



Don Houston
Environmental Project Manager
1010 Tavern Road
Alpine, CA 91901
(T) XXX-XXX-XXX
(F) XXX-XXX-XXX

July 12, 2012

Ms. Amy Baker
Project Manager
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

Re: Notice to Proceed (NTP) Request #7 to Construct Section 3 (138 Kilovolt [kV] Underground Within Old Highway 80 and Carrizo Gorge Road)

Dear Ms. Baker:

On June 21, 2012, the California Public Utilities Commission (CPUC) selected the East County (ECO) Substation Alternative Site combined with the ECO Partial Underground 138 kV Transmission Route Alternative (Decision A.09-08-003) as the approved ECO Substation Project (Project). The decision grants San Diego Gas & Electric Company (SDG&E) a Permit to Construct and conditionally authorizes construction of the Project with the implementation of pre-construction mitigation measures (MMs). A Notice of Determination was submitted to the State Clearinghouse on June 21, 2012, indicating the CPUC's approval of the Project.

Purpose

SDG&E is formally requesting authorization from the CPUC to begin construction of Section 3 (138 kV Underground Within Old Highway 80 and Carrizo Gorge Road), which includes excavating two duct bank trenches and installing access vaults within the paved and adjacent disturbed portions of Carrizo Gorge Road and Old Highway 80. Trenching and vault excavations will involve cutting asphalt based on the surveyed alignment and excavating using a backhoe. The dimensions of each trench will vary based on localized topography and vault and jack-and-bore locations, but are expected to be approximately 2.5 to 6.5 feet wide and 6 to 28 feet deep. The trench alignment will begin at the intersection of the approved access road to steel pole (SP-) 90 and Carrizo Gorge Road and head southeast for approximately 3,200 feet until the intersection of Old Highway 80. At this point, the trench alignment will head northeast within the Old Highway 80 road corridor for approximately 1.8 miles until it turns into the Southern Access Road at the ECO Substation site. The Section 3 portion of the underground alignment included with this request is located within the Carrizo Gorge Road and Old Highway 80 San Diego County road easement. Construction of the underground section within the ECO Substation Southern Access Road is not included in this request; this activity was approved under a separate NTP request (#6) on July 2, 2013. The portion of Section 3 that will connect the underground alignment from Carrizo Gorge Road to SP-91 will also be authorized under a separate NTP. The location of Section 3 to be constructed under this NTP is depicted in Attachment A: Section 3 Route Map.

Once the access vaults have been installed and the trenching activities for the underground 138 kV line have been completed, the cable conduit package will be installed, concrete encasement will be poured around conduits, a flowable thermal fill material will be used to backfill the trench, and an asphalt cap will be placed over the trench. After the wire pulling, splicing, terminating, and testing of underground cable, the adjacent ground, road pavement, and road shoulders will be restored to pre-construction conditions. All of the construction activities will occur within the paved road and adjacent disturbed area.

Construction methods, equipment, underground duct packages and cable installation procedures for Section 3 were described in detail and fully analyzed in the Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS).

Pre-Construction Mitigation Measures

A list of all of the pre-construction measures that are relevant to Section 3 (as identified in the Mitigation Monitoring, Compliance, and Reporting Plan [MMCRP]) and their status are summarized in Attachment B: Pre-Construction Status Report of this NTP request. Attachment B: Pre-Construction Status Report provides the full text of the measures, their corresponding status, an explanation of their status, and explanation of how some of the measures have been divided into tasks to facilitate identification and completion of the pre-construction components of those tasks. In order to facilitate tracking and implementation, some of the measures have been organized into tasks so that the pre-construction and construction components of the measures can be tracked separately. These measures may appear on more than one line in Attachment B: Pre-Construction Status Report and are identified by different task numbers. The pre-construction components of these measures may be identified as “complete,” while the rest of the measure will either be marked as “to be implemented during construction” or will not be included in the report, depending on the specific language of the measure.

No construction work will occur on Section 3 until all of the pre-construction measures have been fulfilled. In accordance with MM BIO-1a and MM BIO-2a, the final engineering plans showing the limits of the approved workspace for Section 3 and jurisdictional water features are provided in Attachment C: Final Engineering Plans. While a number of jurisdictional features cross Old Highway 80 and Carrizo Gorge Road, all of these features will be avoided as the 138 kV underground transmission line will be installed by trenching under or over the culverts, and all drainage features within temporary work areas will be flagged and/or fenced for avoidance. Attachment D: LU-2 Letter Report provides documentation of notification and coordination with the affected landowners, in accordance with the MM LU-2 of the Project’s MMCRP. The Section 3 scour analysis is provided in Attachment E: Scour Analysis. In addition, Attachment F: Transmission Line Traffic Control Plan is included in this NTP request to demonstrate compliance with MM TRA-1. All other required pre-construction MMs, as stated in the MMCRP, will be implemented immediately prior to or during construction.

Activity Summary

Construction of Section 3 will occur in accordance with the descriptions provided in Sections B.3 and C.4.1.4 of the Final EIR/EIS and Attachment A: Updated Project Description and ECO Substation Alternative Site, which was included in SDG&E’s comments on the Draft EIR/EIS that were submitted to the CPUC on March 4, 2011. The information described in these documents includes specific details pertaining to excavation and disturbance areas, material staging and storage, and the installation of the trench and conductor for the Section 3 138 kV underground transmission line.

Upon completion of construction activities, all areas of temporary disturbance will be recontoured or repaired to their original or better condition. No native vegetation communities will be impacted or disturbed by construction of Section 3; therefore, restoration will only involve restoring the pre-construction contour of the road. In addition, the work will include removal of any temporary facilities, as well as collection and proper disposal of any waste, trash, and debris. Construction of Section 3 is anticipated to take approximately 12 months from initial site development through completion, beginning in July 2013 and ending in July 2014.

We respectfully ask for authorization of this NTP request by July 26, 2013. Should you have any questions or need additional information, please do not hesitate to contact me at (XXX) XXX-XXXX.

Sincerely,

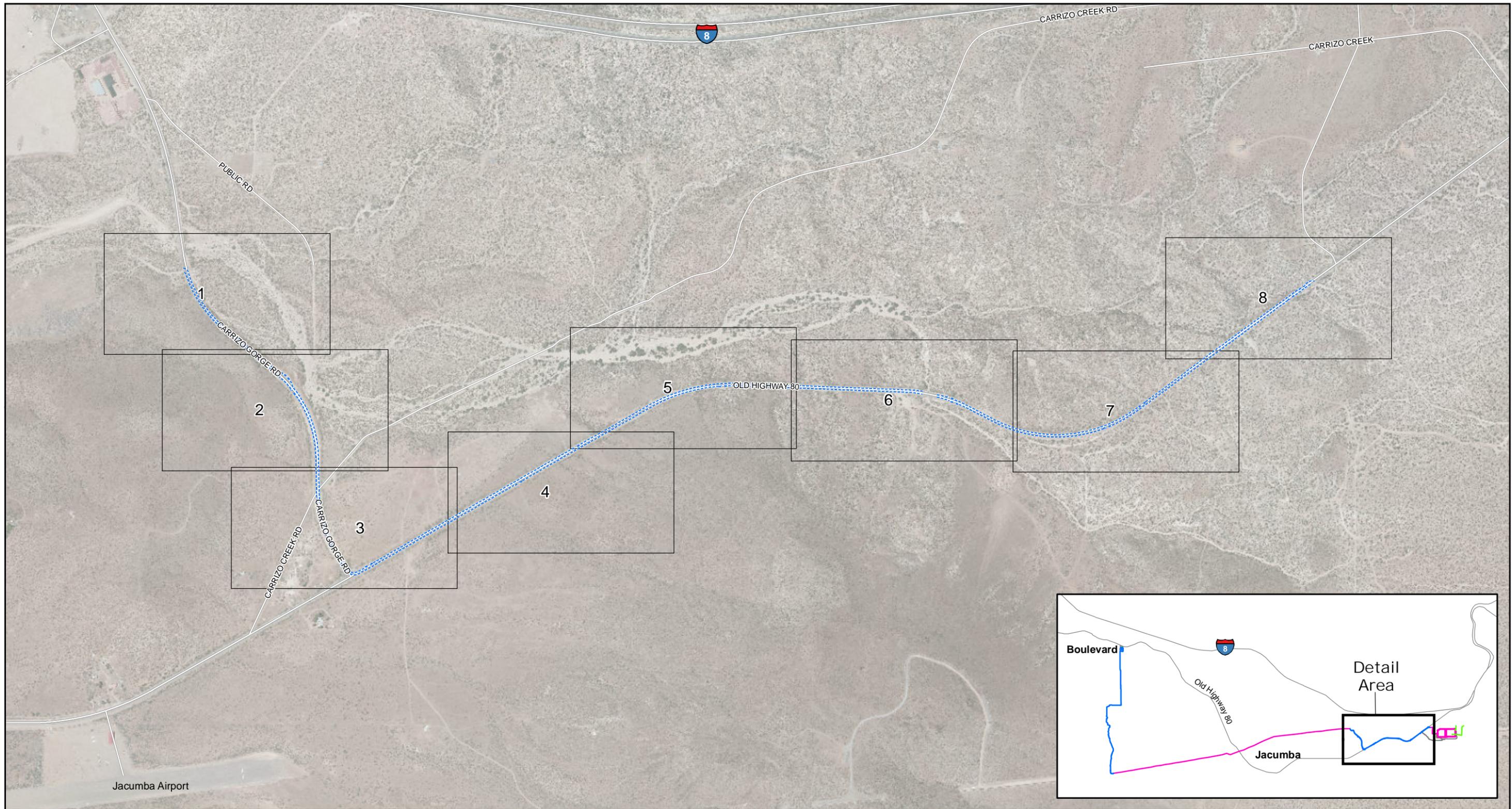
A handwritten signature in black ink that reads "Don Houston". The signature is written in a cursive, slightly slanted style.

Don Houston
Environmental Project Manager
San Diego Gas & Electric Company

Attachment A: Section 3 Route Map
Attachment B: Pre-Construction Status Report
Attachment C: Final Engineering Plans
Attachment D: LU-2 Letter Report
Attachment E: Scour Analysis
Attachment F: Transmission Line Traffic Control Plan

cc: Kirstie Reynolds, SDG&E
David Hochart, Dudek
Anne Marie McGraw, Insignia Environmental
Jeffrey Coward, Insignia Environmental

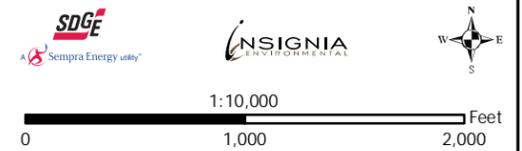
ATTACHMENT A: SECTION 3 ROUTE MAP



Attachment A: Section 3 Route Map Overview

East County Substation Project

- 138 kV Underground
- Map Extent

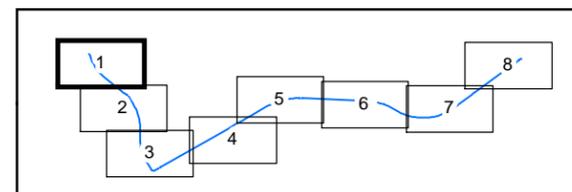




Attachment A: Section 3 Route Map 1 of 8

East County Substation Project

- - - - 138 kV Underground
- Edge of Disturbance/Limits of Work
- Vault
- Jack and Bore





