

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
619.462.1515 tel
619.462.0552 fax
www.helixepi.com



September 29, 2011

SDS-10.15

Ms. Keli Balo
Environmental Biologist
Engineering and Program Management
Public Utilities Department
City of San Diego
9192 Topaz Way, MS 901A
San Diego, CA 92123

Subject: Time Zero Report for the Central Tecolote Canyon Mitigation Project

Dear Ms. Balo:

This letter addresses the completed installation of the Central Tecolote Canyon Mitigation project, which mitigates for past and future impacts to upland and wetland habitat within Tecolote Canyon Natural Park associated with the maintenance of an existing sewer line and related access paths, as well as with the construction of the East Tecolote Pipe Protection Project.

MITIGATION LOCATION

The Central Tecolote Canyon Mitigation Project is located within Tecolote Canyon Natural Park (Park), an open space area located within a narrow coastal canyon, 0.5 mile to the east of Interstate 5 and 0.8 mile to the east of the Pacific Ocean, in the City of San Diego, California (Figures 1 and 2; Latitude/Longitude 117°11'37.597W/32°48'21.809N). It is traversed by a roughly north to south flowing perennial stream (Tecolote Creek). Generally, the lower elevations of the canyon are characterized by mature riparian vegetation, while the slopes are vegetated by chaparral and coastal sage scrub. The canyon is surrounded by residential development and is bisected by several major roadways including Balboa Avenue, Mount Acadia Boulevard, Snead Avenue, and Boyd Avenue.

Specifically, mitigation is located within the Park between Balboa Avenue and Mount Acadia Boulevard, on land owned by the City (Figure 3) and managed by the Park and Recreation

Department. The majority of the mitigation area is within the boundaries of the City of San Diego (City)'s Multi-Habitat Planning Area.

REQUIRED MITIGATION

The Corps, CDFG, RWQCB, and City require mitigation for impacts to sensitive wetlands and/or upland habitats. Past and future impacts related to sewer line maintenance and construction will require at least 1.6 acres of wetland and 1.3 acres of upland restoration and enhancement. Additional mitigation may be necessary as a result of future emergency projects or unanticipated maintenance and construction.

AS-BUILT CONDITIONS

To meet mitigation requirements, mitigation was implemented per the Contract Drawings for the Central Tecolote Canyon Mitigation Project (HELIX, 2010a and b), with only minor modifications to mitigation boundaries where site conditions required. To allow for future impacts, mitigation was in excess of that required by the resource agencies (Table 1).

**Table 1
MITIGATION CREDITS FOR THE
CENTRAL TECOLOTE CANYON MITIGATION PROJECT¹**

MITIGATION TYPE	TOTAL MITIGATION	MITIGATION CREDIT BY RESOURCE AGENCY		
		City	CDFG	Corps/RWQCB
Diegan coastal sage scrub restoration	1.69	1.69		
Native Grassland restoration	1.36	1.36		
Upland Subtotal	3.05	3.05		
Southern riparian forest enhancement	2.44	2.44	2.44	
Tecolote Creek riparian enhancement	0.95	0.95	0.95	0.95
Wetland Subtotal	3.39	3.39	3.39	0.95
Total Restoration/Enhancement	6.44	6.44	3.39	0.95
Weed Management Area ²	4.50	4.50	4.50	0.61 ³
TOTAL MITIGATION CREDIT	10.94	10.94	7.89	1.56

¹ All mitigation outlined in this table occurs outside of sewer and power line easements.

² 25 percent of the total 18.02-acre Weed Management Area (excluding all utility easements and the 0.25 acre for existing tree of heaven removal located at the south end of the project).

³ 25 percent of an approximately 20-foot wide Corps jurisdictional area occurring along the entire length of the main channel (2.44 acres).

