

BIOLOGICAL ENVIRONMENT

3.14 BIOLOGICAL RESOURCES

3.14.1 Regulatory Setting

Federal Endangered Species Act

The federal ESA and subsequent amendments (16 U.S.C. Section 1531, et seq; also see 50 CFR Part 402) provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of the federal ESA, federal agencies are required to consult with USFWS and the National Oceanic and Atmospheric Administration (NOAA) Fisheries to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 (if required) is a Biological Opinion or an incidental take permit. Section 3 of the federal ESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt at such conduct.” Since no federally threatened or endangered species were identified within the Biological Study Area (BSA), as described below, the federal ESA does not apply to the Project.

Clean Water Act

The CWA (33 U.S.C. 1344) is the primary federal law regulating wetlands and waters. The CWA regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation’s waters would be significantly degraded. The Section 404 permit program is run by the Corps with oversight by the USEPA.

Executive Order 11990

EO 11990 also regulates the activities of federal agencies with regard to wetlands. Essentially, this EO states that a federal agency cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) is a federal statute that prohibits the ability to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention... for the protection of migratory birds... or any part, nest, or egg of any such bird.” This statute allows the USFWS to enforce the prohibition of direct “taking” of active nests. Implementation of this law typically includes restrictions on development activities when sensitive nesting birds, including raptors, are present. Since no sensitive nesting birds or raptors were identified within the BSA, as described below, the MBTA does not apply to the Project.

Natural Community Conservation Program

As described in Subchapter 3.1, Land Use, the City adopted its MSCP Subarea Plan in March 1997 to meet the requirements of the NCCP Act of 1991, the federal ESA, and the California ESA. The Subarea Plan regulates effects on natural communities throughout the City and identifies preserve areas within the City as the MHPA. The Project is located within the City's Subarea Plan, but not within the MHPA.

3.14.2 Affected Environment

A Minimal Impacts Natural Environment Study (NES-MI; *San Ysidro Land Port of Entry Improvements Project Natural Environment Study – Minimal Impacts*, April 2009) was prepared for the Project to evaluate the biological resources and potential impacts to such resources within the 52.5-acre BSA that was identified for the Project. The NES-MI addresses the potential for direct impacts (e.g., by grading, construction, and/or staging), as well as indirect impacts (e.g., noise). The results of the NES-MI are summarized in this subchapter.

General biological surveys were conducted within the BSA on November 21, 2008 to identify and record plant and animal species occurring within the BSA. Additionally, the USFWS was contacted to request a species list that identifies federally listed threatened, endangered, or proposed for listing species with the potential to occur within the BSA. The USFWS identified two potential species, including the coastal California gnatcatcher (*Poliophtila californica californica*) and burrowing owl (*Athene cunicularia*). A formal jurisdictional delineation was conducted in areas within the BSA that were suspected to be jurisdictional Waters of the U.S. (WUS) on February 18, 2009 and April 6, 2009.

Vegetation Communities

Five vegetation communities/habitats occur within the BSA, including disturbed wetland, non-native grassland, eucalyptus woodland, disturbed habitat, and developed land (Figure 3.14-1). Of these, only disturbed wetland and non-native grassland are considered sensitive vegetation communities. A brief discussion of each vegetation community/habitat follows.

Disturbed Wetland

Disturbed wetland is dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. Within the BSA, 0.04 acre of disturbed wetland occurs in a small patch along a defined earthen channel east of Camiones Way (Figure 3.14-1). Dominant species within this disturbed wetland in the BSA include curly dock (*Rumex crispus*) and Bermuda grass (*Cynodon dactylon*) with lesser amounts of castor-bean (*Ricinus communis*). Native wetland species that make up a very small portion of the disturbed wetland include mule fat (*Baccharis salicifolia*) and Goodding's black willow (*Salix gooddingii*).

Non-native Grassland

Non-native grassland areas may have supported native grassland in the past, but have been overrun by exotic, introduced annuals. Given that the BSA has not supported native grassland in the recent past, it is likely that the small patches of non-native grassland within the BSA are a result of seed dispersal, which then takes advantage of water draining off the roadway from rainfall. Plant species within this vegetation community in the BSA include ripgut grass (*Bromus diandrus*), oats (*Avena* sp.), Italian ryegrass (*Lolium multiflorum*), California burclover (*Medicago polymorpha*), cheeseweed (*Malva parviflora*), and occasionally curly dock. The BSA contains 0.7 acre of non-native grassland, located south of Camino de la Plaza in the northwestern portion of the BSA (Figure 3.14-1).

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced species that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic with the most common species being either the blue gum (*Eucalyptus gunnii*) or red gum (*E. camaldulensis* ssp. *obtusa*). The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic (toxic; suppresses plant growth) nature of the abundant leaf and bark litter. If sufficient moisture is available, eucalyptus becomes naturalized and is able to reproduce and expand its range. The sparse understory offers only limited wildlife habitat; however, as a wildlife habitat, these woodlands provide excellent nesting sites for a variety of raptors, including red-shouldered hawks (*Buteo lineatus*). During winter migrations, a large variety of warblers may be found feeding on the insects that are attracted to the eucalyptus flowers. Eucalyptus trees with active raptor nests are considered sensitive. A 0.1-acre patch of this eucalyptus woodland occurs within the BSA to the east of Camiones Way (Figure 3.14-1).

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat. Dominant plant species within this vegetation community in the BSA include garland daisy (*Chrysanthemum coronarium*), filaree (*Erodium* sp.), cheeseweed, and crystalline iceplant (*Mesembryanthemum crystallinum*). Two native species, goldenbush (*Isocoma menziesii*) and telegraph weed (*Heterotheca grandiflora*), also were observed in this vegetation community

within the BSA. The BSA contains 0.9 acre of disturbed habitat, located south of Camino de la Plaza and west of I-5 (Figure 3.14-1).

Developed Land

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Within the BSA, developed land encompasses 50.8 acres and consists of I-5, Camino de la Plaza, Camiones Way, East San Ysidro Boulevard, Rail Court, other roadways, commercial buildings with associated parking, and landscaped areas (Figure 3.14-1).

Jurisdictional Areas

Corps jurisdictional areas within the BSA total 0.39 acre of non-wetland WUS. These areas are comprised of two drainages, which are identified as drainage numbers 1 and 2 in Figure 3.14-1. Drainage number 1 consists of a 0.07-acre earthen channel between Camiones Way and Camino de la Plaza that also extends under the freeway to a culvert, and drainage number 2 consists of a 0.32 acre concrete-lined channel that runs parallel to the north side of the border, west of I-5.

Plants and Animals

A total of 44 plant species and 18 animal species were observed/detected within the BSA during general biological surveys, but no sensitive plant or animal species were observed. Although the USFWS identified the coastal California gnatcatcher and burrowing owl as species with the potential to occur within the BSA, neither sensitive species was observed/detected. The BSA is urbanized and suitable habitat for the coastal California gnatcatcher (Diegan coastal sage scrub) does not occur within the BSA. In addition, the non-native grassland within the BSA is too small of an area to support burrowing owls.

3.14.3 Environmental Consequences

Preferred Alternative

Vegetation Communities

As shown in Table 3.14-1, the Preferred Alternative would impact a total of 0.1 acre of disturbed habitat and 25.7 acres of developed land. Phase 1 of the Preferred Alternative would result in impacts to 0.1 acre of disturbed habitat and 11.3 acres of developed land (Figure 3.14-2); Phase 2 would result in impacts to 2.6 acres of developed land (Figure 3.14-3); and Phase 3 would result in impacts to 0.01 acre of disturbed habitat and 11.8 acres of developed land (Figure 3.14-4). No sensitive vegetation communities would be impacted and therefore, no associated adverse impacts would occur.

Table 3.14-1 PREFERRED ALTERNATIVE IMPACTS TO VEGETATION COMMUNITIES (acre)					
Vegetation Community/Habitat	BSA Total ¹	Impacts – Preferred Alternative			
		Phase 1	Phase 2	Phase 3	TOTAL
Disturbed wetland	0.05	0	0	0	0
Non-native grassland	0.7	0	0	0	0
Eucalyptus woodland	0.1	0	0	0	0
Disturbed habitat	0.9	0.1	0	0.01	0.1
Developed land	50.8	11.3	2.6	11.8	25.7
TOTAL	52.5	11.4	2.6	11.8	25.8

¹ Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding.
Source: NES-MI, April 2009.

Jurisdictional Areas

The Preferred Alternative would impact a total of 0.07 acre of non-wetland WUS. Approximately 0.07 acre of drainage number 2 would be impacted during Phase 3 by construction of the proposed southbound roadway, new southbound pedestrian crossing, and USBP facility within the LPOE (refer to Figures 3.14-1 and 3.14-4). Impacts to these jurisdictional areas would require compensatory mitigation (as identified below in Section 3.14.4), as well a CWA Section 404 Nationwide Permit from the Corps and a Section 401 Water Quality Certification from the RWQCB.

Although a bridge landing and a portion of the proposed east-west pedestrian bridge would be constructed over drainage number 1 during Phase 1 (refer to Figures 3.14-1 and 3.14-2), these proposed structures would not physically impact the channel.

Plants and Animals

Since no sensitive plant or animal species were observed within the BSA, implementation of the Preferred Alternative would not result in impacts to sensitive species.

Indirect Water Quality Impacts to Biological Resources

Water quality impacts resulting from surface runoff of urban contaminants or sediments potentially could occur during construction or operation of the Preferred Alternative. Decreased water quality could result in adverse indirect impacts to vegetation, aquatic animals, and terrestrial wildlife that depend on these resources. These potential impacts would be addressed through conformance with the NPDES and City guidelines, as well as incorporation of long-term water quality controls, including measures that would avoid or reduce off-site sediment transport (e.g., the use of storm water filters, street sweeping, and drainage facility maintenance), as identified in Subchapter 3.8, Water Quality and Storm Water Runoff. Implementation of the measures identified in Subchapter 3.8, Water Quality and Storm Water Runoff, would also avoid indirect water quality impacts to biological resources.

Pedestrian Crossing Alternative

Although the Pedestrian Crossing Alternative would entail a different cross-border pedestrian circulation scheme, it would occur within the same BSA as the Preferred Alternative, and construction, operation, and maintenance activities would be similar. The analysis presented above for the Preferred Alternative would largely apply to the Pedestrian Crossing Alternative, with minor differences. As presented in Table 3.14-2 below, the Pedestrian Crossing Alternative would impact a total of 0.2 acre of disturbed habitat and 22.1 acres of developed land. Phase 1 of the Pedestrian Crossing Alternative would result in impacts to 0.1 acre of disturbed habitat and 11.9 acres of developed land (Figure 3.14-5); Phase 2 would result in impacts to 2.9 acres of developed land (Figure 3.14-6); and Phase 3 would result in impacts to 0.07 acre of disturbed habitat and 7.3 acres of developed land (Figure 3.14-7). No sensitive vegetation communities would be impacted and therefore, no associated adverse impacts to would occur.

