 would not provide any commercial, office or retail uses and thus, no tax base. Alternative 2 would also not preserve the Auburn Ravine and Markham Ravine corridors as open space in perpetuity (although nothing would be built there either), and it would not provide public access via trails and crossings. For these reasons, Alternative 2 would not meet any of the project objectives.

Alternative 3: Reduced Footprint

Under Alternative 3, the Reduced Footprint alternative, only development of Areas A, B, and I would occur (see **Figure 6-1**). Areas identified in the V5SP as Areas C-H and J would remain with their current uses, but an open space overlay would be put on those areas to create a permanent open space/greenbelt area. The small portion of Area A south of Auburn Ravine would also remain in its current state. The Lincoln High School Farm would continue to operate in Area G.

Under this alternative, approximately 1,459 acres would be developed, compared to the 4,787 acres developed under the proposed project, a reduction of 69.5 percent. Under Alternative 3, 4,537 residential units ranging from Village Residential Rural to Village Residential High Density would be constructed. This would result in 44.7 percent fewer dwelling units than the

² CalRecycle, 2015. *California Statewide Per Capita Disposal, Diversion, and Recycling Rates for Calendar Year 2014*. June 25, 2015.



SOURCE: C nning a Engineering, 2015; adapted y ESA, 2015

Lincoln Village 5 EIR . 130368
Figure -1
 Land Use Plan – Alternati e 3

proposed project. Approximately 2,464,800 square feet of commercial, mixed use, and office space would be constructed under Alternative 3, which equals a reduction of 46.2 percent from the proposed project. As calculated in **Table 6-2**, Alternative 3 would add 10,456 new residents to the Plan Area, which would be 46.2 percent fewer than the proposed project. **Table 6-3** identifies the acreages, number of units, and square feet of each land use designation that would be developed under Alternative 3.

**TABLE 6-2.
ALTERNATIVE 3 POPULATION ESTIMATE**

Unit Type	PPH ¹	Number of Units	Population
RR, CE, LDR	2.86	1,787	5,111
MDR	2.00	1,975	3,950
HDR, VMU	1.80	775	1,395
TOTAL	--	4,537	10,456

NOTES:

1. Source for PPH rates: City of Lincoln, 2008. City of Lincoln 2050 General Plan. Adopted March 25, 2008.

Aesthetics and Visual Quality

Under Alternative 3, development would be bound by Markham Ravine, SR 65, Auburn Ravine, Moore Road, and Dowd Road. Development would include 4,537 residential dwellings and approximately 2,464,800 square feet of commercial, mixed use, and office space. Impacts on scenic vistas (see Impact 3.1-1) under Alternative 3 would potentially significant because there would be a substantial change to views of the Plan Area under Alternative 3. Because there is no feasible mitigation to reduce this impact, this impact would be significant and unavoidable.

Changes to the visual character (see Impact 3.1-2) under Alternative 3 would be similar to those under the proposed project because existing open land would be developed with one- and two-story residences and commercial structures. The areas that would be developed under Alternative 3 would include a variety of densities of residential structures. In some areas, high-density residential development would be placed across from non-developed areas. This would place large, multi-story residential structures with little to no open space between units directly across from existing open agricultural land or single-family residences located on large (minimum 10 acres) parcels. Unlike the proposed project, Alternative 3 would not include Village Country Estate or Village Rural Residential designations to provide a visual transition from dense, clustered structures within the development area to the open agricultural or grassland areas beyond the Plan Area. While implementation of Alternative 3 would be consistent with the vision of the City's General Plan for a suburban development in this area, impacts of Alternative 3 on existing visual character would be potentially significant because implementation of Alternative 3 would result in substantial changes to the existing character. Because there is no feasible mitigation to reduce this impact, implementation of Alternative 3 would result in a significant and unavoidable impact to existing visual character and quality of the Plan Area and its surroundings.

**TABLE 6-3.
ALTERNATIVE 3 REDUCED FOOTPRINT**

Land Use Designation	Land Use	Density (du/ac)	FAR4	Area A			Area B			Area I			TOTAL		
				Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft
Village Residential Rural	VRR	0.5		0.0	0	0	88.9	34	0	0.0	0	0	88.9	34	0
Village Country Estate	VCE	2		50.1	96	0	0.0	0	0	55.2	106	0	105.3	202	0
Village Residential Low Density	VLDR	5		176.2	809	0	35.3	158	0	123.5	584	0	335.0	1,551	0
Village Residential Medium Density	VMDR	7		224.5	1,412	0	0.0	0	0	81.9	563	0	306.4	1,975	0
Village Residential High Density	VHDR	21		0.0	0	0	0.0	0	0	34.3	719	0	34.3	719	0
Village Mixed Use	VMU	7.5	0.35	0.0	0	0	0.0	0	0	7.5	56	114,300	7.5	56	114,300
Village Center	VC		0.35	26.4	0	342,100	0.0	0	0	7.5	0	114,300	33.9	0	456,400
Village Commercial	VCOMM		0.25	79.5	0	751,900	0.0	0	0	0.0	0	0	79.5	0	751,900
Village Office/Commercial	VOC		0.30	0.0	0	0	102.5	0	1,142,200	0.0	0	0	102.5	0	1,142,200
Village Business and Professional	VBP		0.25	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Elementary School	ES			12.0	0	0	0.0	0	0	11.8	0	0	23.8	0	0
Middle School	MS			0.0	0	0	0.0	0	0	20.0	0	0	20.0	0	0
High School	HS			0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Public/Quasi-Public	PQP			3.9	0	0	0.0	0	0	0.0	0	0	3.9	0	0
Park	VPARK			100.6	0	0	0.0	0	0	7.9	0	0	108.5	0	0
Linear Park	VLP			14.0	0	0	0.0	0	0	5.5	0	0	19.5	0	0
Ag/Preserve	VOSA			0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Open Space Preserve	VOSP			0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Natural Open Space	VOSN			17.3	0	0	33.5	0	0	19.5	0	0	70.3	0	0
Right of Way	ROW			74.6	0	0	06.2	0	0	38.8	0	0	119.60	0	0
SR 65	HWY			0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Total				779.1	2,317	1,094,000	266.4	192	1,142,200	413.3	2,028	228,600	1,458.8	4,537	2,464,800

SOURCE: City of Lincoln, 2016. Lincoln Village 5 Specific Plan. August 12, 2016; ESA, 2016.

Development under Alternative 3 would include the Regional Sports Park, new schools, and commercial structures which would result in potentially significant impacts related to light and glare (see Impact 3.1-3). Mitigation Measure 3.1-3 requiring exterior lighting to be shielded, directed, or otherwise placed to minimize illumination of adjacent parcels would apply to Alternative 3. Adherence to this mitigation measure would reduce light and glare impacts by requiring structures and lighting to be shielded, directed, or otherwise designed to reduce the potential for disturbance or nuisance. Notwithstanding this fact, this impact would be considered significant and unavoidable because even with the mitigation measures, the light and glare would not always be reduced below a level of significance.

Agriculture and Forestry Resources

Alternative 3 would develop Areas A, B, and I in the center of the Plan Area. As shown in Figure 3.2-1, this area contains Prime Farmland, Farmland of Statewide Importance, and Unique Farmland that would be converted to non-agricultural use. Development of Alternative 3 would result in conversion of 1,166.69 acres of Important Farmland, which would be 760.65 fewer acres converted than the proposed project, a reduction of approximately 39.5 percent (see Impact 3.2-1). Like the proposed project, Alternative 3 would include the Agriculture Overlay (AO) District which would be established to respect and allow the continuation of agricultural uses in existence prior to adoption of Alternative 3. As a result of this loss of Important Farmland to non-agricultural use, Mitigation Measure 3.2-1 would be applied to Alternative 3. Mitigation Measure 3.2-1 requires implementation of a comprehensive biological and agricultural resources conservation strategy. While this mitigation measure would reduce impacts related to conversion of Important Farmland, Alternative 3 would still result in a net permanent loss of Important Farmland. Therefore, this impact would be significant and unavoidable.

Alternative 3 would also include 444.24 acres of land under Williamson Act contracts, which is 916.36 acres less than the proposed project, a reduction of approximately 67.3 percent (see Impact 3.2-2). As is the case with the proposed project, the General Development Plan (GDP) would not allow development of land under a Williamson Act contract until the contract has been cancelled or the nonrenewal process has been initiated by the property owner. Because Alternative 3 would not develop on Williamson Act lands until the property has entered the cancellation or nonrenewal process, this alternative would not conflict with Williamson Act contracts.

Development under Alternative 3 would include new growth in the Plan Area, which could increase property values. As property values near new development increase, property owners would have an incentive to sell their property to be developed as it would likely have a higher value as urban development than existing rural or agricultural designations. This increase in property value would be likely to result in indirect pressure for future conversion of agricultural land (see Impact 3.3-3). As there is no feasible mitigation that would allow development without creating indirect pressure on agricultural land, this impact would be significant and unavoidable under Alternative 3.

Air Quality

Like the proposed project, Alternative 3 would develop land uses and densities consistent with City of Lincoln General Plan assumptions. Alternative 3 would not conflict with or obstruct implementation of the applicable air quality plan, and the impact would be less than significant (see Impact 3.3-1).

Alternative 3 would construct 44.7 percent fewer residences and 46.2 percent less commercial development than the proposed project. Also, Alternative 3 would not construct the high school and one of the elementary schools included in the proposed project. The overall amount of development that would occur under Alternative 3 would be approximately 55 percent of the proposed project's development. Construction emissions modeling is based in part on the number of dwelling units that would be constructed, as well as the amount of non-residential (e.g., commercial) square footage. The construction emissions that would be produced under Alternative 3 would be approximately 55 percent of the emissions of the proposed project. Applying a multiplier of 0.55 to the unmitigated emissions in Table 3.3-6, some construction years would still result in ROG emissions that would exceed PCAPCD thresholds, even if mitigation is applied (see Impact 3.3-2). Because these emissions would be substantially above thresholds, emissions could not be mitigated to below the thresholds. Mitigation Measure 3.3-2 includes BMPs and construction fleet assumptions. However, even with this mitigation applied to Alternative 3, this impact would remain significant and unavoidable.

Operational emissions of the proposed project were found to exceed PCAPCD thresholds even with mitigation (see Impact 3.3-3). Applying a multiplier of 0.55 to the emissions, the estimated emissions from implementation of Alternative 3 would also exceed PCAPCD thresholds. Mitigation Measure 3.3-3 would apply to Alternative 3 and would limit diesel idling, provide preferential parking for carpools, and require on-site bicycle racks. Even with these mitigation measures, emissions would exceed thresholds. Therefore, implementation of Alternative 3 would remain significant and unavoidable.

Traffic associated with new development could result in exposure of persons to substantial localized carbon monoxide concentrations (see Impact 3.3-4). The air quality analysis for the proposed project determined that cumulative conditions with the proposed project would be less than significant. Because Alternative 3 would develop approximately 55 percent of the proposed project, it is expected that carbon monoxide concentrations would be proportionately lower under Alternative 3. Thus, impacts from Alternative 3 would be less than significant.

Development of Alternative 3, like the proposed project, would place sensitive receptors in close proximity to SR 65, which could result in exposure to toxic air contaminants (TACs) (see Impact 3.3-5). The proposed project imposed Mitigation Measures 3.3-5(a) and 3.3-5(b) to reduce the potential exposure of on-site sensitive receptors to TACs to less than significant. These measures require BMPs and site design considerations to reduce TAC exposure. These measures would be applied to Alternative 3, and would reduce this impact to less than significant.

Implementation of Alternative 3 could result in exposure of a substantial amount of persons to objectionable odors (see Impact 3.3-6). The PCAPCD lists a project screening distance of two miles from any wastewater treatment plant for potential odor impacts. Under Alternative 3, the nearest residential structures would be located approximately one mile from the Lincoln Wastewater Treatment and Reclamation Facility (WWTRF). Although the project would require that future sellers of residences near the wastewater treatment plant to provide notice to such purchasers, notice of potentially unpleasant odors would not mitigate the nuisance impact. Because there are no known feasible odor mitigation techniques available to fully mask the occasional smell of the wastewater pond water, Alternative 3 would result in a significant and unavoidable impact related to objectionable odors.

Biological Resources

Implementation of Alternative 3 would develop Areas A, B, and I and would include land disturbance and construction that would impact biological resources, including special-status species and their habitat (see Impact 3.4-2). While Alternative 3 would not impact special-status species and their habitat to the same extent as the proposed project, Mitigation Measure 3.4-2 would be applied to Alternative 3 and requires preparation of a project-level mitigation plan to preserve open space, agricultural land, and biological resources. Implementation for Mitigation Measure 3.4-2 would reduce the impact on special-status species and their habitat to a less-than-significant level.

Specific habitat and species that would be impacted by implementation of Alternative 3 would impact vernal pool habitat and species (see Impact 3.4-3), rare plant populations (see Impact 3.4-4), western pond turtle (see Impact 3.4-5), nesting and special-status birds (see Impact 3.4-6), valley elderberry longhorn beetle (see Impact 3.4-7), water quality affecting fish species in Auburn Ravine (see Impact 3.4-8), and riparian habitat or other sensitive natural communities (see Impact 3.4-9). While implementation of Alternative 3 would impact fewer acres of land and habitat, impacts would likely be potentially significant. Mitigation measures for Impacts 3.4-3 through 3.4-9 include the following components: implementation of Mitigation Measure 3.4-2, avoidance and minimization measures, surveys, restoration and/or preservation of similar land, procurement of applicable permits, adherence to BMPs, and implementation of a Storm Water Pollution Prevention Plan (SWPPP). These mitigation measures would reduce impacts of Alternative 3 as they would require no net loss of habitat and protection for species. As these mitigation measures would mitigate impacts of the proposed project to a less-than-significant level, so would they reduce the impacts of Alternative 3.

Implementation of Alternative 3 would impact wetlands in Areas A, B and I (see Impact 3.4-1). A wetland delineation has been conducted for Area A, but not for most of the remainder of the Plan Area. Mitigation Measure 3.4-1 requires a wetland delineation and, if jurisdictional waters are found, restoration, enhancement, or creation of wetlands such that there would be no net loss of wetlands due to project development. Mitigation Measure 3.4-1 would be applied to Alternative 3, and would reduce impacts to a less-than-significant level.

Like the proposed project, Alternative 3 would preserve a majority of Auburn Ravine and Markham Ravine within the Plan Area. Protection of the corridors would allow for continued wildlife habitat within the corridors and preservation of wildlife movement corridors. Therefore, Alternative 3 would not result in a significant impact to wildlife corridors and movement.

As discussed above, implementation of Alternative 3 could impact special status species and their habitat, much of which are protected by approved local, regional, or state policies or ordinances protecting biological resources (see Impact 3.9-10). Mitigation Measure 3.4-11 requires implementation of Mitigation Measures 3.4-1 through 3.4-9 discussed above, and would reduce the impact of the proposed project to a less-than-significant level. Because these mitigation measures have been designed to be consistent with City of Lincoln General Plan policies and City ordinances, Mitigation Measure 3.4-11 would be applied to Alternative 3 and would reduce the impact to a less-than-significant level.

At this time, the draft HCP/NCCP known as the PCCP has not yet been adopted (see Impact 3.4-11). However, much is known about the draft program and the proposed project has been designed to be consistent with the draft PCCP. While adoption of the PCCP is anticipated, it is not guaranteed. Accordingly, Alternative 3 would have no impact on any adopted HCP as there is no approved HCP or similar program that covers the Plan Area.

Climate Change

Alternative 3 would develop the area bounded by Markham Ravine, SR 65, Auburn Ravine, Moore Road, and Dowd Road with a mix of residential, commercial, public, and recreational uses. As discussed above, Alternative 3 would construct 44.7 percent fewer residences and 46.2 less commercial/office/retail development as compared to the proposed project. Thus, the overall amount of development that would occur under Alternative 3 would be approximately 55 percent of the proposed project's anticipated development. Development of new residential and non-residential uses would result in new sources of GHG emissions, which could result in impacts related to climate change (see Impact 3.5-1).

Section 3.5, Climate Change, of this Draft EIR quantified the expected construction and operational emissions that would result under the proposed project. The analysis determined that the proposed project would result in approximately 132,828.42 metric tons (MT) of carbon dioxide equivalent or CO₂e. Annual GHG emissions from operations would equal 11,410 metric tons in 2020, 58,370 metric tons in 2030, and 103,552 metric tons in 2050. This would exceed PCAPCD's threshold of 1,100 CO₂e MT/yr.

Because Alternative 3 would develop approximately 55 percent of the development anticipated under the proposed project, it would be expected that implementation of Alternative 3 would result in a proportionate amount of emissions. Thus, the anticipated emissions for the proposed project was multiplied by 0.55 to estimate the emissions that would occur under Alternative 3, which would be 73,067 CO₂e MT/yr (132,848.42 x 0.55), 6,276 CO₂e MT/yr in 2020, 32,104

CO₂e MT/yr in year 2030, and 56,954 CO₂e MT/yr in year 2050. These amounts would exceed the PCAPCD threshold of 1,100 CO₂e MT/yr. Therefore, Alternative 3 would result in a potentially significant impact related to implementation of programs, plans, or policies aimed at reducing GHG emissions. Mitigation Measure 3.5-1 would be required for Alternative 3. However, implementation of those measures to reduce GHG emissions would not result in a reduction of emissions below the PCAPCD threshold; thus, the impact would remain significant and unavoidable.

Cultural Resources

Development under Alternative 3 would include 4,537 dwelling units and 2,464,800 square feet of commercial uses on 1,458.8 acres. New construction would have the potential to impact historical architectural resources (see Impact 3.6-1), archaeological resources (see Impact 3.6-2), paleontological resources (see Impact 3.6-3), and previously unknown human remains (see Impact 3.6-4). While much of Area A has been previously surveyed, further evaluation would be required to identify potential cultural resources within the Alternative 3 site. Mitigation Measure 3.6-1 would apply to Alternative 3, but would not reduce the impact to less-than-significant because exact nature of future development and the eligibility of potentially affected resources is currently unknown. Therefore, impacts to eligible historic architectural resources from Alternative 3 would be significant and unavoidable.

While historic architectural resources can be surveyed and identified prior to construction, other cultural resources may be subsurface and not discovered until site disturbance. Mitigation Measures 3.6-2a and 3.6-2b provide guidance for the treatment of archeological resources discovered during site work. Mitigation Measure 3.6-3 would provide guidance for paleontological resources that may be discovered during site work. Mitigation Measure 3.6-4 would provide guidance for the treatment of human remains that may be discovered during site work. Collectively, these measures would reduce impacts of Alternative 3 to unknown resources to a less-than-significant level.