A Sempra Energy utility

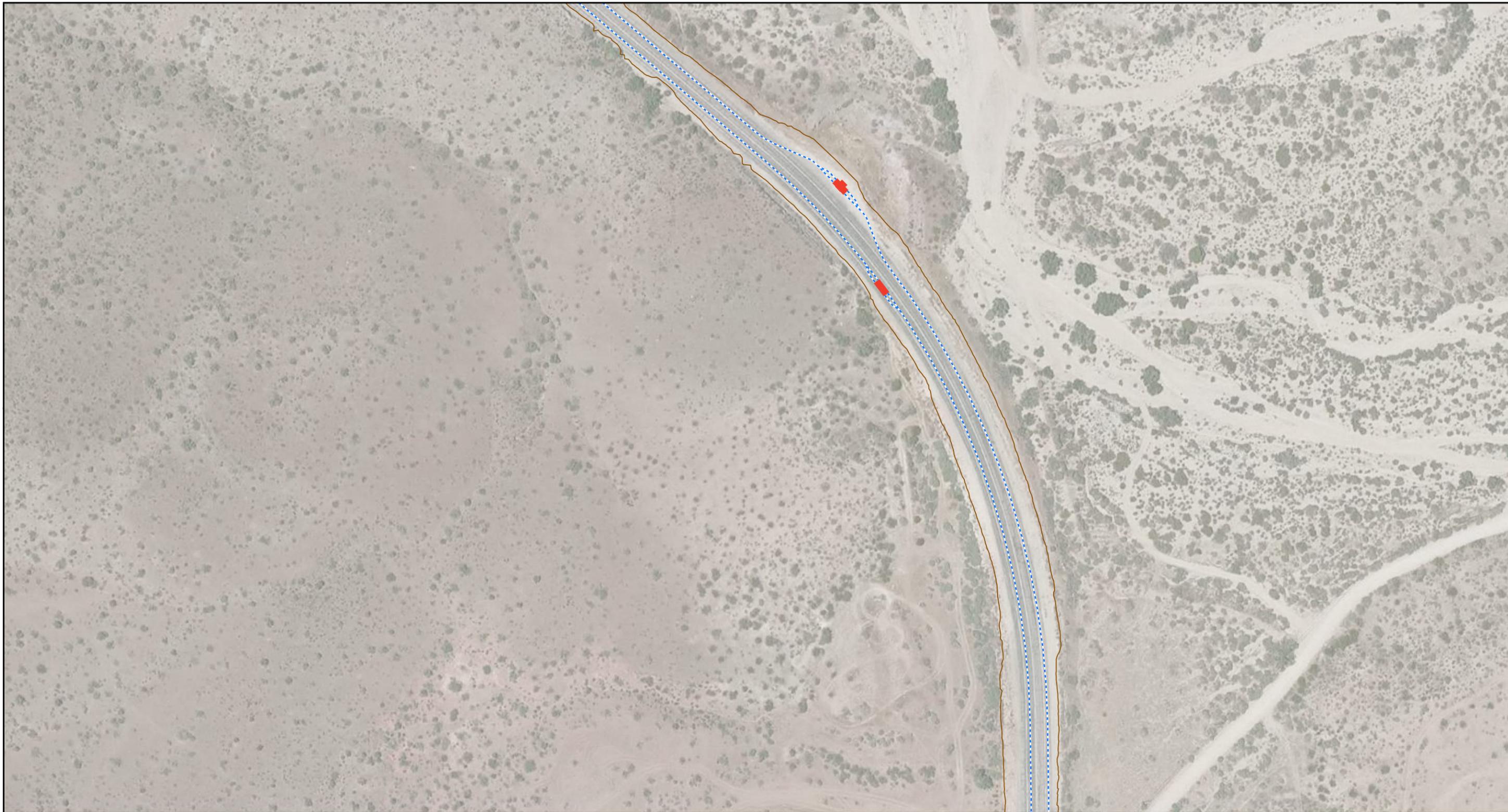




1:1,500



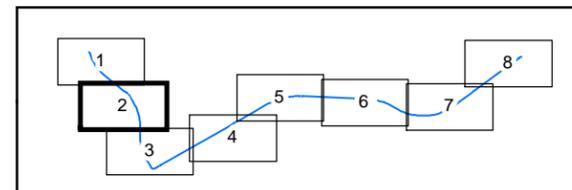
0 100 200 300 Feet

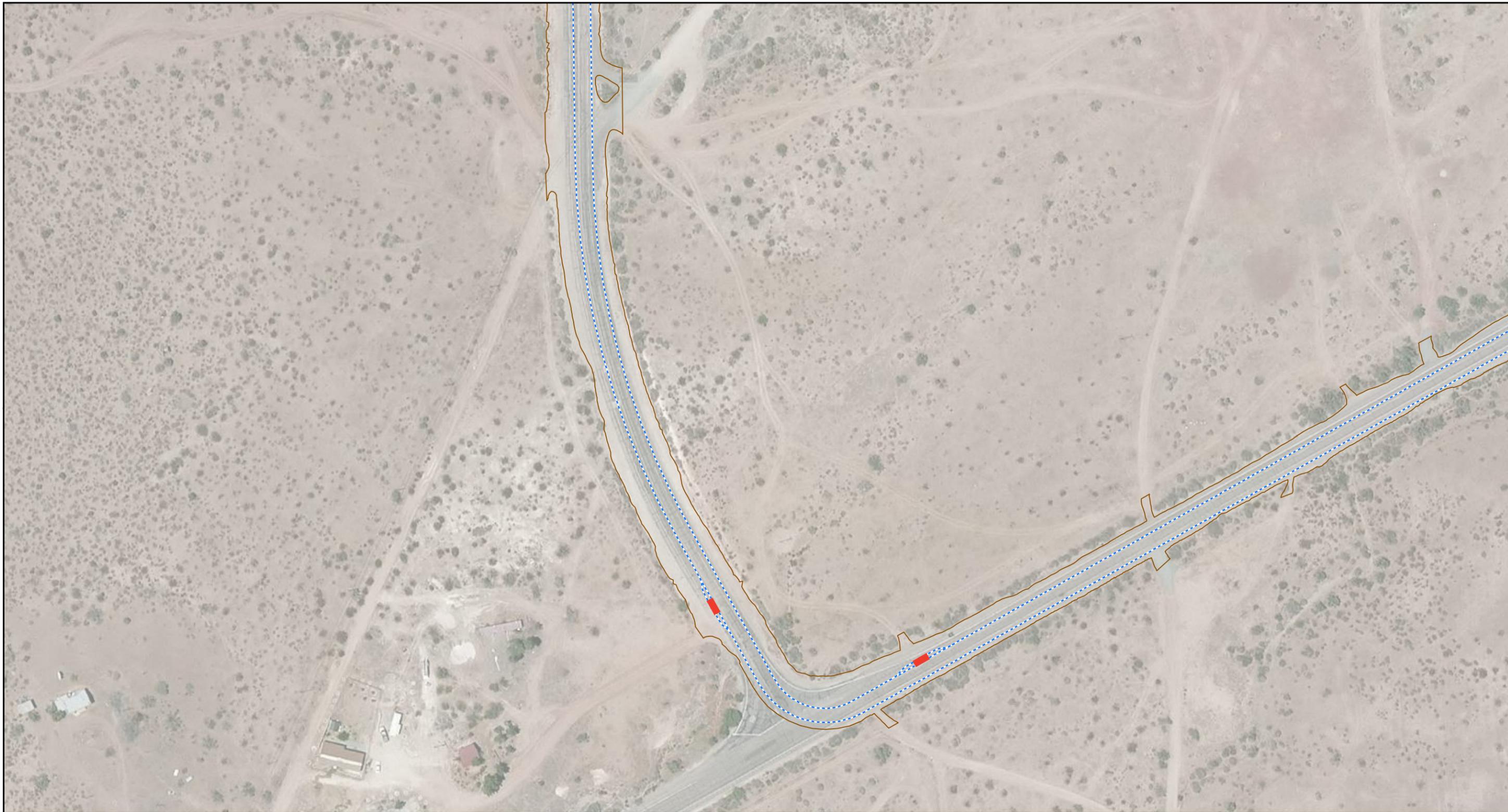


Attachment A: Section 3 Route Map 2 of 8

East County Substation Project

- - - - 138 kV Underground
- Edge of Disturbance/Limits of Work
- Vault
- Jack and Bore

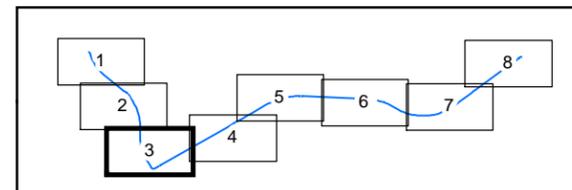




Attachment A: Section 3 Route Map 3 of 8

East County Substation Project

- - - - 138 kV Underground
- Edge of Disturbance/Limits of Work
- Vault
- Jack and Bore





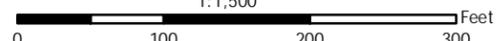
SDGE
A Sempra Energy utility



INSIGNIA
ENGINEERING



1:1,500



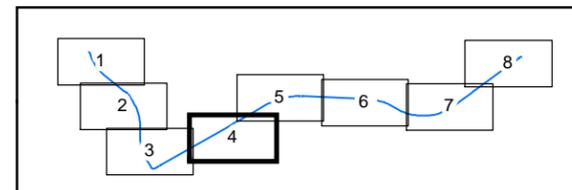
0 100 200 300 Feet



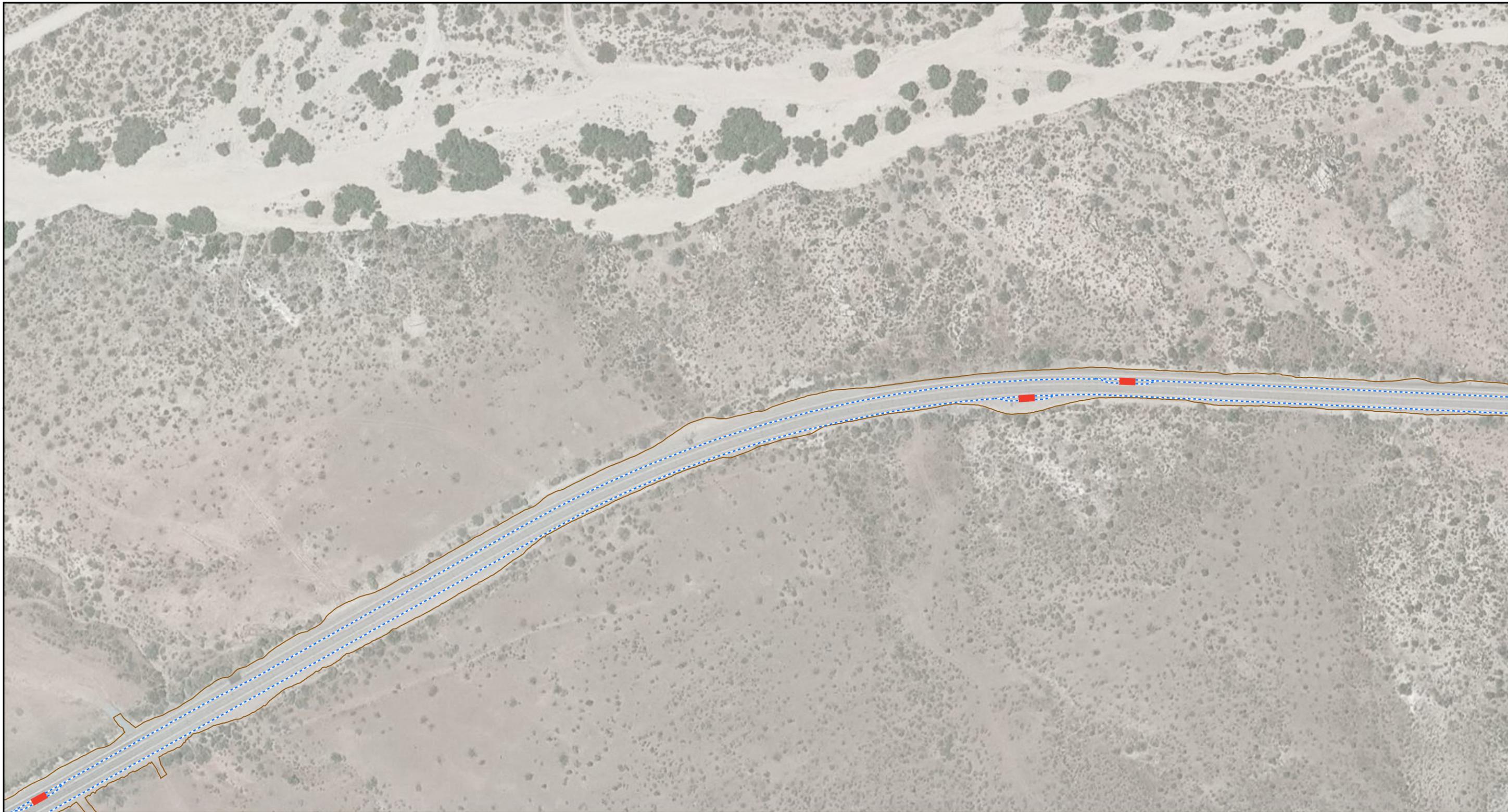
Attachment A: Section 3 Route Map 4 of 8

East County Substation Project

- - - - 138 kV Underground
- Edge of Disturbance/Limits of Work
- Vault
- Jack and Bore