Mitigation installation was initiated in January 2011; during that time, the boundaries of the restoration/enhancement areas were staked by Habitat West, in coordination with a biologist from HELIX Environmental Planning, Inc. (HELIX). Palm tree removal, conducted by

Blackhawk Helicopter and California Tree, was conducted in February and March 2011. All other initial weed removal within all restoration/enhancement areas, as well as the Weed Management Area (WMA) was conducted by Habitat West in February 2011. Irrigation was installed and, to help remove the existing seed bank of non-native plants, several grow/kill cycles were completed for all of the irrigated areas prior to planting. Container plants were installed starting in late June 2011, per the original specifications (Tables 2 through 4) with the following exceptions: (1) only 19 of the specified 68 purple nightshade (*Solanum xanthii*) were available; therefore, it was agreed that that remaining number (49) would be replaced with bladderpod (*Isomeris arborea*), a species which is present on site, (2) most needlegrass (*Nassella* spp.) and creeping wild rye (*Leymus triticoides*) were installed with caging to protect delicate shoots against herbivory by rabbits, and (3) basket bush (*Rhus trilobata*) will be installed in September 2011, after container plantings have grown larger at the nursery.

To facilitate a more natural timing of seed germination, it was determined that seed would not be installed until just prior to the start of the next rainy season (by October 1, 2011); in addition, in order to procure them during the dormant period, cuttings of willow (*Salix* spp.) and mule fat (*Baccharis salicifolia*) would not be collected and installed within the riparian enhancement areas until winter 2012. However, given that all major aspects of the mitigation effort were executed/installed, the 120-day installation period was initiated on July 28, 2011, following a site inspection by the City and HELIX.

Table 2
DIEGAN COASTAL SAGE SCRUB PLANT PALETTE
(1.80 acres)

Scientific Name	Common Name	Number Per Acre	Container Size	Spacing on Center (feet)	Total Number
<i>Artemisia californica</i>	California sagebrush	200	1-gallon	5	334
<i>Eriogonum fasciculatum</i>	California buckwheat	200	1-gallon	5	334
<i>Malosma laurina</i>	laurel sumac	40	1-gallon	10	72
<i>Mimulus aurantiacus</i>	monkeyflower	300	1-gallon	3	501
<i>Opuntia littoralis</i>	coastal prickly pear	25	1-gallon	5	42
<i>Opuntia prolifera</i>	coastal cholla	25	1-gallon	5	42
<i>Rhus integrifolia</i>	lemonadeberry	40	1-gallon	10	72
<i>Salvia mellifera</i>	black sage	200	1-gallon	5	334
<i>Viguiera laciniata</i>	San Diego sunflower	200	1-gallon	5	334
<i>Yucca whipplei</i>	Our Lord's candle	50	1-gallon	5	90
TOTAL					2,155

Table 3 NATIVE GRASSLAND PLANT PALETTE (1.37 acres)					
Scientific Name	Common Name	Number/ Acre	Container Size	Spacing On Center (feet)	Total Number
<i>Isomeris arborea</i>	bladderpod	36	1-gallon	5	49
<i>Mimulus aurantiacus</i>	monkeyflower	50	1-gallon	3	68
<i>Nassella lepida</i>	foothill needlegrass	750	plugs	2	1,027
<i>Nassella pulchra</i>	purple needlegrass	750	plugs	2	1,027
<i>Rhus trilobata</i>	basket bush	50	1-gallon	5	68
<i>Solanum xantii</i>	purple nightshade	14	1-gallon	3	19
<i>Viguiera laciniata</i>	San Diego sunflower	50	1-gallon	5	68
<i>Yucca whipplei</i>	Our Lord's candle	50	1-gallon	5	68
TOTAL					2,394

Table 4 SOUTHERN RIPARIAN FOREST PLANT PALETTE (2.52 acres)					
Scientific Name	Common Name	Number Per Acre	Container Size	Spacing On Center (feet)	Total Number
<i>Artemisia palmeri</i>	San Diego sagewort	100	1-gallon	6	252
<i>Distichlis spicata</i>	saltgrass	500	plugs	6	1,260
<i>Leymus triticoides</i>	creeping wild rye	500	plugs	6	1,260
<i>Isocoma menziesii</i>	goldenbush	60	1-gallon	6	151
<i>Malosma laurina</i>	laurel sumac	60	1-gallon	15	151
<i>Rhus trilobata</i>	basket bush	60	1-gallon	6	151
<i>Sambucus mexicana</i>	blue elderberry	60	1-gallon	15	151
<i>Quercus agrifolia</i>	coast live oak	100	1-gallon	15	252
TOTAL					3,628

Representative photos of the mitigation areas before and after restoration/enhancement installation are provided in Appendix A.