Energy Resources

Implementation of Alternative 3 would require fuels for construction vehicles as well as vehicles of new residents and employees. Alternative 3 would allow construction of up to 4,537 new dwelling units, which would be 44.7 percent fewer new residences than the proposed project. Also, Alternative 3 would construct 2,464,800 sf of non-residential uses, which represents a reduction from the proposed project of 46.2 percent. Overall, Alternative 3 represents an approximately 45 percent reduction in development compared to the proposed project.

Construction of Alternative 3 would include fuel for construction equipment, delivery vehicles, and construction employee vehicles. Construction could result in unnecessary, wasteful, or inefficient use of fuels if construction equipment is not well maintained, if equipment is left to idle when not in use, or if haul trips are not planned efficiently (see Impact 3.7-1). The amount of electricity consumption that would be associated with energy consuming equipment and

processes which will be used during construction of Alternative 3 is unknown and cannot be estimated as it would be too speculative given existing data. However, electricity demand during construction is not expected to be unnecessary, wasteful, or inefficient since unusually electrically intensive construction activities are not anticipated based on the general land uses proposed. In addition, PG&E provides efficient electricity with approximately half of its electrical power generated by renewable sources. To reduce impacts associated with potentially wasteful use of fuels, Mitigation Measure 3.7-1 would be included. This measure and actions to reduce the risk of wasteful or inefficient use of energy, and would reduce the impact from Alternative 3 to less than significant.

VMT per capita is an indicator is whether a project would result in wasteful or inefficient use of transportation energy because driving greater distances would mean using greater amounts of fuel (see Impact 3.7-2). The analysis contained in Section 3.7, Energy Resources, of this Draft EIR determined that the proposed project would result in a decrease in VMT because of the land use design proposal, roadway system, and mobility network were designed in accordance with smart growth principles. By providing a mix of uses, the proposed project would put services and non-residential uses in close proximity to new residences, eliminating the need for many trips beyond the Plan Area. While Alternative 3 would develop 44.7 percent fewer new residences and 46.2percent less non-residential development, Alternative 3 would provide a mix of land uses, including commercial, office, residential of varying densities, parks and recreation, and schools. This mix of uses and the accompanying roadway network would allow for new residences to have access to services that are not currently available within the Plan Area. Thus, while Alternative 3 would develop fewer homes and less non-residential development, the mix of uses would likely lead to an overall decrease in VMT because of the new services and amenities that would be available within the Plan Area. Thus, Alternative 3 would result in less-than-significant impacts related to per capita VMT.

Like all new building in California, development under Alternative 3 would be required to be consistent with the energy efficiency standards contained within CBC Title 24. As such, Alternative 3 would result in a less-than-significant impact related to Title 24 energy standards (see Impact 3.7-3).

Geology, Soils, and Seismicity

Implementation of Alternative 3 would include construction of residential, commercial, public, and recreational structures. While there is a low potential for seismic activity in the Plan Area, new structures could be subjected to seismic activity (see Impact 3.8-1). The City of Lincoln requires that all new buildings must be constructed in accordance with the current (2013) CBC standards and local building design requirements which include seismic design standards designed to minimize seismic safety hazards. Therefore, Alternative 3 would result in less-than-significant impacts related to seismic activity.

The addition of new structures could also contribute to erosion both within and outside the Plan Area (see Impact 3.8-2). While implementation of Alternative 3 would result in common construction practices that would disturb surface soils, Mitigation Measures 3.10-1(a) and 3.10-1(b) would include BMPs that would be included within a SWPPP as required by the NPDES Construction General Permit. City and state drainage control requirements would also ensure that management of stormwater from introduced impervious surfaces would be managed in a manner that prevents erosion or loss of topsoil. Therefore, implementation of Alternative 3 would result in less-than-significant impacts related to erosion or loss of topsoil.

Development under Alternative 3 would be required to adhere to City building code requirements which include the preparation of a geotechnical investigation by a state licensed geotechnical engineer. The required geotechnical report for any new development would determine the susceptibility of the subject site to landslide, lateral spreading, subsidence (settlement), liquefaction and collapse (see Impact 3.8-3). Any identified geotechnical hazards or unstable units would be prescribed appropriate engineering techniques for reducing its effects. Therefore, Alternative 3 would result in less than significant effects related to unstable soils.

As discussed in Section 3.8, Geology, Soils, and Seismicity, the Plan Area may contain clay layers that may exhibit high to very high expansion potential (see Impact 3.8-4). As a requirement of the CBC, developers would be required to complete a final geotechnical investigation that includes site-specific recommendations for the mitigation of potentially expansive soils. Therefore, implementation of Alternative 3 would result in less-than-significant impacts related to expansive soils.

Hazards/Hazardous Materials

Alternative 3 would include many of the same uses as the proposed project, but 44.7 percent fewer dwelling units and 46.2 percent less commercial development. During construction activities, relatively small portions of some construction-related products would contain materials defined as hazardous, such as fuels, solvents, cements and adhesives, paints, cleansers, degreasers, and asphalt mixtures, which are all commonly used in construction. During operation of Alternative 3, land uses would include the transport, use, and disposal of common household, commercial, and agricultural hazardous materials that could include cleansers, solvents, oils, fuels, pesticides, and herbicides. The overall quantities of these materials within the Plan Area at any one time would not result in large bulk amounts that could represent a potential significant hazard to the public or environment (see Impact 3.9-1). Thus, Alternative 3 would result in less-than-significant impacts related to the routine transport, use, or disposal of hazardous materials.

While relatively small portions of hazardous materials are anticipated to be used during the construction and operation, the improper management of these materials could lead to an accidental release of hazardous materials, which in turn could expose the site and its occupants to contamination from hazardous materials (see Impact 3.9-2). While several laws and regulations govern the release of hazardous materials and response to accident conditions, Alternative 3 could

result in potentially significant impacts related to unforeseen and accidental conditions. Mitigation Measure 3.9-2 would reduce this impact to a less-than-significant level.

Alternative 3 would add two elementary schools and one middle school within the western area of the Plan Area. Alternative 3 would include new residential, commercial, office, and parks but would not include any industrial or other land uses where substantive hazardous emissions would occur. Further, the small amount of hazardous materials that would be used within the Plan Area would be stored, handled, and disposed of in accordance with regulatory requirements that minimize emissions. Therefore, implementation of Alternative 3 would be expected to result in a less-than-significant impact related to hazardous materials within one-quarter mile of a school (see Impact 3.9-3).

There are no identified sites listed on the Envirostor or Geotracker databases within or near the Plan Area (see Impact 3.9-4). However, based on the site history of agricultural use which can include the use of fuel storage tanks, it is possible that construction activities could encounter areas of past releases of petroleum hydrocarbons. With implementation of Mitigation Measure 3.9-4, the contractors would have protocols in place to implement in the event that contamination is discovered during construction, and this impact would be mitigated to less than significant.

Development of Alternative 3 would place new development within Compatibility Zones C1, C2, and D of the Lincoln Regional Airport and would be subject to the Placer County ALUCP. As discussed below in the “Land Use and Planning” analysis of Alternative 3, uses proposed under this alternative would be consistent with the ALUCP. Because Alternative 3 would be consistent with the ALUCP, this alternative would result in less-than-significant impacts related to safety within an airport land use plan (see Impact 3.9-5).

Alternative 3 would develop area surrounding the existing aircraft landing strip easement located in the center of the Plan Area. The project applicant proposes to purchase and extinguish the easement. There are no other private airstrips within the Plan Area or its vicinity. Therefore, implementation of Alternative 3 would have no impact related to safety risks from private airstrips (see Impact 3.9-6).

As with the proposed project, construction activities under Alternative 3 could result in temporary land closures, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services (see Impact 3.9-7). Implementation of Mitigation Measure 3.9-7 would reduce this impact to less than significant. Mitigation Measure 3.9-7 requires the developer to prepare and enforce a traffic control plan to minimize traffic impacts on all roadways at and near the work site affected by construction activities. This traffic control plan shall reduce potential traffic safety hazards and ensure adequate access for emergency responders.

Development under Alternative 3 would add 4,537 new dwelling units and 2,464,800 square feet of commercial and office use. Conversion of this land from open grassland or farmland to these new uses would reduce the risk of wildland fire on that land. Wildland fires could still occur in

grasslands within and adjacent to the Plan Area. Although Alternative 3 would result in an increased population residing in and visiting the Plan Area, where fires could occur, fire protection services would be adequate. Therefore, Alternative 3 would result in less-than-significant impacts related to wildland fire (see Impact 3.9-8).

Hydrology, Drainage, and Water Quality

Implementation of Alternative 3 would develop the area bound by Markham Ravine to the north, SR 65 to the east, Auburn Ravine to the south, and Dowd Road to the west. Construction and operation of this alternative could result in degradation of water quality and violations of water quality standards (see Impacts 3.10-1, 3.10-5, and 3.10-6). Mitigation Measure 3.10-1(a) and 3.10-1(b) would apply to Alternative 3, and would reduce potential impacts to less than significant by requiring completion of a Stormwater Pollution Prevention Plan (SWPPP) that includes measures that would control soil erosion and waste discharges. Mitigation Measure 3.10-1(b) requires preparation of a Water Quality Management Plan that would include BMPs to reduce urban pollutants in runoff.

Construction of Alternative 3 would not include any dewatering activities, but may impact groundwater through the additional of impervious surfaces within the Plan Area (see Impacts 3.10-2 and 3.10-4). Currently, only approximately 2 percent of the Plan Area is covered by impervious surfaces. Development of Alternative 3 would add additional impervious surfaces, including roads and homes. However, this alternative would also include approximately 10 proposed detention basins along Auburn and Markham Ravines (see Figure 2-11, Proposed Drainage Infrastructure), which would allow for infiltration of large storm event flows because they would be designed to retain water and allow it to infiltrate. Increased runoff from the new impervious surfaces would be collected and diverted through the stormdrain system and released to Auburn Ravine and Markham Ravine where the vast majority of groundwater recharge within the Plan Area takes place. As groundwater recharge within and along Auburn Ravine and Markham Ravine would not be impeded, impacts on groundwater recharge during operation of Alternative 3 would be less than significant, and no mitigation is required. The development of detention basins and storm drainage infrastructure would reduce the potential for on-or offsite flooding, although bridges crossing Auburn or Markham ravine could impede flows. Mitigation Measure 3.10-4 would still be required to implement construction measures to reduce flooding and demonstrate that the final design of the onsite drainage improvements will comply with the requirements established in the V5 Drainage Master Plan.

Alternative 3 would alter existing drainage patterns within the Plan Area, which could lead to erosion, siltation, flooding, or polluted runoff (see Impacts 3.10-3, 3.10-5, and 3.10-6). Mitigation Measures 3.10-3 and 3.10-5 require implementation of actions designed to control erosion and protect water quality. With implementation of these mitigation measures, impacts related to alterations of the existing drainage patterns and increased runoff would be reduced to less than significant.

Proposed storm drain outfalls are the only structures that would be located within the 100-year floodplain. Should any structures be proposed to be located within the 200-year floodplain, the structure would be elevated above flood depth (see Impact 3.10-7). Mitigation Measure 3.10-7 would be implemented for Alternative 3 and would require permits from the Central Valley Flood Protection Board (CVFPB) and review by the City of Lincoln to ensure that structures would not impede or redirect flood flows. Within implementation of this measure, Alternative 3 would result in less-than-significant impacts related to structures within a floodplain.

Land Use and Planning

Alternative 3 would place various densities of residential development directly across the street from active agricultural operations (along the western boundary of Area A), resulting in potentially significant impacts related to land use conflicts (see Impact 3.11-1). To reduce impacts of this potential conflict, Alternative 3 would be subject to Mitigation Measure 3.11-1 notifying home buyers of Placer County's Right-to-Farm ordinance and potential nuisance activities. While implementation of this mitigation measure would alert residents to the proximity of potential nuisances from agricultural operations, this disclosure would not reduce impacts to a less-than-significant level. Therefore, impacts related to land use conflicts under Alternative 3 would be significant and unavoidable.

Under Alternative 3, land not planned for development within the Plan Area would be subject to an open space overlay. The open space overlay would preclude future development of this area, which includes land within Village 5, SUD-A, and SUD-B. Having land remain in agricultural use within the Plan Area while some portions are developed with residential could result in conflicts between land uses within the Plan Area (see Impact 3.11-2). Mitigation Measure 3.11-2 would reduce impacts related to this conflict, but not to a less-than-significant level. Therefore, this impact would remain significant and unavoidable.

Because areas within the Plan Area would remain open space under this alternative, Alternative 3 would conflict with the City's General Plan which designates the area for development. Therefore, Alternative 3 would conflict with adopted plans and policies (see Impact 3.11-3). The only way to mitigate this impact would be to designate the areas for development, which would not be permitted under this alternative. Therefore, this impact would be significant and unavoidable.

Alternative 3 would include annexation into the City of Lincoln, and would be subject to LAFCO policies regarding annexation (see Impact 3.11-4). Alternative 3 would comply with LAFCO annexation policies for the same reasons as the proposed project, namely that there are no feasible sites within existing city boundaries for this development, open space and agricultural land would be preserved, and its location within Lincoln's sphere of influence. Because Alternative 3 appears to meet LAFCO's annexation requirements, this impact would be less than significant.

Development of Alternative 3 would place new development within Compatibility Zones C1, C2, and D of the Lincoln Regional Airport and would be subject to the Placer County ALUCP (see Impact 3.11-5). Zone C1 permits single-family residential development, as well as parks, outdoor recreation, and commercial development with airspace reviews for structures in excess of 70 feet in height. Uses proposed for this zone under Alternative 3 include Rural Residential, Village Center, Commercial, Office/Commercial, and Open Space. The remainder of the area to be developed under this alternative is within Zone D, which is the least restrictive and allows for development of high-density and medium-density residential development. Because Alternative 3 would be consistent with the ALUCP for the reasons discussed above, this impact would be less than significant.

While the PCCP has not yet been adopted, there are draft maps showing areas that would be targeted for preservation and areas anticipated for future development under the PCCP. Alternative 3 develop areas that are currently anticipated for future development, and would preserve areas anticipated for addition to the reserve network. Therefore, Alternative 3 would result in less than significant effects related to the PCCP (see Impact 3.11-6).

Noise

Alternative 3 would allow for the development of 4,537 dwelling units, a reduction of approximately 44.7 percent compared to the proposed project. Also, Alternative 3 would include 2,464,800 sf of non-residential uses, a reduction of 46.2 percent compared to the proposed project. Construction activities associated with development under Alternative 3 would include noise-generating equipment and activities, including ground clearing, demolition of existing structures, grading, paving, and construction of new structures. These construction activities could result in a substantial temporary increase in ambient noise levels (see Impact 3.12-1). Mitigation Measure 3.12-1 shall be implemented under Alternative 3, which would limit the hours of construction, provide notice to nearby residents, and other actions designed to reduce construction noise. Implementation of Mitigation Measure 3.12-1 would reduce construction noise impacts to a less-than-significant level.

Implementation of Alternative 3 would include excavation, site preparation work, foundation work and new building framing and finishing. These construction activities may generate perceptible vibration when heavy equipment or impact tools such as jackhammers or hoe rams are used in close proximity to occupied uses (see Impact 3.12-2). Bridge construction could also require pile driving, further increasing construction noise levels. Implementation of Mitigation Measure 3.12-2 would be required, but the impact would remain significant and unavoidable.

Development of Alternative 3 would expose new noise-sensitive land uses to transportation noise which could exceed City of Lincoln standards (see Impact 3.12-3). Development of Alternative 3 would introduce additional traffic volumes to local roadways and create new roadways within the Plan Area. Due to the inherent properties of noise and sound, the noise generated by development under Alternative 3 cannot be quantified as a proportion of the proposed project. The traffic noise

increases associated with the full build-out of the proposed project would range between -0.8 to +16.2 dB L_{dn} relative to existing conditions. Because Alternative 3 represents development of a portion of the proposed project, it is likely that increases in noise levels would be similar to those under the proposed project. Mitigation Measure 3.12-3 requires preparation of an acoustical study for development of subdivisions along certain roadways within the Plan Area, and utilization of attenuating features. However, it would be infeasible to implement all measures to attenuate noise, especially for off-site receptors. Therefore, impacts related to a substantial permanent increase in ambient noise levels due to transportation noise would be significant and unavoidable under Alternative 3.

Lincoln Regional Airport is located adjacent to the Plan Area. The Placer County ALUCP has established Compatibility Zones around the airport. These Compatibility Zones each have their own restrictions as to how many residential dwellings can be constructed in each zone, which is based on specific noise, safety, airspace protection, overflight and other compatibility policies created by the County (see Impact 3.12-4). Buildout under Alternative 3 would conform to the allowed uses set forth in the ALUCP. If a daycare center is proposed within the C1 Compatibility Zone, there could be potentially significant impacts related to airport noise. Implementation of Mitigation Measure 3.12-4 would require an acoustical analysis and implementation of design features that would reduce airport noise impact. With implementation of Mitigation Measure 3.12-4, implementation of Alternative 3 would result in less-than-significant impacts related to airport noise. There currently is an approximately one-mile long and 60-foot wide easement for a private airstrip within the Plan Area that is used a few times a year for crop dusting activities on the boundary line of Areas A and I (Impact 3.12-5). Elimination of Mitigation Measure 3.12-5 would be required to remove or relocate the private airstrip to reduce noise exposure to future residents, reducing the impact to a less-than-significant level.

New residents within the Plan Area could be subject to an increase in ambient noise levels from commercial and recreational uses (see Impact 3.12-6). Alternative 3 would include commercial and recreational uses, though the amount of each would be less than compared to the proposed project. Potential noise sources from commercial and recreational uses include HVAC equipment, loading and service delivery activities and equipment, loudspeakers and voices associated with schools, and maintenance equipment and users associated with recreational facilities. Mitigation Measure 3.12-6 would influence placement of HVAC equipment, limit delivery hours, require shielding or other design features to reduce noise, prohibit extended vehicle idling, and require buffers designed to reduce noise impacts. It is anticipated that adherence to Mitigation Measure 3.12-6 would reduce noise impacts associated with commercial and recreational uses under Alternative 3, but there is no guarantee that noise impacts would be reduced to a less-than-significant level. Therefore, implementation of Alternative 3 would result in significant and unavoidable impacts to ambient noise levels.

Population, Employment, and Housing

Population, employment, and housing impacts are generally related to new residents and employment uses. Alternative 3 would add new residents and employment opportunities. **Table 6-4** below calculates the approximate number of jobs that would be generated under Alternative 3. Based on the number of jobs (6,606) and housing units (4,537) that would be generated under Alternative 3, this alternative would result in a job/housing ratio of approximately 1.45. The City of Lincoln's current job/housing ratio is 0.4. As stated in Section 3.14, Population, Employment, and Housing, the job/housing ratio is projected to increase to 0.99 by 2035. Because Alternative 3 would have a job/housing ratio of approximately 1.45, this alternative would not adversely affect the regional job/housing ratio and would place many residents within closer proximity to their place of employment.

