

Section 4(f) De Minimis Determination

Section 6009(a) of SAFETEA-LU amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). This revision provides that once the U.S. Department of Transportation (USDDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. FHWA's final rule on Section 4(f) *de minimis* findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to the Department pursuant to 23 USC 326 and 327, including determinations and approval of Section(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

PROJECT DESCRIPTION

In 2010, the City of Encinitas (City) initiated emergency road and slope repair work along Highway 101 at five locations north of Solana Beach (see Figure 1, Regional Location Map, and Figure 2, Vicinity Map) to repair road damage and slope erosion from rain events that were jeopardizing road safety. The City is now proposing permanent restoration to repair and restore the areas outside of the originally approved emergency work limits and to stabilize the eroded slope areas in five locations (Figure 3, Project Site Map, Areas A-E). Project Area E is entirely with City right-of-way (ROW) designated for road use and is therefore not included in the discussion below. The proposed slope and drainage repair activities include:

- Area A: Repair and extend an existing storm drain culvert. A riprap energy dissipater will be constructed at the outfall of the culvert and the 2: 1 slope will be reconstructed around the new culvert.
- Areas B, C, and D: The toe of new road slope will be keyed into existing grade in order to properly reconstruct and stabilize the 2: 1 slope.

All of the road repair work would be conducted from the top of the roadway and all of the equipment would not go further than the toe of slope at each location. The repaired road slopes would be revegetated with transitional coastal sage scrub species compatible with the existing vegetation in the area. A small portion of this permanent restoration work at each

location will extend in to the San Elijo Lagoon Ecological Reserve, a Section 4(f) resource. (See Figure 4, Work Impacts Outside City Right-of-Way).

In addition, the proposed project also incorporates non-road way associated restoration work within the San Elijo Lagoon Ecological Reserve meant to enhance this resource's role as an ecological reserve (See Figures 5A and 5B, Mitigation/Revegetation Treatment Maps). During the 2010 Emergency roadway opening project referenced above, coastal dune and coastal salt marsh portions of the Reserve were disturbed by earth moving equipment and soil removed from the Reserve was used to shore up eroding portions of Highway 101. These previously disturbed areas would be restored to their existing grades and prepped for planting/seeding. All work in these areas would be done using hand labor only. The project would remove non-native/exotic species and replant the disturbed areas with native species appropriate to the coastal dune and coastal salt marsh habitats.

SECTION 4(f) RESOURCE: SAN ELIJO LAGOON ECOLOGICAL RESERVE

The San Elijo Lagoon Ecological Reserve (Reserve) is comprised of approximately 979-acres of habitat and wetland areas that host more than 700 species of plants and animals. It is located in northern San Diego, between Solana Beach and Encinitas, extending inland to Rancho Santa Fe (see Figures 1 and 2). The San Elijo Lagoon itself is over 479 acres in size and is one of San Diego's largest coastal wetlands. It is comprised of a shallow-water estuary that is artificially dissected into basins by Highway 101, the LOSSAN rail corridor, and Interstate 5. In 2007, the County of San Diego, State of California (including California Department of Fish and Wildlife), and San Elijo Lagoon Conservancy (Conservancy) signed a 25-year cooperative agreement for the operation and maintenance of the Reserve. The Conservancy is responsible for protecting and restoring the resources of the Reserve, its watershed, and related ecosystems through activities including land stewardship, habitat restoration, and scientific monitoring. Much of the Reserve is a publicly owned State and County wildlife refuge and park and as such is comprised of lands owned by the State of California, the County of San Diego, and the Conservancy.

Project Areas A, B, C, and D are bordered on the west by the existing South Coast Highway 101 and the Reserve to the north, east and south. South Coast Highway 101 traverses the Reserve in a north-south direction, consisting of disturbed road shoulders with relatively steep side slopes sparsely vegetated with disturbed coastal sage scrub and ruderal species. The repair and restoration work will occur adjacent to Reserve areas that support sensitive wetland and upland habitat for seven vegetation communities and/or land covers, including middle coastal salt marsh, Diegan coastal sage scrub, and coastal strand. The project areas also support habitat for special status plants and wildlife. The wetlands within the Reserve, adjacent to the

project sites, support relatively dense, high quality salt marsh and wetland communities. At Project Area A, an existing 24-inch corrugated metal pipe (CMP) is currently located near the top of the slope and had failed at some previous point in time. The pipe is undermined and currently protrudes approximately 5-feet out from the eroded slope face, into the Reserve. An eroded open channel drainage course occurs at the pipe outfall and intermittently carries drainage runoff to the lagoon. Project Areas B, C, and D have relatively steep eroded slopes at 1:1 or greater. Sand bags, slurry, and other evidence of previous emergency repair work conducted at the top of the slopes to protect the undermined highway are still present in these areas. In general, the slopes along the east side of South Coast Highway 101, adjacent to and within the Reserve consist of steep gradients which contribute to the erosive and unstable condition of the area.