Table 3.14-2 PEDESTRIAN CROSSING ALTERNATIVE IMPACTS TO VEGETATION COMMUNITIES (acre)					
Vegetation Community/Habitat	BSA Total ¹	Impacts – Preferred Alternative			
		Phase 1	Phase 2	Phase 3	TOTAL
Disturbed wetland	0.05	0	0	0	0
Non-native grassland	0.7	0	0	0	0
Eucalyptus woodland	0.1	0	0	0	0
Disturbed habitat	0.9	0.1	0	0.07	0.2
Developed land	50.8	11.9	2.9	7.3	22.1
TOTAL	52.5	12.0	2.9	7.4	22.3

¹ Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding.
Source: NES-MI, April 2009.

Similarly, implementation of the Pedestrian Crossing Alternative would not result in impacts to sensitive plant or animal species. Potential indirect impacts to biological resources due to decreased water quality would be addressed through the referenced measures identified above for the Preferred Alternative.

The Pedestrian Crossing Alternative would impact a total of 0.05 acre of non-wetland WUS (i.e. impacts to drainage number 2 during Phase 3 by construction of the proposed southbound roadway within the LPOE). Impacts to these jurisdictional areas would require compensatory mitigation, as well a CWA Section 404 Nationwide Permit from the Corps and a Section 401 Water Quality Certification from the RWQCB.

Under the Pedestrian Crossing Alternative, a bridge landing and a portion of the proposed east-west pedestrian bridge would be constructed over drainage number 1 during Phase 1 (refer to Figures 3.14-4). Neither these proposed structures nor the proposed north-south pedestrian bridge would physically impact the channel.

No Build Alternative

Under the No Build Alternative, the described development for the Preferred Alternative would not occur, and there would be no impacts related to biological resources.

3.14.4 Avoidance, Minimization, and/or Mitigation Measures

Preferred Alternative

Implementation of the following avoidance, minimization, and mitigation measure would avoid or reduce impacts to biological resources resulting from the Preferred Alternative:

- During construction of the Preferred Alternative, jurisdictional areas and sensitive vegetation within the BSA should be fenced with orange plastic exclusionary fencing, and no personnel, debris, or equipment would be allowed within the jurisdictional areas.
- Impacts to 0.07 acre of non-wetland WUS should be mitigated at a 1:1 ratio through purchase of mitigation credits equal to 0.07 acre of ephemeral drainage at an approved mitigation bank.
- If removal of habitat and/or construction activities is necessary adjacent to nesting habitat during the bird breeding season (January 15 to September 15), the GSA shall retain an approved biologist to conduct a pre-construction survey to determine the presence or absence of: (1) non-listed nesting migratory birds on, or within, 100 feet of the construction area; (2) Federally- or State-listed birds on, or within, 300 feet of the construction area; and (3) nesting raptors within 500 feet of the construction area. The pre-construction survey will be conducted within 10 calendar days prior to the start of construction. The results of the survey will be submitted to the GSA for review and approval prior to initiating any construction activities.
- If nesting birds are detected by the approved biologist, the following buffers will be established: 1) no work will occur within 100 feet of a non-listed nesting migratory bird nest; 2) no work will occur within 300 feet of a listed bird nest; and 3) no work will occur within 500 feet of a raptor nest. If construction within these buffers cannot be avoided, GSA, in consultation with the resource agencies, will determine the appropriate buffer.

Pedestrian Crossing Alternative

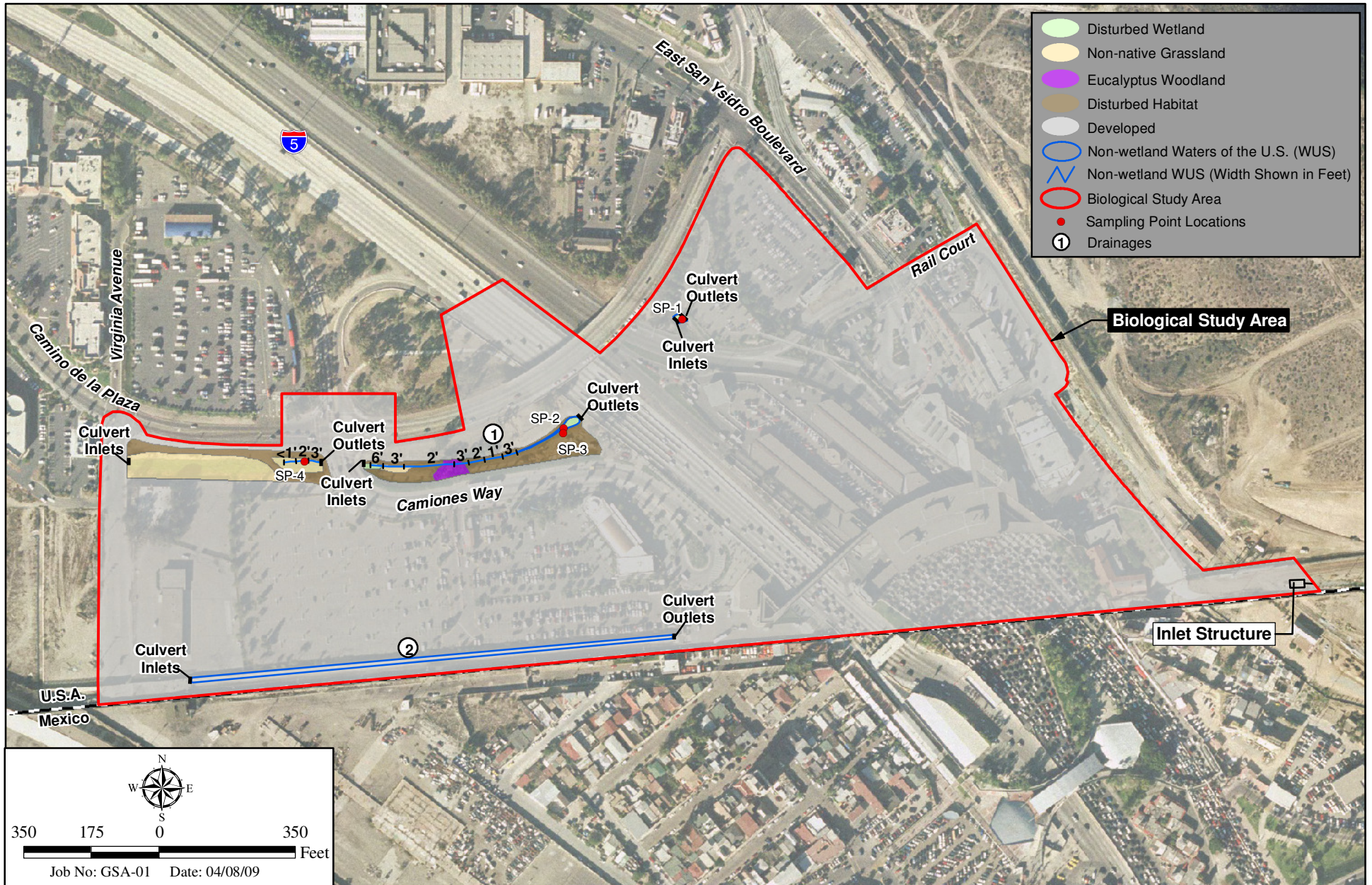
Implementation of the following avoidance, minimization, and mitigation measure would avoid or reduce impacts to biological resources resulting from the Pedestrian Crossing Alternative:

- During construction of the Preferred Alternative, jurisdictional areas and sensitive vegetation within the BSA should be fenced with orange plastic exclusionary fencing, and no personnel, debris, or equipment would be allowed within the jurisdictional areas.
- Impacts to 0.05 acre of non-wetland WUS should be mitigated at a 1:1 ratio through purchase of mitigation credits equal to 0.05 acre of ephemeral drainage at an approved mitigation bank.

- If removal of habitat and/or construction activities is necessary adjacent to nesting habitat during the bird breeding season (January 15 to September 15), the GSA shall retain an approved biologist to conduct a pre-construction survey to determine the presence or absence of: (1) non-listed nesting migratory birds on, or within, 100 feet of the construction area; (2) Federally- or State-listed birds on, or within, 300 feet of the construction area; and (3) nesting raptors within 500 feet of the construction area. The pre-construction survey will be conducted within 10 calendar days prior to the start of construction. The results of the survey will be submitted to the GSA for review and approval prior to initiating any construction activities.
- If nesting birds are detected by the approved biologist, the following buffers will be established: 1) no work will occur within 100 feet of a non-listed nesting migratory bird nest; 2) no work will occur within 300 feet of a listed bird nest; and 3) no work will occur within 500 feet of a raptor nest. If construction within these buffers cannot be avoided, GSA, in consultation with the resource agencies, will determine the appropriate buffer.

No Build Alternative

No avoidance, minimization, or mitigation measures would be required because no impacts to sensitive biological resources would occur under the No Build Alternative.