**TABLE 6-4.
ALTERNATIVE 3 EMPLOYMENT GENERATION**

Land Use Designation	Employment Generation Rate	Area	Total Jobs Generated
Village Mixed Use	1 employee per 500 sf	114,300	229
Village Center	1 employee per 500 sf	456,400	913
Village Commercial	1 employee per 500 sf	751,900	1,504
Village Office/Commercial	Office: 1 employee per 225 sf Commercial: 1 employee per 500 sf	1,142,200 ¹	3,960
Village Business and Professional	1 employee per 225 sf	0	0
Total			6,606

NOTE:

1. Employment generation based on 60% office and 40% commercial.

SOURCE: ALH Urban & Regional Economics, 2015. Village 5 Specific Plan Area Urban Decay Analysis. April 2015.

Implementation of Alternative 3 would increase the amount of jobs and housing opportunities within the Plan Area. This development, while consistent with the City of Lincoln General Plan, would induce substantial growth and concomitant physical environmental effects (see Impact 3.13-1). The only mitigation measure available would be to not build the project because the project would inevitably cause an inducement of substantial growth to the Plan Area. Therefore, implementation of Alternative 3 would result in significant and unavoidable impacts related to growth inducement.

Alternative 3 would require the replacement of existing residences within the Plan Area locations that would be developed (see Impact 3.13-2). Sales of these properties would be voluntary, so there would not be any displacement requiring relocation. Therefore, Alternative 3 would have no impact related to displacement of people or housing.

Public Services

Alternative 3 would add 4,537 new dwelling units in the Plan Area, which would result in a population increase of 10,456. New residents would trigger the need for additional police, fire, schools, parks, libraries, and other public services.

Table 6-5 calculates that Alternative 3 would require approximately 20 officers, five staff members, and 1,985 square feet of space based on the estimated population (see Impact 3.14-1). The 2050 General Plan expresses a specific need for a centralized police station in Policy PFS-8.11. There is a central police station located at 770 7th Street, which is approximately 16,000 square feet. This would likely be sufficient to house the additional 20 officers need for Alternative 3. Even if it was not sufficient, a temporary police station could be located within any space that would be zoned Village Commercial (VCOMM). Therefore, Alternative 3 would result in a less-than-significant impact related to police services.

**TABLE 6-5.
ALTERNATIVE 3 POLICE PROTECTION REQUIREMENTS**

	Population	Officers/1,000	Officers	Staff/1,000	Staff	Square Footage/Staff	Square Footage
Alternative 3	10,456	1.87	19.55	0.40	4.18	475/staff	1,985.5

SOURCE: City of Lincoln, 2016. Lincoln Village 5 Specific Plan. August 12, 2016.

Under Alternative 3, fire protection responsibility would transfer from CAL FIRE and Placer County Fire Department to the City of Lincoln Fire Department (see Impact 3.14-2). Using the City of Lincoln's generation rates, **Table 6-6** identifies that Alternative 3 would require 14 new staff members and 12,000 square feet of facility space. Development under Alternative 3 would contribute taxes and fees to supplement the General Fund for Lincoln, which could support the expansion of LFD staff and operations. However, to adequately provide fire protection services to the Plan Area, a new fire station would be required to position fire rescue equipment and personnel close enough to the Plan Area to provide adequate response time. The site plan for Alternative 3 includes an area of Public/Quasi-Public, which could be used for a new fire station. The construction of a new station at this site has been considered throughout this EIR in various chapters (i.e., Air Quality, Biological Resources, etc.). Thus, the impacts from Alternative 3 regarding fire protection would be less than significant.

**TABLE 6-6.
ALTERNATIVE 3 FIRE PROTECTION REQUIREMENTS**

	Population	LFD Staff/1,000	LFD Staff	Square Footage/Staff	Square Footage
Alternative 3	10,456	1.26	13.17	917/staff	12,076.9

SOURCE: City of Lincoln, 2016. Lincoln Village 5 Specific Plan. August 12, 2016.

Based on WPUSD's student generation rates, Alternative 3 would be expected to generate approximately 2,098 new students as shown in **Table 6-7** (see Impact 3.14-3). Specifically, Alternative 3 would generate 1,324 elementary students, 316 middle school students, and 458 high school students (see **Table 6-8**). Alternative 3 would include two elementary schools and one middle school. Based on elementary school capacity ranging from 650 (average) to 800 (maximum) students,³ the two elementary schools included in Alternative 3 would adequately serve the new students generated by Alternative 3. Based on a middle school capacity ranging from 1,200 (average) to 1,400 (maximum) students,⁴ the number of middle school students generated under Alternative 3 would be adequately served by the proposed middle school within the Plan Area, as well as include excess capacity to accommodate students from outside of the Plan Area.

As discussed in Section 3.14, Public Services and Recreation, Lincoln High School currently has excess capacity of 314 students. While this excess capacity would not completely cover the number of high school students generated by Alternative 3, many would be accommodated there. Additionally, high school students within the Plan Area would have the opportunity to attend other schools, such as Phoenix High School (grades 9-12) at 870 J Street and Horizon Charter Schools (grades K-12) at 2800 Nicolaus Road, #100. Finally, the project applicant and/or developer(s) would be required to contribute fees towards school facilities funding. The specific requirements would be set forth in the Development Agreement for the project.

In summary, Alternative 3 would be required to pay the applicable school fees, which is considered full mitigation of residential development impacts on schools. Alternative 3 would also be required to develop its school sites appropriately with site development and the specific impacts of developing these schools have been discussed in the topical sections of this EIR. Therefore, the impact related to school services and facilities under Alternative 3 would be less than significant (see Impact 3.14-3).

Alternative 3 would generate 10,456 new residents in the Plan Area. The City of Lincoln requires dedication of a total of nine acres per 1,000 new residents for parkland and open space. Using that rate, Alternative 3 would be required to include 94.1 acres of park. Implementation of Alternative 3 would include approximately 108.5 acres of parks, 19.5 acres of linear parkland, and 70.3 acres of natural open space as shown in **Table 6-9**. Based on the applicable credit ratios for each type of park or open space, the total park credited acreage under Alternative 3 would be 119.43 acres, as calculated in Table 6-9.

³ Steer, Heather, Facilities Coordinator, Western Placer Unified School District, electronic communication, October 2014.

⁴ Steer, Heather, Facilities Coordinator, Western Placer Unified School District, electronic communication, October 2014.

**TABLE 6-7.
ALTERNATIVE 3 PROBABLE STUDENT GENERATION**

Type of School	Single Family Units ^{1,2}	Single Family Generation Rate (students/dwelling unit)	Single Family Student Generation	Multi Family Units ³	Multi Family Generation Rate (students/dwelling unit)	Multi Family Student Generation	Total Students Generated
Elementary (K-5)	2,762	0.373	1,031	775	0.378	293	1,324
Middle (6-8)	2,762	0.089	246	775	0.090	70	316
High (9-12)	2,762	0.118	326	775	0.170	132	458
Total	--	--	1,603	--	--	495	2,098

NOTES:

1. Includes units designated on the Land Use Plan as RR, CE, LDR, or MDR.
2. 1,000 units have been deducted from the LDR and MDR categories for age-qualified units. The age-qualified units are all located in Area A.
3. Includes units designated on the Land Use Plan as HDR or VMU.

SOURCES: Calculated by ESA based upon information provided by Heather Steer, Facilities Coordinator, Western Placer Unified School District, electronic communication, October 2014; ESA 2014.

**TABLE 6-8.
ALTERNATIVE 3 SCHOOL SITE DEMANDS**

Alternative 3	Elementary (K-5)	Middle (6-8)	High (9-12)
Students Generated	1,324	316	458
School Capacity (Average)	650	1,200	2,000
School Capacity (Maximum)	800	1,400	2,500
Number of Schools Required	2	1	1

NOTES:

1. Average capacity refers to the number of students WPUSD targets for planning and designing new school facilities.
2. Maximum capacity refers to the ultimate maximum amount of students WPUSD would put on a campus while the District opens a new school site.

SOURCES: Calculated by ESA based on information provided by Heather Steer, Facilities Coordinator, Western Placer Unified School District, electronic communication, October 2014; ESA 2014.

**TABLE 6-9.
ALTERNATIVE 3 PARK AND OPEN SPACE CREDITS**

Land Use	Acreage¹	Credit Ratio	Credited Acreage
Alternative 3			
Parks	108.5	1:1	108.5
Linear Corridors/Paseos	19.5	0.2:1	3.9
Open Space	70.3	0.1:1	7.03
Total	198.3	--	119.43
SOURCE:			
1. City of Lincoln, 2016. Lincoln Village 5 Specific Plan. August 12, 2016.			

Since Alternative 3 would provide for adequate parks within the Plan Area, buildout of Alternative 3 would not cause an increase in the demand for parks and recreational facilities beyond the Plan Area to the extent that new or expanded facilities would be needed. However, if fewer than 38.7 acres of the Regional Sports Park are available for public use for this alternative, the project applicant shall either provide the required additional active recreational park land; or pay the In Lieu Fee for park and recreational facilities consistent with Mitigation Measure 3.14-4. Alternative 3 would be constructed where no current parks or recreational facilities exist, and as such, no parks would deteriorate or become overused. As a result, Alternative 3 would not result in any deterioration of existing facilities. Thus, Alternative 3 would have a less-than-significant impact related to parks with the implementation of Mitigation Measure 3.14-4 (see Impact 3.14-4).

Implementation of Alternative 3 would add 10,456 new residents to the Plan Area, which would increase the overall demand on library services within the City. Alternative 3 would be required to contribute its appropriate share of CFD Fees and PFE Fees (adopted in 2012) to fund the expansion of library services and facilities. These fees would be used by the City to evaluate library needs and plan and construct new facilities. Therefore, Alternative 3 would result in a less-than-significant impact to library facilities (see Impact 3.14-5).

Transportation and Circulation

Alternative 3 would add 4,537 new dwelling units, which represents a 44.7 percent reduction compared to the proposed project. Also, Alternative 3 would develop 2,464,800 sf of non-residential uses, which is a 46.2 percent reduction compared to the proposed project. According to Table 3.15-10 in Section 3.15, Transportation and Circulation, the proposed project would increase delays and cause intersections within the City of Lincoln that are currently operating at acceptable LOS to operate at an unacceptable LOS (see Impact 3.15-1). While Alternative 3 represents an approximately 45 percent overall reduction compared to the proposed project, it is likely that Alternative 3 would also cause unacceptable LOS conditions at multiple City of Lincoln intersections. Mitigation Measure 3.15-1 requires the payment of impact fees and the construction of improvements designed to achieve acceptable LOS conditions. As an alternative

to paying fees, the project applicant could construct intersection and roadway improvements such as intersection signalization, roadway widening and restriping, and intersection reconfiguration, as outlined in Mitigation Measure 3.15-1. Improvements to the following intersections would be required: Nelson Lane/Nicolaus Road, Airport Road/Nicolaus Road, Dowd Road/Nicolaus Road, Fiddymment Road/Moore Road, Dowd Road/Moore Road, and Lakeside Drive/Nicolaus Road. Implementation of Mitigation Measure 3.15-1 would reduce Alternative 3's impact on City of Lincoln intersections, and the impact would be reduced to a less-than-significant level, the same as under the proposed project.

Like the proposed project, Alternative 3 would be expected to add traffic to the Caledon Circle/Ferrari Ranch Road intersection, which operates at an unacceptable LOS E during the a.m. peak hour under existing conditions (see Impact 3.15-2). The addition of the proposed project traffic would result in an increase of four seconds of average vehicle delay during the a.m. peak hour, as shown in Table 3.15-10. Because Alternative 3 would develop approximately 45 percent less than the proposed project, it is likely that Alternative 3 would increase the existing delay by no more than four seconds, which is below the significance threshold of five seconds or more increase in average vehicle delay for an intersection that is already operating at an unacceptable LOS without the project. Therefore, Alternative 3 would result in a less-than-significant impact to City of Lincoln intersections currently operating at an unacceptable LOS.

Alternative 3 would add new roadways and intersections to the City of Lincoln within the Plan Area. While Alternative 3 would not develop the same number of roadways and intersections as the proposed project, there would be new roadways and intersections. Under the proposed project, the future intersection at Nelson Road and Mavis Road would operate at unacceptable LOS without Mitigation Measure 3.15-3 (see Impact 3.15-3). While Alternative 3 would not be expected to generate the same amount of traffic as the proposed project, implementation of Mitigation Measure 3.15-3 requiring monitoring of LOS at this intersection would ensure that Alternative 3 would have a less-than-significant impact related to future City of Lincoln intersections within the Plan Area.

While Alternative 3 would include annexation of the Plan Area to the City of Lincoln, development within the Plan Area could impact intersections and roadways within unincorporated Placer County (see Impact 3.15-4). Because Alternative 3 would generate less traffic than the proposed project, it cannot be conclusively determined at this time whether Alternative 3 would result in unacceptable LOS at Placer County intersections. Mitigation Measure 3.15-4 requires payment of fair share fees for construction of roadway and intersection improvements. Implementation of Mitigation Measure 3.15-4 would reduce impacts to Placer County intersections, but there is no guarantee that roadway improvements would be built in time to prevent significant impacts. Therefore, implementation of Alternative 3 would result in significant and unavoidable impacts related to Placer County intersections.

The intersection of Fiddymment Road and Baseline Road operates at an unacceptable LOS within the jurisdiction of the City of Roseville (see Impact 3.15-5). As shown in Table 3.15-10, the proposed project would add one second of delay during the a.m. peak hour but would reduce the p.m. peak hour delay by six seconds. While Alternative 3 may not reduce the p.m. peak hour delay by the same amount as the proposed project, adding traffic to low delay movements and more efficient utilization of the existing signal timings would result in an overall reduction in average vehicle delay. Although Alternative 3 would include less development than the proposed project, it would have a less-than-significant impact on City of Roseville intersections.

SR 65 runs through the Plan Area, so it is foreseeable that implementation of Alternative 3 could have impacts on intersections and highway segments under the jurisdiction of Caltrans (see Impacts 3.15-6, 3.15-8, and 3.15-9). Table 3.15-10 indicates that the proposed project would result in unacceptable LOS at one intersection under Caltrans' jurisdiction. This intersection (Nelson Road/SR 65) currently operates at LOS C. While Alternative 3 represents an approximately 45 percent reduction in development compared to the proposed project, it is likely that Alternative 3 would also cause this intersection to operate at an unacceptable LOS. Mitigation Measure 3.15-6 commits the project applicant to pay their fair share towards these improvements through the City of Lincoln's updated PFE fee program, and ensure they are constructed prior to the service level degrading to an unacceptable LOS D or worse. Mitigation Measure 3.15-6 would be required for Alternative 3 but would remain significant and unavoidable because project-related traffic improvements are not fully funded.

Alternative 3 would add traffic to segments of Fiddymment Road and Athens Avenue in Placer County, similar to the proposed project (Impact 3.15-7), but at a lower volume. Under the proposed project, the addition of the traffic to these study segments would degrade the daily LOS from LOS A to LOS C. Since Alternative 3 would generate fewer trips than the proposed project and have lesser impacts to Placer County roadway segments, LOS along Fiddymment Road and Athens Avenue would not degrade to an unacceptable LOS. Therefore, the impact to Placer County roadways would be less than significant.

Like the proposed project, Alternative 3 would include facilities to support bicycle, pedestrian, and bus transit travel operations within the Plan Area. Additionally, Alternative 3 would include the provision of NEV lanes throughout the site. Though Alternative 3 would not develop as many bike lanes, NEV lanes, sidewalks and walking trails, or bus turnouts and shelters as the proposed project because Alternative 3 would not develop as much area, Alternative 3 would include these alternative transportation facilities to serve the increased population. Thus, Alternative 3 would result in less-than-significant impacts related to bicycle and pedestrian movement (see Impact 3.15-10) and bus transit (see Impact 3.15-11).

All roadways within the Plan Area under Alternative 3 would include at least the minimum required travel way for emergency vehicle access. In addition, Class I multi-use trails may accommodate emergency and maintenance vehicles to provide access to open space areas.

Therefore, Alternative 3 would result in less-than-significant impacts related to emergency vehicle access (see Impact 3.15-12).

While Alternative 3 would include approximately 45 percent less development than the proposed project, Alternative 3 has the potential to cause significant traffic impacts during construction (see Impact 3.15-13). Construction activity will require heavy vehicles to access the site and may include the possibility of temporary traffic lane closures, travel hazards to bicyclists and pedestrians, increased loading and potential damage to roadbeds, or substantial truck traffic on roadways not designated as truck routes. Mitigation Measure 3.15-13 requires preparation of a Construction Traffic Management Plan that will be subject to review and approval by the City Department of Public Works, in consultation with Caltrans, affected transit providers, and local emergency service providers. The Traffic Management Plan shall ensure that acceptable operating conditions are maintained on local roadways and freeway facilities. With implementation of Mitigation Measure 3.15-13, the construction impacts to Plan Area roadways under Alternative 3 would be reduced to less than significant.

Utilities

Alternative 3 would develop approximately 4,537 new residential dwelling units in the Plan Area, which could result in approximately 10,456 new residents. New dwelling units and residents could trigger additional demand for potable water, wastewater facilities, storm water facilities, and solid waste disposal.

Implementation of Alternative 3 could require additional water supply entitlements or sources (see Impact 3.16-1), or new or expanded treatment, storage, and conveyance facilities (see Impact 3.16-2). As this level of development represents approximately 53.8 percent of the number of residents that would be added under the proposed project, Alternative 3 would be estimated to require approximately 53.8 percent of the water that would be required by the proposed project. As the proposed project would require approximately 6,396 acre feet per year (AFY) of water, Alternative 3 would be expected to require approximately 3,441 AFY. The analysis in Impact 3.16-1 determined that the proposed project would have sufficient water supplies, and would therefore have a less-than-significant impact related to new entitlements or supplies. Because demand under Alternative 3 would be less than the proposed project, Alternative 3 would be expected to also result in less-than-significant impacts.

The analysis of Impact 3.16-2 concluded that the proposed project would result in less-than-significant impacts related to new or expanded water treatment, storage, or conveyance infrastructure with implementation of Mitigation Measure 3.16-2. Mitigation Measure 3.16-2 requires improvements for treatment and distribution facilities to be completed in order to serve the additional demand. Mitigation Measure 3.16-2 would be applied to Alternative 3, and would reduce this impact to a less-than-significant level as there would be adequate capacity by the time it is required.