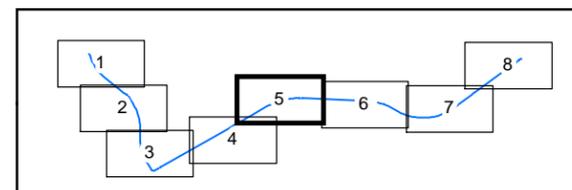
1:1,500

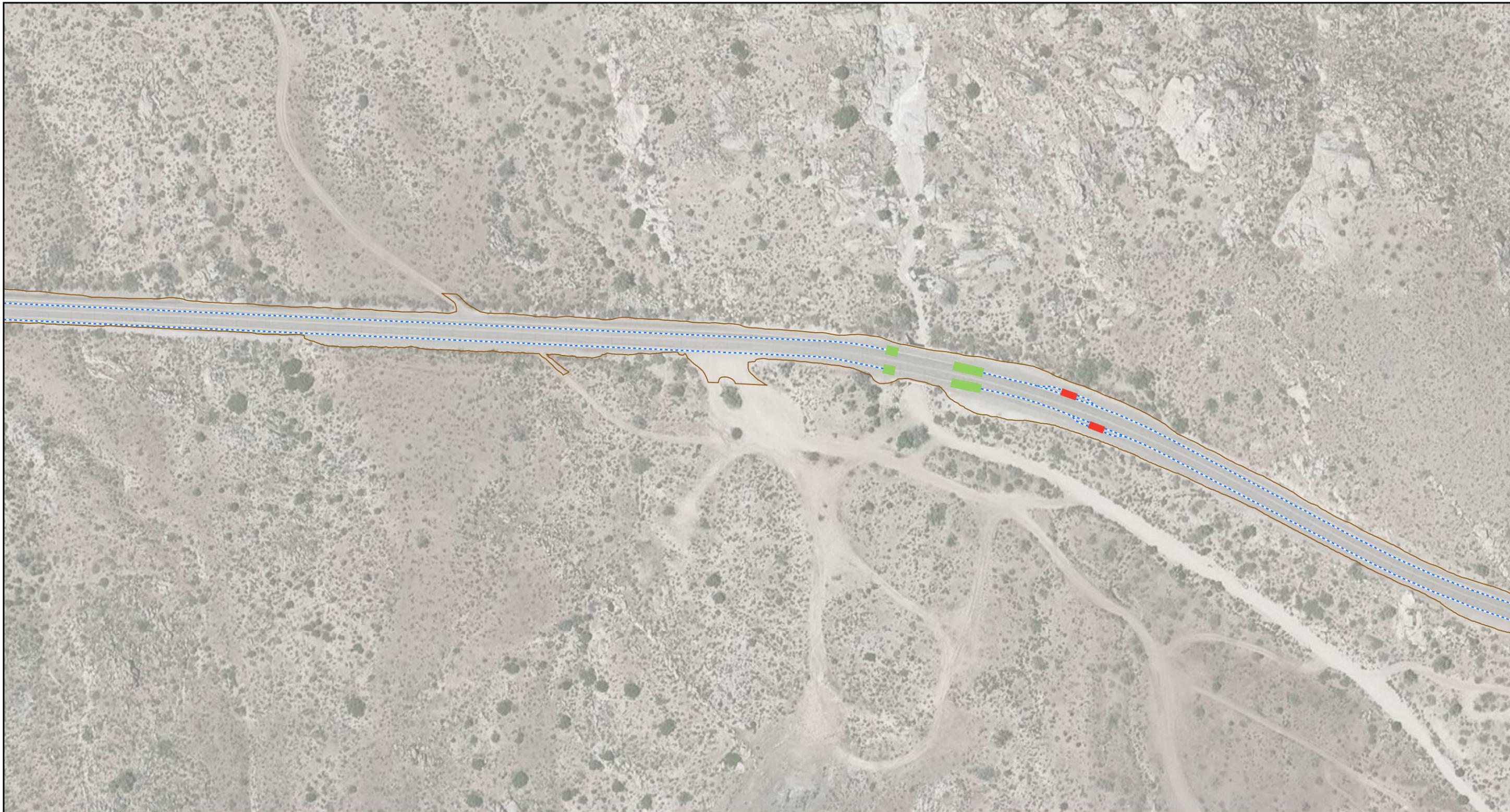


Attachment A: Section 3 Route Map 5 of 8

East County Substation Project

- - - - 138 kV Underground
- Edge of Disturbance/Limits of Work
- Vault
- Jack and Bore

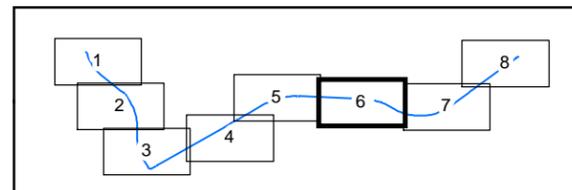




Attachment A: Section 3 Route Map 6 of 8

East County Substation Project

- - - - 138 kV Underground
- Edge of Disturbance/Limits of Work
- Vault
- Jack and Bore

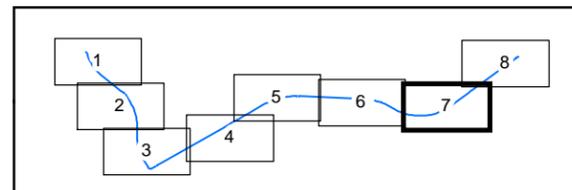




Attachment A: Section 3 Route Map 7 of 8

East County Substation Project

- - - - 138 kV Underground
- Edge of Disturbance/Limits of Work
- Vault
- Jack and Bore

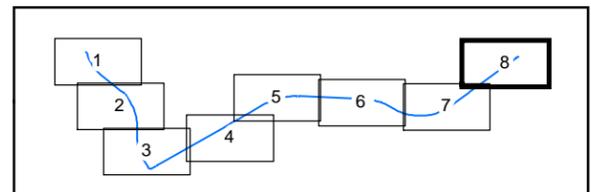




Attachment A: Section 3 Route Map 8 of 8

East County Substation Project

- - - - 138 kV Underground
- Edge of Disturbance/Limits of Work
- Vault
- Jack and Bore



1:1,500

0 100 200 300 Feet

ATTACHMENT B: PRE-CONSTRUCTION STATUS REPORT

- To Be Implemented During Construction
- Pending OR To Be Implemented Immediately Prior to Construction
- Complete
- Not Applicable

Report Criteria:

AGENCY: CPUC

SOURCE: MMCRP

TIMING: Design; Design and During; Design and Post; Pre; Pre and During; Pre and Post; Pre, During, and Post

LOCATION: Section 3 138 kV Underground Transmission Line

Location: Section 3 138 kV Underground Transmission Line

Measure Category	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-01a	01	Confine all construction and construction-related activities to the minimum necessary area as defined by the final engineering plans	All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas identified on the final engineering plans. The limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period. An environmental monitor shall complete regular observations to ensure that all work is completed within the approved work limits, and in the event any work occurs beyond the approved limits, it shall be reported.	SDG&E submitted GIS data showing the limits of approved work space to the CPUC on November 27, 2012. Updated GIS shapefiles are provided with this NTP request and Section 3 maps are provided as Attachment A: Section 3 Route Map to this NTP request. The approved work space will be delineated with stakes and/or flagging immediately prior to construction. Environmental Inspectors will be present during construction to ensure that all work is completed within the approved work limits.	Pre and During	To Be Implemented Immediately Prior to Const.
Biological	BIO-01b	01	Conduct contractor training for all construction staff	Prior to construction, all developer, contractor, and subcontractor personnel shall receive training regarding the appropriate work practices necessary to implement the mitigation measures and comply with environmental regulations, including plant and wildlife species avoidance, impact minimization, and best management practices. Sign-in sheets and hard hat decals shall be provided that document contractor training has been completed for construction personnel.	The Project's environmental awareness education program was approved by the CPUC on December 10, 2012 and by the BLM on December 17, 2012. The CPUC approved the Safe Worker Environmental Awareness Program Truck Driver Training handout on January 8, 2013. Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.	Pre and During	To Be Implemented During Construction

Measure Category	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-01d	02	Restore all temporary construction areas pursuant to a Habitat Restoration Plan	A habitat restoration specialist will be designated and approved by the California Public Utilities Commission and Bureau of Land Management and will determine the most appropriate method of restoration.	Habitat restoration activities do not apply to the Section 3 138 kV Underground Transmission Line, as all construction activities will occur within disturbed road limits and no native vegetation communities will be impacted.	Pre	N/A
Biological	BIO-01d	03	Restore all temporary construction areas pursuant to a Habitat Restoration Plan	Restoration techniques may include: hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. The Habitat Restoration Plan shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project.	Habitat restoration activities do not apply to the Section 3 138 kV Underground Transmission Line, as all construction activities will occur within disturbed road limits and no native vegetation communities will be impacted.	Pre and During	N/A
Biological	BIO-01e	01	Provide habitat compensation or restoration for permanent impacts to native vegetation communities	Permanent impact to all native vegetation communities shall be compensated through a combination habitat compensation and habitat restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Habitat compensation shall be accomplished through agency-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting comparable habitats to those lands impacted by the ECO Substation Project. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as compensation for permanent impacts provided that restoration is demonstrated to be feasible and the restoration effort is implemented pursuant to a Habitat Restoration Plan, which includes success criteria and monitoring specifications as described above for Mitigation Measure BIO-1d. The Habitat Restoration Plan shall be approved by the permitting agencies prior to construction of the project. All habitat compensation and restoration used as mitigation for the ECO Substation Project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the ECO Substation Project on private lands shall include long-term management and legal protection assurances.	No impacts to jurisdictional resources or native vegetation communities will result from construction of the Section 3 portion of the Project, as all construction activities will occur within disturbed road limits. Therefore, no compensatory mitigation or habitat restoration is required for Section 3.	Pre, During, and Post	N/A
Biological	BIO-01g	01	Prepare and implement a Stormwater Pollution Prevention Plan	Prepare a Stormwater Pollution Prevention Plan pursuant to the specifications described in Mitigation Measure HYD-1.	The Linear SWPPP was uploaded to SMARTS on November 20, 2012 and submitted to the CPUC on November 27, 2012.	Pre and During	Complete
Biological	BIO-02a	01	Limit temporary and permanent impacts to jurisdictional features to the minimum necessary as defined by the final engineering plans	Obtain and implement the terms and conditions of agency permit(s) for unavoidable impacts to jurisdictional wetlands and waters. All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas within the approved work limits identified on the final engineering plans. The limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period. The project applicant shall obtain applicable permits and provide evidence of permit approval, which may include but not be limited to a Clean Water Act Section 404 Permit, a Clean Water Act Section 401 water quality certification, and a Section 1602 streambed alteration agreement with the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game for impacts to jurisdictional features prior to project construction. The terms and conditions of these authorizations shall be implemented.	The Section 401 Water Quality Certification was issued on July 31, 2012 and was submitted to the CPUC on August 10, 2012. The USACE 404 Permit was issued on September 19, 2012 and submitted to the CPUC on September 19, 2012. The CDFG 1600 Agreement was issued on October 30, 2012 and submitted to the CPUC on November 6, 2012. The limits of the approved work space will be delineated with stakes and/or flagging immediately prior to construction. The terms and conditions of the permits will be implemented during construction. Section 3 Project maps showing the approved work space limits with waters marked are included as an attachment with the NTP request as Attachment C: Final Engineering Plans.	Pre and During	To Be Implemented Immediately Prior to Const.

Measure Category	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-02b	01	Compensate for impacts to jurisdictional waters and wetlands	Temporary and permanent impacts to all jurisdictional resources shall be compensated through a combination habitat creation (i.e., establishment), enhancement, preservation, and/or and restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Any creation enhancement, preservation, and/or restoration effort shall be implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. A habitat restoration specialist will be designated and approved by the permitting agencies and will determine the most appropriate method of restoration. Restoration techniques may include hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the CPUC or BLM (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the CPUC or BLM, the temporary impact shall be considered a permanent impact and compensated accordingly. All habitat creation and restoration used as mitigation for the Proposed ECO Substation Project on public lands shall be located in areas designated for resource protection and management. All habitat creation and restoration used as mitigation for the project on private lands shall include long-term management and legal protection assurances.	No impacts to jurisdictional resources will result from construction of the Section 3 portion of the Project, as all construction activities will occur within disturbed road limits. Therefore, no compensatory mitigation or habitat restoration is required for Section 3.	Pre and During	N/A
Biological	BIO-02c	01	Where drainage crossings are unavoidable, construct access roads at right angles to drainages	Unless not possible due to existing landforms or site constraints, access roads shall be built perpendicular to drainages to minimize the impacts to these resources and prevent impacts along the length of jurisdictional features.	No access roads will be constructed for the Section 3 portion of the Project; therefore, this measure is not applicable.	Pre and During	N/A
Biological	BIO-03a	01	Prepare and implement a Noxious Weeds and Invasive Species Control Plan	A Noxious Weeds and Invasive Species Control Plan shall be prepared and reviewed by the California Public Utilities Commission/Bureau of Land Management and applicable permitting agencies. On BLM lands, the plan shall be consistent with an Integrated Pest Management approach per the Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Report (2007).	The final Noxious Weeds and Invasive Species Control Plan was approved by the CPUC on November 29, 2012 and by the CDFW on January 10, 2013. BLM Variance Request #1 was submitted by the BLM on July 5, 2013. SDG&E believes that the Noxious Weeds and Invasive Species Control Plan should not be required for Section 3, as all activities will occur within the road and disturbed road shoulder. SDG&E will not start construction of the BLM portion of Section 3 until BLM concurrence is obtained.	Pre	Complete
Biological	BIO-04a	02	Prepare and implement a Dust Control Plan	(j) Prepare and file with the San Diego Air Pollution Control District, Bureau of Land Management and California Public Utilities Commission a Dust Control Plan that describes how these measures would be implemented and monitored at all locations of the project. This plan shall be developed consistent with the requirements of Mitigation Measure AQ-1.	The CPUC approved the Dust Control Plan on October 12, 2012. The Dust Control Plan was submitted to the SDAPCD on October 16, 2012. The BLM indicated on August 29, 2012 that they do not need to review the Dust Control Plan.	Pre	Complete
Biological	BIO-05a	01	Install fencing or flagging around identified special-status plant species populations in the construction areas	Prior to the start of construction, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species for all construction areas. All of the special-status plant locations shall be recorded using a Global Positioning System (GPS), which will be used to site the avoidance fencing/flagging.	No special-status plant species are located within the Section 3 disturbance areas. As a result, this measure is not applicable to Section 3.	Pre	N/A