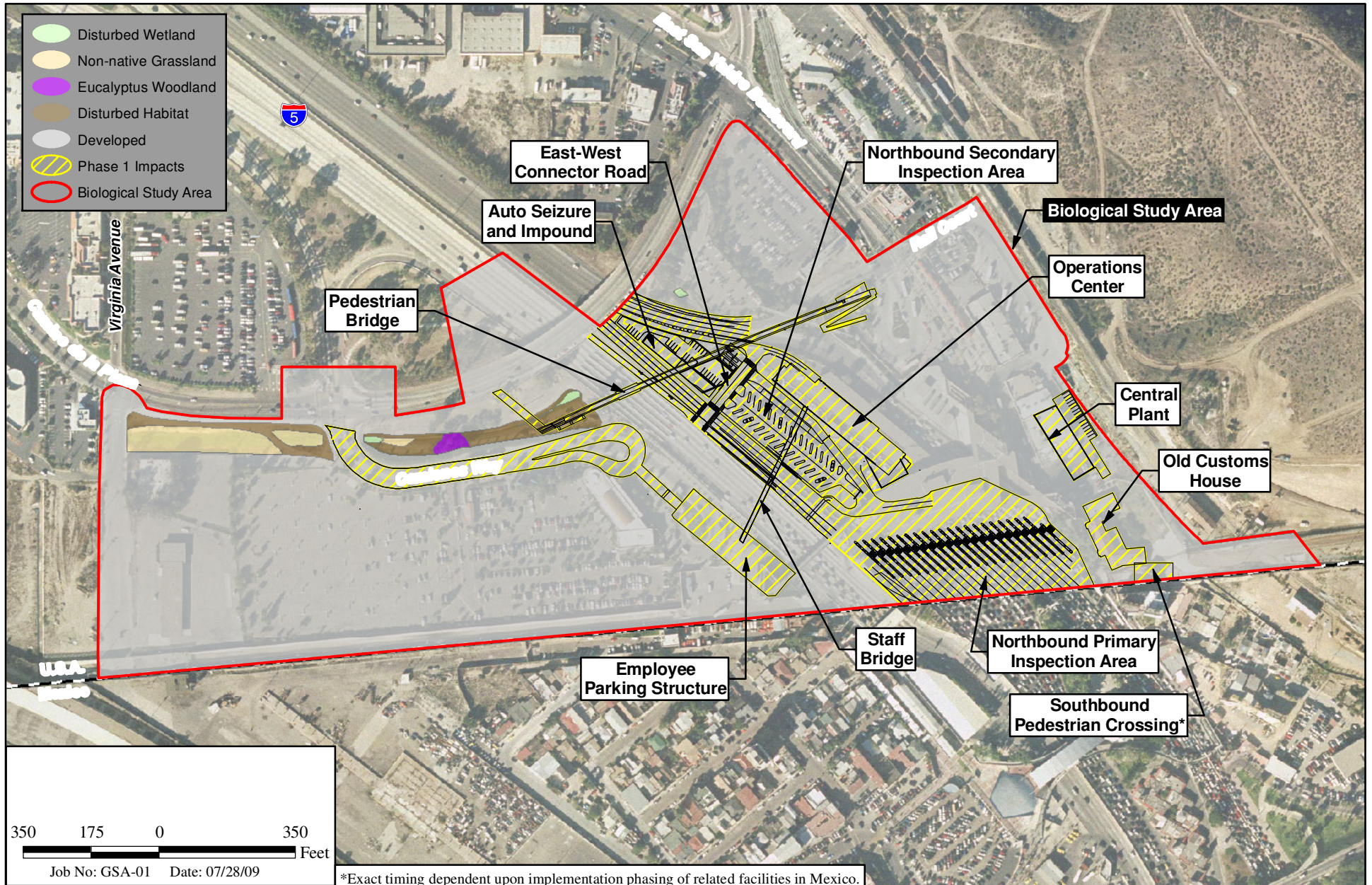


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Vegetation Communities and Corps Jurisdictional Areas

SAN YSIDRO LAND PORT OF ENTRY IMPROVEMENTS

Figure 3.14-1

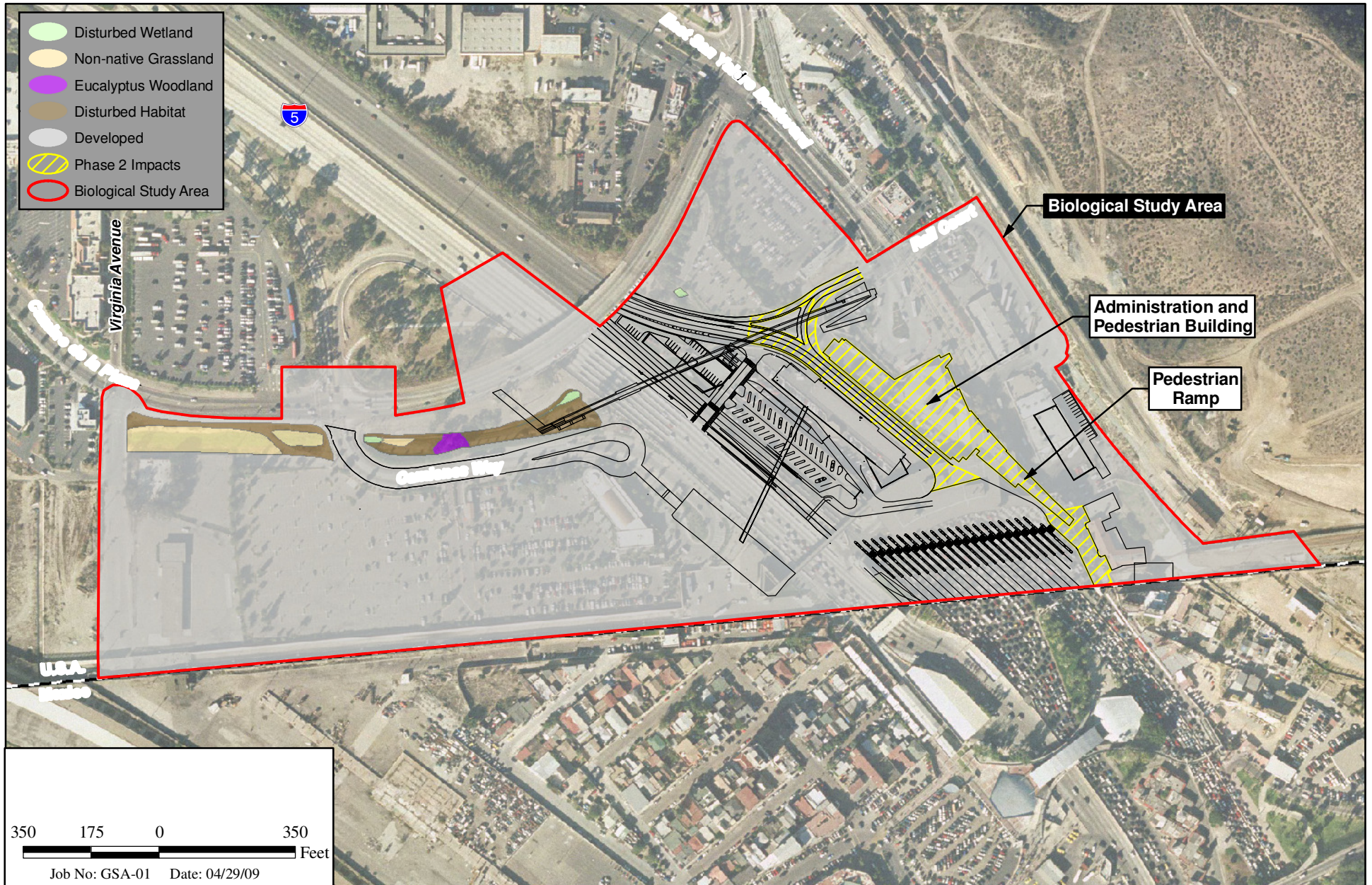


Phase 1 Vegetation Impacts - Preferred Alternative

SAN YSIDRO LAND PORT OF ENTRY IMPROVEMENTS

Figure 3.14-2 (Revised)

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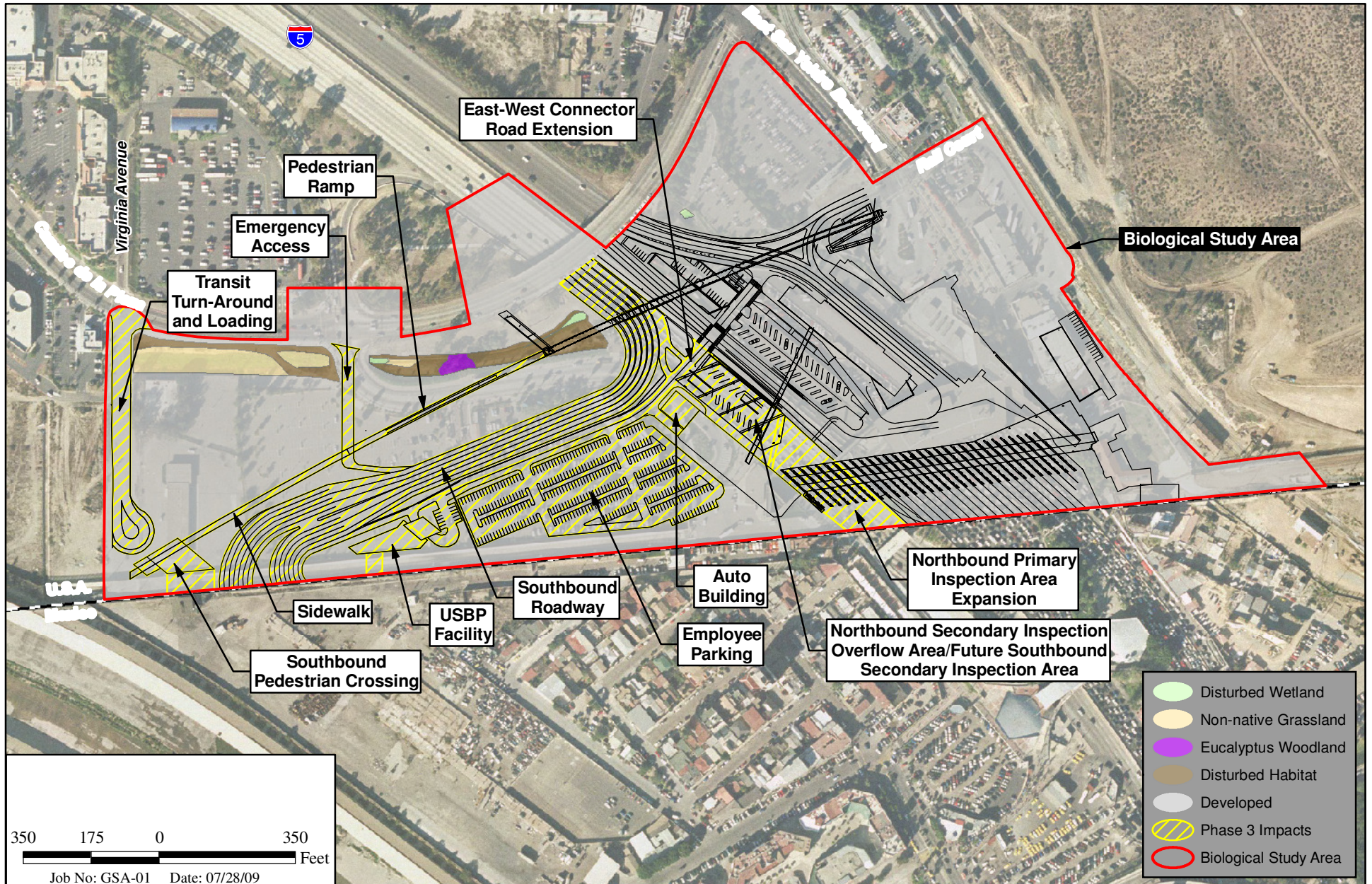