Impact 3.16-3 concluded that the proposed project would generate an estimated 3.8 million gallons per day (mgd) of wastewater at full buildout. Alternative 3 would result in 53.8 percent of the number of new residents as anticipated under the proposed project. Therefore, Alternative 3 would be expected to generate approximately 2.0 mgd. As discussed in Impact 3.16-3, the City would ultimately have the capacity for 12.0 mgd, and would have sufficient capacity to serve the proposed project. Because Alternative 3 represents just over half of the generation as would be expected under the proposed project, implementation of Alternative 3 would be less than significant.

Implementation of Alternative 3 could require new or expanded storm water facilities (see Impact 3.16-4). Because Alternative 3 would develop less area than the proposed project, this alternative would require development of a storm water drainage and infrastructure plan to be implemented within the area that would be developed under Alternative 3. Storm water infrastructure plans have already been developed for Area A, which would cover a substantial amount of the area that would be developed under Alternative 3. Development of a Storm Water Drainage and Infrastructure Plan would be required by the City, and would demonstrate that Alternative 3 would not result in significant impacts related to storm water facilities.

Implementation of Alternative 3 would generate additional solid waste that would require disposal at local facilities (see Impact 3.16-5). As calculated in Impact 3.16-5, the proposed project could generate up to 105,145 pounds per day of solid waste. Because Alternative 3 represents approximately 53.8 percent of the development that would occur under the proposed project, Alternative 3 would be expected to generate approximately 56,568 pounds (or 28.3 tons) per day of solid waste. The WRS� has capacity of 1,900 tons per day, and would be able to handle the solid waste generated by the proposed project. Because Alternative 3 would generate approximately half the solid waste compared with the proposed project, implementation of Alternative 3 would result in a less-than-significant impact related to solid waste facilities.

Relationship to Project Objectives

Alternative 3 would meet many of the project objectives, including:

1. Establish an approximately 4,787-acre mixed-use village that incorporates feasible, smart growth principles and results in an economically stable, sustainable community.
2. Provide a Land Use Plan which includes a broad range of compatible land uses, including residential, commercial, office, mixed-use, recreation, and public/quasi-public, which are organized around a compact core and provide appropriate land use transitions.
3. Provide a pedestrian-friendly community environment that provides a safe and pleasant place for people to live, work, and recreate.
4. Provide two Village Centers, located adjacent to key arterial streets and functioning as hubs of activity and a source of sales tax revenue.
5. Establish a network of open space and recreation amenities for Plan Area and City residents with the potential for recreational tourism. Elements include a regional sports park,

community parks, neighborhood parks, linear parkways, and pedestrian and bike connections throughout the Plan Area.

9. Provide a land use plan with a balance of uses and density that results in an adequate tax base which, at project buildout, generates a surplus to the City's General Fund and develops financial resources to pay for public services and infrastructure without causing financial burden to existing residents.
10. Provide a land use plan, design standards, and guidelines that are consistent with Lincoln 2050 General Plan goals and policies, incorporate market-acceptable design features, and foster an attractive, well-maintained community.
11. Establish a land use and circulation system that promotes convenient mobility, links Village 5 with other villages and the existing areas of Lincoln, and provides a variety of non-vehicular modes within a setting that is safe, accessible, and convenient for all modes of travel.
12. Promote a diversity of housing opportunities responsive to the needs of Lincoln, the region, and market conditions, including single-family dwellings, apartments, condominiums, townhouses, and live-work units to serve a broad range of family incomes.

While Alternative 3 would generally meet the above objectives, it would not do so to the same extent as the proposed project. For example, while Alternative 3 would provide a mix of uses to provide an adequate tax base, this Alternative would include only 46.2 percent less non-residential development, meaning that Alternative 3 would not provide as much commercial and retail development that could boost the tax base. Additionally, while Alternative 3 would provide parks and open space, it would provide significantly less park facilities than the proposed project.

Objectives that Alternative 3 would not meet include:

6. Provide sites for a high school, a junior high school and three elementary schools, which are conveniently located to serve the Plan Area residents and surrounding villages.
7. Preserve and protect the Auburn Ravine and Markham Ravine corridors as permanent open space and provide public access with perimeter trails and crossings, where feasible.
8. Provide regional and community scale retail and employment centers in locations with easy access and visibility from SR 65, offering employment opportunities for residents in the Plan Area and the City of Lincoln and resulting in a balanced ratio of jobs and housing and consistent with the City's 2050 General Plan.
13. Provide a comprehensively planned infrastructure system that is sized to serve the entire Plan Area and adjacent planned villages, which complements the city-wide infrastructure and ensures funding for the ongoing maintenance needs of the parks, open space, and storm water quality facilities, public services and infrastructure.

While Alternative 3 would include two elementary schools and one middle school, Alternative 3 would not provide a third elementary school or the high school mentioned in Objective 6. Additionally, because Alternative 3 would include 46.2 percent less non-residential development, Alternative 3 would not be likely to provide regional-scale retail as listed in Objective 13.

Alternative 3 would provide employment and shopping areas with easy access and visibility from SR 65, but this alternative would provide less of these uses than planned by the proposed project. Likewise, Alternative 3 would provide a regional sports park, community parks, neighborhood parks, linear parkways, and pedestrian and bike connections throughout the Plan Area similar to the proposed project, but at a smaller acreage. Because the development under Alternative 3 would be less than that of the proposed project, this alternative may not have sufficient funds from development fees and taxes to provide for necessary infrastructure and maintenance. Thus, while Alternative 3 would meet most of the project objectives, this alternative would not meet them to the same extent as the proposed project, but would not have as many significant environmental impacts as the proposed project.

Alternative 4: No Development West of Dowd Road

Alternative 4 would not develop any uses west of Dowd Road (see **Figure 6-2**), except the parcel designated for the development of a high school immediately north of and abutting Markham Ravine. A significant portion of Area F would not be constructed. The existing Lincoln High School Farm located in Area G would remain, and no densification or changes to existing conditions would occur in that area. The majority of Area H would not be developed, except for the P/QP use identified east of Dowd Road and south of Moore Road. All other Areas, including A, B, C, D, E, I, and J would develop as proposed under the V5SP.

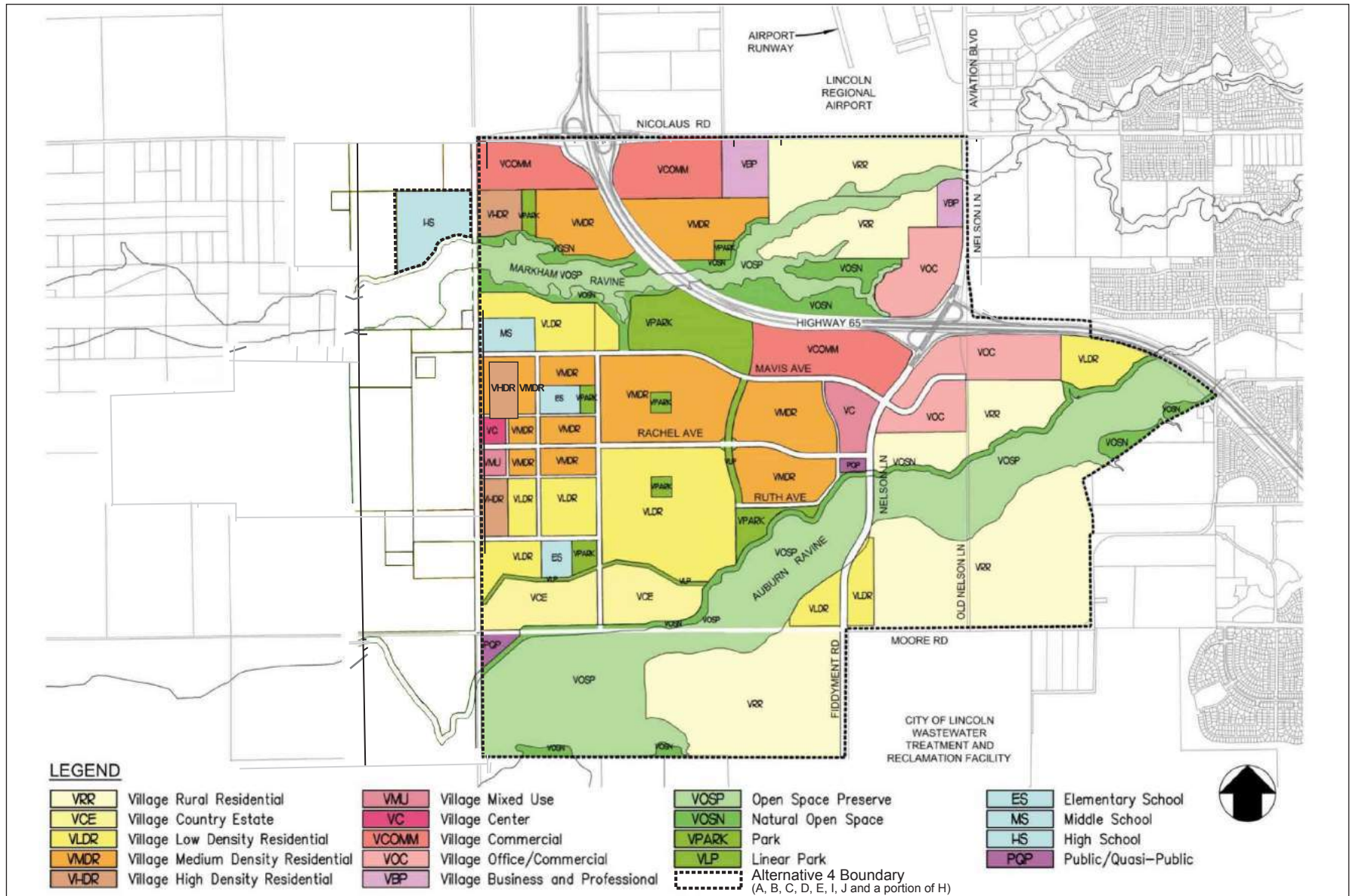
Under this alternative, approximately 2,233.5 acres would be developed, compared to the 4,787 acres developed under the proposed project, a reduction of 53.3 percent. Under Alternative 4, 5,954 residential units ranging from Village Residential Rural to Village Residential High Density would be constructed. This would be a reduction of 27.4 percent of dwelling units compared to the proposed project. Approximately 4,581,600 square feet of commercial, mixed use, and office space would be constructed, which is equal to that proposed in the Specific Plan. As calculated in **Table 6-10**, Alternative 4 would add 13,698 new residents to the Plan Area, which would be 29.6 percent fewer than the proposed project. **Table 6-11** identifies the acreages, number of units, and square feet of each land use designation that would be developed under Alternative 4.

TABLE 6-10.
ALTERNATIVE 4 POPULATION ESTIMATE

Unit Type	PPH ¹	Number of Units	Population
RR, CE, LDR	2.86	2,277	6,513
MDR	2.00	2,830	5,660
HDR, VMU	1.80	847	1,525
TOTAL	--	5,954	13,698

NOTES:

1. Source for PPH rates: City of Lincoln, 2008. City of Lincoln 2050 General Plan. Adopted March 25, 2008.



SOURCE: C nning a Engineering, 2015; adapted y ESA, 2015

Lincoln Village 5 EIR . 130368

Figure -2
Land Use Plan – Alternati e 4

**TABLE 6-11.
ALTERNATIVE 4 NO DEVELOPMENT WEST OF DOWD ROAD**

Land Use Designation	Land Use	Density (du/ac)	FAR ⁴	Area A			Area B			Area C			Area D			Area E			Area F			Area H			Area I			Area J			TOTAL		
				Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft	Acres	Units	Sq Ft
Village Residential Rural	VRR	0.5		0.0	0	0	88.9	34	0	0.0	0	0	179.5	62	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	490.7	224	0	268.4	320	0
Village Country Estate	VCE	2		50.1	96	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	55.2	106	0	0.0	0	0	105.3	202	0
Village Residential Low Density	VLDR	5		196.2	909	0	35.3	158	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	123.5	584	0	21.3	104	0	355.0	1,755	0
Village Residential Medium Density	VMDR	7		224.5	1,412	0	0.0	0	0	0.0	0	0	0.0	0	0	65.0	409	0	53.1	326	0	0.0	0	0	99.0	683	0	0.0	0	0	441.6	2,830	0
Village Residential High Density	VHDR	21		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	20.6	432	0	0.0	0	0	17.1	359	0	0.0	0	0	37.7	791	0
Village Mixed Use	VMU	7.5	0.35	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	7.5	56	114,300	0.0	0	0	7.5	56	114,300
Village Center	VC		0.35	26.4	0	342,100	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	7.5	0	114,300	0.0	0	0	33.9	0	456,400
Village Commercial	VCOMM		0.25	79.5	0	751,900	0.0	0	0	0.0	0	0	0.0	0	0	66.4	0	650,700	50.4	0	515,700	0.0	0	0	0.0	0	0	0.0	0	0	196.3	0	1,918,300
Village Office/Commercial	VOC		0.30	0.0	0	0	102.5	0	1,142,200	57.4	0	554,600	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	159.9	0	1,696,800
Village Business and Professional	VBP		0.25	0.0	0	0	0.0	0	0	12.7	0	104,500	0.0	0	0	30.1	0	291,300	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	42.8	0	395,800
Elementary School	ES			12.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	11.8	0	0	0.0	0	0	23.8	0	0
Middle School	MS			0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	20.0	0	0	0.0	0	0	20.0	0	0
High School	HS			0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	48.7	0	0	0.0	0	0	0.0	0	0	0.0	0	0	48.7	0	0
Public/Quasi-Public	PQP			3.9	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	9.7	0	0	0.0	0	0	0.0	0	0	13.6	0	0
Park	VPARK			100.6	0	0	0.0	0	0	0.0	0	0	0.0	0	0	3.5	0	6.6	0	0	0.0	0	0	7.9	0	0	0.0	0	0	118.6	0	0	
Linear Park	VLP			14.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0.0	0	0	0.0	0	0	5.5	0	0	0.0	0	0	19.5	0	0	
Ag/Preserve	VOSA			0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	
Open Space Preserve	VOSP			0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	
Natural Open Space	VOSN			17.3	0	0	33.5	0	0	0.0	0	0	55.2	0	0	9.4	0	17.7	0	0	0.0	0	0	19.5	0	0	22.7	0	0	152.6	0	0	
Right of Way	ROW			74.6	0	0	6.2	0	0	11.4	0	0	0.0	0	0	0.0	0	12.6	0	0	44.7	0	0	38.8	0	0	11.0	0	0	188.3	0	0	
SR 65	HWY			0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	
TOTAL:				799.1	2,417	1,094,000	266.4	192	1,142,200	81.5	0	659,100	234.7	62	0	174.4	409	942,000	209.7	758	515,700	54.4	0	0	413.3	1,788	228,600	545.7	328	0	2,233.5	5,954	4,581,600

SOURCE: City of Lincoln, 2016. Lincoln Village 5 Specific Plan. August 12, 2016; ESA, 2016.

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Aesthetics and Visual Quality

Under Alternative 4, development would be bound by Nicolaus Road, Nelson Lane, SR 65, Moore Road, Fiddymment Road, and Dowd Road. Development would include 5,954 residential dwellings and approximately 4,581,600 square feet of commercial, mixed use, and office space. Impacts on scenic vistas (see Impact 3.1-1) under Alternative 4 would be potentially significant because while the view corridors and areas directly adjacent would be preserved, allowing for continued visibility from area roadways, the overall views of the Plan Area would change substantially. Because there is no feasible mitigation to reduce this impact, this impact would be significant and unavoidable.

Changes to the visual character (see Impact 3.1-2) under Alternative 4 would be similar to those under the proposed project because existing open land would be developed with one- and two-story residences and commercial structures. The areas that would be developed under Alternative 4 would include a variety of densities of residential structures. In some areas, high-density residential development would be placed across from non-developed areas. This would place large, multi-story residential structures with little to no open space between units directly across from existing open agricultural land or single-family residences located on large (minimum 10 acres) parcels. At the western boundary of the area to be developed under Alternative 4, there would not be country estate or rural residential areas to provide a visual transition from dense, clustered structures within the development area to the open agricultural or grassland beyond the Plan Area. Implementation of Alternative 4 would be consistent with the vision of the City's General Plan for a suburban development in this area. However, impacts of Alternative 4 on existing visual character would be potentially significant because implementation of Alternative 4 would result in substantial changes to the existing character. Because there is no feasible mitigation to reduce this impact, implementation of Alternative 4 would result in a significant and unavoidable impact to existing visual character and quality of the Plan Area and its surroundings.

Alternative 4 would include an electronic message center adjacent to SR 65, similar to the proposed project. Electronic message centers are designed to be visible and readable from roadways. Given the height, size, and lights of the electronic message center, it would likely be visible to new residential units within Area A as well as other phases within the Plan Area, even though there would not be as many residences under Alternative 4 as under the proposed project. Because the proposed electronic message center would be a prominent feature developed within the Plan Area, impacts related to changes in the existing visual character would be potentially significant. Because there is no feasible mitigation to reduce this impact, implementation of Alternative 4 would result in a significant and unavoidable impact to existing visual character and quality of the Plan Area and its surroundings as a result of the proposed electronic message center.

Development under Alternative 4 would include the Regional Sports Park, new schools, and commercial structures which would result in potentially significant impacts related to light and glare (see Impact 3.1-4). Mitigation Measure 3.1-4 requiring exterior lighting to be shielded,

directed, or otherwise placed to minimize illumination of adjacent parcels would apply to Alternative 4. Adherence to this mitigation measure would reduce light and glare impacts by requiring structures and lighting to be shielded, directed, or otherwise designed to reduce the potential for disturbance or nuisance, reducing this impact to less than significant.

Similar to the proposed project, the electronic message center included in Alternative 4 would introduce new sources of light. Compliance with applicable sign regulations including Caltrans regulations and City Code would ensure that images and light associated with the electronic message center are directed toward motorists on SR 65, do not include flashing or animated images, and rotate after a minimum amount of time. With compliance to these regulations, the proposed electronic message center within Area A would not create a new source of substantial light which would adversely affect day or nighttime views in the area. The impact for Alternative 4 would be less than significant.