START OF THE FIVE-YEAR MONITORING PERIOD

If all requirements are met on schedule, the 120-day establishment period will end on November 28, 2011 and the 5-year maintenance and monitoring period will be initiated on that date. A brief letter addressing the completion of the establishment period and start of the 5-year maintenance/monitoring will be prepared by HELIX to document the official start of this phase of the mitigation effort.

Regularly scheduled maintenance and monitoring will be conducted during the 120-day establishment period, as well as the 5-year monitoring period, as specified in the Final Conceptual Habitat Restoration Plan (HELIX 2008). Annual technical monitoring to evaluate restoration success will be scheduled in May, at the end of the growing season for most native vegetation within the restoration/enhancement areas. As a result of the off-set timing of the annual assessment (May) and the end of each year of monitoring (the following November), a monitoring memo will be prepared following the assessment and all other data collected will be presented in the annual report, which will not be prepared until after the end of each year of monitoring. Annual reports will include assessments of cover (native and non-native), observations of plant recruitment, lists of wildlife and plant species observed on site, photographic documentation, a discussion of the progress of the restoration effort towards meeting final success criteria, and remedial recommendations, if necessary. In Years 1 and 2, monitoring will only be qualitative and be based on a visual survey of all mitigation areas. In Years 3 through 5, quantitative transect monitoring will be conducted in the 3 restored and enhanced habitats, while the Tecolote Creek riparian enhancement areas and Weed Management Area will continue to be monitored qualitatively. Annual reports will be submitted to Corps, RWQCB, CDFG, and City (Public Utilities Department, Park and Recreation Department, and Development Services Department Mitigation Monitoring Coordination Section) for the duration of the maintenance period.

NOTIFICATION OF COMPLETION

The City of San Diego Public Utilities Department, the responsible party, shall notify the Corps, RWQCB, and CDFG of completion of the mitigation effort through submittal of a Year 5 monitoring report. The agencies will determine final acceptance of the mitigation site. If the success criteria are not being met on site, these agencies will work with the City towards a mutually acceptable alternative solution.

CLOSING

Please contact me if you have any questions regarding the initiation of the 120-day establishment period of this restoration/enhancement effort.

Sincerely,



Sally Trnka
Senior Scientist

Enclosures:

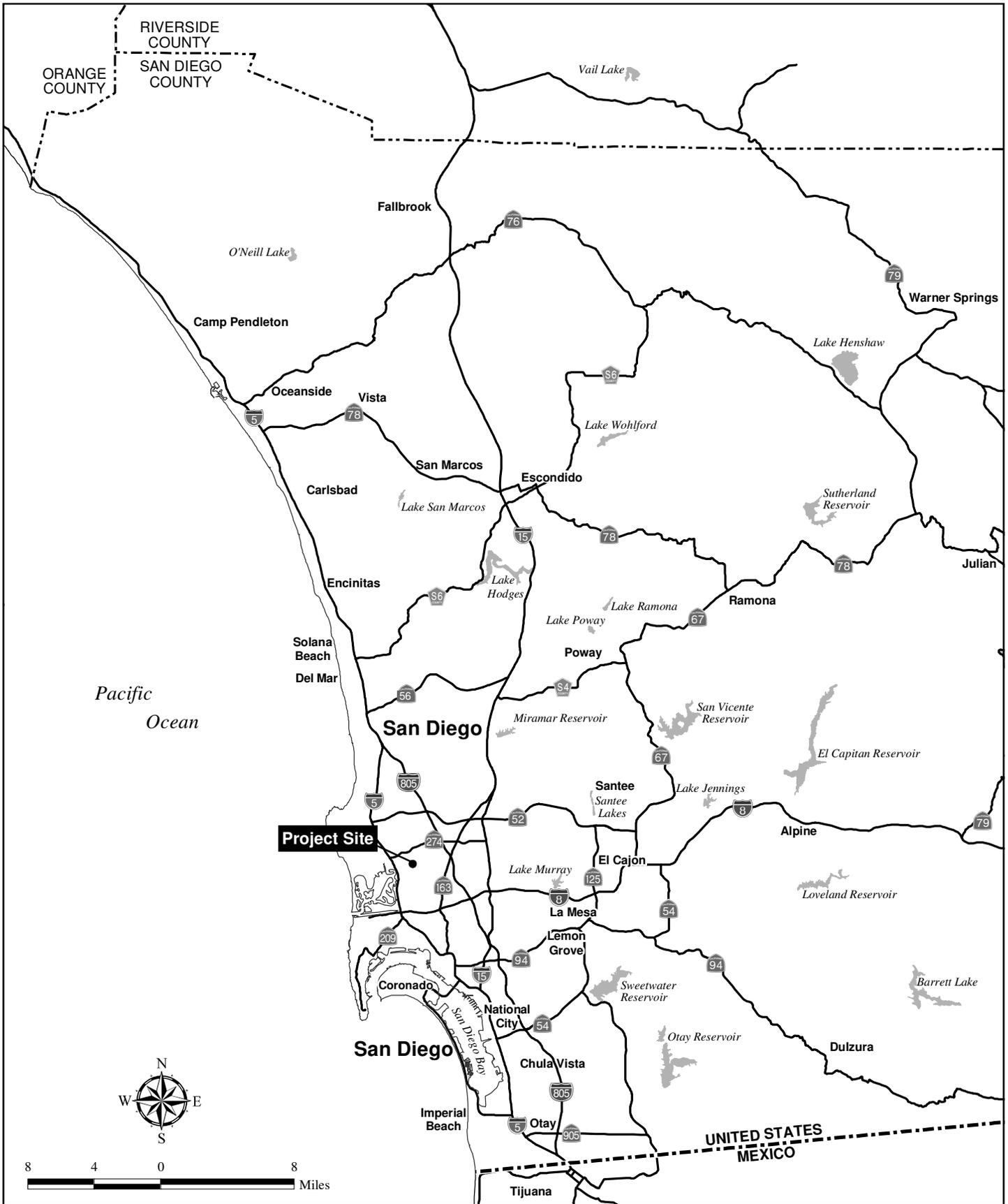
- Figure 1 Regional Location Map
 - 2 Project Location Map
 - 3 Photo Documentation and Transect Locations
- Appendix A Representative Site Photos

REFERENCES

HELIX Environmental Planning, Inc. (HELIX). 2008. Final Conceptual Habitat Restoration Plan for the Central Tecolote Enhancement/Mitigation Project. December 23.

2010a. Contract Drawings for Central Tecolote Canyon Mitigation Project, City of San Diego for Public Utilities Department. January 25.