Location: Section 3 138 kV Underground Transmission Line

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-05a	02	Install fencing or flagging around identified special-status plant species populations in the construction areas	Special-status plant species shall be avoided to the maximum extent possible by all construction activities. The boundaries of all special-status plant species to be avoided shall be delineated in the field with clearly visible fencing or flagging. The fencing/flagging shall be maintained for the duration of project construction activities.	No special-status plant species are located within the Section 3 disturbance areas. As a result, this measure is not applicable to Section 3.	Pre and During	N/A
Biological	BIO-05b	01	Implement special-status plant species compensation	Impacts to special-status plant species shall be maximally avoided. Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through off-site land preservation and/or plant salvage and relocation. Where off-site land preservation is biologically preferred, the land shall contain comparable special-status plant resources as the impacted lands and shall include long-term management and legal protection assurances to the satisfaction of the CPUC or BLM. Land preservation must be completed within 18 months of permit issuance. Where salvage and relocation is demonstrated to be feasible and biologically preferred, it shall be conducted pursuant to an agency-approved plan that details the methods for salvage, stockpiling, and replanting, as well as the characteristics of the receiver sites.	No impacts to special-status plant species will result from construction of the Section 3 portion of the Project, as all work will occur within the road and road shoulder. Therefore, no compensatory mitigation is required for Section 3.	Pre and During	N/A
Biological	BIO-05b	02	Implement special-status plant species compensation	Any salvage and relocation plans shall be approved by the permitting agencies prior to project construction. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. Success criteria and monitoring shall also be included in the plan. If salvage and relocation is not possible to the satisfaction of the CPUC or BLM, off-site land preservation shall be required.	No salvage and relocation of special-status plant species is planned for the Project; therefore, this measure is not applicable.	Pre	N/A
Biological	BIO-07f	01	Obtain and implement the terms of agency permit(s) with jurisdiction federal or state listed species	If determined necessary, the applicant shall obtain a biological opinion through Section 7 consultation between the Bureau of Land Management and U.S. Fish and Wildlife Service for impacts to federally listed wildlife species and a Section 2081 permit (or consistency determination) from the California Department of Fish and Game for impacts to state listed wildlife species resulting from this project, if applicable.	No take of federally or state-listed wildlife species is anticipated for the Section 3 portion of the Project. As a result, this measure is not applicable for Section 3.	Pre	N/A
Biological	BIO-07g	01	Conduct protocol surveys for Quino checkerspot butterfly within 1 year prior to project construction activities in occupied habitat	SDG&E shall conduct pre-construction protocol surveys for Quino checkerspot butterfly within 1 year prior to construction activities, or as required by U.S. Fish and Wildlife Service, in any area known to support the species. Surveys shall be conducted by a qualified, permitted biologist in accordance with the most currently accepted protocol survey method. Results shall be reported to the U.S. Fish and Wildlife Service within 45 days of the completion of the survey. The surveys that were conducted in the spring of 2010 will be valid for construction in 2012 so long as construction commences before May 2012. If construction is not scheduled to commence before May 2012, SDG&E will contact the U.S. Fish and Wildlife Service to discuss whether an additional survey is warranted.	No Quino checkerspot butterfly habitat is present along the Section 3 portion of the Project. As a result, this measure is not applicable for Section 3.	Pre and During	N/A
Biological	BIO-07h	01	Provide compensation for temporary and permanent impacts to Quino checkerspot butterfly habitat through conservation and/or restoration	Temporary and permanent impact to Quino checkerspot butterfly shall be compensated through a combination of habitat compensation and habitat restoration at a minimum of a 2:1 mitigation ratio for non-critical habitat and a minimum of a 3:1 mitigation ratio for critical habitat, or as required by the permitting agencies. Habitat compensation shall be accomplished through U.S. Fish and Wildlife Service-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting Quino checkerspot butterfly. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as habitat compensation provided that the restoration effort is demonstrated to be feasible and implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to project construction. All habitat compensation and restoration used as mitigation for the Proposed Project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the Proposed Project on private lands shall include long-term management and legal protection assurances.	In accordance with consultation with the USFWS and as supported by the Biological Opinion, the Section 3 138 kV Underground Transmission Line does not contain occupied Quino checkerspot butterfly habitat and mitigation is not required for impacts to these areas; therefore, this measure is not applicable to this location.	Pre, During, and Post	N/A

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-07i	01	Final design of transmission towers and access roads through critical habitat shall maximally avoid host plants for Quino checkerspot butterfly	The final design of the ECO Project through Quino checkerspot butterfly habitat shall maximally avoid and minimize habitat resources used by the species. SDG&E shall explore alternate tower locations, reduced road widths, reduced vegetation maintenance, and other design modifications and obtain agency approval of the final design through this area.	In accordance with consultation with the USFWS and as supported by the Biological Opinion, the Section 3 138 kV Underground Transmission Line does not contain occupied Quino checkerspot butterfly habitat; therefore, this measure is not applicable to this location.	Design	N/A
Biological	BIO-07j	01	Conduct pre-construction nesting bird surveys and implement appropriate avoidance measures for identified nesting birds	<p>If the project must occur during the avian breeding season (February 1st to August 31st, and as early as January 1 for some raptors), SDG&E should work with the California Department of Fish and Game (CDFG), Bureau of Land Management, and the U.S. Fish and Wildlife Service (USFWS) to prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds.</p> <p>SDG&E will submit to the agencies the NBMMRP (see following for details) for review and approval prior to commencement of the project during the breeding season. The NBMMRP should include the following:</p> <ol style="list-style-type: none"> 1. Nest Survey Protocols describing the nest survey methodologies 2. A Management Plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks 3. A Monitoring and Reporting Plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to enable USFWS and CDFG to monitor SDG&E's compliance with Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 4. A schedule for the submittal (usually weekly) of the NML 5. Standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks 6. A detailed explanation of how the buffer widths were determined 7. All measures SDG&E will implement to preclude birds from utilizing project-related structures (i.e., construction equipment, facilities, or materials) for nesting. 	The Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) was approved by the CDFW on January 10, 2013 and by the USFWS on January 16, 2013. The CDFW- and USFWS-approved NBMMRP was approved by the CPUC on January 22, 2013.	Pre and During	Complete

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-07j	02	Conduct pre-construction nesting bird surveys and implement appropriate avoidance measures for identified nesting birds	<p>To determine presence of nesting birds that the project activities may affect, surveys should be conducted beyond the project area-300 feet for passerine birds and 500 feet for raptors. The survey protocols should include a detailed description of methodologies utilized by CDFG-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols should include but are not limited to the size of project corridor being surveyed, method of search, and behavior that indicates active nests.</p> <p>Each nest identified in the project area should be included in the NML. The NMLs should be updated daily and submitted to the CDFG weekly. Since the purpose of the NMLs is to allow the CDFG to track compliance, the NMLs should include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet for passerine birds, 500 feet for raptors) and nests whose standard buffer width was reduced by encroachment of project-related activities. The NMLs should provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The NMLs will allow for tracking the success and failure of the buffers and will provide data on the adequacy of the buffers for certain species.</p> <p>SDG&E will rely on its avian biologists to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths should be site- and species-/guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds. The determination of the buffer widths should consider the following factors:</p> <ul style="list-style-type: none"> a. Nesting chronologies b. Geographic location c. Existing ambient conditions (human activity within line of sight-cars, bikes, pedestrians, dogs, noise) d. Type and extent of disturbance (e.g., noise levels and quality- punctuated, continual, ground vibrations-blasting-related vibrations proximate to tern colonies are known to make the birds flush the nests) e. Visibility of disturbance f. Duration and timing of disturbance g. Influence of other environmental factors h. Species' site-specific level of habituation to the disturbance. <p>Application of the standard buffer widths should avoid the potential for project-related nest abandonment and failure of fledging, and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened.</p>	SDG&E provided the CPUC with documentation of CDFW approval of Larry Butcher, Dean DiTommaso, Jeffry Coward, and Abbie Alterman as avian biologists on January 8, 2013. Kevin Kilpatrick, Lauren Brudney, Lisa Eigner, and Shirley Innecken have also been approved by the CDFW as avian biologists. Nesting bird surveys began in January 2013 and were conducted in accordance with the NBMMP prior to construction. The NBMMP will be implemented during construction.	Pre and During	To Be Implemented Immediately Prior to Const.
Biological	BIO-10a	01	Design all transmission towers and lines to conform with Avian Power Line Interaction Committee standards	The Proposed Project shall implement recommendations by the Avian Power Line Interaction Committee (2006), which will protect raptors and other birds from electrocution. These measures are sufficient to protect even the largest birds that may perch or roost on transmission lines or towers from electrocution.	No transmission poles or lines will be installed for the Section 3 138 kV Underground Transmission Line; therefore, this measure is not applicable to this location.	Design	N/A

Location: Section 3 138 kV Underground Transmission Line

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-10b	01	Develop and implement project-specific Avian Protection Plans	Develop and implement project-specific Avian Protection Plans. Develop and implement an Avian Protection Plan related to wire, transmission tower, and facilities impacts from electrocution and collision of bird species. An Avian Protection Plan shall be developed jointly with the U.S. Fish and Wildlife Service and California Department of Fish and Game and shall provide the framework necessary for implementing a program to reduce bird mortalities and document actions. The Avian Protection Plan shall include the following: corporate policy, training, permit compliance, construction design standards, nest management, avian reporting system, risk assessment methodology, mortality reduction measures, avian enhancement options, quality control, public awareness, and key resources.	No transmission poles or lines will be installed for the 138 kV Underground Transmission Line; therefore, this measure is not applicable to this location.	Pre, During, and Post	N/A
Biological	ECO-BIO-08	01	Provide environmental training to project personnel	Prior to construction, all SDG&E, contractor, and subcontractor Project personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including appropriate wildlife avoidance; impact minimization procedures; the importance of these resources, and the purpose and necessity of protecting them; and methods for protecting sensitive ecological resources. The training will include BMPs to reduce the potential for erosion and sedimentation during construction of the Project.	The intent and requirements of ECO-BIO-08 will be satisfied through the implementation of environmental awareness education for all construction staff prior to construction, which is required by BIO-01b. Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.	Pre and During	To Be Implemented During Construction
Biological	ECO-BIO-09	01	Avoid impacts during surveys	Survey personnel will keep survey vehicles on existing roads.	Survey crews have been instructed to stay on existing roads during survey activities.	Pre, During, and Post	To Be Implemented During Construction
Biological	ECO-BIO-09	02	Avoid impacts during surveys	During Project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat will require prior approval from the Project biological monitor. Hiking off roads or paths for survey data collection will be allowed year-round as long as all of the other applicable APMs are met.	A biological monitor will be present during, or provide prior approval for, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat in accordance with this measure.	Pre, During, and Post	To Be Implemented During Construction
Biological	ECO-BIO-20	01	Construct escape ramps within retention basins	Permanent retention basins will be constructed with escape ramps along two sides of the pond to allow entrapped wildlife to escape. The slope of the ramps will not exceed a two to one ratio and will be constructed of non-slippery material, or as specified by the biological monitor.	This measure is not applicable as no permanent retention basins will be constructed for the 138 kV Underground Transmission Line.	Pre and During	N/A
Visual	ECO-AES-01	01	Reduce potential visual contrast with the desert landscape setting	To reduce potential visual contrast and integrate the ECO Substation's appearance with the desert landscape setting, when project construction has been completed, all disturbed terrain at the ECO Substation site will be restored through recontouring and revegetation in accordance with the Landscaping Plan included as Appendix 5: Landscape Concept Plans.	This measure only pertains to the ECO Substation; therefore, it is not applicable to the 138 kV Underground Transmission Line.	Pre and Post	N/A

Location: Section 3 138 kV Underground Transmission Line

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Visual	ECO-AES-02	01	All disturbed terrain restored	When project construction has been completed, all disturbed terrain at the Boulevard Substation site will be restored through recontouring, revegetation, and landscaping in accordance with the Boulevard Substation Landscape Concept Plan included as Appendix 5: Landscape Concept Plans. To provide screening and thus reduce potential project visibility, the Boulevard Substation Landscape Concept Plan includes larger shrubs and trees that will partially screen views of the substation from Old Highway 80 and from adjacent residential properties.	This measure only pertains to disturbed terrain at the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre and Post	N/A
Visual	ECO-AES-03	01	Reduce the project's potential visibility from Old Highway 80	To reduce the project's potential visibility from Old Highway 80, the underground portion of the new 138 kV transmission line will be extended an additional distance of approximately 600 feet to the south, and the steel cable riser pole will be relocated to replace structure SP-2.	This measure is not applicable because the Project will be constructed underground from the Boulevard Substation to SP-38.	Pre and During	N/A
Visual	VIS-01a	01	Reduce impacts at scenic highway and trail crossings	At highway and trail crossings, structures shall be placed at the maximum feasible distance from the crossing to reduce visual impacts as long as other significant resources are not negatively affected.	No transmission poles or lines will be installed for the Section 3 138 kV Underground Transmission Line; therefore, this measure is not applicable to this location.	Design and During	N/A
Visual	VIS-01b	01	Reduce impacts at scenic view areas	In scenic view areas (the Jewel Valley Trail and the Jewel Valley Road Pathway) transmission line structures would be placed to avoid sensitive features and/or allow conductors to clearly span the features, within limits of standard design where feasible.	San Diego County confirmed on October 18, 2012 that no official trails or recreation areas are located in the Project area; therefore, this measure is not applicable.	Design and During	N/A
Visual	VIS-03a	01	Reduce visibility of construction activities and equipment	If visible from nearby roads, residences, public gathering areas, or recreational areas, facilities, or trails, stationary construction sites and staging areas and fly yards shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. Where practical, construction staging and storage will be screened with opaque fencing from close-range residential views. Additionally, construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use shall be avoided. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days before the start of construction.	Temporary screening fencing is not required for the construction of Section 3, as it is not a stationary construction site. As a result, this measure is not applicable to the Section 3 138 kV Underground Transmission Line.	Pre, During, and Post	N/A
Visual	VIS-03b	01	Reduce construction night-lighting impacts	SDG&E shall design and install all lighting at construction and storage yards and at staging areas and fly yards such that illumination of the project facilities, vicinity, and nighttime sky is minimized. The Construction Lighting Mitigation Plan shall be reviewed for consistency with the County of San Diego Light Pollution Code (Section 59.100 et. al) and Sections 6322 and 6322 of the Zoning Ordinance to ensure outdoor light fixtures emitting light into the night sky do not result in a detrimental effect on astronomical research and to ensure reflected glare and light trespass is minimized. SDG&E shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the CPUC and BLM. The Plan shall include but is not necessarily limited to the following: · Lighting shall be designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary; · All lighting shall be of minimum necessary brightness consistent with worker safety; and · High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.	The Section 3 138 kV Underground Transmission line does not include construction and storage yards or staging areas; therefore, this measure is not applicable.	Pre and During	N/A
Visual	VIS-03d	01	Reduce in-line views of land scars	Construct access or spur roads at appropriate angles from the originating primary travel facilities to minimize extended in-line views of newly graded terrain, when feasible. Contour grading should be used where feasible to better blend graded surfaces with existing terrain. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC and BLM for review and approval at least 60 days prior to the start of construction.	No new access roads will be constructed for the Section 3 138 kV Underground Transmission Line; therefore, this measure is not applicable.	Pre and During	N/A