Agriculture and Forestry Resources

Alternative 4 would develop the Plan Area east of Dowd Road. As shown in Figure 3.2-1, this area contains Prime Farmland, Farmland of Statewide Importance, and Unique Farmland that would be converted to non-agricultural use. Development of Alternative 4 would result in conversion of 1,497.64 acres of Important Farmland, which would be 429.7 fewer acres converted than the proposed project, a reduction of approximately 22.3 percent (see Impact 3.2-1). Like the proposed project, Alternative 4 would include the AO District which would be established to respect and allow the continuation of agricultural uses that were in existence prior to adoption of Alternative 4. As a result of this loss of Important Farmland to non-agricultural use, Mitigation Measure 3.2-1 would be applied to Alternative 4. Mitigation Measure 3.2-1 requires implementation of a comprehensive biological and agricultural resources conservation strategy. While this mitigation measure would reduce impacts related to conversion of Important Farmland, Alternative 4 would still result in a net permanent loss of Important Farmland. Therefore, this impact would be significant and unavoidable.

Alternative 4 would also include 1,010.95 acres of land under Williamson Act contracts, which is 349.65 acres less than the proposed project, a reduction of approximately 25.7 percent (see Impact 3.2-2). As is the case with the proposed project, the GDP would not allow development of land under a Williamson Act contract until the contract has been cancelled or the nonrenewal process has been initiated by the property owner. Because Alternative 4 would not develop on Williamson Act lands until the property has entered the cancellation or nonrenewal process, this alternative would not conflict with Williamson Act contracts.

Development under Alternative 4 would include new growth in the Plan Area, which could increase property values. As property values near new development increase, property owners would have an incentive to sell their property to be developed as it would likely have a higher value as urban development than existing rural or agricultural designations. This increase in property value would be likely to result in indirect pressure for future conversion of agricultural

land (see Impact 3.3-3). As there is no feasible mitigation that would allow development without creating indirect pressure on agricultural land, this impact would be significant and unavoidable.

Air Quality

Alternative 4 would construct 27.4 percent fewer residences but the same amount of commercial development as the proposed project, resulting in development of approximately 80 percent of the total uses compared to the proposed project. Also, Alternative 4 would not construct one of the elementary schools included in the proposed project. Like the proposed project, Alternative 4 would develop land uses and densities consistent with City of Lincoln General Plan assumptions. Thus, Alternative 4 would not conflict with or obstruct implementation of the applicable air quality plan, and the impact would be less than significant (see Impact 3.3-1).

Construction emissions modeling is based in part on the number of dwelling units that would be constructed, as well as the amount of non-residential (e.g., commercial) square footage. For purposes of a conservative comparative analysis, the construction emissions that would be produced under Alternative 4 would be approximately 80 percent of the emissions of the proposed project. Applying a multiplier of 0.80 to the unmitigated emissions in Table 3.3-6, some construction years would still result in ROG emissions that would exceed PCAPCD thresholds, even if mitigation is applied (see Impact 3.3-2). Because these emissions would be substantially above thresholds, emissions could not be mitigated to below the thresholds. Mitigation Measure 3.3-2 includes BMPs and construction fleet assumptions. However, even with mitigation, this impact would remain significant and unavoidable under Alternative 4.

Operational emissions of the proposed project were found to exceed PCAPCD thresholds even with mitigation (see Impact 3.3-3). Applying a multiplier of 0.80 to the proposed project emissions, the estimated emissions from implementation of Alternative 4 would also exceed PCAPCD thresholds. Mitigation Measure 3.3-3 would be applied to Alternative 4 and would limit diesel idling, provide preferential parking for carpools, and require on-site bicycle racks. Even with these mitigation measures, emissions would exceed thresholds. Therefore, implementation of Alternative 4 would remain significant and unavoidable for operational air emissions.

Traffic associated with new development could result in exposure of persons to substantial localized carbon monoxide concentrations (see Impact 3.3-4). The air quality analysis for the proposed project determined that air emissions for the proposed project would be less than significant. Because Alternative 4 would develop approximately 80 percent of the proposed project, it is expected that carbon monoxide concentrations would be proportionately lower under Alternative 4. Thus, impacts from Alternative 4 would be less than significant.

Development of Alternative 4, like the proposed project, would place sensitive receptors in close proximity to SR 65, which could result in exposure to TACs (see Impact 3.3-5). The proposed project imposed Mitigation Measures 3.3-5(a) and 3.3-5(b) to reduce the potential exposure of on-site sensitive receptors to TACs to less than significant. These measures require BMPs and

site design considerations to reduce TAC exposure. These measures would be applied to Alternative 4, and would reduce this impact to less than significant.

Implementation of Alternative 4 could result in exposure of a substantial amount of persons to objectionable odors (see Impact 3.3-6). The PCAPCD lists a project screening distance of two miles from any wastewater treatment plant for potential odor impacts. Under Alternative 4, the nearest residential structures would be located within one-tenth mile from the Lincoln WWTRF. Although the project would require that future sellers of residences near the wastewater treatment plant to provide notice to such purchasers, notice of potentially unpleasant odors would not mitigate the nuisance impact. Because there are no known feasible odor mitigation techniques available to fully mask the occasional smell of the wastewater pond water, Alternative 4 would result in a significant and unavoidable impact related to objectionable odors.

Biological Resources

Implementation of Alternative 4 would impact wetlands in Areas A-E, I, and J (see Impact 3.4-1). A wetland delineation has been conducted for Area A, but not for most of the remainder of the Plan Area. Mitigation Measure 3.4-1 requires a wetland delineation and, if jurisdictional waters are found, restoration, enhancement, or creation of wetlands such that there would be no net loss of wetlands due to project development. Mitigation Measure 3.4-1 would be applied to Alternative 4, and would reduce impacts to a less-than-significant level.

Implementation of Alternative 4 would include land disturbance and construction that would impact biological resources, including special-status species and their habitat (see Impact 3.4-2). Because Alternative 4 would develop less acreage than the proposed project, impacts from Alternative 4 would be potentially significant. Mitigation Measure 3.4-2 would be applied to Alternative 4, and would reduce the development's impacts to a less-than-significant level. Mitigation Measure 3.4-2 requires development and implementation of a project-level mitigation plan to preserve open space, agricultural land, and biological resources.

Specific habitat and species that would be impacted by implementation of Alternative 4 would include vernal pool habitat and species (see Impact 3.4-3), rare plant populations (see Impact 3.4-4), western pond turtle (see Impact 3.4-5), nesting and special-status birds (see Impact 3.4-6), valley elderberry longhorn beetle (see Impact 3.4-7), water quality affecting fish species in Auburn Ravine (see Impact 3.4-8), and riparian habitat or other sensitive natural communities (see Impact 3.4-9). While implementation of Alternative 4 would impact fewer acres of land and habitat, impacts would likely be potentially significant. Mitigation measures for Impacts 3.4-2 through 3.4-9 include the following components: implementation of Mitigation Measure 3.4-2, avoidance and minimization measures, surveys, restoration and/or preservation of similar land, procurement of applicable permits, adherence to BMPs, and implementation of a storm water pollution prevention plan (SWPPP). These mitigation measures would reduce impacts of Alternative 4 as they require no net loss of habitat and protection for species. As these mitigation

measures would mitigate impacts of the proposed project to a less-than-significant level, so would they reduce the impacts of Alternative 4.

Like the proposed project, Alternative 4 would preserve a majority of Auburn Ravine and Markham Ravine. Protection of the corridors would allow for continued wildlife habitat within the corridors and preservation of wildlife movement corridors. Therefore, Alternative 4 would not result in a significant impact to wildlife corridors and movement.

As discussed above, implementation of Alternative 4 could impact special status species and their habitat, much of which are protected by approved local, regional, or state policies or ordinances protecting biological resources (see Impact 3.9-10). However, Alternative 4 would protect both the Auburn Ravine and Markham Ravine wildlife habitat and movement corridors, similar to the proposed project, and the impact would be less than significant. Mitigation Measure 3.4-11 requires implementation of Mitigation Measures 3.4-1 through 3.4-9 discussed above, and would reduce the impact of the proposed project to a less-than-significant level. Because these mitigation measures have been designed to be consistent with City of Lincoln General Plan policies and City ordinances, Mitigation Measure 3.4-11 would be applied to Alternative 4 and would reduce the impact to a less-than-significant level.

At this time, the draft HCP/NCCP known as the PCCP has not yet been adopted (see Impact 3.4-11). However, much is known about the draft program and the proposed project has been designed to be consistent with the draft PCCP. While adoption of the PCCP is anticipated, it is not guaranteed. Accordingly, Alternative 4 would have no impact on any adopted HCP as there is no approved HCP or similar program that covers the Plan Area.

Climate Change

Alternative 4 would develop primarily east of Dowd Road with a mix of residential, commercial, public, and recreational uses. As discussed above, Alternative 4 would construct 27.4 percent fewer residences and the same amount of non-residential development as compared to the proposed project. Thus, a conservative estimate of the overall amount of development that would occur under Alternative 4 would be approximately 80 percent of the proposed project's anticipated development. Development of new residential and non-residential uses would result in new sources of GHG emissions, which could result in impacts related to climate change (see Impact 3.5-1).

Section 3.5, Climate Change, of this Draft EIR quantified the expected construction and operational emissions that would result under the proposed project. The analysis determined that the proposed project would result in approximately 132,828.42 metric tons CO₂e. Annual GHG emissions from operations would equal 11,410 metric tons in 2020, 58,370 metric tons in 2030, and 103,552 metric tons in 2050. This would exceed PCAPCD's threshold of 1,100 CO₂e MT/yr.

Because Alternative 4 would develop approximately 80 percent of the development anticipated under the proposed project, it would be expected that implementation of Alternative 4 would

result in a proportionate amount of emissions. Thus, the anticipated emissions for the proposed project could be multiplied by 0.80 to estimate the emissions that would occur under Alternative 4, and would be 106,262.74 CO₂e MT/yr (132,828.42 x 0.80) in year 2025, 46,696 CO₂e MT/yr in year 2030, and 82,842 CO₂e MT/yr in year 2050. These amounts would exceed the PCAPCD threshold of 1,100 CO₂e MT/yr. Therefore, Alternative 4 would result in a potentially significant impact related to implementation of programs, plans, or policies aimed at reducing GHG emissions. Mitigation Measure 3.5-1 would be required for Alternative 4. However, implementation of those measures to reduce GHG emissions would not result in emissions below the PCAPCD threshold, and the impact would remain significant and unavoidable.

Cultural Resources

Development under Alternative 4 would include 5,954 new dwelling units and 4,581,600 square feet of commercial development on 2,233.5 acres. New construction would have the potential to impact historical architectural resources (see Impact 3.6-1), archaeological resources (see Impact 3.6-2), paleontological resources (see Impact 3.6-3), and previously unknown human remains (see Impact 3.6-4). As much of the Plan Area has not been surveyed, evaluations would need to be done of individual properties to determine whether cultural resources may be present within the site. Mitigation Measure 3.6-1 would apply to Alternative 4, but would not reduce the impact to less-than-significant because exact nature of future development and the eligibility of potentially affected resources is currently unknown. Therefore, impacts to potentially eligible historic architectural resources would be significant and unavoidable.

While historic architectural resources can be surveyed and identified prior to construction, other cultural resources may be subsurface and not discovered until site disturbance. Mitigation Measures 3.6-2(a) and 3.6-2(b) provide guidance for the treatment of archeological resources discovered during site work. Mitigation Measure 3.6-3 would provide guidance for paleontological resources that may be discovered during site work. Mitigation Measure 3.6-4 would provide guidance for the treatment of human remains that may be discovered during site work. Collectively, these measures would reduce impacts of Alternative 4 to unknown resources to a less-than-significant level.

Energy Resources

Implementation of Alternative 4 would require fuels for construction vehicles as well as vehicles of new residents and employees. Alternative 4 would allow construction of up to 5,954 new dwelling units, which would be 27.4 percent fewer new residences than the proposed project. Also, Alternative 4 would construct 4,581,600 sf of non-residential uses, which is the same as under the proposed project. Overall, Alternative 4 represents a roughly 20 percent reduction in development compared to the proposed project.

Construction of Alternative 4 would require fuel for construction equipment, delivery vehicles, and construction employee vehicles. Construction could result in unnecessary, wasteful, or inefficient use of fuels if construction equipment is not well maintained, if equipment is left to

idle when not in use, or if haul trips are not planned efficiently (see Impact 3.7-1). The amount of electricity consumption that would be associated with energy consuming equipment and processes which will be used during construction of Alternative 4 is unknown and cannot be estimated as it would be too speculative given existing data. However, electricity demand during construction is not expected to be unnecessary, wasteful, or inefficient since unusually electrically intensive construction activities are not anticipated based on the general land uses proposed. In addition, PG&E provides efficient electricity with approximately half of its electrical power generated by renewable sources. To reduce impacts associated with potentially wasteful use of fuels, Mitigation Measure 3.7-1 would be included. This measure and actions to reduce the risk of wasteful or inefficient use of energy, and would reduce the impact from Alternative 4 to less than significant.

VMT per capita is an indicator of whether a project would result in wasteful or inefficient use of transportation energy because driving greater distances would mean using greater amounts of fuel (see Impact 3.7-2). The analysis contained in Section 3.7, Energy Resources, of this Draft EIR determined that the proposed project would result in a decrease in VMT because of the land use design proposal, roadway system, and mobility network were designed in accordance with smart growth principles. By providing a mix of uses, the proposed project would put services and non-residential uses in close proximity to new residences, eliminating the need for many trips beyond the Plan Area. While Alternative 4 would develop 27.4 percent fewer new residences and the same amount of non-residential development as the proposed project, Alternative 4 would provide a mix of land uses, including commercial, office, residential of varying densities, parks and recreation, and schools. This mix of uses and the accompanying roadway network would allow for new residences to have access to services that are not currently available within the Plan Area. Thus, while Alternative 4 would develop fewer homes than the proposed project, the mix of uses would likely lead to an overall decrease in VMT because of the new services and amenities that would be available within the Plan Area. Thus, Alternative 4 would result in less-than-significant impacts related to per capita VMT.

Like all new building in California, development under Alternative 4 would be required to be consistent with the energy efficiency standards contained within CBC Title 24. As such, Alternative 4 would result in a less-than-significant impact related to Title 24 energy standards (see Impact 3.7-3).

Geology, Soils, and Seismicity

Implementation of Alternative 4 would include construction of residential, commercial, public, and recreational development. While there is a low potential for seismic activity in the Plan Area, new structures could be subjected to seismic activity (see Impact 3.8-1). The City of Lincoln requires that all new buildings must be constructed in accordance with the current (2013) CBC standards and local building design requirements which include seismic design standards designed to minimize seismic safety hazards. Therefore, Alternative 4 would result in less-than-significant impacts related to seismic activity.

The addition of new structures could also contribute to erosion both within and outside the Plan Area (see Impact 3.8-2). While implementation of Alternative 4 would result in common construction practices that would disturb surface soils, Mitigation Measures 3.10-1(a) and 3.10-1(b) would include BMPs that would be included within a SWPPP as required by the NPDES Construction General Permit. City and state drainage control requirements would also ensure that management of storm water from introduced impervious surfaces would be managed in a manner that prevents erosion or loss of topsoil. Therefore, implementation of Alternative 4 would result in less-than-significant impacts related to erosion or loss of topsoil.

Development under Alternative 4 would be required to adhere to City building code requirements which include the preparation of a geotechnical investigation by a state licensed geotechnical engineer. The required geotechnical report for any new development would determine the susceptibility of the subject site to landslide, lateral spreading, subsidence (settlement), liquefaction and collapse (see Impact 3.8-3). Any identified geotechnical hazards or unstable units would be prescribed appropriate engineering techniques for reducing its effects. Therefore, Alternative 4 would result in less than significant effects related to unstable soils.

As discussed in Section 3.8, Geology, Soils, and Seismicity, the Plan Area may contain clay layers that may exhibit high to very high expansion potential (see Impact 3.8-4). As a requirement of the CBC, developers would be required to complete a final geotechnical investigation that includes site-specific recommendations for the mitigation of potentially expansive soils. Therefore, implementation of Alternative 4 would result in less-than-significant impacts related to expansive soils.

Hazards/Hazardous Materials

Alternative 4 would include many of the same uses as the proposed project, but 27.4 percent fewer dwelling units and one less elementary school. Alternative 4 would include the same amount of non-residential development as the proposed project. During construction activities, relatively small portions of some construction-related products would contain materials defined as hazardous, such as fuels, solvents, cements and adhesives, paints, cleansers, degreasers, and asphalt mixtures, which are all commonly used in construction. During operation of Alternative 4, land uses would include the transport, use, and disposal of common household, commercial, and agricultural hazardous materials that could include cleansers, solvents, oils, fuels, pesticides, and herbicides. The overall quantities of these materials within the Plan Area at any one time would not result in large bulk amounts that could represent a potential significant hazard to the public or environment (see Impact 3.9-1). Thus, Alternative 4 would result in less-than-significant impacts related to the routine transport, use, or disposal of hazardous materials.

While relatively small portions of hazardous materials are anticipated to be used during the construction and operation, the improper management of these materials could lead to an accidental release of hazardous materials, which in turn could expose the site and its occupants to contamination from hazardous materials (see Impact 3.9-2). While several laws and regulations

govern the release of hazardous materials and response to accident conditions, Alternative 4 could result in potentially significant impacts related to unforeseen and accidental conditions. Mitigation Measure 3.9-2 would reduce this impact to a less-than-significant level.

Alternative 4 would add two elementary schools, one middle school, and one high school within the western area of the Plan Area. Alternative 4 would include new residential, commercial, office, and parks but would not include any industrial or other land uses where substantive hazardous emissions would occur. Further, the small amount of hazardous materials that would be used within the Plan Area would be stored, handled, and disposed of in accordance with regulatory requirements that minimize emissions. Therefore, implementation of Alternative 4 would be expected to result in a less-than-significant impact related to hazardous materials within one-quarter mile of a school (see Impact 3.9-3).

There are no identified sites listed on the Envirostor or Geotracker databases within or near the Plan Area (see Impact 3.9-4). However, based on the site history of agricultural use which can include the use of fuel storage tanks, it is possible that construction activities could encounter areas of past releases of petroleum hydrocarbons. With implementation of Mitigation Measure 3.9-4, the contractors would have protocols in place to implement in the event that contamination is discovered during construction, and this impact under Alternative 4 would be mitigated to less than significant.

Development of Alternative 4 would place new development within Compatibility Zones A, B1, C1, C2, and D of the Lincoln Regional Airport and would be subject to the Placer County ALUCP. As discussed below in the “Land Use and Planning” analysis of Alternative 4, uses proposed under this alternative would be consistent with the ALUCP. Because Alternative 4 would be consistent with the ALUCP, this alternative would result in less-than-significant impacts related to safety within an airport land use plan (see Impact 3.9-5).

Alternative 4 would develop area surrounding the existing aircraft landing strip easement located in the center of the Plan Area. Under Mitigation Measure 3.9-6, the project applicant would be required to purchase and extinguish the easement in order to develop the property. There are no other private airstrips within the Plan Area or its vicinity. Implementation of Alternative 4 would similarly be required to comply with Mitigation Measure 3.9-6. Such compliance would reduce potential safety risks from private airstrips to less than significant (see Impact 3.9-6).