Phase 2 Vegetation Impacts - Preferred Alternative

SAN YSIDRO LAND PORT OF ENTRY IMPROVEMENTS

Figure 3.14-3

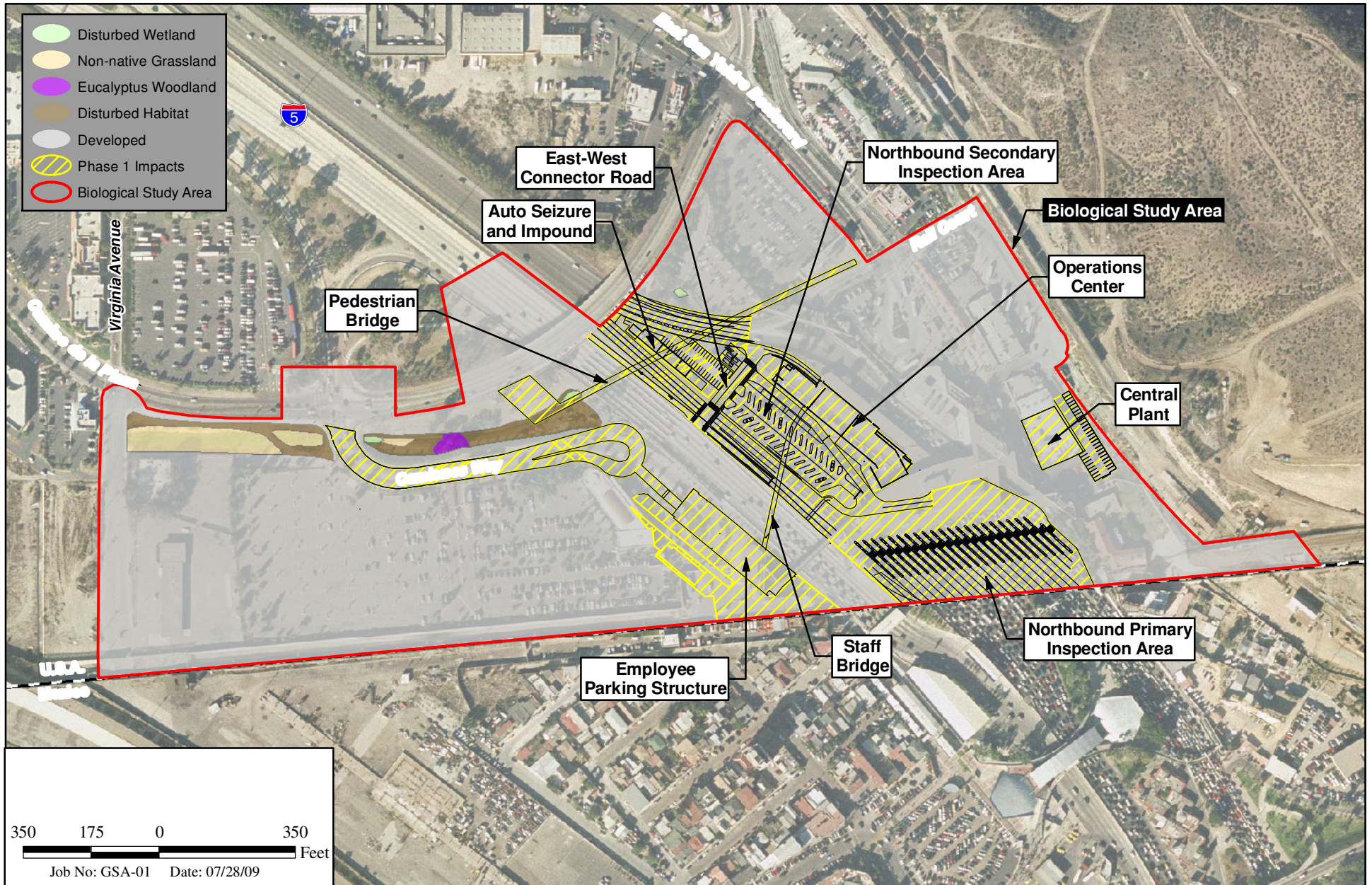
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Phase 3 Vegetation Impacts - Preferred Alternative

SAN YSIDRO LAND PORT OF ENTRY IMPROVEMENTS

Figure 3.14-4 (Revised)

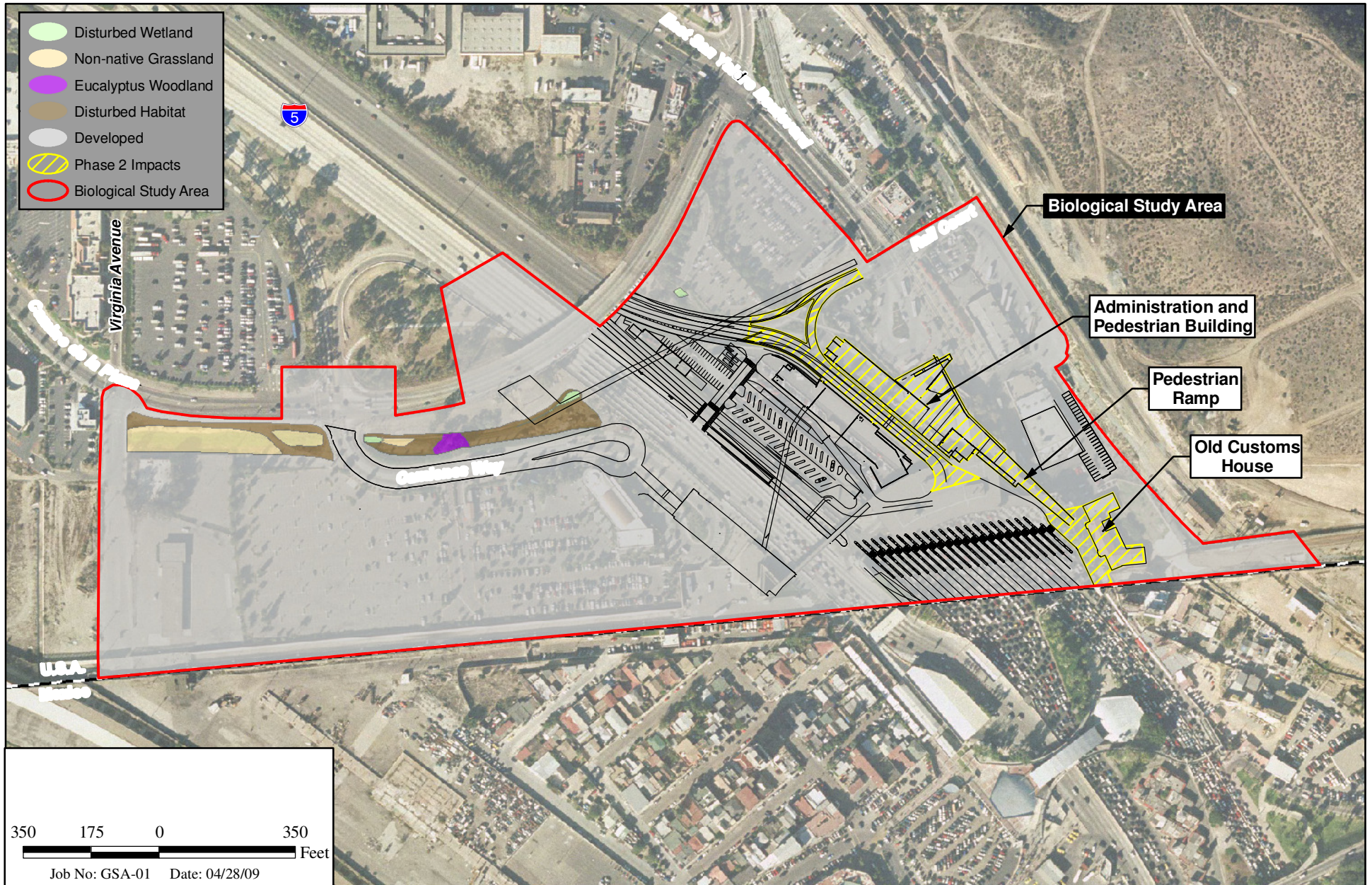


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Phase 1 Vegetation Impacts - Pedestrian Crossing Alternative

SAN YSIDRO LAND PORT OF ENTRY IMPROVEMENTS

Figure 3.14-5 (Revised)