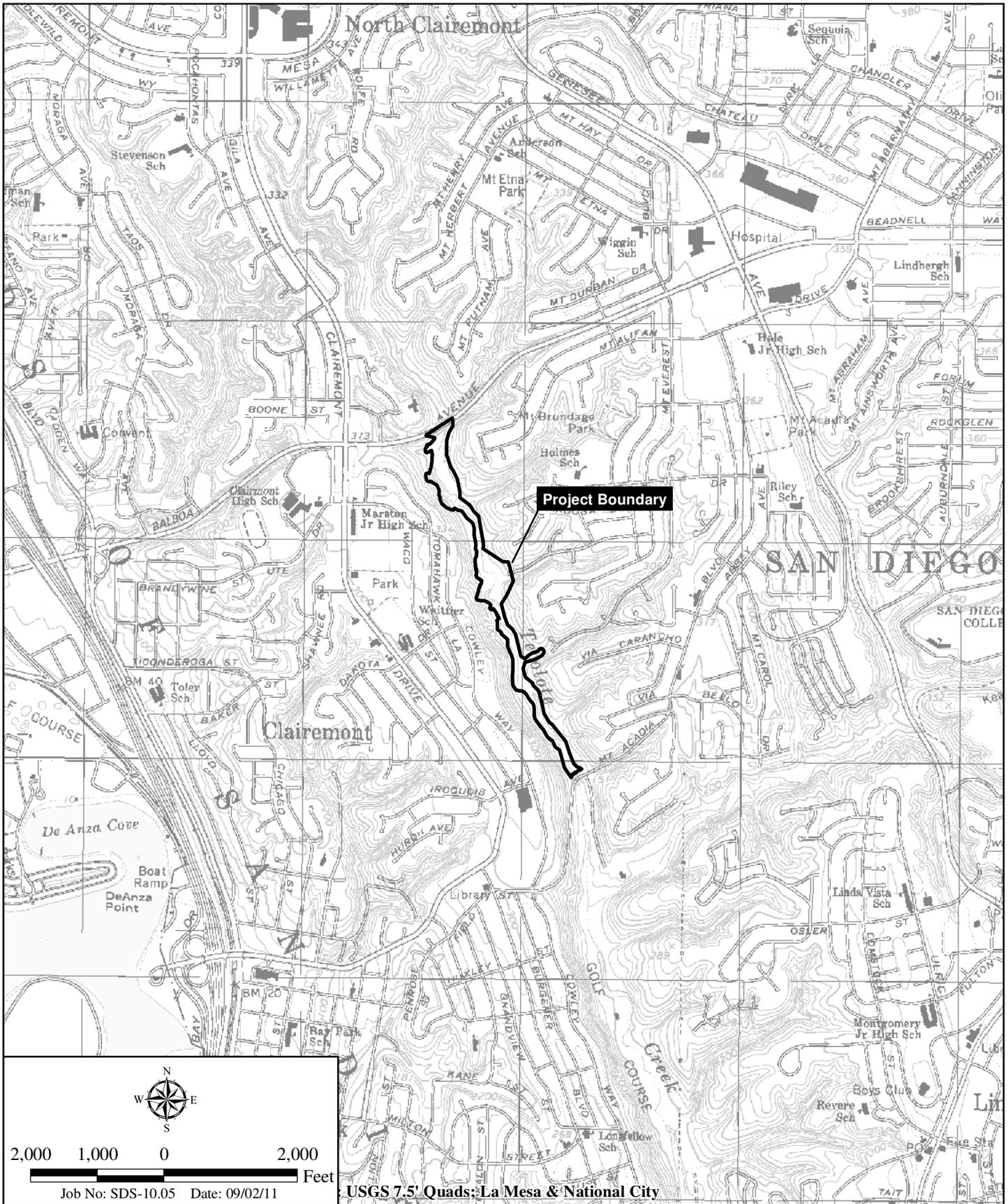
2010b. Mitigation Credit Clarification for the Central Tecolote Canyon Enhancement/Mitigation Project. June 9.