As with the proposed project, construction activities under Alternative 4 could result in temporary land closures, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services (see Impact 3.9-7). Implementation of Mitigation Measure 3.9-7 would reduce this impact to less than significant. Mitigation Measure 3.9-7 requires the developer to prepare and enforce a traffic control plan to minimize traffic impacts on all roadways at and near the work site affected by construction activities. This traffic control plan shall reduce potential traffic safety hazards and ensure adequate access for emergency responders.

Development under Alternative 4 would add 5,954 new dwelling units and 4,581,600 square feet of non-residential use. Conversion of this land from open grassland or farmland to these new uses would reduce the risk of wildland fire on that land. Wildland fires could still occur in grasslands within and adjacent to the Plan Area. Although Alternative 4 would result in an increased population residing in and visiting the Plan Area, where fires could occur, fire protection services would be adequate. Therefore, Alternative 4 would result in less-than-significant impacts related to wildland fire (see Impact 3.9-8).

Hydrology, Drainage, and Water Quality

Implementation of Alternative 4 would develop the Plan Area east of Dowd Road. The only feature of Alternative 4 that would be built west of Dowd Road is the proposed high school located south of Nicolaus Road and north of Markham Ravine. Construction and operation of this alternative could result in degradation of water quality and violations of water quality standards (see Impacts 3.10-1 and 3.10-6) through accidental discharge of contaminants or urban runoff containing contaminants such as oil and pesticides. Mitigation Measures 3.10-1(a) and 3.10-1(b) would apply to Alternative 4, and would reduce potential impacts to less than significant. Mitigation Measure 3.10-1(a) requires completion of a Storm Water Pollution Prevention Plan (SWPPP) to include measures that would control soil erosion and waste discharges. Mitigation Measure 3.10-1(b) requires preparation of a Water Quality Management Plan that would include BMPs to reduce urban pollutants in runoff.

Construction of Alternative 4 would not include any dewatering activities, but may impact groundwater through the addition of impervious surfaces within the Plan Area (see Impact 3.10-2). Currently, only approximately two percent of the Plan Area is covered by impervious surfaces. Development of Alternative 4 would add new impervious surfaces, including roads and homes. However, this alternative would also include approximately 17 proposed detention basins, mostly along Auburn and Markham Ravines (see Figure 2-11, Proposed Drainage Infrastructure), which would allow for infiltration of large storm event flows because they would be designed to retain water and allow it to infiltrate to recharge groundwater. Increased runoff from the new impervious surfaces would be collected and diverted through the storm drain system and released to Auburn Ravine and Markham Ravine where the vast majority of groundwater recharge within the Plan Area takes place. As groundwater recharge within and along Auburn Ravine and Markham Ravine would not be impeded, impacts on groundwater recharge during operation of Alternative 4 would be less than significant, and no mitigation is required.

Alternative 4 would alter existing drainage patterns within the Plan Area, which could lead to erosion, siltation, flooding, or polluted runoff (see Impacts 3.10-3 and 3.10-5). Mitigation Measures 3.10-3 and 3.10-5 require implementation of measures designed to control erosion and protect water quality. With implementation of these mitigation measures, impacts related to alterations of the existing drainage patterns and increased runoff would be reduced to less than significant.

Proposed storm drain outfalls are the only structures that would be located within the 100-year floodplain. Should any structures be proposed to be located within the 200-year floodplain, the structure would be elevated above flood depth (see Impact 3.10-7). Mitigation Measure 3.10-7 would be implemented for Alternative 4 and would require permits from the CVFPB and review by the City of Lincoln to ensure that structures would not impede or redirect flood flows. Within implementation of these measures, Alternative 4 would result in less-than-significant impacts related to structures within a floodplain.

Similar to the proposed project, Alternative 4 would alter the existing drainage pattern of the area through the introduction of impervious surfaces and construction of bridges over Auburn and Markham ravines, which could cause on- or offsite flooding (see Impact 3.10-4). However, implementation of Mitigation Measure 3.10-4 would ensure that measures are taken during construction to reduce the risk of localized flooding and ensure the final design of onsite drainage improvements comply with the requirements established in the V5 Drainage Master Plan, and the impact would be less than significant.

Land Use and Planning

Alternative 4 would place high-density residential development directly across the street from active agricultural operations, resulting in potentially significant impacts related to land use conflicts (see Impact 3.11-1). To reduce impacts of this potential conflict, Alternative 4 would be subject to Mitigation Measure 3.11-1 notifying home buyers of Placer County's Right-to-Farm ordinance and potential nuisance activities. While implementation of this mitigation measure would alert residents to the proximity of potential nuisances from agricultural operations, this disclosure would not reduce impacts to a less-than-significant level. Therefore, impacts related to land use conflicts under Alternative 4 would be significant and unavoidable.

Under Alternative 4, land west of Dowd Road not planned for development within the Plan Area would be subject to an open space overlay. The open space overlay would preclude future development of this area, which includes land within Village 5. Having land remain in agricultural use within the Plan Area while some portions are developed with high-density residential could result in conflicts between land uses within the Plan Area (see Impact 3.11-2). Mitigation Measure 3.11-2 would reduce impacts related to this conflict, but not to a less-than-significant level. Therefore, this impact would remain significant and unavoidable.

Because significant portions of Areas F, H, and J within the Plan Area would remain open space and under agricultural production under this alternative, Alternative 4 would conflict with the City's General Plan which designates these areas for development. Therefore, Alternative 4 would conflict with adopted plans and policies (see Impact 3.11-3). The only way to mitigate this impact would be to designate the areas for development, which would not be permitted under this alternative. Therefore, this impact would be significant and unavoidable.

Alternative 4 would include annexation into the City of Lincoln, and would be subject to LAFCO policies regarding annexation (see Impact 3.11-4). Alternative 4 would comply with LAFCO annexation policies for the same reasons as the proposed project, namely that there are no feasible sites within existing city boundaries for this development, open space and agricultural land would be preserved, and its location within Lincoln's sphere of influence. Because Alternative 4 appears to meet LAFCO's annexation requirements, this impact would be less than significant.

Development of Alternative 4 would place new development within Compatibility Zones A, B1, C1, C2, and D of the Lincoln Regional Airport and would be subject to the Placer County ALUCP (see Impact 3.11-5). Zone A is the most restrictive of the compatibility zones. Only a small portion of Zone A extends into the Plan Area, and that area would not be subject to any additional development under Alternative 4. Zone B1 allows both residential and non-residential uses, but includes height and other restrictions. Uses proposed within Zone B1 under Alternative 4 would include Rural Residential, Office/Commercial, Business and Professional, and Open Space. Zone C1 permits single-family residential development, as well as parks, outdoor recreation, and commercial development with airspace reviews for structures in excess of 70 feet in height. Uses proposed for this zone under Alternative 4 include Rural Residential, Village Center, Commercial, Office/Commercial, Business and Professional, and Open Space. The remainder of the area to be developed under this alternative is within Zone D or outside of the compatibility zones. Zone D is the least restrictive and allows for development of high-density and medium-density residential development. Because Alternative 4 would be consistent with the ALUCP for the reasons discussed above, this impact would be less than significant.

While the PCCP has not yet been adopted, there are draft maps showing areas that would be targeted for preservation and areas anticipated for future development under the PCCP. Alternative 4 would develop areas that are currently anticipated for future development, and would preserve areas anticipated for addition to the reserve network. Therefore, Alternative 4 would result in less than significant effects related to the PCCP (see Impact 3.11-6).

Noise

Alternative 4 would allow for the development of 5,954 dwelling units, a reduction of approximately 27.4 percent compared to the proposed project. Also, Alternative 4 would include 4,581,600 sf of non-residential uses, an amount equal to that of the proposed project. Construction activities associated with development under Alternative 4 would include noise-generating equipment and activities, including ground clearing, demolition of existing structures, grading, paving, and construction of new structures. These construction activities could result in a substantial temporary increase in ambient noise levels (see Impact 3.12-1). Mitigation Measure 3.12-1 would be required under Alternative 4, which would limit the hours of construction, provide notice to nearby residents, and other actions designed to reduce construction noise. Implementation of Mitigation Measure 3.12-1 would reduce construction noise impacts to a less-than-significant level.

Implementation of Alternative 4 would include excavation, site preparation work, foundation work and new building framing and finishing. These construction activities may generate perceptible vibration when heavy equipment or impact tools such as jackhammers or hoe rams are used in close proximity to occupied uses (see Impact 3.12-2). Implementation of Mitigation Measure 3.12-2 would reduce this impact. However, groundborne vibration impacts may not be totally avoided if sensitive receptors are close to sources of vibration. Therefore, this impact would be significant and unavoidable under Alternative 4.

Development of Alternative 4 would expose new noise-sensitive land uses to transportation noise which could exceed City of Lincoln standards (see Impact 3.12-3). Development of Alternative 4 would introduce additional traffic volumes to local roadways and create new roadways within the Plan Area. Due to the inherent properties of noise and sound, the noise generated by development under Alternative 4 cannot be quantified as a proportion of the proposed project. The traffic noise increases associated with the full build-out of the proposed project would range between -0.8 to +16.2 dB L_{dn} relative to existing conditions. Because Alternative 4 represents development of a portion of the proposed project, it is likely that increases in noise levels would be similar to those under the proposed project. Mitigation Measure 3.12-3 requires preparation of an acoustical study for development of subdivisions along certain roadways within the Plan Area, and utilization of attenuating features. However, it would be infeasible to implement all measures to attenuate noise, especially for off-site receptors. Therefore, impacts related to a substantial permanent increase in ambient noise levels due to transportation noise would be significant and unavoidable under Alternative 4.

Lincoln Regional Airport is located adjacent to the Plan Area. The Placer County ALUCP has established Compatibility Zones around the airport. These Compatibility Zones each have their own restrictions as to how many residential dwellings can be constructed in each zone, which is based on specific noise, safety, airspace protection, overflight and other compatibility policies created by the County (see Impact 3.12-4). Buildout under Alternative 4 would conform to the allowed uses set forth in the ALUCP. If a daycare facility is proposed within the C1 Compatibility Zone, implementation of Alternative 3 would result in potentially significant impacts related to airport noise. Implementation of Mitigation Measure 3.12-4 would require an acoustical analysis and measures to be implemented to reduce noise levels. Therefore, with Mitigation Measure 3.12-4, implementation of Alternative 4 would result in less-than-significant impacts related to airport noise.

New residents and sensitive receptors within the Plan Area could be subject to noise associated with use of the existing private airstrip in the Plan Area. Implementation of Mitigation Measure 3.12-5 would require that the private airstrip be removed or relocated prior to development within 500 feet of the airstrip. Alternative 4 would have fewer residents that could be affected by private aircraft noise than the proposed project.

New residents and sensitive receptors within the Plan Area could be subject to an increase in ambient noise levels from commercial and recreational uses (see Impact 3.12-6). Alternative 4 would include commercial and recreational uses, though the amount of each would be less than compared to the proposed project. Potential noise sources from commercial and recreational uses include HVAC equipment, loading and service delivery activities and equipment, loudspeakers and voices associated with schools, and maintenance equipment and users associated with recreational facilities. Mitigation Measure 3.12-6 would influence placement of HVAC equipment, limit delivery hours, require shielding or other design features to reduce noise, prohibit extended vehicle idling, and require buffers designed to reduce noise impacts. It is anticipated that adherence to Mitigation Measure 3.12-6 would reduce noise impacts associated with commercial and recreational uses under Alternative 4, but there is no guarantee that noise impacts would be reduced to a less-than-significant level. Therefore, implementation of Alternative 4 would result in significant and unavoidable impacts to ambient noise levels.

Population, Employment, and Housing

Population, employment, and housing impacts are generally related to new residents and employment uses. Alternative 4 would add new residents and employment opportunities. **Table 6-12** calculates the approximate number of jobs that would be generated under Alternative 4. Based on the number of jobs (14,658) and housing units (5,954) that would be generated under Alternative 4, this alternative would result in a job/housing ratio of approximately 2.46. The City of Lincoln's current job/housing ratio is 0.4. As stated in Section 3.13, Population, Employment, and Housing, the job/housing ratio is projected to increase to 0.99 by 2035. Because Alternative 4 would have a job/housing ratio of approximately 2.46, this alternative would not adversely affect the regional job/housing ratio.

**TABLE 6-12.
ALTERNATIVE 4 EMPLOYMENT GENERATION**

Land Use Designation	Employment Generation Rate	Area	Total Jobs Generated
Village Mixed Use	1 employee per 500 sf	114,300	229
Village Center	1 employee per 500 sf	456,400	913
Village Commercial	1 employee per 500 sf	1,918,300	3,837
Village Office/Commercial	Office: 1 employee per 225 sf Commercial: 1 employee per 500 sf	1,696,800 ¹	7,919
Village Business and Professional	1 employee per 225 sf	395,800	1,760
Total			14,658

NOTE:

1. Employment generation based on 60% office and 40% commercial.

SOURCE: ESA, 2016.

Implementation of Alternative 4 would increase the amount of jobs and housing opportunities within the project site would generally attract more activity and development in the Plan Area.

This development, while consistent with the City of Lincoln General Plan, would induce substantial growth and concomitant physical environmental effects (see Impact 3.13-1). The only mitigation measure available would be to not build the project because the project would inevitably cause an inducement of substantial growth to the Plan Area. Therefore, implementation of Alternative 4 would result in significant and unavoidable impacts related to growth inducement.

Alternative 4 would require the replacement of existing residences within the Plan Area that would be developed (see Impact 3.13-2). Sales of these properties would be voluntary, so there would not be any displacement requiring relocation. Therefore, Alternative 4 would have no impact related to displacement of people or housing.

Public Services

Alternative 4 would add 5,954 new dwelling units in the Plan Area, which would result in a population increase of 13,698. New residents would trigger the need for additional police, fire, schools, parks, libraries, and other public services and facilities.

Table 6-13 calculates that Alternative 4 would require approximately 26 police officers, 6 staff members, and 2,603 square feet of police department space based on the estimated Alternative 4 population (see Impact 3.14-1). A temporary police station could be located within the Plan Area under Alternative 4, thereby providing sufficient facilities to provide police protection services to the Plan Area. Therefore, Alternative 4 would result in a less-than-significant impact related to police services.

**TABLE 6-13.
ALTERNATIVE 4 POLICE PROTECTION REQUIREMENTS**

	Population	Officers/1,000	Officers	Staff/1,000	Staff	Square Footage/Staff	Square Footage
Alternative 4	13,698	1.87	25.62	0.40	5.48	475/staff	2,603

SOURCE: City of Lincoln, 2016. Lincoln Village 5 Specific Plan. August 12, 2016.

Under Alternative 4, fire protection responsibility would transfer from CAL FIRE and Placer County Fire Department to the City of Lincoln Fire Department (see Impact 3.14-2). Using the City of Lincoln's generation rates, **Table 6-14** identifies that Alternative 4 would require 18 new staff members and nearly 16,000 square feet of facility space. Like the proposed project, Alternative 4 would locate a new fire station within Area A at the intersection of Nelson Lane and Rachel Avenue on a PQP parcel. Provision of a new fire station would position fire rescue equipment and personnel close enough to the Plan Area to provide adequate response time. The site plan for Alternative 4 includes two areas designated for Public/Quasi-Public use, either or both of which could be sites for a fire station. Therefore, impacts from Alternative 4 regarding fire protection would be less than significant.

**TABLE 6-14.
ALTERNATIVE 4 FIRE PROTECTION REQUIREMENTS**

	Population	LFD Staff/1,000	LFD Staff	Square Footage/Staff	Square Footage
Alternative 4	13,698	1.26	17.3	917/staff	15,864.1

SOURCE: City of Lincoln, 2016. Lincoln Village 5 Specific Plan. August 12, 2016.

Based on WPUSD's student generation rates, Alternative 4 would be expected to generate approximately 2,925 new students as shown in **Table 6-15** (see Impact 3.14-3). Specifically, Alternative 4 would generate 1,853 elementary students, 443 middle school students, and 629 high school students (see **Table 6-16**). Alternative 4 would include two elementary schools, one middle school, and one high school. Based on elementary school capacity ranging from 650 (average) to 800 (maximum) students,⁵ Alternative 4 would require three elementary schools. While Alternative 4 would only provide two elementary schools, there is excess capacity at Creekside Oaks Elementary School (2030 First Street, Lincoln, CA), the currently-designated elementary school for much of the Plan Area. Also, students would be able to attend other schools, including Horizon Charter Schools (grades K-12) at 2800 Nicolaus Road, #100 and Community Christian Schools (grades Pre-K-8) at 1545 1st Street. Finally, the project applicant and/or developer(s) would be required to contribute fees towards school facilities funding. The specific requirements would be set forth in the Development Agreement for the project.

Based on a middle school capacity ranging from 1,200 (average) to 1,400 (maximum) students,⁶ the number of middle school students generated under Alternative 4 would be adequately served by the proposed middle school within the Plan Area, as well as include excess capacity to accommodate students from outside of the Plan Area. The proposed high school within the Plan Area would likewise have excess capacity. As described above, the project applicant and/or developer(s) would be required to contribute fees towards school facilities funding. The specific requirements would be set forth in the Development Agreement for the project.

In summary, Alternative 4 would be required to pay the applicable school fees, which is considered full mitigation of residential development impacts on schools. Alternative 4 would also be required to develop its school sites appropriately with site development and the specific impacts of developing these schools have been discussed in the topical sections of this EIR. Therefore, the impact related to school services and facilities under Alternative 4 would be less than significant (see Impact 3.14-3).

⁵ Steer, Heather, Facilities Coordinator, Western Placer Unified School District, electronic communication, October 2014.

⁶ Steer, Heather, Facilities Coordinator, Western Placer Unified School District, electronic communication, October 2014.

**TABLE 6-15.
ALTERNATIVE 4 PROBABLE STUDENT GENERATION**

Type of School	Single Family Units ^{1,2}	Single Family Generation Rate (students/dwelling unit)	Single Family Student Generation	Multi Family Units ³	Multi Family Generation Rate (students/dwelling unit)	Multi Family Student Generation	Total Students Generated
Elementary (K-5)	4,107	0.373	1,532	847	0.378	321	1,853
Middle (6-8)	4,107	0.089	366	847	0.090	77	443
High (9-12)	4,107	0.118	485	847	0.170	144	629
Total	--	--	2,383	--	--	542	2,925

NOTES:

1. Includes units designated on the Land Use Plan as RR, CE, LDR, or MDR.
2. 1,000 units have been deducted from the LDR and MDR categories for age-qualified units. The age-qualified units are all located in Area A.
3. Includes units designated on the Land Use Plan as HDR or VMU.