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Visual	VIS-03e	01	Reduce visual contrast from unnatural vegetation lines	In those areas where views of land scars are unavoidable, the boundaries of disturbed areas shall be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. Furthermore, all graded roads and areas not required for ongoing operation, maintenance, or access shall be returned to preconstruction conditions. In those cases where potential public access is opened by construction routes, SDG&E shall create barriers or fences to prevent public access and shall patrol construction routes to prevent vandalized access and litter cleanup until all areas where vegetation was removed are returned to pre-project state. SDG&E shall submit final construction and restoration plans demonstrating compliance with this measure to the CPUC and BLM for review and approval at least 60 days before the start of construction.	No land scars will result from construction of Section 3, as all construction activities will occur within disturbed road limits and no native vegetation communities will be impacted. As a result, this measure is not applicable to Section 3.	Pre, During, and Post	N/A
Visual	VIS-03f	01	Minimize vegetation removal	Only the minimum amount of vegetation necessary for the construction of structures and facilities will be removed. Topsoil located in areas to be restored shall be conserved during excavation and reused as cover on disturbed areas to facilitate re-growth of vegetation. Topsoil located in developed or disturbed areas is excluded from this measure.	No native vegetation communities or topsoil removal occurred during construction of Section 3, as all construction activities will occur within disturbed road limits. As a result, this measure is not applicable to Section 3.	Pre and During	N/A
Visual	VIS-03g	01	Reduce visual contrast associated with substation and ancillary facilities	<p>SDG&E shall submit to the CPUC a Surface Treatment Plan describing the application of colors and textures to all new facility structure buildings, walls, fences, and components comprising all ancillary facilities including substations. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Treatment Plan shall be submitted to the CPUC for approval at least 90 days before (a) ordering the first structures that are to be color treated during manufacture or (b) construction of any of the ancillary facility components, whichever comes first. If the CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SDG&E shall prepare and submit for review and approval a revised Plan. The Surface Treatment Plan shall include:</p> <ul style="list-style-type: none"> · Specification and 11 x 17-inch color simulations at life-size scale of the treatment proposed for use on project structures, including structures treated during manufacture · A list of each major project structure, building, tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation) · Two sets of brochures and/or color chips for each proposed color · A detailed schedule for completion of the treatment · Procedures to ensure proper treatment maintenance for the life of the project. <p>SDG&E shall not specify to the vendors the treatment of any buildings or structures treated during manufacture or perform the final treatment on any buildings or structures treated on site, until SDG&E receives notification of approval of the Surface Treatment Plan by the CPUC. Within 30 days following the start of commercial operation, SDG&E shall notify the CPUC that all buildings and structures are ready for inspection.</p>	The Surface Treatment Plan will not be required as no aboveground structures will be constructed for the 138 kV Underground Transmission Line; therefore, this measure is not applicable to this location.	Pre, During, and Post	N/A

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Visual	VIS-03h	01	Screen substations and ancillary facilities	<p>SDG&E shall provide a Final Screening/Landscape Plan for screening vegetation, walls, and fences that reduces visibility of ancillary facilities and helps the facility blend in with the landscape. Similar to the use of berms in the Conceptual Landscape Plans prepared for the PEA, the use of berms to facilitate project screening may also be incorporated into the Final Plan. SDG&E shall submit the Plan to the CPUC for review and approval at least 90 days before installing the landscape screening. If the CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SDG&E shall prepare and submit for review and approval a revised Plan. The plan shall include but not necessarily be limited to:</p> <ul style="list-style-type: none"> · An 11 x 17-inch color simulation of the proposed landscaping at 5 years · A plan view to scale depicting the project and the location of screening elements · A detailed list of any plants to be used, their size and age at planting, the expected time to maturity, and the expected height at 5 years and at maturity · SDG&E shall complete installation of the screening/landscape plan before the start of project operation · SDG&E shall notify the CPUC within 7 days after completing installation of the screening/landscape plan that the screening components are ready for inspection. 	The Screening/Landscape Plan is only applicable to the Boulevard Substation and the ECO Substation per the MMCRP; therefore, this measure is not applicable to this location.	Pre, During, and Post	N/A
Visual	VIS-03j	01	Reduce potential transmission conductor visibility and visual contrast	<p>The following design measures shall be applied to all new structure locations, conductors, and re-conducted spans to reduce the degree of visual contrast caused by the new facilities:</p> <ul style="list-style-type: none"> · All new conductors and re-conducted spans to be non-specular to reduce conductor visibility and visual contrast. · Where revisions would not conflict with existing design considerations to avoid sensitive resources (including hydrological, cultural, and biological resources), no new access roads shall be constructed such that they directly approach existing or proposed towers in a straight line from sensitive viewing locations immediately downhill of the structures. 	Transmission conductor will be installed underground for this location; therefore, this measure is not applicable to the 138 kV Underground Transmission Line.	Pre and During	N/A
Visual	VIS-03k	01	Reduce potential visual contrast from transmission structure spacing	Where the line parallels existing transmission lines, the spacing of structures shall match the existing transmission structures, where feasible, to minimize visual effects.	This measure only pertains to the 138 kV Overhead Transmission Line; therefore, this measure is not applicable to the 138 kV Underground Transmission Line.	Pre and During	N/A
Visual	VIS-03l	01	Reduce potential view blockage and visual contrasts of structures	Transmission line structures will not be installed directly in front of residences or in direct line-of-sight from a residence, where feasible. SDG&E will consult with affected property owners on structure siting to reduce land use and visual impacts.	No individual transmission line structures will be constructed as part of the 138 kV Underground Transmission Line; therefore, this measure is not applicable to this location.	Pre	N/A

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Visual	VIS-03m	01	Reduce visual impacts resulting from native tree removal	<p>In the event that ornamental or native trees within the project area will be removed due to project design and grading, SDG&E shall prepare a Tree Replacement Plan to be submitted with the Screening/Landscape Plan. The Tree Replacement Plan shall include but is not limited to the following:</p> <ul style="list-style-type: none"> · Tree Removal Locations: Indicate the size, type, and location of each tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required.) · Assessment of the health and structural conditions, soils, tree size (trunk diameter, basal diameter, height, canopy spread), pest and disease presence, and accessibility of native oak trees to be removed due to project design and grading in order to determine whether existing trees can be transplanted outside the project footprint post-construction. If the assessment determines native oak trees can be transplanted, the oaks would be augmented with additional oak plantings in case the larger trees decline and are lost as a result of the relocation process. If native oak trees cannot be transplanted, the Tree Replacement Plan shall indicate the size, type, and location of each proposed replacement tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required). · Photos of the site and/or trees to be removed. · Oak replacement plan focusing on oak tree planting with smaller container trees at higher numbers, recommended at least 5:1 with 15-gallon size trees. <p>The Tree Replacement Plan must minimize mature tree loss to the degree feasible. The Tree Replacement Plan shall be submitted to the CPUC for approval at least 90 days prior to planned tree removal. If the CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, the SDG&E shall prepare and submit the revised Tree Replacement Plan for review and approval.</p>	According to the MMCRP, this measure only applies to the Boulevard Substation site; therefore, this measure is not applicable to the Section 3 138 kV Underground Transmission Line.	Pre and Post	N/A
Visual	VIS-04a	01	Reduce long-term night-lighting impacts from substations and ancillary facilities	<p>SDG&E shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. The Lighting Mitigation Plan shall be reviewed for consistency with the County of San Diego Light Pollution Code (Section 59.100 et. al) and Sections 6322 and 6322 of the Zoning Ordinance to ensure outdoor light fixtures emitting light into the night sky do not result in a detrimental effect on astronomical research and to ensure reflected glare and light trespass is minimized. SDG&E shall submit a Lighting Mitigation Plan to the CPUC for review and approval at least 90 days before ordering any permanent exterior lighting fixtures or components. SDG&E shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the CPUC. The Plan shall include but is not necessarily limited to the following:</p> <ul style="list-style-type: none"> · Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary. · All lighting shall be of minimum necessary brightness consistent with worker safety. · High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied. 	This measure applies to substations and ancillary facilities. No permanent lighting will be installed in this location; therefore, this measure is not applicable.	Pre, During, and Post	N/A

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Land	LU-01a	01	Prepare Construction Notification Plan	<p>Forty-five days prior to construction, SDG&E shall prepare and submit a Construction Notification Plan to the BLM and CPUC for approval. The Plan shall identify the procedures that will be used to inform property owners of the location and duration of construction, identify approvals that are needed prior to posting or publication of construction notices, and include text of proposed public notices and advertisements. The Plan shall address at a minimum two of the following components:</p> <ul style="list-style-type: none"> · Public notice mailer. A public notice mailer shall be prepared and mailed no less than 15 days prior to construction. The notice shall identify construction activities that would restrict, block, remove parking, or require a detour to access existing residential properties. The notice shall state the type of construction activities that will be conducted and the location and duration of construction, including all helicopter activities. SDG&E shall mail the notice to all residents or property owners within 1,000 feet of project components. If construction delays of more than 7 days occur, an additional notice shall be prepared and distributed. · Newspaper advertisements. Fifteen days prior to construction within a route segment, notices shall be placed in local newspapers and bulletins, including Spanish language newspapers and bulletins. The notice shall state when and where construction will occur and provide information about the public liaison person and hotline. If construction is delayed for more than 7 days, an additional round of newspaper notices shall be placed to discuss the status and schedule of construction. · Public venue notices. Thirty days prior to construction, notice of construction shall be posted at public venues such as libraries, community notification boards, post offices, rest stops, community centers, and other public venues to inform affected residents of the purpose and schedule of construction activities. · Public liaison person and toll-free information hotline. SDG&E shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbances. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. SDG&E shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan. 	<p>The Construction Notification Plan was approved by the CPUC on October 31, 2012. The BLM indicated on August 29, 2012 that they do not need to review the Construction Notification Plan prior to construction. The CPUC approved a broad public notice mailer on February 26, 2013. The broad public notice mailer for the entire Project was distributed on June 5, 2013. Evidence of mailing was submitted to the CPUC on June 12, 2013.</p> <p>SDG&E is providing the CPUC with a weekly public inquiry log for the information hotline, in accordance with the Construction Notification Plan.</p>	Pre and During	To Be Implemented During Construction
Land	LU-01b	01	Notify property owners and provide access	To facilitate access to properties obstructed by construction activities, SDG&E shall notify property owners and tenants at least 24 hours in advance of construction activities and shall provide alternative access if required.	SDG&E will notify property owners, tenants, the CPUC, and BLM immediately prior to construction activities if access to properties will be obstructed.	Pre and During	To Be Implemented During Construction
Land	LU-02	01	Revise project elements to minimize land use conflicts	<p>At least 90 days prior to completing final transmission line design for the approved route, SDG&E shall notify landowners of parcels through which the alignment would pass regarding the specific location of the ROW, individual towers, staging areas, access roads, or other facilities associated with the project that would occur on the subject property. The notified parties shall be provided at least 30 days in which to identify conflicts with any planned development on the subject property and to work with SDG&E to identify potential reroutes of the alignment that would be mutually acceptable to SDG&E and the landowner. Property owners whose land may be divided into potentially uneconomic parcels shall be afforded this same opportunity, even if development plans have not been established. SDG&E shall endeavor to accommodate these reroutes only to the extent that they are reasonable and feasible, do not create a substantial increase in cost, and do not create adverse impacts to resources or to other properties that would be greater in magnitude than impacts that would occur from construction and operation of the alignment as originally planned.</p> <p>SDG&E shall provide a written report to the CPUC/BLM providing evidence of the notice to landowners and copies of any responses to the notice within 30 days of the notice closing date for responses. SDG&E shall also identify in the documentation submitted to the CPUC and BLM whether reroutes recommended by the landowner or SDG&E can be accommodated. Where they cannot be accommodated, the reasons shall be provided. SDG&E shall provide information sufficient for the CPUC and BLM to determine that the reroute creates no more adverse impact than the originally planned alignment location. SDG&E shall include environmental information consistent with that required for a variance. Where a reroute is proposed, the CPUC or BLM will review and agree to accept or reject individual reroutes. The CPUC or BLM may also recommend compromise reroutes for any of the parcels for which responses were provided in a timely fashion.</p>	Attachment D: LU-2 Letter Report to this NTP Request provides the contents of notice to landowners, distribution of notice, and any responses.	Design	Complete