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Regional Location Map

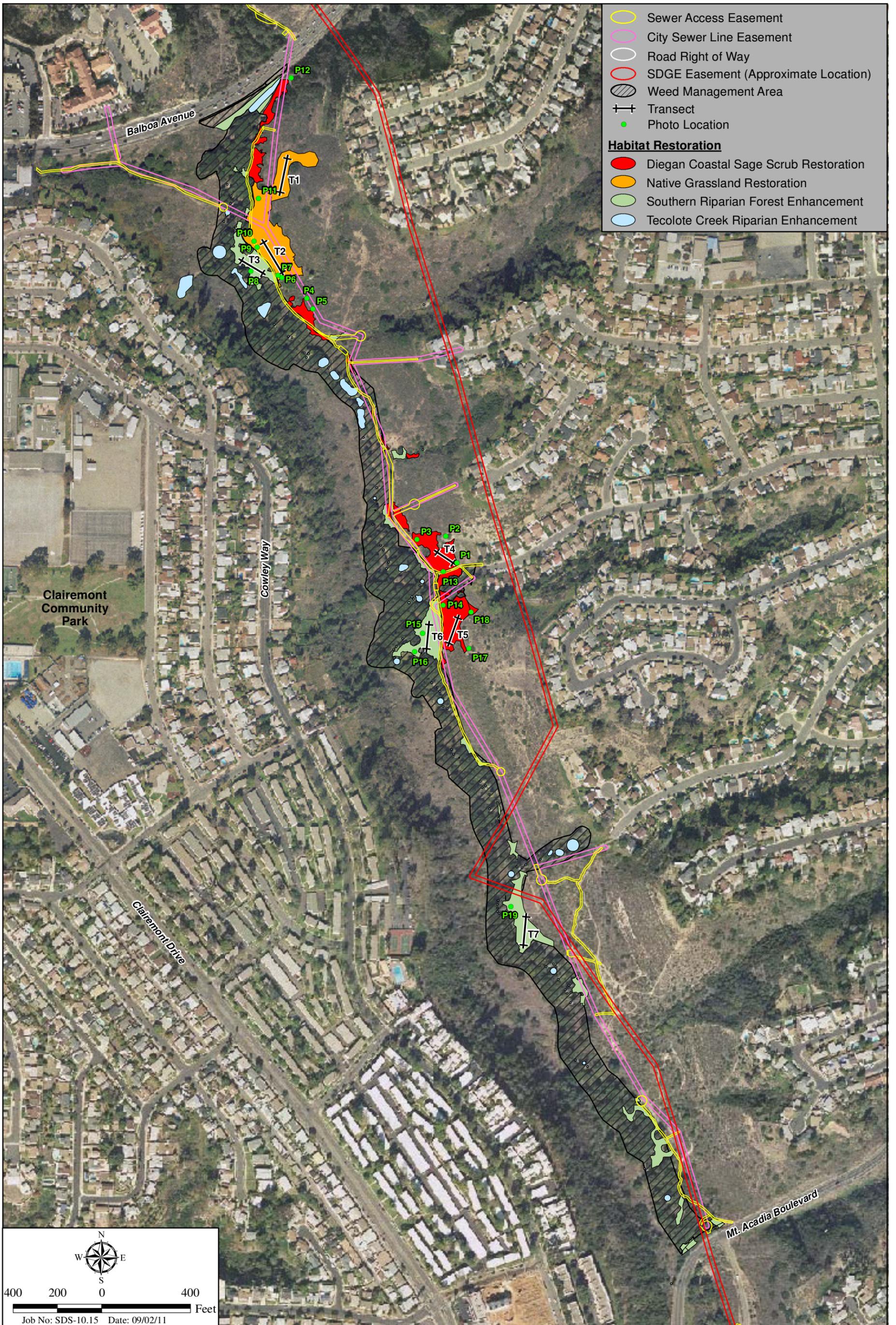
CENTRAL TECOLOTE CANYON MITIGATION PROJECT



Project Location Map

CENTRAL TECOLOTE CANYON MITIGATION PROJECT

Figure 2



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Photo Documentation and Transect Locations

CENTRAL TECOLOTE CANYON MITIGATION PROJECT



Pre-restoration/Enhancement, 12/30/10
Photo Location 1; Diegan coastal sage scrub restoration.



Post-installation, 09/01/11
Photo Location 1; Diegan coastal sage scrub restoration.



Pre-restoration/Enhancement, 12/30/10
Photo Location 2; Diegan coastal sage scrub restoration.



Post-installation, 09/01/11
Photo Location 2; Diegan coastal sage scrub restoration.