SOURCES: Calculated by ESA based upon information provided by Heather Steer, Facilities Coordinator, Western Placer Unified School District, electronic communication, October 2014; ESA 2014.

**TABLE 6-16.
ALTERNATIVE 4 SCHOOL SITE DEMANDS**

Alternative 4	Elementary (K-5)	Middle (6-8)	High (9-12)
Students Generated	1,853	443	629
School Capacity (Average) ¹	650	1,200	2,000
School Capacity (Maximum) ²	800	1,400	2,500
Number of Schools Required	3	1	1

NOTES:

1. Average capacity refers to the number of students WPUSD targets for planning and designing new school facilities.
2. Maximum capacity refers to the ultimate maximum amount of students WPUSD would put on a campus while the District opens a new school site.

SOURCES: Calculated by ESA based on information provided by Heather Steer, Facilities Coordinator, Western Placer Unified School District, electronic communication, October 2014; ESA 2014.

Alternative 4 would generate 13,698 new residents in the Plan Area. The City of Lincoln requires parkland dedication of a total of nine acres per 1,000 new residents. Using that rate, Alternative 4 would be required to include 123.3 acres of parkland. Implementation of Alternative 4 would include approximately 118.6 acres of parks, 19.5 acres of linear parkland, and 152.6 acres of open space as shown in Table 6-11. Based on the applicable credit ratios for each type of park or open space, the total park credited acreage under Alternative 4 would be 137.76 acres, as calculated in **Table 6-17**.

**TABLE 6-17.
ALTERNATIVE 4 PARK AND OPEN SPACE CREDITS**

Land Use	Acreage¹	Credit Ratio	Credited Acreage
Parks	118.6	1:1	118.6
Linear Corridors/Paseos	19.5	0.2:1	3.9
Open Space	152.6	0.1:1	15.26
Total	290.7	--	137.76

SOURCE:

1. City of Lincoln, 2016. Lincoln Village 5 Specific Plan. August 12, 2016.

Since Alternative 4 would provide parkland acreage in excess of the requirement, buildout of Alternative 4 would not cause an increase in the demand for parks and recreational facilities beyond the Plan Area to the extent that new or expanded facilities would be needed. Alternative 4 would be constructed where no current parks or recreational facilities exist, and as such, no parks would deteriorate or become overused. As a result, Alternative 4 would not result in any deterioration of existing facilities. As discussed in Impact 3.14-4, if the City does not provide at least 38.7 acres of credit for the applicant's dedication of the Regional Sports Park, a potentially significant impact to active recreational parks could occur. In that event, Mitigation Measure 3.14-4 would be required and Alternative 4 would have a less-than-significant impact related to parks (see Impact 3.14-4).

Implementation of Alternative 4 would add 13,698 new residents to the Plan Area, which would increase the overall demand on library services within the City. Alternative 4 would be required to contribute its appropriate share of CFD Fees and PFE Fees (adopted in 2012) to fund the expansion of library services and facilities. These fees would be used by the City to evaluate library needs and plan and construct new facilities. Therefore, Alternative 4 would result in a less-than-significant impact to library facilities (see Impact 3.14-5).

Transportation and Circulation

Alternative 4 would add 5,954 new dwelling units, which represents a 27.4 percent reduction compared to the proposed project. Also, Alternative 4 would develop 4,581,600 sf of non-residential uses, which is the same as the proposed project. According to Table 3.15-10 in Section 3.15, Transportation and Circulation, the proposed project would increase delays and cause intersections within the City of Lincoln that are currently operating at acceptable LOS to operate

at an unacceptable LOS (see Impact 3.15-1). While Alternative 4 represents an approximately 20 percent overall reduction compared to the proposed project, it is likely that Alternative 4 would also cause unacceptable LOS conditions at multiple City of Lincoln intersections. Improvements to the following intersections would be required: Nelson Lane/Nicolaus Road, Airport Road/Nicolaus Road, Dowd Road/Nicolaus Road, Fiddymont Road/Moore Road, Dowd Road/Moore Road, and Lakeside Drive/Nicolaus Road. Mitigation Measure 3.15-1 requires the payment of impact fees and the construction of improvements designed to achieve acceptable LOS conditions. As an alternative to paying fees, the project applicant could construct intersection and roadway improvements such as intersection signalization, roadway widening and restriping, and intersection reconfiguration, as outlined in Mitigation Measure 3.15-1. Implementation of Mitigation Measure 3.15-1 would reduce Alternative 4's impact on City of Lincoln intersections, and the impact would be reduced to a less-than-significant level, the same as under the proposed project.

Like the proposed project, Alternative 4 would be expected to add traffic to the Caledon Circle/Ferrari Ranch Road intersection, which operates at an unacceptable LOS E during the a.m. peak hour under existing conditions (see Impact 3.15-2). The addition of the proposed project traffic would result in an increase of four seconds of average vehicle delay during the a.m. peak hour, as shown in Table 3.15-10. Because Alternative 3 would develop approximately 20 percent less than the proposed project, it is likely that Alternative 4 would increase the existing delay by no more than four seconds, which is below the significance threshold of five seconds or more increase in average vehicle delay for an intersection that is already operating at an unacceptable LOS without the project. Therefore, Alternative 4 would result in a less-than-significant impact to City of Lincoln intersections currently operating at an unacceptable LOS.

Alternative 4 would add new roadways and intersections to the City of Lincoln within the Plan Area. While Alternative 4 would not develop the same number of roadways and intersections as the proposed project, there would be new roadways and intersections. Under the proposed project, the future intersection at Nelson Road and Mavis Road would operate at unacceptable LOS without Mitigation Measure 3.15-3 (see Impact 3.15-3). While Alternative 4 would not be expected to generate the same amount of traffic as the proposed project, implementation of Mitigation Measure 3.15-3 requiring monitoring of LOS at this intersection would ensure that Alternative 4 would have a less-than-significant impact related to future City of Lincoln intersections within the Plan Area.

While Alternative 4 would include annexation of the Plan Area to the City of Lincoln, development within the Plan Area could impact intersections and roadways within unincorporated Placer County (see Impact 3.15-4). Because Alternative 4 would generate less traffic than the proposed project, it cannot be conclusively determined at this time whether Alternative 4 would result in unacceptable LOS at Placer County intersections. Mitigation Measure 3.15-4 requires payment of fair share fees for construction of roadway and intersection improvements. Implementation of Mitigation Measure 3.15-4 would reduce impacts to Placer

County intersections, but there is no guarantee that roadway improvements would be built in time to prevent significant impacts. Therefore, implementation of Alternative 4 would result in significant and unavoidable impacts related to Placer County intersections.

The intersection of Fiddymment Road and Baseline Road operates at an unacceptable LOS within the jurisdiction of the City of Roseville (see Impact 3.15-5). As shown in Table 3.15-10, the proposed project would add one second of delay during the a.m. peak hour but would reduce the p.m. peak hour delay by six seconds. While Alternative 4 may not reduce the p.m. peak hour delay by the same amount as the proposed project, adding traffic to low delay movements and more efficient utilization of the existing signal timings would result in an overall reduction in average vehicle delay. Although Alternative 4 would include less development than the proposed project, it would have a less-than-significant impact on City of Roseville intersections.

SR 65 runs through the Plan Area, so it is foreseeable that implementation of Alternative 4 could have impacts on intersections and highway segments under the jurisdiction of Caltrans (see Impacts 3.15-6, 3.15-8, and 3.15-9). Table 3.15-10 indicates that the proposed project would result in unacceptable LOS at one intersection under Caltrans' jurisdiction. This intersection (Nelson Road/SR 65) currently operates at LOS C. While Alternative 4 represents an approximately 20 percent reduction in development compared to the proposed project, it is likely that Alternative 4 would also cause this intersection to operate at an unacceptable LOS. Mitigation Measure 3.15-6 commits the project applicant to pay their fair share towards these improvements through the City of Lincoln's updated PFE fee program, and ensure they are constructed prior to the service level degrading to an unacceptable LOS D or worse. Mitigation Measure 3.15-6 would be required for Alternative 4, but the impact would remain significant and unavoidable because project-related traffic improvements are not fully funded.

Alternative 4 would add traffic to segments of Fiddymment Road and Athens Avenue in Placer County, similar to the proposed project (Impact 3.15-7), but at a lower volume. Under the proposed project, the addition of the traffic to these study segments would degrade the daily LOS from LOS A to LOS C. Since Alternative 4 would generate fewer trips than the proposed project and have lesser impacts to Placer County roadway segments, LOS along Fiddymment Road and Athens Avenue would not degrade to an unacceptable LOS. Therefore, the impact to Placer County roadways would be less than significant.

Like the proposed project, Alternative 4 would include facilities to support bicycle, pedestrian, and bus transit travel operations within the Plan Area. Additionally, Alternative 4 would include the provision of NEV lanes throughout the site. Though Alternative 4 would not develop as many bike lanes, NEV lanes, sidewalks and walking trails, or bus turnouts and shelters as the proposed project because Alternative 4 would not develop as much area, Alternative 4 would include these alternative transportation facilities to serve the increased population. Thus, Alternative 4 would result in less-than-significant impacts related to bicycle and pedestrian movement (see Impact 3.15-10) and bus transit (see Impact 3.15-11).

All roadways within the Plan Area under Alternative 4 would include at least the minimum required travel way for emergency vehicle access. In addition, Class I multi-use trails may accommodate emergency and maintenance vehicles to provide access to open space areas. Therefore, Alternative 4 would result in less-than-significant impacts related to emergency vehicle access (see Impact 3.15-12).

While Alternative 4 would include approximately 20 percent less development than the proposed project, Alternative 4 has the potential to cause significant traffic impacts during construction (see Impact 3.15-13). Construction activity will require heavy vehicles to access the site and may include the possibility of temporary traffic lane closures, travel hazards to bicyclists and pedestrians, increased loading and potential damage to roadbeds, or substantial truck traffic on roadways not designated as truck routes. Mitigation Measure 3.15-13 requires preparation of a Construction Traffic Management Plan that will be subject to review and approval by the City Department of Public Works, in consultation with Caltrans, affected transit providers, and local emergency service providers. The Traffic Management Plan shall ensure that acceptable operating conditions are maintained on local roadways and freeway facilities. With implementation of Mitigation Measure 3.15-13, the construction impacts to Plan Area roadways under Alternative 4 would be reduced to less than significant.

Utilities

Alternative 4 would construct 27.4 percent fewer residences but the same amount of commercial development as the proposed project, resulting in development of approximately 80 percent of the total uses compared to the proposed project. New dwelling units and residents could trigger additional demand for potable water, wastewater facilities, storm water facilities, and solid waste disposal.

Implementation of Alternative 4 could require additional water supply entitlements or sources (see Impact 3.16-1), or new or expanded treatment, storage, and conveyance facilities (see Impact 3.16-2) over existing baseline. As this level of development represents approximately 80 percent of the number of residents that would be added under the proposed project, Alternative 4 would be estimated to require approximately 80 percent of the water that would be required by the proposed project. As the proposed project would require approximately 6,396 AFY of water, Alternative 4 would be expected to require approximately 5,117 AFY. The analysis in Impact 3.16-1 determined that the proposed project would have sufficient water supplies, and would therefore have a less-than-significant impact related to new entitlements or supplies. Because demand under Alternative 4 would be less than the proposed project, Alternative 4 would be expected to also result in less-than-significant impacts.

The analysis of Impact 3.16-2 concluded that the proposed project would result in less-than-significant impacts related to new or expanded water treatment, storage, or conveyance infrastructure with implementation of Mitigation Measure 3.16-2. Mitigation Measure 3.16-2 requires improvements for treatment and distribution facilities to be completed in order to serve

the additional demand. Mitigation Measure 3.16-2 would be applied to Alternative 4, and would reduce this impact to a less-than-significant level as there would be adequate capacity by the time it is required.

Impact 3.16-3 concluded that the proposed project would generate an estimated 3.8 mgd of wastewater at full buildout. Alternative 4 would result in approximately 80 percent of the development anticipated under the proposed project. Therefore, Alternative 4 would be expected to generate approximately 3.0 mgd. As discussed in Impact 3.16-3, the City would ultimately have the capacity for 12.0 mgd, and would have sufficient capacity to serve the proposed project. Because Alternative 4 represents approximately 80 percent of the generation as would be expected under the proposed project, implementation of Alternative 4 would be less than significant.

Implementation of Alternative 4 could require new or expanded storm water facilities (see Impact 3.16-4). Because Alternative 4 would develop less area than the proposed project, this alternative would require development of a storm water drainage and infrastructure plan to be implemented within the Plan Area that would be developed under Alternative 4. Storm water infrastructure plans have already been developed for Area A, which would cover a portion of the area that would be developed under Alternative 4. Development of a Storm Water Drainage and Infrastructure Plan would be required by the City, and would demonstrate that Alternative 4 would not result in significant impacts related to storm water facilities. Similar to the proposed project, Alternative 4 would require the construction of detention basins to store storm water runoff. Storm water runoff volumes would not increase under Alternative 4, similar to the proposed project, and the impact would be less than significant.

Implementation of Alternative 4 would generate additional solid waste that would require disposal at local facilities (see Impact 3.16-5). As calculated in Impact 3.16-5, the proposed project could generate up to 105,145 pounds per day of solid waste. Because Alternative 4 represents approximately 80 percent of the development that would occur under the proposed project, Alternative 4 would be expected to generate approximately 84,116 pounds (or 42.1 tons) per day of solid waste. The WRS� has capacity of 1,900 tons per day, and would be able to handle the solid waste generated by the proposed project. Because Alternative 4 would generate approximately 80 percent of the solid waste compared with the proposed project, implementation of Alternative 4 would result in a less-than-significant impact related to solid waste facilities.

Relationship to Project Objectives

Alternative 4 would meet many of the project objectives, including:

1. Establish an approximately 4,787-acre mixed-use village that incorporates feasible, smart growth principles and results in an economically stable, sustainable community.
2. Provide a Land Use Plan which includes a broad range of compatible land uses, including residential, commercial, office, mixed-use, recreation, and public/quasi-public, which are organized around a compact core and provide appropriate land use transitions.

3. Provide a pedestrian-friendly community environment that provides a safe and pleasant place for people to live, work, and recreate.
4. Provide two Village Centers, located adjacent to key arterial streets and functioning as hubs of activity and a source of sales tax revenue.
5. Establish a network of open space and recreation amenities for Plan Area and City residents with the potential for recreational tourism. Elements include a regional sports park, community parks, neighborhood parks, linear parkways, and pedestrian and bike connections throughout the Plan Area.
7. Preserve and protect the Auburn Ravine and Markham Ravine corridors as permanent open space and provide public access with perimeter trails and crossings, where feasible.
8. Provide regional and community scale retail and employment centers in locations with easy access and visibility from SR 65, offering employment opportunities for residents in the Plan Area and the City of Lincoln and resulting in a balanced ratio of jobs and housing and consistent with the City's 2050 General Plan.
9. Provide a land use plan with a balance of uses and density that results in an adequate tax base which, at project buildout, generates a surplus to the City's General Fund and develops financial resources to pay for public services and infrastructure without causing financial burden to existing residents.
10. Provide a land use plan, design standards, and guidelines that are consistent with Lincoln 2050 General Plan goals and policies, incorporate market-acceptable design features, and foster an attractive, well-maintained community.
11. Establish a land use and circulation system that promotes convenient mobility, links Village 5 with other villages and the existing areas of Lincoln, and provides a variety of non-vehicular modes within a setting that is safe, accessible, and convenient for all modes of travel.
12. Promote a diversity of housing opportunities responsive to the needs of Lincoln, the region, and market conditions, including single-family dwellings, apartments, condominiums, townhouses, and live-work units to serve a broad range of family incomes.
13. Provide a comprehensively planned infrastructure system that is sized to serve the entire Plan Area and adjacent planned villages, which complements the city-wide infrastructure and ensures funding for the ongoing maintenance needs of the parks, open space, and storm water quality facilities, public services and infrastructure.

While Alternative 4 would generally meet the above objectives, it would not do so to the same extent as the proposed project. For example, while Alternative 4 would generally provide transitions between incompatible land uses, there would not be transitions between the new development east of Dowd Road and the agricultural operations west of Dowd Road. Additionally, while Alternative 4 would provide parks and open space, it would not provide as many acres as the proposed project.

Objectives that Alternative 4 would not meet include:

6. Provide sites for a high school, a junior high school and three elementary schools, which are conveniently located to serve the Plan Area residents and surrounding villages.

While Alternative 4 would include two elementary schools, one middle school, and a high school, Alternative 4 would not provide a third elementary school mentioned in Objective 6. While Alternative 4 would provide a strong tax base, it would not provide as strong of a tax base as this alternative would have fewer residential units than the proposed project. Thus, while Alternative 4 would meet most of the project objectives, this alternative would not meet them to the same extent as would the proposed project.

6.1.6 Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126.6 (e)(2) of the State CEQA Guidelines requires that an environmentally superior alternative be designated and states that if the environmentally superior alternative is the No Project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Based on the summary of information presented in **Table 6-18**, the environmentally superior alternative is Alternative 1: No Project/No Build. Alternative 1 and Alternative 2 generally have lesser environmental impacts than the proposed project or the other alternatives. As discussed above, if the environmentally superior alternative is the no project alternative, the EIR must also identify an environmentally superior alternative from the other alternatives. Aside from Alternative 1 and Alternative 2 (the 'no project' alternatives), Alternative 4 would have the least environmental impacts. However, Alternative 4 would not include the third elementary school or as many residential units, making it unable to meet the project objectives to the same extent as the proposed project.