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Wilderness and Recreation	WR-01	01	Provide notice for access restrictions or anticipated closures to wilderness and recreation areas	SDG&E shall coordinate with the County of San Diego to ensure that proper signage is posted in advance for any access restriction and/or anticipated closures of wilderness and recreation areas (including trails and pathways) so that recreational users may plan accordingly. Signage shall be posted 30 days prior to construction at public venues such as rest stops, resource management offices, and along access routes to known recreational destinations that would be restricted, blocked, or detoured. Notices shall provide information on alternative recreation areas that may be used during the closure of these facilities.	SDG&E consulted with San Diego County (County) on October 18, 2012 regarding potential access restrictions to wilderness and recreation areas. The County confirmed that no access restrictions and/or anticipated closures of wilderness and recreation areas will occur as no official trails or recreation areas are located in the Project area; therefore, this measure is not applicable.	Pre	N/A
Cultural and Paleontological	CUL-01a	01	Develop and implement a Historic Properties Treatment Plan-Cultural Resources Management Plan	A Historic Properties Treatment Plan-Cultural Resources Management Plan (HPTP-CRMP) shall be prepared to avoid or mitigate impacts for significant cultural resources pursuant to Section 106 Guidelines. An MOA shall be developed among all federal, state, and local agencies to implement the HPTP-CRMP. As part of the HPTP-CRMP, recorded cultural resources that can be avoided shall be listed and demarcated during construction as Environmentally Sensitive Areas (ESAs). All recommended NRHP- and/or CRHR-eligible resources that would not be affected by direct impacts, but are within 100 feet of direct impact areas, shall be designated as ESAs. Protective fencing or other markers shall be erected and maintained on SDG&E-owned property, easements, or ROW to protect ESAs from inadvertent trespass for the duration of construction in the vicinity (the ESA fencing should demarcate the limits of the construction areas and where people have to stay within the easement, ROW, or SDG&E-owned property). An archaeologist shall monitor during ground-disturbing activities at all cultural resource ESAs. The HPTP-CRMP shall also define any additional areas that are considered to be of high sensitivity for discovery of buried NRHP-eligible historic properties and CRHR-eligible historic resources, including burials, cremations, or sacred features. These areas of high sensitivity shall also be monitored by qualified archaeologists during construction.	The Research Design for Archaeological Data Recovery at CA-SDI-7074 (HPTP) was approved by the BLM on August 10, 2012. The MOA was signed by all signatory parties on August 10, 2012. The final HPTP was incorporated into the final MOA, which was provided to the CPUC in August of 2012. The CRMP was approved by the BLM on August 10, 2012. The CRMP was submitted to the CPUC on September 24, 2012. Protective fencing for ESAs will be installed immediately prior to construction. Monitoring will occur during construction.	Pre and During	To Be Implemented Immediately Prior to Const.
Cultural and Paleontological	CUL-01a	02	Develop and implement a Historic Properties Treatment Plan-Cultural Resources Management Plan	<p>If recommended NRHP-eligible historic properties and CRHR-eligible historic resources are not avoidable, the HPTP-CRMP shall provide a process for evaluating NRHP and CRHR eligibility, consulting with Native Americans about site treatment, working with engineers to avoid resources; suggest various options for reducing adverse effects; and outline a data recovery mitigation plan that would include research design, field sampling, laboratory analysis, reporting, curation, and dissemination of results. Other treatment measures to resolve adverse effects could include but are not limited to historical documentation, photography, collection and publishing of oral histories, field work to gather information for research purposes or some form of public awareness or interpretation. A description of alternative treatments to resolve adverse effects other than data recovery excavations could also include:</p> <ul style="list-style-type: none"> · Relocation of construction component to portions of historic properties that do not contribute to the qualities that make the resource eligible for the NRHP and CRHR; · Deeding cemetery of other sensitive areas outside of the substation property and related facilities into open space in perpetuity and providing necessary long-term protection measures; · Public interpretation including the preparation of a public version of the cultural resources studies and/or education materials for local schools; · Providing Native American tribes future access to traditional and cultural areas on the Project site, but outside of the substation property and related facilities, after completion of Project construction; and · SDG&E financial support of existing cultural centers for the preparation of interpretive displays. 	There are no CRHR- or NRHP-eligible resources present within the area of direct impact for Section 3.	Pre and During	N/A
Cultural and Paleontological	CUL-01a	03	Develop and implement a Historic Properties Treatment Plan-Cultural Resources Management Plan	The HPTP-CRMP shall include provisions for reporting and curation of artifacts and data at a facility that is approved by the agency. The applicant shall attempt to gain permission for artifacts from privately held land to be curated with the other project collections. As part of the HPTP-CRMP, processing of all collected cultural remains shall be described. All artifacts shall be analyzed to identify function and chronology as they relate to the history of the area. Faunal material shall be identified as to species.	Refer to CUL-01a, Task 1 regarding the status of the HPTP and CRMP. The HPTP and CRMP, which include provisions for reporting and curation of artifacts in the event that any are discovered, will be implemented during construction.	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Cultural and Paleontological	CUL-01b	01	Avoid and protect significant resources	SDG&E shall design and implement a long-term management plan to protect NRHP-eligible, CRHR-eligible sites or sites treated as eligible for project management purposes from direct impacts of project operation and maintenance and from indirect impacts (such as erosion and access) that could result from the presence of the project. The plan shall be developed in consultation with the BLM and other consulting parties to design measures that shall be effective against project maintenance impacts, such as vegetation clearing and road and tower maintenance, and project-related vehicular impacts. The plan shall also include a context for understanding the cultural resources within the ROW and describe how protective measures will be undertaken for the cultural resources within the ROW or main project area that may experience operational and access impacts as a result of the project. Measures considered shall include demarcation of Environmentally Sensitive Areas (ESA's) during any subsequent project construction maintenance activities for all historic properties within 50 feet of direct impact areas, permanent restrictive fencing or gates, permanent access road closures, signage, stabilization of potential erosive areas, site capping, site patrols, and interpretive/educational programs, or other measures that will be effective for protecting the resources. The plan shall be property specific and shall include provisions for monitoring and reporting its effectiveness and for addressing inadequacies or failures that result in damage to resources.	The BLM confirmed that the Long-Term Management Plan is not a pre-construction requirement on August 24, 2012. The CPUC confirmed that this plan is not a pre-construction requirement on August 21, 2012. SDG&E will submit the Long-Term Management Plan to the CPUC once it is complete.	Pre, During, and Post	To Be Implemented During Construction
Cultural and Paleontological	CUL-01c	01	Training for contractor	All construction personnel shall be trained regarding the recognition of possible buried cultural remains and protection of all cultural resources, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. SDG&E shall complete training for all construction personnel and retain documentation showing when training of personnel was completed. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Training shall inform all construction personnel that shall be avoided, and that travel and construction activity shall be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials on or off the ROW by SDG&E, its representatives, or employees shall not be allowed. Violators shall be subject to prosecution under the appropriate State and federal laws, and violations shall be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order. The following issues shall be addressed in training or in preparation for construction: · All construction contracts shall require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits, their responsibility to avoid and protect all cultural resources, and the penalties for collection, vandalism, or inadvertent destruction of cultural resources. · SDG&E shall provide training for supervisory construction personnel describing the potential for exposing cultural resources and procedures and notifications required in the event of discoveries by project personnel or archaeological monitors. Supervisors shall also be briefed on the consequences of intentional or inadvertent damage to cultural resources. Supervisory personnel shall enforce restrictions on collection or disturbance of artifacts or other cultural resources	SDG&E coordinated with the BLM regarding the cultural awareness video and materials on November 13, 2012. SDG&E provided the cultural awareness video to the BLM on December 10, 2012. The brochure, wallet card, cultural awareness video, sign-in sheet, and hard-hat decal were approved by the CPUC on December 10, 2012 and by the BLM on December 17, 2012. The CPUC approved the SWEAP Truck Driver Training handout on January 8, 2013. Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Cultural and Paleontological	CUL-01d	01	Construction monitoring	Prior to issuance of grading permit(s), the SDG&E shall retain a qualified archaeologist, in accordance with the Secretary of the Interior's Standards and Guidelines (Secretary's Standards) (36 CFR 61), and Native American observer to monitor ground-disturbing activities in culturally sensitive areas in an effort to identify any unknown resources. A qualified archaeologist shall attend preconstruction meetings, as needed, to make comments and/or suggestions concerning the monitoring program and to discuss excavation plans with the excavation contractor. The requirements for archaeological monitoring shall be noted on the construction plans.	SDG&E has contracted with ASM Affiliates under Insignia Environmental to provide qualified archaeologists and Native American observers for the Project. SDG&E held a pre-construction orientation meeting with the BLM, tribal cultural consultants, and archaeological monitors on December 13, 2012. A qualified archaeologist and Native American observer will be present to monitor ground-disturbing activities in culturally sensitive areas during construction. Archaeological monitoring will be required for ground-disturbing activities conducted within 100 feet of environmentally sensitive areas that have been established to protect cultural resources. Final engineering plans that note the requirements for archaeological monitoring have been included as Attachment C: Final Engineering Plans.	Pre	Complete
Cultural and Paleontological	CUL-01e	01	Discovery of unknown resources	In the event that previously unknown cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground disturbance to allow evaluation of recommended significant cultural resources. The process for handling inadvertent discoveries shall be documented in the CRMP. It shall detail the methods, consultation procedures, and timelines for assessing register eligibility, formulating a mitigation plan, and implementing treatment should avoidance and protection of the resource not be possible. Mitigation and treatment plans for unanticipated discoveries shall be approved by the BLM and SHPO prior to implementation. The archaeologist in coordination with the BLM shall evaluate the significance of the discovered resources based on eligibility for the NRHP, CRHR, or local registers. Preliminary determinations of NRHP eligibility shall be made by the CPUC and BLM, in consultation with other appropriate agencies and local governments, and the SHPO.	The Monitoring, Post-Review Discovery, and Unanticipated Effects Plan (CRMP) was approved by the BLM on August 10, 2012. The CRMP was submitted to the CPUC on September 24, 2012. The CRMP will be implemented during construction.	Pre and During	To Be Implemented During Construction
Cultural and Paleontological	CUL-01f	01	Control unauthorized access	SDG&E shall coordinate with the authorized officer of the BLM or local landowner/administrator at least 60 days before construction in order to determine if gates shall be installed on access roads, especially trails that would be dually used as access roads, to prevent unauthorized vehicular access to the ROW. Gate installation shall be required at the discretion of the BLM. On trails proposed for dual use as access roads, gates shall be wide enough to allow horses, bicycles, and pedestrians to pass through. SDG&E shall document its coordination efforts with the BLM of the road/trail and provide this documentation to the CPUC and BLM 30 days prior to construction. Signs prohibiting unauthorized use of the access roads shall be posted on the installed gates.	No gates will be installed along the Section 3 portion of the Project; therefore, this measure is not applicable for this location.	Pre and During	N/A
Cultural and Paleontological	CUL-01g	01	Funding of law enforcement patrols	To control unauthorized use of project access roads and to provide for the general protection of cultural and natural resources made more accessible as a result of the project facilities, SDG&E shall provide funding to BLM and CPUC for law enforcement patrols for the term of the ROW. The BLM and CPUC will formulate what funding is reasonable to implement the above.	The BLM confirmed in an email to the CPUC on February 1, 2013 that this measure is not a pre-construction requirement and will be addressed in the Long-Term Management Plan, which will be prepared and submitted to the CPUC and BLM during construction.	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Cultural and Paleontological	CUL-01h	01	Continue consultation with Native Americans and other traditional groups	<p>SDG&E shall provide assistance to the BLM and CPUC, as requested by the BLM and CPUC, to continue required government to government consultation with interested Native American tribes and individuals (Executive Memorandum of April 29, 1994, and Section 106 of the National Historic Preservation Act) and other traditional groups to identify and assess or mitigate the impact of the approved project on traditional cultural properties or other resources of Native American concern, such as sacred sites and landscapes, or areas of traditional plant gathering for food, medicine, basket weaving, or ceremonial uses. As directed by the BLM and CPUC, SDG&E shall undertake required treatments, studies, or other actions that result from such consultation. Actions that are required during or after construction shall be defined, detailed, and scheduled in the HPTP-CRMP and implemented by SDG&E and may include the following:</p> <ul style="list-style-type: none"> · Information regarding further developments in the project; · Participation by Native American monitors in any additional surveys, archaeological excavations, and ground-disturbing construction activities; · Return of any prehistoric artifacts requiring repatriation under the NAGPRA that are recovered to the appropriate tribe after they have been analyzed by archaeologists; · The right to inspect sites where human remains are discovered and to determine the treatment and disposition of the remains; and · Copies of all site records, survey reports, or other environmental documents. 	The Tribal Participation Plan was submitted to the tribes on September 12, 2012. This plan will be implemented during construction.	Pre, During, and Post	To Be Implemented During Construction
Cultural and Paleontological	CUL-02	01	Human remains	All location of known Native American human remains shall be avoided through project design and designation as ESAs if within 100 feet of project components.	No Native American human remains have been identified in the Project area. If any Native American human remains are discovered, they will be avoided during construction.	Pre and During	To Be Implemented During Construction
Cultural and Paleontological	ECO-CUL-02	01	Pre-construction analysis and assessment	At least 120 days prior to construction, a cultural/historical resource consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources that were identified during the initial studies from major ground-disturbing activities. The analysis and assessment will be prepared to meet the requirements of the CEQA and NEPA. Project component sites that require testing for significance determination will be treated on a case-by-case basis using all applicable criteria.	SDG&E has contracted with ASM Affiliates under Insignia Environmental to provide qualified archaeologists for the Project. Potentially CRHR/NRHP eligible sites were analyzed and assessed in the August 2011 Eligibility Report prepared by ASM Affiliates. The fieldwork portion of the East County Substation Data Recovery Project was completed in accordance with the HPTP, and the BLM approved the completion of the data recovery on December 21, 2012.	Pre	Complete
Cultural and Paleontological	PALEO-01a	01	Inventory and evaluate paleontological resources in the Final APE	Prior to construction, SDG&E shall conduct and submit to the BLM and CPUC for approval an inventory of significant paleontological resources within the affected area, based on field surveys of areas identified as marginal through high or undetermined paleontological sensitivity potential.	A Paleontological Resource Assessment was prepared for the Project by Department of PaleoServices in 2008. The Paleontological Monitoring and Treatment Plan was approved by the CPUC and BLM on October 10, 2012.	Pre	Complete