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Representative Site Photos
CENTRAL TECOLOTE CANYON MITIGATION PROJECT
Appendix A



Pre-restoration/Enhancement, 12/30/10
Photo Location 3; Diegan coastal sage scrub restoration.



Post-installation, 09/01/11
Photo Location 3; Diegan coastal sage scrub restoration.



Pre-restoration/Enhancement, 12/30/10
Photo Location 4; Diegan coastal sage scrub restoration.



Post-installation, 09/01/11
Photo Location 4; Diegan coastal sage scrub restoration.



Pre-restoration/Enhancement, 12/30/10
Photo Location 5; Diegan coastal sage scrub restoration.



Post-installation, 09/01/11
Photo Location 5; Diegan coastal sage scrub restoration.

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Representative Site Photos
CENTRAL TECOLOTE CANYON MITIGATION PROJECT
Appendix A



Pre-restoration/Enhancement, 12/30/10
Photo Location 6; Native grassland restoration.



Post-installation, 09/01/11
Photo Location 6; Native grassland restoration.



Pre-restoration/Enhancement, 12/30/10
Photo Location 7; Southern riparian forest enhancement.



Post-installation, 09/01/11
Photo Location 7; Southern riparian forest enhancement.

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Pre-restoration/Enhancement, 12/30/10
Photo Location 8; Southern riparian forest enhancement.



Post-installation, 09/01/11
Photo Location 8; Southern riparian forest enhancement.

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Pre-restoration/Enhancement, 12/30/10
Photo Location 9; Southern riparian forest enhancement.



Post-installation, 09/01/11
Photo Location 9; Southern riparian forest enhancement.

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Pre-restoration/Enhancement, 12/30/10
Photo Location 10; Native grassland restoration.



Post-installation, 09/01/11
Photo Location 10; Native grassland restoration.



Pre-restoration/Enhancement, 12/30/10
Photo Location 11; Native grassland restoration.



Post-installation, 09/01/11
Photo Location 11; Native grassland restoration.

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Representative Site Photos
CENTRAL TECOLOTE CANYON MITIGATION PROJECT
Appendix A



Pre-restoration/Enhancement, 12/30/10
Photo Location 12; Diegan coastal sage scrub restoration.



Post-installation, 09/01/11
Photo Location 12; Diegan coastal sage scrub restoration.



Pre-restoration/Enhancement, 12/30/10
Photo Location 13; Diegan coastal sage scrub restoration.



Post-installation, 09/01/11
Photo Location 13; Diegan coastal sage scrub restoration.

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Pre-restoration/Enhancement, 12/30/10
Photo Location 14; Southern riparian forest enhancement.



Post-installation, 09/01/11
Photo Location 14; Southern riparian forest enhancement.

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Representative Site Photos

Photo Location 14; Southern riparian forest enhancement. CENTRAL TEXAS COLOTE CANYON MITIGATION PROJECT

Appendix A



Pre-restoration/Enhancement, 12/30/10
Photo Location 15; Southern riparian forest enhancement.



Post-installation, 09/01/11
Photo Location 15; Southern riparian forest enhancement.



Pre-restoration/Enhancement, 12/30/10
Photo Location 16; Southern riparian forest enhancement.



Post-installation, 09/01/11
Photo Location 16; Southern riparian forest enhancement.



Pre-restoration/Enhancement, 12/30/10
Photo Location 17; Diegan coastal sage scrub restoration.



Post-installation, 09/01/11
Photo Location 17; Diegan coastal sage scrub restoration.



Pre-restoration/Enhancement, 12/30/10
Photo Location 18; Diegan coastal sage scrub restoration.



Post-installation, 09/01/11
Photo Location 18; Diegan coastal sage scrub restoration.



Pre-restoration/Enhancement, 12/30/10
Photo Location 19; Southern riparian forest enhancement.



Post-installation, 09/01/11
Photo Location 19; Southern riparian forest enhancement.

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