**TABLE 6-18.
COMPARISON OF PROPOSED PROJECT WITH ALTERNATIVES**

Resource and Impact	Proposed Project			Alternative 1			Alternative 2			Alternative 3			Alternative 4		
	Significance Before Mitigation	Mitigation Measure Number	Significance After Mitigation	Significance Before Mitigation	Mitigation Measure Number	Significance After Mitigation	Significance Before Mitigation	Mitigation Measure Number	Significance After Mitigation	Significance Before Mitigation	Mitigation Measure Number	Significance After Mitigation	Significance Before Mitigation	Mitigation Measure Number	Significance After Mitigation
3.1 Aesthetics and Visual Quality															
3.1-1: Implementation of the proposed project would impact scenic vistas in the project area	PS	-	SU	NI	-	NI	LTS	-	LTS	PS	-	SU	PS	-	SU
3.1-2: Implementation of the proposed project would alter the existing visual character or quality of the Plan Area and its surroundings.	PS	-	SU	NI	-	NI	LTS	-	LTS	PS	-	SU	PS	-	SU
3.1-3: The proposed electronic message center would alter the existing visual character or quality of the Plan Area and its surroundings.	PS	-	SU	NI	-	NI	NI	-	NI	PS	-	SU	PS	-	SU
3.1-4: Implementation of the proposed project would introduce light and glare into the project area.	PS	3.1-4	SU	NI	-	NI	LTS	-	LTS	PS	3.1-4	LTS	PS	3.1-4	SU
3.1-5: The proposed electronic message center would introduce light and glare into the project area.	LTS	-	LTS	NI	-	NI	NI	-	NI	LTS	-	LTS	LTS	-	LTS
3.2 Agriculture and Forestry Resources															
3.2-1: Implementation of the proposed project would result in conversion of Important Farmland to non-agricultural use.	PS	3.2-1a-b	SU	NI	-	NI	NI	-	NI	PS	3.2-1a-b	SU	PS	3.2-1a-b	SU
3.2-2: Implementation of the proposed project could conflict with a Williamson Act contract.	LTS	-	LTS	NI	-	NI	NI	-	NI	LTS	-	LTS	LTS	-	LTS
3.2-3: Implementation of the proposed project could involve other changes in the environment which, due to their location or nature, could indirectly convert agricultural land to non-agricultural use.	LTS	-	LTS	NI	-	NI	NI	-	NI	PS	-	SU	PS	-	SU
3.3 Air Quality															
3.3-1: The proposed project would not conflict with or obstruct implementation of an applicable air quality plan.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.3-2: Construction of land uses under the proposed project would generate criteria pollutant emissions that could substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.	PS	3.3-2	SU	NI	-	NI	LTS	-	LTS	PS	3.3-2	SU	PS	3.3-2	SU
3.3-3: Operational activities associated with development under the proposed project would result in emissions of criteria air pollutants at levels that would substantially contribute to a potential violation of applicable air quality standards or to nonattainment conditions.	PS	3.3-3	SU	NI	-	NI	LTS	-	LTS	PS	3.3-3	SU	PS	3.3-3	SU
3.3-4: Traffic associated with development under the proposed project could result in exposure of persons to substantial localized carbon monoxide concentrations.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.3-5: Development under the proposed project would locate sensitive residential receptors in close proximity to SR 65, which would result in the exposure of persons to substantial toxic air contaminant concentrations.	PS	3.3-5a-b	LTS	NI	-	NI	LTS	-	LTS	PS	3.3-5a-b	LTS	PS	3.3-5a-b	LTS
3.3-6: Land uses to be developed under the proposed project would result in exposure of substantial persons to objectionable odors.	PS	-	SU	NI	-	NI	LTS	-	LTS	PS	-	SU	PS	-	SU

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3.4 Biological Resources															
3.4-1: Implementation of the proposed project could have a substantial adverse effect on federally protected wetlands defined by Section 404 of the Clean Water Act through direct removal, placement of fill, hydrological interruption, or by other means and would result in fill of jurisdictional wetlands or other protected waters	PS	3.4-1	LTS	NI	-	NI	PS	3.4-1	LTS	PS	3.4-1	LTS	PS	3.4-1	LTS
3.4-2: Implementation of the proposed project could result in adverse impacts to special-status species, either directly or through habitat modifications.	PS	3.4-2	LTS	NI	-	NI	PS	3.4-2	LTS	PS	3.4-2	LTS	PS	3.4-2	LTS
3.4-3: Implementation of the proposed project could result in the loss and/or degradation of vernal pool habitat, and the loss of special-status vernal pool crustaceans or amphibians.	PS	3.4-3	LTS	NI	-	NI	PS	3.4-3	LTS	PS	3.4-3	LTS	PS	3.4-3	LTS
3.4-4: Implementation of the proposed project could result in the loss and/or degradation of rare plant populations.	PS	3.4-4	LTS	NI	-	NI	PS	3.4-4	LTS	PS	3.4-4	LTS	PS	3.4-4	LTS
3.4-5: Implementation of the proposed project could result in the loss of western pond turtle and/or degradation of potential habitat.	PS	3.4-5	LTS	NI	-	NI	PS	3.4-5	LTS	PS	3.4-5	LTS	PS	3.4-5	LTS
3.4-6: Implementation of the proposed project could result in the loss or disturbance of nesting birds and the loss or degradation of special-status bird nesting and foraging habitat	PS	3.4-6	LTS	NI	-	NI	PS	3.4-6	LTS	PS	3.4-6	LTS	PS	3.4-6	LTS
3.4-7: Implementation of the proposed project could result in the loss of valley elderberry longhorn beetle and/or loss or degradation of potential habitat.	PS	3.4-7	LTS	NI	-	NI	PS	3.4-7	LTS	PS	3.4-7	LTS	PS	3.4-7	LTS
3.4-8: Implementation of the proposed project could result in changes to surface water quality in Auburn Ravine that could affect Central Valley Steelhead and Chinook salmon due to the reconstruction and/or widening of various bridges within the Plan Area.	PS	3.4-8	LTS	NI	-	NI	PS	3.4-8	LTS	PS	3.4-8	LTS	PS	3.4-8	LTS
3.4-9: Implementation of the proposed project could have a substantial adverse effect on riparian habitat or other sensitive natural communities identified in local, state, or federal plans, policies, or regulations.	PS	3.4-9	LTS	NI	-	NI	PS	3.4-9	LTS	PS	3.4-9	LTS	PS	3.4-9	LTS
3.4-10: Implementation of the proposed project could interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.4-11: Implementation of the proposed project could conflict with the provisions of approved local, regional or state policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	PS	3.4-11	LTS	NI	-	NI	LTS	-	LTS	PS	3.4-11	LTS	PS	3.4-11	LTS
3.4-12: Implementation of the proposed project could conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	NI	-	NI	NI	-	NI	NI	-	NI	NI	-	NI	NI	-	NI

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3.5 Climate Change															
3.5-1: Construction and operation of the proposed project would result in a cumulatively considerable increase in greenhouse gas (GHG) emissions that could conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing GHG emissions.	PS	3.5-1	SU	NI	-	NI	PS	3.5-1	SU	PS	3.5-1	SU	PS	3.5-1	SU
3.6 Cultural Resources															
3.6-1: Implementation of the proposed project would adversely impact historic architectural resources directly through demolition or substantial alteration, or indirectly through changes to historical setting.	PS	3.6-1	SU	NI	-	NI	PS	3.6-1	SU	PS	3.6-1	SU	PS	3.6-1	SU
3.6-2: Implementation of the proposed project could result in damage or destruction of known or previously unidentified unique archaeological resources.	PS	3.6-2a-b	LTS	NI	-	NI	PS	3.6-2a-b	LTS	PS	3.6-2a-b	LTS	PS	3.6-2a-b	LTS
3.6-3: Ground-disturbing construction associated with implementation of the proposed project could result in disturbance or destruction of a paleontological resource.	PS	3.6-3	LTS	NI	-	NI	PS	3.6-3	LTS	PS	3.6-3	LTS	PS	3.6-3	LTS
3.6-4: Ground-disturbing activities associated with construction of the proposed project could result in damage to previously unidentified human remains.	PS	3.6-4	LTS	NI	-	NI	PS	3.6-4	LTS	PS	3.6-4	LTS	PS	3.6-4	LTS
3.7 Energy Resources															
3.7-1: Construction of the proposed project would not use fuel and energy in an unnecessary, wasteful, or inefficient manner during project construction.	PS	3.7-1	LTS	NI	-	NI	PS	3.7-1	LTS	PS	3.7-1	LTS	PS	3.7-1	LTS
3.7-2: Development of the proposed project would result in decreased vehicle-miles travelled per service population, as compared to the existing baseline, resulting in a corresponding decrease in transportation energy use per service population.	LTS	-	LTS	NI	-	NI	PS	-	SU	LTS	-	LTS	LTS	-	LTS
3.7-3: Development of the proposed project would comply with the most current version of Title 24 energy standards for energy conservation.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.8 Geology, Soils, Seismicity															
3.8-1: The proposed project would not expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death due to strong seismic ground shaking or liquefaction.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.8-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.	PS	3.8-2(a) and (b)	LTS	NI	-	NI	PS	3.8-2(a) and (b)	LTS	PS	3.8-2(a) and (b)	LTS	PS	3.8-2	LTS
3.8-3: The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.8-4: The proposed project could be located on expansive soil, as defined in California Building Code (2013), creating substantial risks to life or property.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS

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3.9 Hazards/Hazardous Materials															
3.9-1: The proposed project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.9-2: The proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	PS	3.9-2	LTS	NI	-	NI	PS	3.9-2	LTS	PS	3.9-2	LTS	PS	3.9-2	LTS
3.9-3: The proposed project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LTS	-	LTS	NI	-	NI	NI	-	NI	LTS	-	LTS	LTS	-	LTS
3.9-4: The proposed project could be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List) and, as a result, create a significant hazard to the public or the environment.	PS	3.9-4a-b	LTS	NI	-	NI	PS	3.9-4	LTS	PS	3.9-4	LTS	PS	3.9-4	LTS
3.9-5: The proposed project could result in a safety hazard for people residing or working in the project area for a project located within an airport land use plan.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.9-6: The proposed project would not result in a safety hazard for people residing or working in the project area for a project within the vicinity of a private airstrip.	PS	3.9-6-	LTS	NI	-	NI	LTS	-	LTS	PS	3.9-6-	LTS	PS	3.9-6-	LTS
3.9-7: The proposed project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	PS	3.9-7	LTS	NI	-	NI	LTS	-	LTS	PS	3.9-7	LTS	PS	3.9-7	LTS
3.9-8: The proposed project could expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.10 Hydrology, Drainage, and Water Quality															
3.10-1: Implementation of the proposed project could violate water quality standards or waste discharge requirements.	PS	3.10-1a-b	LTS	NI	-	NI	LTS	-	LTS	PS	3.10-1a-b	LTS	PS	3.10-1a-b	LTS
3.10-2: Construction of the proposed project could substantially deplete groundwater supplies or interfere substantially with groundwater recharge due to increases in impervious surface area, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.10-3: Implementation of the proposed project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.	PS	3.10-3	LTS	NI	-	NI	LTS	-	LTS	PS	3.10-3	LTS	PS	3.10-3	LTS

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Resource and Impact	Proposed Project			Alternative 1			Alternative 2			Alternative 3			Alternative 4		
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3.10-4: Implementation of the proposed project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which could result in flooding on- or off-site.	PS	3.10-4	LTS	NI	-	NI	LTS	-	LTS	PS	3.10-4	PS	PS	3.10-4	LTS
3.10-5: Implementation of the proposed project could create or contribute runoff water which would provide substantial additional sources of polluted runoff.	PS	3.10-5	LTS	NI	-	NI	LTS	-	LTS	PS	3.10-5	LTS	PS	3.10-5	LTS
3.10-6: Implementation of the proposed project could otherwise substantially degrade water quality.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.10-7: Implementation of the proposed project could place within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map, or within a 200-year floodplain, housing or structures which would impede or redirect flood flows.	PS	3.10-7	LTS	NI	-	NI	LTS	-	LTS	PS	3.10-7	LTS	LTS	-	LTS
3.11 Land Use and Planning															
3.11-1: Implementation of the proposed project would conflict with adjacent land uses.	PS	3.11-1	SU	NI	-	NI	PS	-	SU	PS	3.11-1	SU	PS	3.11-1	SU
3.11-2: Implementation of the proposed project would create conflicting land uses within the Plan Area.	PS	3.11-2	SU	NI	-	NI	NI	-	NI	PS	3.11-2	SU	PS	3.11-2	SU
3.11-3: Implementation of the proposed project could conflict with the City of Lincoln 2050 General Plan.	LTS	-	LTS	NI	-	NI	NI	-	NI	PS	-	SU	PS	-	SU
3.11-4: Implementation of the proposed project could conflict with Placer County LAFCO policies for annexation.	LTS	-	LTS	NI	-	NI	NI	-	NI	LTS	-	LTS	LTS	-	LTS
3.11-5: Implementation of the proposed project could conflict with Placer County Airport Land Use Compatibility Plan (ALUCP).	LTS	-	LTS	NI	-	NI	NI	-	NI	LTS	-	LTS	LTS	-	LTS
3.11-6: Implementation of the proposed project could conflict with the current working draft of the Placer County Conservation Plan (PCCP).	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.12 Noise and Vibration															
3.12-1: Construction of the proposed project could temporarily increase ambient noise levels.	PS	3.12-1	LTS	NI	-	NI	PS	3.12-1	LTS	PS	3.12-1	LTS	PS	3.12-1	LTS
3.12-2: Construction of the proposed project would result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.	PS	3.12-2	SU	NI	-	NI	PS	3.12-2	LTS	PS	3.12-2	LTS	PS	3.12-2	SU
3.12-3: Implementation of the proposed project would expose noise-sensitive land uses to transportation noise levels in excess of the City of Lincoln General Plan noise standard or result in a substantial permanent increase in ambient transportation-related noise above existing levels.	PS	3.12-3	SU	NI	-	NI	LTS	-	LTS	PS	3.12-3	SU	PS	3.12-3	SU

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3.12-4: The proposed project could result in exposure of people residing or working at the project site to excessive noise levels from a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public or public use airport.	PS	3.12-4	LTS	NI	-	NI	LTS	-	LTS	PS	3.12-4	LTS	PS	3.12-4	LTS
3.12-5: Implementation of the proposed project would expose people residing or working in the proposed project area to excessive noise levels for a project within the vicinity of a private airstrip.	PS	3.12-5	LTS	NI	-	NI	LTS	-	LTS	PS	3.12-5	LTS	PS	3.12-5	LTS
3.12-6: Implementation of the proposed project would expose on-site noise-sensitive land uses to noise generated by commercial, educational and recreational activities in excess of the City of Lincoln General Plan noise standard or result in an increase in ambient noise	PS	3.12-6	SU	NI	-	NI	NI	-	NI	PS	3.12-6	SU	PS	3.12-6	SU
3.13 Population, Employment, and Housing															
3.13-1: The proposed project would induce substantial population growth in an area.	PS	-	SU	NI	-	NI	LTS	-	LTS	PS	-	SU	PS	-	SU
3.13-2: The proposed project would not displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.	NI	-	NI	NI	-	NI	NI	-	NI	NI	-	NI	NI	-	NI
3.14 Public Services and Recreation															
3.14-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities or the need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police services.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.14-2: The proposed project could result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire services.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.14-3: The proposed project would result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities or the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for schools.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.14-4: The proposed project could result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities or the need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for parks and recreation services.	PS	3.14-4	LTS	NI	-	NI	LTS	-	LTS	PS	3.14-4	LTS	PS	3.14-4	LTS

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3.14-5: The proposed project could result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities or the need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios for libraries.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.15 Transportation and Circulation															
3.15-1: Implementation of the proposed project would increase traffic levels at intersections under the City of Lincoln's jurisdiction operating at an acceptable LOS under existing conditions.	PS	3.15-1	SU/LTS	NI	-	NI	LTS	-	LTS	PS	3.15-1	LTS	PS	3.15-1	LTS
3.15-2: Implementation of the proposed project would increase traffic levels at intersections under the City of Lincoln's jurisdiction operating at an unacceptable LOS under existing conditions	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.15-3: Implementation of the proposed project would increase traffic levels at future City of Lincoln intersections in Village 5.	PS	3.15-3	SU/LTS	NI	-	NI	LTS	-	LTS	PS	3.15-3	LTS	PS	3.15-3	LTS
3.15-4: Implementation of the proposed project would increase traffic levels at intersections under the County of Placer's jurisdiction.	PS	3.15-4	SU	NI	-	NI	LTS	-	LTS	PS	3.15-4	SU	PS	3.15-4	SU
3.15-5: Implementation of the proposed project would increase traffic levels at intersections under the City of Roseville's jurisdiction.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.15-6: Implementation of the proposed project would increase traffic levels at intersections maintained by Caltrans.	PS	3.15-6	SU	NI	-	NI	LTS	-	LTS	PS	3.15-6	SU	PS	3.15-6	SU
3.15-7: Implementation of the proposed project would increase traffic levels on study roadway segments in Placer County.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.15-8: Implementation of the proposed project would increase traffic levels on study highway facilities maintained by Caltrans.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.15-9: Implementation of the proposed project would increase traffic levels on freeway facilities maintained by Caltrans.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.15-10: Implementation of the proposed project would include the provision of new bicycle and pedestrian facilities in the proposed project to support bicycle and pedestrian travel within the project, and connect the project with adjacent areas in the City of Lincoln.	LTS	-	LTS	NI	-	NI	NI	-	NI	LTS	-	LTS	LTS	-	LTS
3.15-11: Implementation of the proposed project would include the provision of transit shelters and a potential bus transfer facility to support transit use as a means of travel within the project and between the project and the surrounding area.	LTS	-	LTS	NI	-	NI	NI	-	NI	LTS	-	LTS	LTS	-	LTS
3.15-12: Implementation of the proposed project would include adequate access for emergency vehicles.	LTS	-	LTS	NI	-	NI	NI	-	NI	LTS	-	LTS	LTS	-	LTS

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3.15-13: The proposed project could result in temporary impacts to transportation and traffic when construction activity occurs within the Village 5 Specific Plan site.	PS	3.15-13	LTS	NI	-	NI	NI	-	NI	PS	3.15-13	LTS	PS	3.15-13	LTS
3.16 Utilities and Infrastructure															
3.16-1: Implementation of the proposed project would result in an increased demand for water supply that could result in the need for new or expanded entitlements or supply sources.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.16-2: Implementation of the proposed project would result in an increased demand for water supply that could result in the need for new or expanded treatment, storage or conveyance facilities.	PS	3.16-2	LTS	NI	-	NI	LTS	-	LTS	PS	3.16-2	LTS	PS	3.16-2	LTS
3.16-3: Implementation of the proposed project would generate additional wastewater flows, which could exceed applicable treatment requirements or result in the expansion or construction of new facilities, which could cause significant environmental effects.	LTS	-	LTS	NI	-	NI	NI	-	NI	LTS	-	LTS	LTS	-	LTS
3.16-4: The proposed project could generate additional runoff, thereby increasing storm water flows and exceeding the existing stormwater and drainage capabilities, resulting in new and expanded facilities.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS
3.16-5: Implementation of the proposed project would not result in solid waste exceedance of capacity at the Western Regional Sanitary Landfill.	LTS	-	LTS	NI	-	NI	LTS	-	LTS	LTS	-	LTS	LTS	-	LTS

SOURCE: Compiled by ESA 2016

CHAPTER 7

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CHAPTER 8

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1. Introduction

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2. Project Description

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3.0 Introduction to the Analysis

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