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Cultural and Paleontological	PALEO-01b	01	Develop Paleontological Monitoring and Treatment Plan	Following completion and approval of the paleontological resources inventory and prior to construction, SDG&E shall prepare and submit to the CPUC and BLM for approval a Paleontological Monitoring Treatment Plan (Plan). The Plan shall be designed by a Qualified Paleontologist and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements, including BLM and County of San Diego Paleontological Resource Guidelines. The qualified paleontologist shall have an MA or PhD in paleontology, shall have knowledge of the local paleontology, and shall be familiar with paleontological procedures and techniques. The Plan shall identify construction impact areas of moderate to high sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. The Plan shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance in sediments determined to have a moderate to high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist). Sediments with zero sensitivity will not require paleontological monitoring. The Qualified Paleontologist shall have a BA in Geology or Paleontology, and a minimum of 1 year of monitoring experience in local sediments. The Plan shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The Plan shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting. The Plan shall specify that all paleontological work undertaken by the applicant on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to, a Paleontological Resources Use Permit (for work on public lands administered by BLM). Notices to proceed shall be issued by the lead agency and other agencies with jurisdiction, following approval of the Paleontological Monitoring and Treatment Plan.	Refer to PALEO-01a regarding the status of the Paleontological Monitoring and Treatment Plan.	Pre	Complete
Cultural and Paleontological	PALEO-01e	01	Train construction personnel	<p>Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during construction. The project shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. Training shall inform all construction personnel that Environmentally Sensitive Areas include areas determined to be paleontologically sensitive, as defined on the paleontological sensitivity maps for the project, and must be avoided, and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils on or off the ROW by the project, its representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate state and federal laws, and violations will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop-work order. The following issues shall be addressed in training or in preparation for construction:</p> <ul style="list-style-type: none"> · All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing subsurface paleontological resources, their responsibility to avoid and protect all such resources, and the penalties for collection, vandalism, or inadvertent destruction of paleontological resources. · The project shall provide a background briefing for supervisory personnel describing the potential for exposing paleontological resources, the location of any potential Environmentally Sensitive Areas, and procedures and notifications required in the event of discoveries by project personnel or paleontological monitors. Supervisory personnel shall enforce restrictions on collection or disturbance of fossils. · Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be diverted, and the project paleontologist shall be notified. Once the find has been inspected and a preliminary assessment made, the project paleontologist will notify the lead agency and other appropriate land managers and proceed with data recovery in accordance with the approved Treatment Plan consistent with Mitigation Measure PALEO-1B (Develop Paleontological Monitoring and Treatment Plan). 	<p>SDG&E submitted the contract language to the CPUC on September 4, 2012. The environmental awareness program, including paleontological resources awareness materials, was approved by the CPUC on December 10, 2012 and by the BLM on December 17, 2012. The CPUC approved the SWEAP Truck Driver Training handout on January 8, 2013.</p> <p>Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.</p>	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Noise	ECO-NOI-02	01	Notify property owners within 300 feet	SDG&E will provide notice of the construction plans to all property owners within 300 feet of the Project by mail at least one week prior to the start of construction activities. The announcement will state the construction start date, anticipated completion date, and hours of operation, and well as provide a telephone contact number for receiving questions or complaints during construction.	The Construction Notification Plan was approved by the CPUC on October 31, 2012. The BLM indicated on August 29, 2012 that they do not need to review the Construction Notification Plan. Property owners were notified on June 5, 2013 with distribution of the public notice mailer required by LU-1a. Evidence of mailing was submitted to the CPUC on June 12, 2013.	Pre and During	Complete
Noise	NOI-01	01	Blasting Plan	SDG&E will prepare a blasting plan that will reduce impacts associated with construction-related noise and vibrations related to blasting. The blasting plan will be site specific, based on general and exact locations of required blasting and the results of a project-specific geotechnical investigation. The blasting plan will include a description of the planned blasting methods, an inventory of receptors potentially affected by the planned blasting, and calculations to determine the area affected by the planned blasting. Noise calculations in the blasting plan will account for blasting activities and all supplemental construction equipment. The final blasting plan and pre-blast survey shall meet the requirements provided below, as well as those outlined in Mitigation Measure HAZ-4b. The blasting plan will include a schedule to demonstrate, where feasible, construction blasting to occur infrequently enough that it will not exceed the County's impulsive noise standard because blasting would not occur for more than 25% (15 minutes) during a 1-hour period due to the short time duration of a blast. Where this is not possible, other construction blasting would be coordinated with impacted building occupants to occur in their absence, or at other acceptable times, to avoid nuisance or annoyance complaints. If necessary, the applicant will temporarily relocate impacted residents on an as-needed basis for the duration of the blasting activities. The applicant will be responsible for temporary relocation expenses (i.e.; expenses for temporary housing) incurred by impacted residents if relocation is necessary during blasting activities.	No blasting is expected to occur during the construction of Section 3; therefore, this measure is not applicable to this location.	Pre and During	N/A
Noise	NOI-01	02	Blasting Plan	To ensure that potentially impacted residents are informed, the applicant will provide notice by mail to all property owners within 300 feet of the project at least 1 week prior to the start of construction activities.	No blasting is expected to occur during the construction of Section 3; therefore, this measure is not applicable to this location.	Pre and During	N/A
Noise	NOI-02	01	Conductor configuration selection to address noise impacts	As part of the project's design selection process, the proper conductor configuration shall be selected so that the corona noise does not exceed the County's noise ordinance limits along the transmission line corridor measured during worst-case weather conditions at or beyond 6 feet from the boundary of the easement upon which the transmission line is located.	According to the MMCRP, this measure applies to the SWPL Loop-in only; therefore, this measure is not applicable to the Section 3 138 kV Underground Transmission Line.	Design and Post	N/A

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Transportation	TRA-01	01	Prepare and implement a Traffic Control Plan	<p>At minimum, the plan will include the following:</p> <ul style="list-style-type: none"> · SDG&E shall encourage carpooling to the construction site to reduce personal vehicle traffic in the project area to the greatest extent possible. · SDG&E will consider the specific object sizes, weights, origin, destination, and unique handling requirements, and evaluate alternative transportation approaches. · Measures such as informational signs and flaggers shall be implemented when equipment may result in blocked roadways, and traffic cones or similar shall be implemented to identify any necessary changes in temporary lane configuration. · Flaggers and directional guidance for bicyclists along Old Highway 80 shall be used. · All Caltrans' standards for utility encroachments shall be met. · The plan shall be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook (WATCH) Manual. · Clearances or overhead crossings shall conform to regulations of the CPUC and BLM, and the number of crossings shall be minimized. · New installations under an existing roadbed shall be made by the boring-and-jacking method. No trenching under the traveled way will occur. · For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled-access rights-of-way (ROWS). · Utilities shall not be located in median areas. · Transverse crossings shall be normal (90°) to the highway alignment where practical. If impractical, skews of up to 30° from normal may be allowed. · Supports for overhead lines crossing freeways shall be located outside the controlled-access ROW and not on cut-or-fill slopes, and shall not impair sight distances. All installations shall be placed as close to the ROW line as possible. Aboveground utilities shall be outside of the clear recovery zone (20 feet from edge-of-travel way for conventional highways and 30 feet for freeways and expressways). Allowance shall be made for future widening of the highways. · New installations shall not impair sight distances. · SDG&E shall coordinate in advance with the applicants for the other two connected actions. This effort shall include coordinating the timing of construction of the various projects to reduce potential conflicts. · SDG&E shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The County will then notify respective police, fire, ambulance, and paramedic services. SDG&E shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities, and advise of any access restrictions that could impact their effectiveness. <p>SDG&E shall provide a draft copy of the Traffic Control Plan to the agencies listed for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E, and plan revisions will address each comment to the satisfaction of the commenting agency. The final plan will be submitted to the CPUC and BLM with input from commenting agencies and provided to SDG&E for implementation during all construction activities.</p>	The Traffic Control Plan for Section 3 is included as Attachment F: Transmission Line Traffic Control Plan. The Transmission Line Traffic Control Plan will be implemented during construction.	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Transportation	TRA-02	01	Repair roadways damaged by construction activities	If damage to roads occurs, SDG&E shall coordinate repairs with the affected public agencies to ensure that any impacts to area roads are adequately repaired at SDG&E's cost. Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. Said measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.	Attachment F: Transmission Line Traffic Control Plan to this NTP request includes a copy of the draft curb/grade permit plan, which was submitted to San Diego County for approval. If damage to roads occurs during construction, SDG&E will repair roads in coordination with San Diego County.	Pre, During, and Post	To Be Implemented During Construction
Transportation	TRA-03	01	Consult with and inform the FAA, DOD, and U.S. Customs and Border Protection	SDG&E shall consult with the FAA, DOD, and U.S. Customs and Border Protection (San Diego Sector) to avoid potential safety issues associated with proximity to airports, military bases or training areas, and land strips and to determine where Border Protection aircraft operate in the County. Prior to construction, SDG&E shall provide written notification to the FAA, the U.S. Air Force Regional Environmental Coordinator (or appropriate DOD representative), U.S. Customs and Border Protection (San Diego Sector), and to the CPUC and BLM, stating when and where the new transmission lines and towers will be erected, and shall install markers as requested by the U.S. Customs and Border Protection or FAA. SDG&E shall also provide all agencies listed above with aerial photos or topographic maps clearly showing the new lines and towers.	No overhead facilities will be constructed as part of the 138 kV Underground Transmission Line; therefore, this measure is not applicable to this location.	Pre	N/A
Public Health and Safety	HAZ-01a	01	Hazardous Materials Management Plan	<p>Prior to approval of final construction plans, SDG&E shall prepare an HMMP for the construction phase of the project, which shall be reviewed and approved by the appropriate agency, and shall include the following components:</p> <ul style="list-style-type: none"> The plan shall identify all hazardous materials that will be present on any portion of the construction site, including, but not limited to, fuels, solvents, and petroleum products. The plan shall address storage, use, transportation, and disposal of each hazardous material anticipated to be used at the site. The plan shall establish inspection procedures, storage requirements, storage quantity limits, inventory control, nonhazardous product substitutes, and disposition of excess materials. The plan shall identify secondary containment and spill prevention countermeasures, as well as a contingency plan to identify potential spill hazards, how to prevent their occurrence, and responses for different quantities of spills that may occur. Secondary containment and countermeasures shall be in place throughout construction so that if any leaks or spills occur, responses will be made immediately. The plan shall identify materials (and their locations) that will be on site and readily accessible to clean up small spills (i.e., spill kit, absorbent pads, and shovels). Such emergency spill supplies and equipment shall be clearly marked and located adjacent to all areas of work and in construction staging areas. The plan shall identify the spill-response materials that must be maintained in vehicles and substation sites during construction and procedures for notification to the appropriate authorities. The plan shall identify adequate safety and fire suppression devices for construction-related activities involving toxic, flammable, or explosive materials (including refueling construction vehicles and equipment). Such devices shall be readily accessible on the project site, as specified by the County's Fire Department and per the Uniform Building Code and Uniform Fire Code. The plan shall be included as part of all contractor specifications and final construction plans to the satisfaction of the appropriate agency. The plan shall also identify requirements for notices to federal and local emergency response authorities and shall include emergency response plans. <p>The plan shall be submitted to BLM and CPUC at least 30 days prior to construction.</p>	The CPUC approved the Hazardous Materials and Waste Management Plan on October 31, 2012. The BLM indicated on August 29, 2012 that they do not need to review the plan prior to construction. The plan will be implemented during construction.	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	HAZ-01a	02	Hazardous Materials Management Plan	Prior to construction, all contractor and subcontractor personnel shall receive training regarding the components of the HMMP, as well as applicable environmental laws and regulations related to hazardous materials handling, storage, and spill prevention and response measures.	<p>The requirements of the HMMP have been incorporated into the environmental awareness education program. The Project's environmental awareness education program was approved by the CPUC on December 10, 2012 and by the BLM on December 17, 2012. The CPUC approved the Safe Worker Environmental Awareness Program Truck Driver Training handout on January 8, 2013.</p> <p>Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.</p>	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-01a	03	Hazardous Materials Management Plan	SDG&E shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities.	SDG&E has designated Geosyntec Consultants as the Designated Field Representative (Hazardous Materials). The designated field representative or a designee will be on site during construction to ensure adherence to the Hazardous Materials and Waste Management Plan.	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	HAZ-01b	01	Health and Safety Program	<p>Prior to approval of final construction plans, SDG&E shall prepare a Health and Safety Program for each applicable phase of the project (i.e., construction, operation, and decommissioning). The program shall be developed to protect both workers and the general public during all phases of the project. The program shall be implemented to educate construction workers about the hazards associated with the particular project site and the safety measures that must be taken to prevent injury. The program shall include standards regarding occupational safety, safe work practices for each task, hazard training requirements for workers, and mechanisms for documentation and reporting.</p> <p>Regarding occupational health and safety, the program should identify all applicable federal and state occupational safety standards; establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; OSHA standard practices for safe use of explosives and blasting agents; and measures for reducing occupational EMF exposures); establish fire safety evacuation procedures; and define safety performance standards (e.g., electrical system standards and lightning protection standards). The program should include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. The program should include worker training regarding how to identify potentially contaminated soils and/or groundwater. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies shall be established.</p> <p>The program should identify requirements for temporary fencing around staging areas, storage yards, and excavation areas during construction or decommissioning activities. Such fencing should be designed to restrict transient traffic, off-highway vehicle (OHV) use, and the general public from accessing areas under construction and should be removed once construction or decommissioning activities are complete. The program should also identify appropriate measures to be taken during operation of the project to limit public access to hazardous facilities (e.g., permanent fencing, locked access). In order to inform workers and the general public of the dangers of abandoned mines, pamphlets with the "Stay Out-Stay Alive" information used by federal and state governments should be distributed as part of the program.</p> <p>The program shall be submitted to BLM and CPUC at least 30 days prior to construction.</p>	The CPUC approved the Health and Safety Program and Safety Assessment on December 13, 2012. The Health and Safety Program and Safety Assessment will be implemented during construction.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-01b	02	Health and Safety Program	SDG&E shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the program for all construction activities.	SDG&E has designated Geosyntec Consultants as the Designated Field Representative (Safety Lead). The designated field representative or a designee will be on site during construction to ensure adherence to the Health and Safety Program and Safety Assessment.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-01c	01	Waste Management Plan	<p>Prior to approval of final construction plans, SDG&E shall prepare a Waste Management Plan, which shall determine waste procedures, waste storage locations, waste-specific management and disposal requirements, inspection procedures, and waste minimization procedures.</p> <p>The plan shall be submitted to CPUC and BLM at least 30 days prior to construction.</p>	The Waste Management Plan has been combined with the Hazardous Material Management Plan required by Mitigation Measure HAZ-01a. The CPUC approved the Hazardous Materials and Waste Management Plan on October 31, 2012. The BLM indicated on August 29, 2012 that they do not need to review the plan prior to construction. The plan will be implemented during construction.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-01c	02	Waste Management Plan	SDG&E shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities.	SDG&E has designated Geosyntec Consultants as the Designated Field Representative (Hazardous Materials). The designated field representative or a designee will be on site during construction to ensure adherence to the Hazardous Materials and Waste Management Plan.	Pre and During	To Be Implemented During Construction