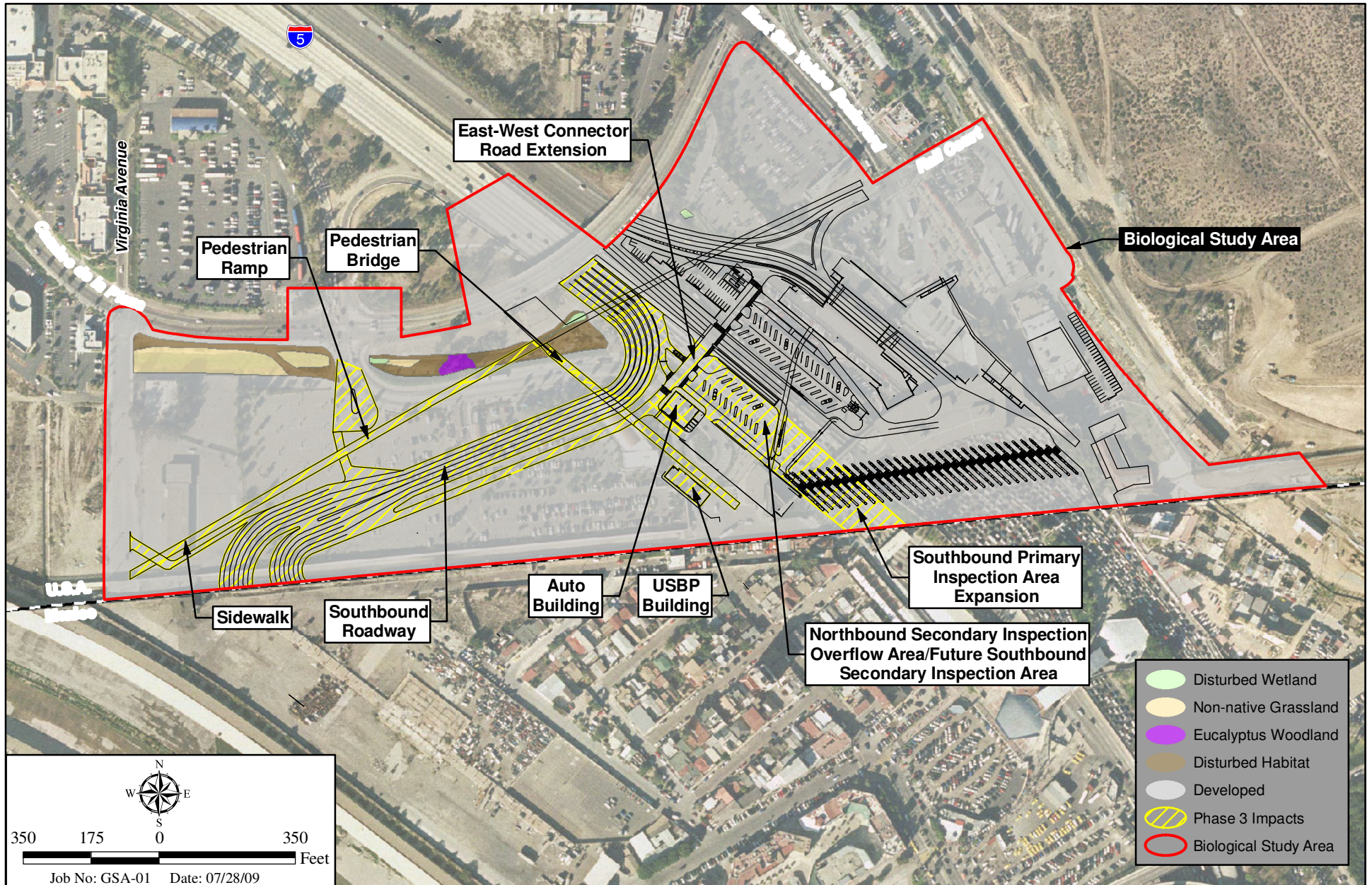


Phase 2 Vegetation Impacts - Pedestrian Crossing Alternative

SAN YSIDRO LAND PORT OF ENTRY IMPROVEMENTS

Figure 3.14-6

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Phase 3 Vegetation Impacts - Pedestrian Crossing Alternative

SAN YSIDRO LAND PORT OF ENTRY IMPROVEMENTS

Figure 3.14-7 (Revised)

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ADDITIONAL IMPACTS

3.15 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

NEPA requires a discussion of a project's relationship of local short-term impacts and use of resources to the maintenance and enhancement of long-term productivity in 40 CFR Section 1502.16 (Environmental Consequences) of the CEQ Regulations. A discussion of the Project alternatives and the No Build Alternative is provided below.

3.15.1 Preferred Alternative

The Preferred Alternative would involve short-term construction activities that would be necessary for the attainment of short-term and long-term transportation and economic objectives associated with an improved border crossing facility. The local short-term impacts and use of resources by the Preferred Alternative are consistent with the maintenance and enhancement of long-term productivity for the San Diego/Tijuana region and beyond. The following short-term and long-term losses and benefits would occur:

Short-term losses would include:

- Economic losses experienced by businesses affected by relocation and by reduced access and parking during construction;
- Temporary construction impacts such as noise, air quality, motorized and non-motorized traffic delays or detours;
- Brief interruptions in utility service where relocation or connections would be required;
- Interruptions in border crossings where temporary lane obstructions would be required during construction; and
- Visual impacts from construction activities.

Short-term benefits would include:

- Increased jobs and revenue generated during construction.

Long-term losses would include:

- Use of construction materials and energy; and
- Possible loss of the NRHP-listed Old Customs House.

Long-term benefits would include:

- Reduction in wait times at the San Ysidro LPOE and potentially the Otay Mesa LPOE, improving the free movement of passenger vehicles and people;
- Reduced air emissions due to shorter idling times;
- Improved connections for cross-border travelers to existing multi-modal transportation options near the LPOE;

- Improvement in security and the ability to conduct inspections at the San Ysidro LPOE;
- Improved productivity, as people spend less time waiting to cross the border and more time working and other productive pursuits; and
- Reduction in energy consumption due to reduced wait times at the San Ysidro LPOE and use of energy efficient and sustainable design features at the improved LPOE.

3.15.2 Pedestrian Crossing Alternative

Although the Pedestrian Crossing Alternative would entail a different cross-border pedestrian circulation scheme, it would occur within the same Project Study Area as the Preferred Alternative, and would be expected to result in similar short- and long-term impacts and benefits. The exceptions would be: (1) the long-term benefit identified above with respect to improved connections for cross-border travelers to existing multi-modal transportation options near the LPOE; and (2) the possible long-term loss of the Old Customs House.

Under the Pedestrian Crossing Alternative, a single southbound pedestrian crossing would be provided at its existing location. The two new southbound pedestrian crossings proposed under the Preferred Alternative would not be constructed, which would result in a less desirable pedestrian circulation pattern. Provision of only one southbound pedestrian crossing would result in greater walking distances to the southbound border crossing.

Like the Preferred Alternative, the Pedestrian Crossing Alternative would remove Camiones Way, and would replace it with a small turn-around at the south leg of the Camino de la Plaza/I-5 off-ramp intersection, where Camiones Way currently extends from Camino de la Plaza. The new turn-around would function as a transit and privately owned vehicle drop-off area; however, it would be a smaller facility than the proposed facility along Virginia Avenue under the Preferred Alternative and would not include any loading areas.

The Pedestrian Crossing Alternative also would not provide direct connections between transit and pedestrian facilities. The east-west pedestrian bridge within the LPOE would land on the north side of the East San Ysidro Boulevard/I-5 freeway ramp intersection (instead of at the San Ysidro Intermodal Transportation Center as described for the Preferred Alternative), requiring pedestrians to cross the busy intersection to and from the San Ysidro Intermodal Transportation Center located across the street. Furthermore, those utilizing transit at the shortened Camiones Way turn-around would have longer walking distances to and from the border crossing compared to the Preferred Alternative. As a result, the Pedestrian Crossing Alternative would not provide the improved mobility for pedestrians that the Preferred Alternative would create. Overall, the identified long-term benefit of the Preferred Alternative would not be realized under the Pedestrian Crossing Alternative.

On the other hand, the Old Customs House would be retained under the Pedestrian Crossing Alternative. Therefore the identified possible long-term loss of the Old Customs House would not occur under the Pedestrian Crossing Alternative.

3.15.3 No Build Alternative

The No Build Alternative would offer none of the benefits nor have any of the losses listed above. It would, however, not resolve worsening congestion at the LPOE.

3.16 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROJECT

3.16.1 Preferred Alternative

Implementation of the Preferred Alternative would involve a commitment of a range of natural, physical, human, and fiscal resources. Proposed activities include the demolition of most of the existing LPOE facility and the construction of new border crossing facilities. Considerable amounts of fossil fuels, labor, and construction materials such as cement, aggregate, and bituminous material would be expended in demolition and construction activities. Additionally, large amounts of labor and natural resources would be used in the making of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use would not have an adverse effect upon continued availability of these resources.

Land used in the construction of the proposed facility is considered an irreversible commitment during the time period that the land is used for a border facility. However, most of the subject land consists of the existing LPOE that is already committed for such uses. Additional land currently used for commercial uses would also be converted to border crossing facilities. These commercial uses would be acquired and/or relocated in accordance with federal regulations. It is anticipated that displaced businesses relocated within the community would generate higher tax revenues due to higher assessed property values at the new locations, which would compensate for any initial loss of tax revenues. In addition, increased economic activity throughout the region as a result of implementation of the Preferred Alternative would be expected to further offset any temporary loss in property tax revenue from the parcel acquisitions. If a greater need arises for use of the land, or if the border facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion would ever be necessary or desirable, particularly given the regional importance of the San Ysidro LPOE.

Implementation of the Preferred Alternative potentially could result in the loss of the historic Old Customs House, which is listed on the NRHP. The Preferred Alternative may affect this resource to accommodate a planned southbound pedestrian crossing. Per Section 106 of the NHPA, GSA is currently in consultation with the SHPO, Advisory Council on Historic Preservation, and other parties regarding the potential future use of the Old Customs House.

Construction would also require a substantial one-time expenditure of federal funds, which are not retrievable; this would be partially offset by savings in energy and time. In addition to the costs of construction, there would be costs for maintenance and personnel. The commitment of these resources is based on the concept that residents in the immediate area, region, and state would benefit from the improved quality and efficiency of the San Ysidro LPOE. These benefits would consist of improved accessibility, greater safety, reduced energy use and time savings, which are expected to outweigh the commitment of these resources.

3.16.2 Pedestrian Crossing Alternative

Although the Pedestrian Crossing Alternative would entail a different cross-border pedestrian circulation scheme, it would occur within the same Project Study Area as the Preferred Alternative, and would be expected to result in a similar commitment of resources. Implementation of the Pedestrian Crossing Alternative, however, would not result in the loss of the historic, NRHP-listed Old Customs House, because the LPOE's southbound pedestrian crossing would remain at its current location. The Pedestrian Crossing Alternative would still

require the interior renovation of the Old Customs House to accommodate the temporary use of this building for pedestrian processing operations during construction of the new Administration and Pedestrian Building in Phase 2, but the irretrievable loss of this historical resource would not occur.

3.16.3 No Build Alternative

The No Build Alternative would not require irreversible and irretrievable commitments of resources.

3.17 CUMULATIVE IMPACTS

3.17.1 Regulatory Setting

CEQ regulations implementing NEPA require federal agencies to analyze cumulative effects of their actions on the environment. In accordance with 40 CFR, Section 1508.7 of the CEQ Regulations, cumulative impacts are defined as:

The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions.

Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time. Cumulative impacts on resources in the Project area may result from the impacts of the Project together with other past, present, and reasonably foreseeable projects, such as residential, commercial, industrial, and other development. These land use activities may result in cumulative effects on a variety of natural resources, such as species and their habitats, water resources, and air quality. They also can contribute to cumulative impacts on the urban environment, such as changes in community character, traffic patterns, noise, housing availability, and employment.

3.17.2 Affected Environment

The analysis of cumulative impacts follows the process in the CEQ's *Considering Cumulative Impacts under NEPA* (CEQ 1997). The following 11 steps served as guidance for identifying and assessing cumulative impacts:

1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.
2. Identify the geographic boundaries of the analysis.
3. Identify the time frame for the analysis.
4. Identify other actions that have contributed or may contribute to cumulative effects.
5. Characterize the components and status of the environment.
6. Characterize the stresses on the environment.
7. Define a baseline condition for the environment.
8. Identify important cause-and-effect relationships.
9. Determine the magnitude and significance of the cumulative effects.
10. Modify or add alternative actions.
11. Monitor cumulative effects of the selected alternative.

Cumulative Issues

Based on methodologies contained in the CEQ's *Considering Cumulative Impacts under NEPA* (CEQ 1997), the cumulative analysis in this subchapter addresses the issues of traffic and air quality. Project impacts on other issues/resources would not contribute to adverse cumulative

effects. A brief explanation of why the Project would not contribute to cumulative effects of other environmental issues is provided below.