Resources Evaluated Relative to the Requirements of Section 4(f)

This section of the document discusses parks, recreational facilities, wildlife refuges and historic properties found within or next to the project area that do not trigger Section 4(f) protection because either: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

RESTORATION WORK WITHIN SAN ELIJO LAGOON ECOLOGICAL RESERVE

As noted above, the proposed project includes restoration work within the Reserve outside of the roadway footprint. This work does not constitute a use as Reserve lands and would not be, either temporarily or permanently, incorporated into a transportation facility.

De Minimis Determination

As shown on Figure 4, the project would require roadway work within the Reserve. In total, the project would use a total of 0.014-acres along the southwest portion of the lagoon and adjacent to Highway 101 (approximately 0.009-acres at Area A; approximately 0.001-acres at Area B; approximately 0.002 -acres at Area C; and approximately 0.003 -acres at Area D). The project would use less than 0.002% of the total Reserve (see Figure 3). With respect to the functions and values of the Reserve at locations A-C, in these areas the Reserve is somewhat diminished through the evidence of disturbed habitat due to the proximity of these locations to the adjacent road slopes and drainage facilities.

Specifically, the habitat at Area A is characterized by eroded open channel land cover and middle coastal salt marsh vegetation (Figure 6A, Work Areas Vegetation Impact Map). Following the construction activities, the area will be restored with Diegan Coastal Sage Scrub establishment areas, open channel revegetation area, and middle coastal salt marsh enhancement and restoration (Figure 5A, Mitigation/Revegetation Treatment Map).

At Area B, the habitat primarily consists of middle coastal salt marsh at the toe of the slope and Diegan Coastal Sage Scrub at the top of the slope. (Figure 6B, Work Areas Vegetation Impact Map). These habitats will be restored and enhanced through the project efforts (Figure 5A, Mitigation/Revegetation Treatment Map).

Areas C and D consist of habitat primarily characterized as Coastal Strand, which will be restored and enhanced once repairs are completed. (Figure 6B, Work Areas Vegetation Impact Map and Figure 5B, Mitigation/Revegetation Treatment Map). In addition to site-specific habitat establishment, restoration and enhancement activities, the project will also include additional restoration and establishment efforts for the areas between each project site, including the removal of exotic tree and shrub species, and sensitive plant restoration areas. Please refer to Figures 5A and 5B for a complete description of the Mitigation/Revegetation activities proposed as part of the project. Given the minor amount of use and the diminished quality of the Reserve at the project areas, it is clear that the project would not affect the lagoon's ability to continue as an ecological reserve or as a state or county regional park. The project's impacts are therefore considered to be *de minimis* use because they will not adversely affect the activities, features, and attributes that constitute this 4(f) resource.



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SOURCE: USGS 7.5-Minute Series Quadrangle.