Land Use

No adverse land use impacts would occur with implementation of the Project build alternatives (see Subchapter 3.1, Land Use). Presumably, all cumulative projects in the SYCP Area also would be designed to be consistent with all relevant local, state, and federal plans and policies, or could require plan amendments to avoid or mitigate potential impacts. Overall, no associated adverse cumulative land use impacts would be anticipated.

Community Character

The SYCP Area, inclusive of the Project Study Area, does not experience a high level of community cohesion due to the existing border facilities, functions, and associated activities. The SYCP Area is furthermore divided by transportation corridors that traverse the community, including the I-5, I-805, and trolley line. The Project would be consistent with the existing SYCP, and would not further divide the established community. On the contrary, the Project would construct facilities that could restore some connectivity and mobility between the divided eastern and western sides of the community, specifically a pedestrian bridge that would span the I-5 and LPOE. Furthermore, the Project would replace existing border facilities with new ones. Development of the cumulative projects (as identified below under Cumulative Projects), which primarily consist of mixed-use, residential, commercial retail uses, would generally be compatible within the developed community. Because the Project would not change land uses and facility types, its cumulative effect on community character, together with the identified cumulative projects, would not contribute to associated adverse cumulative impacts.

Visual/Aesthetics

The Project Study Area is located in an area that is largely developed. The development of the Project (either build alternative), in combination with other identified cumulative projects (as identified below under Cumulative Projects) in the Project viewshed (refer to Figure 3.5-1), would cause incrementally more visual change in the viewshed than the Project would alone. A total of 11 cumulative projects are located within the Project viewshed. These include several infill mixed-use, residential, and commercial retail projects, as well as one public roadway project, within the developed portion of the viewshed. The larger mixed-use projects would be the most visible and would result in the highest level of change within the Project viewshed. The smaller infill projects and one roadway project would not be highly noticeable within the existing visual environment. Taken together, the cumulative projects would result in a low to moderate level of change in the viewshed given the existing developed visual environment and the similarity between existing and proposed land uses.

Additionally, the Project would replace existing border facilities with new border facilities. Views and viewer response to the Project would be similar to the existing condition since land uses and facility types would not substantially change. Therefore, the Project's contribution to visual change within the viewshed would not result in adverse cumulative visual effects.

Cultural Resources

As discussed in Subchapter 3.6, Cultural Resources, the Preferred Alternative would impact the Old Customs House, which is listed on the NRHP. Pursuant to Section 106 of the NHPA, GSA

is currently in consultation with the SHPO, Advisory Council on Historic Preservation, and other parties regarding the potential future use of the Old Customs House. The development of the identified cumulative projects (as identified below under Cumulative Projects) would not adversely affect any listed cultural or historical resources. Since no other resources within the SYCP Area would be affected, Project effects on historical resources would not contribute to adverse cumulative cultural resources impacts.

Water Quality/Hydrology/Floodplain

Implementation of the Project would result in the generation of short- and long-term contaminants, and would contribute to cumulative water quality impacts in downstream receiving waters, including the Tijuana River and Estuary. Identified short- and long-term Project-specific water quality impacts would be reduced through conformance with existing regulatory permit requirements (i.e., NPDES Construction Permit and associated City Storm Water Standards) and incorporation of BMPs. Because it would not be possible for these efforts to completely eliminate the generation of contaminants, the Project would incrementally contribute to cumulative water quality impacts. These cumulative impacts are not considered adverse, however, based on the following considerations: (1) all identified Project-level water quality impacts would be avoided or reduced through site-specific Project design features and conformance with existing regulatory requirements; and (2) the Project and identified cumulative projects are subject to the same water quality standards intended to limit urban runoff contaminants, conform with Basin Plan water quality objectives and beneficial uses, and address regional (i.e., cumulative) water quality impacts on a watershed-wide basis, and therefore would be required to implement measures to minimize water quality impacts as well.

The Project would not result in hydrology or flooding impacts related to drainage alteration, increased runoff volumes/velocities, storm drain capacity due to proposed design elements (refer to Subchapter 3.7, Hydrology and Floodplain). Presumably, all cumulative projects in the SYCP Area would be designed to accommodate their runoff volumes and velocities by constructing appropriate facilities such that drainage basins and storm drain systems are not adversely impacted. Therefore, no associated adverse impacts would occur.

Geology and Soils

All potential Project-specific geotechnical impacts would be avoided or reduced through conformance with geotechnical recommendations and established regulatory requirements. Potential geology and soils effects are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other planned or proposed development.

Paleontology

As described in Subchapter 3.10, Paleontology, all potential Project-specific impacts to paleontological resources would be effectively avoided or addressed through identified mitigation measures. Cumulative projects (as identified below under Cumulative Projects) would be subject to similar analysis and (if applicable) similar mitigation requirements for paleontological resources (pursuant to applicable regulatory guidelines).

The importance of individual paleontological resources is related to the inherent scientific data and associated research value. Information gained from the paleontological monitoring program within the Project Study Area and other locations having paleontological resource impacts would

be presented in reports and filed with appropriate regulatory agencies and scientific institutions with permanent paleontological collections, such as the San Diego Natural History Museum. Any fossils collected during Project grading or grading of cumulative projects also would be curated at such a scientific institution and would be available to other paleontologists for further study. Based on the required compliance of both the Project and applicable cumulative projects with monitoring, collection, and analysis requirements for paleontological resources, the Project would not result in adverse cumulative paleontological resource impacts.

Hazardous Waste/Materials

As described in Subchapter 3.11, Hazardous Waste/Materials, Project-specific impacts to hazardous waste/materials would be reduced through conformance with applicable regulatory requirements and implementation of appropriate mitigation measures. Similar measures would be required of other projects in the vicinity that contain or are adjacent to known hazardous materials sites. As a result, adverse cumulative impacts related to the increased exposure of people to public health and safety risks from hazardous materials would not occur.

Biological Resources

The Project would not impact sensitive biological habitat (refer to Subchapter 3.14, Biological Resources), and therefore, would not cumulatively contribute to the loss of habitat region wide. The Project would impact a small area of non-wetland WUS (0.07 acre under the Preferred Alternative and 0.5 acre under the Pedestrian Crossing Alternative), but implementation of compensatory mitigation would ensure that the Project's contribution would not result in adverse cumulative impacts to biological resources.

Cumulative Study Areas

The area of cumulative effect varies depending on the resource issue analyzed. The cumulative air quality study area for the Project encompasses the SYCP Area (refer to Figure 3.1-1), while the cumulative traffic study area includes roadway segments, freeway segments, and intersections that are likely to be affected by the Project. The traffic study area, shown in Figure 3.4-1, includes 11 roadway segments, eight freeway segments, and nine intersections within an approximately 1.25-mile radius of the San Ysidro LPOE within the U.S. These segments and intersections include:

Roadway Segments

- East Beyer Boulevard, north of East San Ysidro Boulevard
- Camino de la Plaza, from Virginia Avenue to the I-5 southbound ramps
- Camino de la Plaza, from the I-5 southbound ramps to East San Ysidro Boulevard
- Camiones Way, south of Camino de la Plaza
- East San Ysidro Boulevard, from Olive Drive to the I-805 southbound ramps
- East San Ysidro Boulevard, from the I-805 southbound ramps to the I-805 northbound ramps
- East San Ysidro Boulevard, from the I-805 northbound ramps to Border Village Road (north)
- East San Ysidro Boulevard, from Border Village Road (south) to Camino de la Plaza
- Via de San Ysidro, from East San Ysidro Boulevard to the I-5 northbound ramps
- Via de San Ysidro, from the I-5 northbound ramps to I-5 the southbound off-ramp
- Via de San Ysidro, from the I-5 southbound off-ramp to Calle Primera

Freeway Segments

- I-5, from Dairy Mart Road to Via de San Ysidro (northbound and southbound)
- I-5, from Via de San Ysidro to the I-805 interchange (northbound and southbound)
- I-5, from the I-805 interchange to East San Ysidro Boulevard (northbound)
- I-5, from the I-805 interchange to the Camino de la Plaza on-ramp (southbound)
- I-5, from East San Ysidro Boulevard to the international border (northbound)
- I-5, from Camino de la Plaza on-ramp to the international border (southbound)
- I-805, from the SR-905 interchange to East San Ysidro Boulevard (northbound and southbound)
- I-805, from East San Ysidro Boulevard to the I-5 interchange (northbound and southbound)

Intersections

- Via de San Ysidro/Calle Primera
- Via de San Ysidro/I-5 southbound off-ramp
- Via de San Ysidro/I-5 northbound ramps
- East San Ysidro Boulevard/I-805 southbound ramps
- East San Ysidro Boulevard/I-805 northbound ramps
- East San Ysidro Boulevard/East Beyer Boulevard
- East San Ysidro Boulevard/I-5 northbound ramps
- Camino de la Plaza/I-5 southbound ramps
- Camino de la Plaza/Virginia Avenue

Cumulative Projects

Current and reasonably foreseeable projects in the SYCP Area are identified in Table 3.17-1. Information on these projects was obtained through consultation with City planners familiar with past, present, and reasonably foreseeable projects in the area surrounding the Project site, as well as review of available environmental documentation. Table 3.17-1 provides a summary of the public and private development projects within the SYCP Area. Refer to Figure 3.1-3 for the location of these identified cumulative projects.

Specifically, there are 25 projects in the SYCP Area that have been recently constructed, are under construction, are in various stages of processing/review by the applicable lead agency, or are currently planned for development. These cumulative projects largely consist of a mixture of residential, commercial office, retail, and institutional land uses. Cumulative projects also include a medical facility and roadway improvements.

In addition to these projects within the SYCP Area, there is one proposed border project to the east within the community of Otay Mesa, which entails construction of a new four-lane freeway (SR-11), and a new LPOE at east Otay Mesa. A Presidential Permit has been granted following the completion of a Program Environmental Impact Report/Program EIS for this project to select the preferred project location. A Tier II environmental document is currently being prepared to evaluate alternative designs for SR-11 and the new LPOE. This LPOE is planned to serve passenger and commercial vehicles, as well as pedestrians, and may be a toll facility. This new LPOE is expected to help alleviate congestion at the San Ysidro and Otay Mesa LPOEs and has been shown to be needed with or without the Project (GSA 2008). For this reason, this additional project, although located outside of the cumulative study area for traffic and air quality, has been considered in the cumulative analysis.

Similarly, planned improvements at the existing Otay Mesa LPOE are anticipated to nearly double the number of lanes for non-commercial border crossers, as well as significantly increase this LPOE's capacity to process commercial traffic by 2015. As in the case of the new Otay Mesa East LPOE, this project has been considered in the present Project cumulative

analysis because it is expected to help alleviate congestion at the San Ysidro LPOE and has been shown to be needed with or without the Project (GSA 2008).

Table 3.17-1 CUMULATIVE PROJECTS IN THE SYCP AREA				
No.¹	Project Name	Location	Type	Description
1	Las Palmas	122 Alverson Road	Single and Multi-family Residential	Demolish existing structures and construct 17 rental units – 16 multi-family units and one single family residence. Permits were issued.
2	El Pedregal Apartments	104 Averil Road	Multi-family Residential	Site Development Permit for 44 rental apartments and one manager apartment, and a 1,200-square-foot community center on a 2.26-acre site.
3	Verbena Apartments	3774 Beyer Blvd.	Residential	80-unit affordable housing complex.
4	San Ysidro Health Center	4004, 4050 Beyer Blvd.	Medical	25,000 square-foot medical facility. Under construction.
5	Villas Andalucia	4225 Beyer Blvd	Multi-family Residential	24 dwelling units on a 1.47-acre site.
6	Blackshaw Lane Villas	549 Blackshaw Lane	Residential	11-12 condo units on a 0.94-acre site. Requires Community Plan Amendment
7	Vista Lane Villas	3481 Vista Lane	Multi-family Residential	Community Plan amendment, Planned Development Permit, Rezone, and Tentative Map to construct 38 units on a 1.92-acre site.
8	Mission Villas	3515 Vista Lane	Residential	14 condominiums on a 1.92-acre site. Requires Community Plan Amendment.
9	7 th Day Adventist Church	521 Blackshaw Lane	Community	Conditional Use Permit amendment for a 5,943 square-foot addition to existing church on a 1.88-acre site.
10	Camino de la Plaza	Along Camino de la Plaza	Public Improvement	Current street improvements including sidewalks, curbs and gutters, streetlights, and benches.
11	4191 Camino de la Plaza	4191 Camino de la Plaza	Retail	New 1-story storefront and trash enclosure for future restaurant at existing mall
12	815 W. San Ysidro Blvd.	815 W. San Ysidro Blvd.	Multi-family Residential	22 multi-family units.
13	Tuscan Villas	517 W. San Ysidro Blvd.	Multi-family Residential	17 multi-family units.
14	1010 W. San Ysidro Blvd.	1010 W. San Ysidro Blvd.	Single Family Residential	125 single family dwelling units.
15	Pilot Village – Mi Pueblo	W. San Ysidro Blvd., between Cottonwood and I-805	Mixed-use	Mixed-use development on a 14-acre site with approximately 1,000 new housing units and 150,000 square feet of retail/commercial space, parking, park land, and civic space.
16	Pilot Village – Living Rooms at the Border	114 West Hall Ave.	Mixed-use	Mixed-use development and rehabilitation of a historic church into a community facility and higher density affordable rental housing.
17	Pilot Village – Willow Road Mixed Use	120 Willow Road	Mixed-use	Approximately 3,100 square feet of retail/commercial and 36 multi-family residences.
18	1975 1/3 Smythe Ave.	1975 1/3 Smythe Ave	Residential	Planned Development Permit to develop a 4.35-acre parcel into 40 residential condominiums.
19	129 W. San Ysidro Blvd.	129 W. San Ysidro Blvd.	Industrial	Approximately 1,800 square feet of warehouse.
20	151 W. San Ysidro Blvd.	151 W. San Ysidro Blvd.	Commercial	Commercial building on vacant lot.
21	198 W. San Ysidro Blvd.	198 W. San Ysidro Blvd.	Community	One-story firehouse.
22	Ponce de Leon Duplex	344 Sunrise Drive	Residential	Two-story duplex.
23	Las Americas	3905 1/3 Camino de la Plaza	Commercial Retail	67-acre mixed use project.
24	Las Americas West	Southwest corner of Camino de la Plaza and Sipes Lane	Commercial Retail	Approximately 90,000 square feet of retail, a 3,500-square foot fast food restaurant, a 2,000-square foot nursery, and 430 parking spaces.
25	Willow Elementary School	Willow Road	Institutional	Replacing 80,000 square feet, including 43 classrooms, primarily portable buildings.

¹ Number corresponds to location in Figure 3.1-3.

3.17.3 Environmental Consequences

Traffic and Transportation/Pedestrian and Bicycle Facilities

Preferred Alternative

Cumulative traffic impacts were evaluated in the traffic report prepared for the Project, (*San Ysidro Land Port of Entry Border Station Expansion Traffic Impact Study*, April 2009). The cumulative traffic analysis evaluated future traffic conditions in the horizon year (2030), which represents buildout of the San Ysidro community, including the Preferred Alternative and the cumulative projects in Table 3.17-1.

Roadway Segments

The following roadway segments would operate at LOS F under horizon year conditions without the Preferred Alternative:

- Camino de la Plaza, between Virginia Avenue and the I-5 southbound ramps
- East San Ysidro Boulevard, between the I-805 northbound ramps and Border Village Road
- Via de San Ysidro, between East San Ysidro Boulevard and the I-5 northbound ramps
- Via de San Ysidro, between the I-5 southbound off-ramp and Calle Primera

Under the horizon year conditions with the Preferred Alternative, the same roadways would continue to operate at LOS F (refer to Table 3.4-8). Implementation of the Preferred Alternative would not increase traffic volumes on the segment of Via de San Ysidro, between the I-5 southbound off-ramp and Calle Primera.

Traffic volumes on the other segment of Via de San Ysidro (between East San Ysidro Boulevard and the I-5 northbound ramps), as well as the segment of East San Ysidro Boulevard (between the I-805 northbound ramps and Border Village Road) would increase with the Preferred Alternative. However, assuming these roadways would be improved to their ultimate recommended street classifications (as identified in the SYCP) by the horizon year (which is by definition, buildout of the Project area, including roadways), the additional volumes resulting from the Preferred Alternative would not further degrade traffic conditions on these roadways. The segment of East San Ysidro Boulevard would continue to operate at LOS F, but the V/C ratio (i.e., volume compared to the roadway's traffic-carrying capacity) would not increase, and the segment of Via de San Ysidro would operate at LOS C.

The segment of Camino de la Plaza, between Virginia Avenue and the I-5 southbound ramps, however, would continue to operate at LOS F, but with much higher volumes. Accordingly, the Preferred Alternative would result in an adverse cumulative traffic impact to this segment of Camino de la Plaza.

Freeway Segments

Analyzed freeway segments would operate at LOS C or better under horizon year conditions without the Preferred Alternative (refer to Table 3.4-9).

With the Preferred Alternative, northbound I-5, between the international border and the I-805 interchange would degrade from LOS C to E and F during the AM peak period, and northbound

I-805, between the I-5 interchange and East San Ysidro Boulevard would degrade from LOS C to F during the AM peak period (refer to Table 3.4-9). Volumes along this stretch of northbound I-5 and northbound I-805 would increase due to the proposed LPOE improvements, which would increase the processing capacity of northbound traffic crossing the border and merging onto northbound I-5 and I-805. While the Preferred Alternative would result in adverse cumulative traffic impacts to these freeway segments, the benefits of greatly reducing congestion (wait times and vehicle queues) for northbound vehicles crossing the border would offset these impacts.

Intersections

The following intersections would operate at LOS E or F under horizon year conditions without the Preferred Alternative:

- Via de San Ysidro/Calle Primera (LOS F during PM peak period)
- Via de San Ysidro/I-5 northbound ramps (LOS F during PM peak period)
- Camino de la Plaza/I-5 southbound ramps (LOS E during PM peak period)
- Camino de la Plaza/Virginia Avenue (LOS F during PM peak period)

These intersections that would continue to operate at LOS E or F with the Preferred Alternative under horizon year conditions (refer to Table 3.4-10). Although the intersections of Via de San Ysidro/Calle Primera and Via de San Ysidro/I-5 northbound ramps would operate at LOS F during the PM peak hour, the Preferred Alternative would not increase in delays at these two intersections. Delays at Camino de la Plaza's intersections with the I-5 southbound ramps and Virginia Avenue, however, would increase considerably, resulting in adverse cumulative traffic impacts.

Queuing and Wait Times

Under horizon year conditions, wait times for northbound traffic without the Preferred Alternative are forecast to exceed 10 hours several times during the day, which would result in extremely long queues of vehicles waiting to cross the border. With the Preferred Alternative, northbound wait times would be reduced to a maximum of 1.5 hours throughout the day. Wait times for southbound traffic would approach one hour several times during the day both without and with the Preferred Alternative. No reduction in southbound wait times would occur with the Preferred Alternative because currently, only periodic inspections occur for southbound vehicles. No additional southbound inspections are proposed. No associated cumulative traffic impacts would occur.

Pedestrian Crossing Alternative

Although the Pedestrian Crossing Alternative would entail a different cross-border pedestrian circulation scheme, it would occur within the same Project Study Area as the Preferred Alternative, and would be expected to result in the same vehicle traffic volumes, peak hour flows, and distribution. Therefore, cumulative traffic impacts resulting from the Pedestrian Crossing Alternative to roadway segments, freeway segments, and intersections would be the same as those identified for the Preferred Alternative. Adverse cumulative traffic impacts resulting from the Pedestrian Crossing Alternative would include the following:

Roadway Segments

- Camino de la Plaza, between Virginia Avenue and I-5 southbound ramps

Freeway Segments

- Northbound I-5, between the I-805 interchange and East San Ysidro Boulevard
- Northbound I-5, between East San Ysidro Boulevard and the international border

While the Pedestrian Crossing Alternative would result in adverse cumulative traffic impacts to these freeway segments, the benefits of greatly reducing congestion (wait times and vehicle queues) for northbound vehicles crossing the border would offset these impacts.

Intersections

- Camino de la Plaza/Virginia Avenue (PM peak)
- Camino de la Plaza/I-5 southbound ramps (PM peak)

Queuing and Waiting Times

Forecasted wait times for northbound traffic without and with the Pedestrian Crossing Alternative would be the same as identified above under the Preferred Alternative because the number of lanes, inspection booths, and processing facilities would be the same under both build alternatives. No associated cumulative traffic impacts would occur.