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FIGURE 2
Project Vicinity





SOURCES: AERIAL-BING MAPPING SERVICE, SELC BOUNDARY-SAN ELIJO LAGOON CONSERVANCY 2012

FIGURE 4

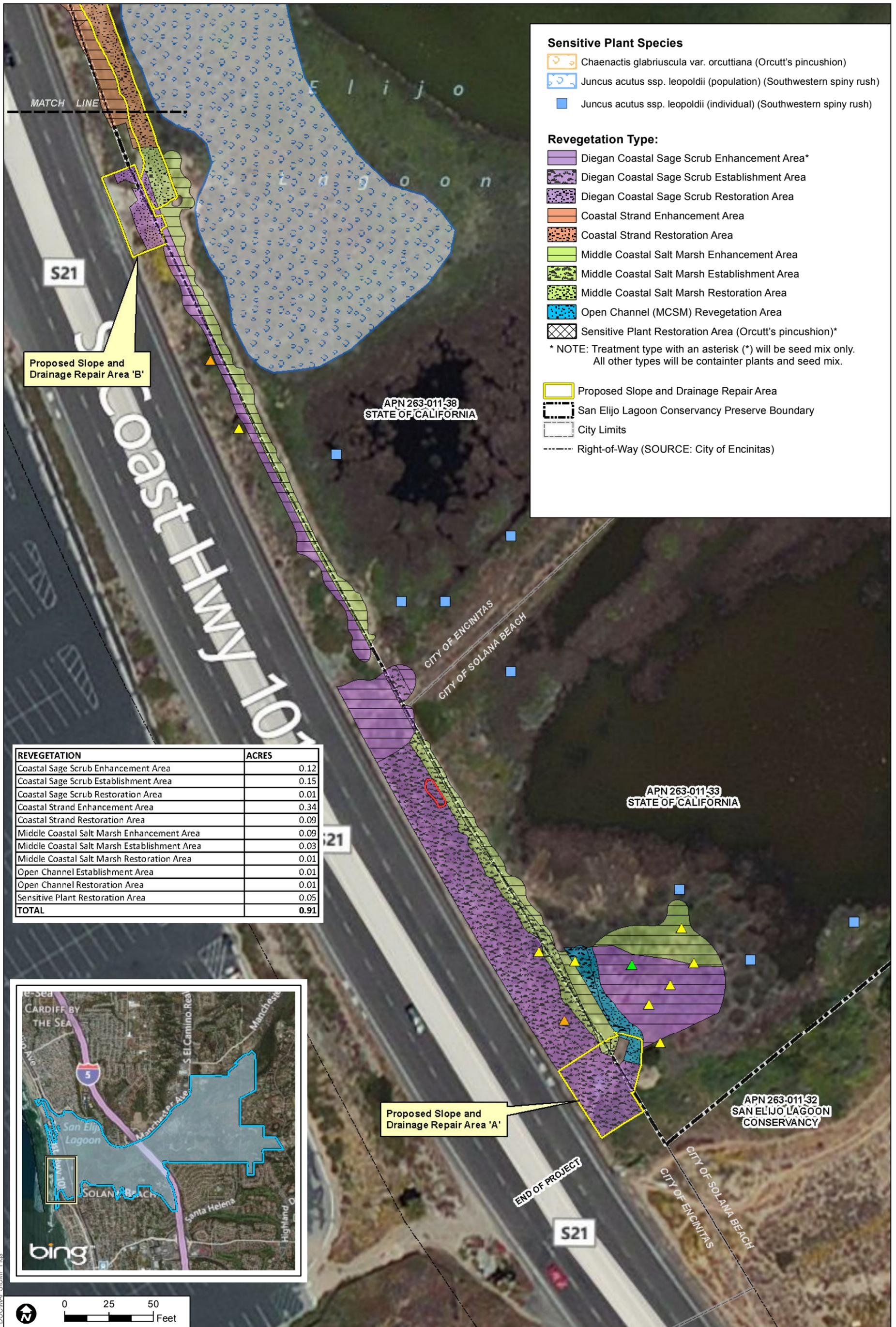
Proposed Slope and Road Repair Project Site Outside of Right-of-Way

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- Sensitive Plant Species**
- Chaenactis glabriuscula var. orcuttiana (Orcutt's pincushion)
 - Juncus acutus ssp. leopoldii (population) (Southwestern spiny rush)
 - Juncus acutus ssp. leopoldii (individual) (Southwestern spiny rush)

- Revegetation Type:**
- Diegan Coastal Sage Scrub Enhancement Area*
 - Diegan Coastal Sage Scrub Establishment Area
 - Diegan Coastal Sage Scrub Restoration Area
 - Coastal Strand Enhancement Area
 - Coastal Strand Restoration Area
 - Middle Coastal Salt Marsh Enhancement Area
 - Middle Coastal Salt Marsh Establishment Area
 - Middle Coastal Salt Marsh Restoration Area
 - Open Channel (MCSM) Revegetation Area
 - Sensitive Plant Restoration Area (Orcutt's pincushion)*

* NOTE: Treatment type with an asterisk (*) will be seed mix only. All other types will be container plants and seed mix.

- Proposed Slope and Drainage Repair Area
- San Elijo Lagoon Conservancy Preserve Boundary
- City Limits
- Right-of-Way (SOURCE: City of Encinitas)

REVEGETATION	ACRES
Coastal Sage Scrub Enhancement Area	0.12
Coastal Sage Scrub Establishment Area	0.15
Coastal Sage Scrub Restoration Area	0.01
Coastal Strand Enhancement Area	0.34
Coastal Strand Restoration Area	0.09
Middle Coastal Salt Marsh Enhancement Area	0.09
Middle Coastal Salt Marsh Establishment Area	0.03
Middle Coastal Salt Marsh Restoration Area	0.01
Open Channel Establishment Area	0.01
Open Channel Restoration Area	0.01
Sensitive Plant Restoration Area	0.05
TOTAL	0.91

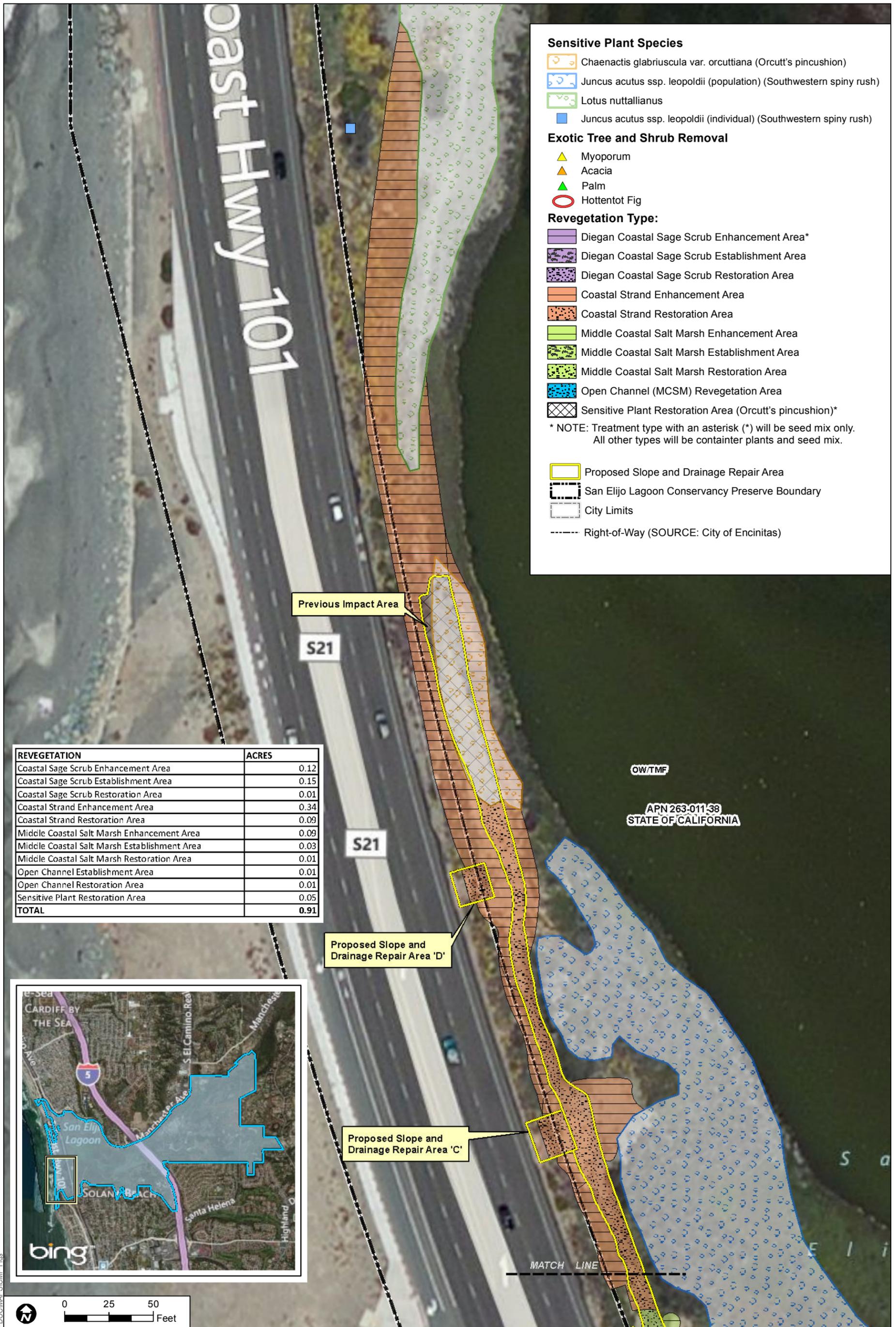


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SOURCES: AERIAL-BING MAPPING SERVICE, SELC BOUNDARY-SAN ELIJO LAGOON CONSERVANCY 2012
VEGETATION: AECOM 2010 AND DUDEK 2012
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FIGURE 5A
Mitigation/Revegetation Treatments Map