No Build Alternative

Under the No Build Alternative, the Preferred Alternative would not be constructed. Traffic volumes on traffic study area roadway segments and intersections would increase as the community is built out. Cumulative traffic impacts would occur to the following roadway segments and intersections under the No Build Alternative:

- Camino de la Plaza, between Virginia Avenue to the I-5 southbound ramps (LOS F)
- East San Ysidro Boulevard, between the I-805 northbound ramps and Border Village Road (LOS F)
- Via de San Ysidro, between East San Ysidro Boulevard and the I-5 northbound ramps (LOS F)
- Via de San Ysidro, between the I-5 southbound off-ramp and Calle Primera (LOS F)
- Via de San Ysidro/Calle Primera (LOS F during PM peak period)
- Via de San Ysidro/I-5 northbound ramps (LOS F during PM peak period)
- Camino de la Plaza/I-5 southbound ramps (LOS E during PM peak period)
- Camino de la Plaza/Virginia Avenue (LOS F during PM peak period)

Additionally, as stated earlier, wait times for northbound traffic at the LPOE are forecast to exceed 10 hours if no improvements are made to the existing LPOE. This would result in extremely long queues of vehicles waiting to cross the border.

Air Quality

Preferred Alternative

Construction Impacts

The Preferred Alternative would be constructed in three phases over a period of approximately four years, with some overlap of phases occurring. Phase 1 is anticipated to begin in winter

2009/2010 with a 18 to 24-month duration. Phase 2 is anticipated to begin in 2011 and take 24 to 30 months. Construction of Phase 3 is estimated to begin as early as 2011, or as late as 2013, depending on the schedule provided by Mexico for their construction of the El Chaparral facility, and would last approximately 20 to 24 months. Emissions from the three construction phases would overlap as their construction phases are anticipated to overlap.

The air quality analysis (*Air Quality Impact Assessment for the San Ysidro Land Port of Entry Improvements Project*, April 2009) evaluated construction emissions by comparing projected annual construction emissions of the Preferred Alternative with *de minimus* thresholds established under 40 CFR Part 93, the General Conformity Rule, which applies to federal projects in nonattainment areas. The SDAB is currently considered a nonattainment area for O₃ and a maintenance area for CO. The *de minimus* thresholds for O₃ precursors (NO_x and VOCs) and CO are 100 tons per year. Annual emissions for each individual phase would be below the *de minimis* thresholds for all pollutants (i.e., 100 tons per year) during construction of the Preferred Alternative (refer to Table 3.12-4). Although all three construction phases would overlap, annual emissions of all pollutants would be less than the *de minimis* thresholds throughout the duration of construction.

However, if multiple cumulative projects (listed in Table 3.17-1) are constructed at the same time, the Preferred Alternative's construction emissions, in combination with emissions generated by the other projects under simultaneous construction, potentially may exceed the *de minimus* thresholds. The Preferred Alternative, therefore, could contribute to an adverse cumulative air quality impact during construction.

Operational Impacts

The Project is included in the 2030 San Diego RTP: Pathways for the Future (Table A.2-Phased Highway Projects – Revenue Constrained Plan, page A-9) approved by SANDAG in 2007. The Project is also included in the SANDAG 2008 RTIP as MPO ID CAL-56, RTP #08-00 (page 36). A conformity determination for both the 2030 RTP and the 2008 RTIP was made by DOT on November 17, 2008. The design concept and scope of the Preferred Alternative is consistent with the project description in the 2030 RTP, the 2008 RTIP, and the assumptions in the SANDAG regional emissions analysis. The Preferred Alternative, therefore, would conform to the SIP.

Based on the CO Hot Spots evaluation conducted for the Preferred Alternative, the predicted CO concentrations due to the Preferred Alternative would be substantially below the 1-hour and 8-hour NAAQS and CAAQS for CO (refer to Table 3.12-6). Furthermore, the estimated truck percentage of ADT traveling in the Project vicinity would not exceed eight percent, which is the threshold of significance established by the USEPA for PM_{2.5} and PM₁₀ impacts. Therefore, the Preferred Alternative would be in conformance with applicable CO and particulate matter standards.

Because the Preferred Alternative would conform to the SIP and applicable CO and particulate matter standards, operational emissions of the Preferred Alternative would not contribute to adverse cumulative air quality impacts.

Global Climate Change

As discussed in Subchapter 2.12, Air Quality, individual projects do not generate enough GHG emissions to significantly influence global climate change, but their incremental contribution combined with any increase of all other sources of GHG may result in cumulative impacts.

The Preferred Alternative is designed to reduce congestion and vehicle time delays by expanding the LPOE at the border. Without the Preferred Alternative, wait times at the border are projected to increase up to 10 hours in the horizon year (2030). Implementation of the Preferred Alternative would reduce projected wait times to a maximum of 1.5 hours throughout the day (*San Ysidro Land Port of Entry Border Station Expansion Traffic Impact Study*, April 2009). Due to the reduction in vehicle hours traveled and improved traffic flow resulting from the Preferred Alternative, it is anticipated that CO₂ emissions at the LPOE would be reduced.

However, the effect of increasing processing capacity of northbound traffic at the LPOE would result in higher volumes of traffic merging onto northbound I-5 and I-805 during peak periods, especially the AM peak. As a result, northbound I-5, between the international border and the I-805 interchange, and northbound I-805, between the I-5 interchange and East San Ysidro Boulevard would experience greater congestion and reduced speeds with the Preferred Alternative, which could generate additional CO₂ emissions. It is anticipated that these additional emissions may be partially or completely offset by the reduced emissions at the LPOE (as described above) because congestion and delays on the freeway segments would be less than existing congestion and delays at the San Ysidro LPOE.

Pedestrian Crossing Alternative

Although the Pedestrian Crossing Alternative would entail a different cross-border pedestrian circulation scheme, it would occur within the same Project Study Area as the Preferred Alternative, and construction (including phasing), operation, and maintenance activities would be similar. The analysis presented above for the Preferred Alternative would apply equally to the Pedestrian Crossing Alternative, and potential cumulative impacts with respect to air quality would be the same. As with the Preferred Alternative, the Pedestrian Crossing Alternative could contribute to an adverse cumulative air quality impact during construction if multiple cumulative projects are simultaneously under construction. No adverse cumulative air quality impacts related to operational emissions or global climate change would occur.

No Build Alternative

Under the No Build Alternative, the proposed improvements to the San Ysidro LPOE would not be constructed. The Preferred Alternative's contribution to easing future traffic congestion would not occur. Since existing traffic congestion would not be reduced, associated air quality impacts also would not be reduced. Regardless, no cumulative impacts are assessed because no construction is proposed.

3.17.4 Avoidance, Minimization, and/or Mitigation Measures

Traffic and Transportation/Pedestrian and Bicycle Facilities

Preferred Alternative

As described in Chapter 1.0, a primary Project goal in support of the Project purpose is to increase the processing capacity and efficiency of the LPOE in response to the need that is created by the current and projected demand for vehicles and persons to cross the border. Thus, the Preferred Alternative does not directly generate a substantial volume of traffic, but would accommodate existing and projected border crossing demand. It would also modify the patterns of traffic flow in the Project area. The purpose and need for the Project does not include local roadway improvements; however, feasible improvements have been identified that may be implemented by others to achieve acceptable LOS, based on commonly accepted local roadway segment and intersection standards. These potential improvements to be implemented by others are described below.

Implementation of the following avoidance, minimization, and mitigation measures would avoid or reduce cumulative traffic impacts to roadway segments and intersections resulting from the Preferred Alternative:

- Widening of the segment of Camino de la Plaza, between Virginia Avenue and the I-5 southbound ramps to four-lane major standards.
- Installation of a traffic signal at the Camino de la Plaza/Virginia Avenue intersection.
- Re-striping of the I-5 southbound ramps at Camino de la Plaza to one southbound left-turn lane, one southbound right-turn lane, one southbound shared through/right-turn lane, and one westbound through lane.

Widening the roadway segment of Camino de la Plaza would increase the roadway capacity and improve the LOS to C in horizon year conditions. Installation of the traffic signal at the Camino de la Plaza/Virginia Avenue intersection would improve the LOS to C in horizon year conditions. Re-striping the I-5 southbound ramps at Camino de la Plaza would improve the LOS to D in horizon year conditions.

As discussed above in Section 3.17.3, the Preferred Alternative would result in adverse cumulative traffic impacts to three freeway segments. There are no avoidance, minimization, or mitigation measures identified that would lessen these impacts; however, the benefits of greatly reducing congestion (wait times and vehicle queues) for northbound vehicles crossing the border would offset these impacts.

Pedestrian Crossing Alternative

Implementation (by others) of the avoidance, minimization and mitigation measures identified above for the Preferred Alternative would avoid or reduce the cumulative traffic impacts to roadway segments and intersections resulting from the Pedestrian Crossing Alternative. As with the Preferred Alternative, there are no avoidance, minimization, or mitigation measures identified that would lessen cumulative impacts to freeway segments, but the large reduction in congestion for northbound traffic crossing through the LPOE would offset these freeway impacts.

No Build Alternative

Cumulative traffic impacts would occur under the No Build Alternative, as discussed above. However, because no action is proposed, no avoidance, minimization, or mitigation measures are required.

Air Quality

Preferred Alternative

Construction

Implementation of the following avoidance, minimization, and mitigation measures would reduce cumulative air quality impacts of the Preferred Alternative resulting from construction activities:

- Water or dust palliative should be applied to exposed soil surfaces at the construction site(s) and equipment as frequently as necessary to control fugitive dust emissions.
- Soil binder should be spread on any unpaved roads used for construction purposes, and all construction parking areas.
- Trucks should be washed off as they leave the construction site(s), as necessary, to control fugitive dust emissions.
- Construction equipment and vehicles should be properly tuned and maintained. Low sulfur fuel should be used in all construction equipment.
- Track-out reduction measures such as gravel pads should be used at access points to minimize dust and mud deposits on roads affected by construction traffic.
- Transported loads of soils and wet materials should be covered prior to transport, or adequate freeboard (space from the top of the material to the top of the truck) should be provided to reduce PM₁₀ and deposition of particulate during transportation.
- Dust and mud that are deposited on paved, public roads due to construction activity and traffic should be removed to decrease particulate matter.
- To the extent feasible, construction traffic should be routed and scheduled to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Grading and earth moving should be suspended when wind gusts exceed 25 mph unless the soil is wet enough to prevent dust plumes.

Global Climate Change

To the extent that it is applicable or feasible, the following measures can help to reduce GHG emissions and potential climate change impacts resulting from the Preferred Alternative:

- Provide landscaping where possible, which reduces surface warming and decreases CO₂ through photosynthesis

- Use lighter color surfaces, such as Portland cement, which helps to reduce the albedo effect (i.e., surface reflectivity of the sun's radiation) and cool the surface
- Use of energy efficient lighting
- Limit idling times on trucks and equipment used during construction

Pedestrian Crossing Alternative

Implementation of the avoidance, minimization and mitigation measures identified above for the Preferred Alternative would reduce the cumulative air quality impacts of the Pedestrian Crossing Alternative.

No Build Alternative

The No Build Alternative would not result in air quality impacts; therefore, no avoidance, minimization, or mitigation measures are required.