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Sensitive Plant Species

- Chaenactis glabriuscula var. orcuttiana (Orcutt's pincushion)
- Juncus acutus ssp. leopoldii (population) (Southwestern spiny rush)
- Lotus nuttallianus
- Juncus acutus ssp. leopoldii (individual) (Southwestern spiny rush)

Exotic Tree and Shrub Removal

- Myoporum
- Acacia
- Palm
- Hottentot Fig

Revegetation Type:

- Diegan Coastal Sage Scrub Enhancement Area*
- Diegan Coastal Sage Scrub Establishment Area
- Diegan Coastal Sage Scrub Restoration Area
- Coastal Strand Enhancement Area
- Coastal Strand Restoration Area
- Middle Coastal Salt Marsh Enhancement Area
- Middle Coastal Salt Marsh Establishment Area
- Middle Coastal Salt Marsh Restoration Area
- Open Channel (MCSM) Revegetation Area
- Sensitive Plant Restoration Area (Orcutt's pincushion)*

* NOTE: Treatment type with an asterisk (*) will be seed mix only. All other types will be container plants and seed mix.

- Proposed Slope and Drainage Repair Area
- San Elijo Lagoon Conservancy Preserve Boundary
- City Limits
- Right-of-Way (SOURCE: City of Encinitas)

REVEGETATION	ACRES
Coastal Sage Scrub Enhancement Area	0.12
Coastal Sage Scrub Establishment Area	0.15
Coastal Sage Scrub Restoration Area	0.01
Coastal Strand Enhancement Area	0.34
Coastal Strand Restoration Area	0.09
Middle Coastal Salt Marsh Enhancement Area	0.09
Middle Coastal Salt Marsh Establishment Area	0.03
Middle Coastal Salt Marsh Restoration Area	0.01
Open Channel Establishment Area	0.01
Open Channel Restoration Area	0.01
Sensitive Plant Restoration Area	0.05
TOTAL	0.91



FIGURE 5B
Mitigation/Revegetation Treatments Map

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Proposed Slope & Drainage Repair Area
Impacted Vegetation Communities/Landcovers
 Disturbed Coastal Sage Scrub (DCSS)
 Disturbed Habitat (DH)
 Open Channel (OC)
 Middle Coastal Salt Marsh - Middle (MCSM)
 San Elijo Lagoon Conservancy Preserve Boundary
 City Limits
 - - - - - Right-of-Way (SOURCE: City of Encinitas)

↑ 0 25 50 Feet



Vegetation Communities/Landcovers
 DCSS, Diegan Coastal Sage Scrub
 DEV, Developed
 DH, Disturbed Habitat
 MCSM, Middle Coastal Salt Marsh
 OC, Open Channel
 OW/TMF, Tidal Mud Flat/Open Water

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AERIAL SOURCE: BING MAPPING SERVICE

FIGURE 6A

Work Areas Vegetation Impact Map

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Proposed Slope & Drainage Repair Area

Impacted Vegetation Communities/Landcovers

- Coastal Strand (CS)
- Disturbed Coastal Sage Scrub (DCSS)
- Developed Land (DEV)
- Middle Coastal Salt Marsh - Middle (MCSM)
- San Elijo Lagoon Conservancy Preserve Boundary
- City Limits
- Right-of-Way (SOURCE: City of Encinitas)

Vegetation Communities/Landcovers

- CS, Coastal Strand
- DCSS, Diegan Coastal Sage Scrub
- DEV, Developed
- DH, Disturbed Habitat
- OW/TMF, Tidal Mud Flat/Open Water
- SCSMM, Coastal Salt Marsh - Mid

0 25 50 Feet

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AERIAL SOURCE: BING MAPPING SERVICE

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FIGURE 6B
Work Areas Vegetation Impact Map

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