Location: Section 3 138 kV Underground Transmission Line

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	HAZ-01d	01	Testing for environmental hazards associated with demolition	Prior to demolition of the existing Boulevard Substation and surrounding buildings, soil, conduit, equipment, and structures shall be tested for environmental hazards, including oil, lead-based paint, and asbestos. An asbestos and lead-based paint survey shall be performed by a Cal/OSHA certified Asbestos Consultant/Site Surveillance Technician and a California Department of Public Health (CDPH) certified Inspector/Assessor, Sampling Technician, or Program Monitor. The survey shall be performed in accordance with the applicable state guidance to identify asbestos containing materials (ACM), asbestos containing construction materials (ACCM), and lead-based paint (LBP) as defined in the California Code of Regulations. If ACM, ACCM, or LBP is identified, abatement and disposal of all regulated materials shall be performed by a Cal/OSHA/CDPH certified abatement contractor prior to or during the demolition process.	This measure only applies to demolition of the existing Boulevard Substation; therefore, this measure is not applicable to this location.	Pre and During	N/A
Public Health and Safety	HAZ-02a	01	Test for pesticides/herbicides on currently or historically farmed land	In areas where the land has been or is currently being farmed, soil samples shall be collected and tested for herbicides, pesticides, and fumigants to determine the presence and extent of any contamination. The sampling and testing shall be prepared in consultation with the County Agricultural Commission, conducted by an appropriate California licensed professional, and sent to a California Certified Laboratory. A report documenting the areas proposed for sampling and the process used for sampling and testing shall be submitted to the CPUC and BLM for review and approval at least 60 days prior to construction.	There are no areas where land has been or is currently farmed along the 138 kV Underground Transmission Line route; therefore, this measure is not applicable to this location.	Pre	N/A
Public Health and Safety	HAZ-02a	02	Test for pesticides/herbicides on currently or historically farmed land	Results of the laboratory testing and recommended resolutions for handling and excavating materials found to exceed regulatory requirements shall be submitted to the CPUC and BLM at least 30 days prior to construction.	There are no areas where land has been or is currently farmed along the 138 kV Underground Transmission Line route; therefore, this measure is not applicable to this location.	Pre	N/A
Public Health and Safety	HAZ-02a	03	Test for pesticides/herbicides on currently or historically farmed land	<p>If soil or groundwater contamination is confirmed as a result of soil sampling, SDG&E shall immediately stop work and notify the designated environmental field representative. All work in the contaminated area shall cease, the work shall be cordoned off, and the environmental field representative shall implement appropriate health and safety procedures. Work outside the contaminated area may continue as determined by the environmental field representative.</p> <p>Excavated materials containing elevated levels of pesticides or herbicides would require special handling and disposal according to procedures established by the regulatory agencies. Effective dust control suppression procedures shall be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. SDG&E shall contact the appropriate regulatory agencies for the State of California (e.g., DTSC or RWQCB) and the County to plan options for handling, treating, and/or disposing of materials.</p>	There are no areas where land has been or is currently farmed along the 138 kV Underground Transmission Line route; therefore, this measure is not applicable to this location.	Pre and During	N/A
Public Health and Safety	HAZ-03	01	Soil testing for lead contamination	<p>Soil samples shall be collected and tested from all excavation sites within 500 feet of any area identified as a current or historical shooting range to determine the presence of lead and extent of any contamination. The sampling and testing shall be conducted by a California licensed professional and sent to a California Certified Laboratory. A report documenting the areas proposed for sampling and the process used for sampling and testing shall be submitted to the project's lead agency for review and approval at least 60 days prior to excavation. Results of the laboratory testing and recommended resolutions for handling and excavating any materials found to exceed regulatory requirements shall be submitted to the project's lead agency 30 days prior to excavation.</p> <p>In addition, a Soil/Lead Contamination Handling Plan shall be prepared to address appropriate procedures in the event that lead contamination is discovered as a result of soil testing. This plan shall contain provisions for a lead-awareness program for workers, as well as guidelines for the identification, removal, transport, and disposal of lead-impacted materials. This plan shall also emphasize that all activities within, or in close proximity to, contaminated areas must follow applicable environmental and hazardous waste laws and regulations. This plan shall be submitted to the project's lead agency 30 days prior to excavation.</p> <p>Documentation of any confirmed or suspected contamination identified during testing or excavation shall be made in the form of a report identifying the location and potential contamination, as well as the process used for sampling. Results of laboratory testing and recommended resolutions for handling and excavating materials found to exceed regulatory requirements shall be submitted to the CPUC and BLM for review and approval.</p>	Per the MMCRP, this measure only applies to the ECO Substation site; therefore, this measure is not applicable to Section 3.	Pre and During	N/A

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	HAZ-04a	01	Safety assessment	Prior to commencing construction activities, SDG&E shall conduct a safety assessment to describe potential safety issues associated with the project, how safety prevention measures would be implemented, where medical aid kits would be located, the appropriate response action for each safety hazard, and procedures for notifying the appropriate authorities. The assessment shall address issues such as site access, construction hazards, safe work practices, security, heavy equipment transportation, traffic management, emergency procedures, and fire control.	The CPUC approved the Health and Safety Program and Safety Assessment on December 13, 2012. The Health and Safety Program and Safety Assessment will be implemented during construction.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-04b	01	Blasting Plan	<p>If blasting is deemed necessary for the construction of project components, SDG&E shall conduct a pre-blast survey and prepare a blasting plan. A written report of the pre-blast survey and final blasting plan shall be provided to the appropriate regulatory agency and approved prior to any rock removal using explosives. In addition to any other requirements established by the appropriate regulatory agencies, the pre-blast survey and blasting plan shall meet the following conditions, as well as those outlined in Mitigation Measure NOI-1:</p> <p>The pre-blast survey shall be conducted for structures within a minimum radius of 1,000 feet from the identified blast site to be specified by SDG&E. Sensitive receptors that could reasonably be affected by blasting shall be surveyed as part of the pre-blast survey. Notification that blasting would occur shall be provided to all owners of the identified structures to be surveyed prior to commencement of blasting. The pre-blast survey shall be included in the final blasting plan.</p> <p>The final blasting plan shall address air-blast limits, ground vibrations, and maximum peak particle velocity for ground movement, including provisions to monitor and assess compliance with the air-blast, ground vibration, and peak particle velocity requirements. The blasting plan shall meet criteria established in Chapter 3 (Control of Adverse Effects) in the Blasting Guidance Manual of the U.S. Department of Interior Office of Surface Mining Reclamation and Enforcement.</p> <p>The blasting plan shall outline the anticipated blasting procedures for the removal of rock material at the proposed turbine foundation locations. The blasting procedures shall incorporate line control to full depth and controlled blasting techniques to create minimum breakage outside the line control and maximum rock fragmentation within the target area. Prior to blasting, all applicable regulatory measures shall be met. SDG&E, its general contractor, or its subcontractor (as appropriate) shall keep a record of each blast for at least 1 year from the date of the last blast.</p>	<p>Refer to NOI-01 regarding the status of the Blasting Plan.</p> <p>SDG&E will prepare a site-specific blasting plan prior to blasting.</p>	Pre, During, and Post	To Be Implemented During Construction
Public Health and Safety	PS-01a	01	Minimize electromagnetic and public safety communications	The project shall be designed to minimize EMI (e.g., impacts to radar, microwave, television, and radio transmissions) and comply with FCC regulations.	The CPUC approved a report demonstrating minimization of EMI in compliance with FCC regulations on January 11, 2013. SDG&E has specified and will implement designs that minimize EMI, in accordance with the report, during construction.	Pre and During	To Be Implemented During Construction
Public Health and Safety	PS-01a	02	Minimize electromagnetic and public safety communications	Signal strength studies shall be completed prior to construction and conducted when proposed locations have the potential to impact transmissions.	The CPUC approved a report discussing signal strength measurements and interference issues on January 11, 2013. SDG&E has specified and will implement designs that minimize transmission impacts, in accordance with the report, during construction.	Pre and During	To Be Implemented During Construction
Public Health and Safety	PS-01b	01	Limit conductor surface potential	Prior to construction, SDG&E shall specify and implement designs that limit the conductor surface electric gradient in accordance with the Institute of Electrical and Electronic Engineers (IEEE) Radio Noise Design Guide.	New conductors will be installed underground at this location; therefore, this measure is not applicable.	Pre, During, and Post	N/A

Location: Section 3 138 kV Underground Transmission Line

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	PS-02	01	Determine proper grounding procedures and implement appropriate grounding measures	As part of the project siting and construction process, SDG&E's contractor(s) shall identify objects (such as fences, conductors, and pipelines) that have the potential for induced voltages and work with the affected parties to determine proper grounding procedures (Note: CPUC General Order 95 and the NESC do not have specific requirements for grounding). SDG&E shall install all necessary grounding measures prior to energizing the line.	There are no objects to be grounded along Section 3; thus, this measure is not applicable to this location.	Pre and During	N/A
Air Quality	ECO-AIR-13	01	Green building practices at ECO Substation	During final design, SDG&E will consider the feasibility of using rooftop photovoltaic panels on the control shelters to help support operating load at the ECO Substation. SDG&E will also investigate utilizing solar tubes for lighting in the control shelters. SDG&E's Project team will work closely with SDG&E's Sustainable Communities team to implement green building practices at the ECO Substation.	ECO-AIR-13 only applies to the ECO Substation per the MMCRP; therefore, this measure is not applicable to the Section 3 138 kV Underground Transmission Line.	Design	N/A
Hydrology and Water	ECO-HYD-01	01	Compensation for permanent impacts to waters of the U.S. and state-only waters	SDG&E will compensate for permanent impacts to any waters of the U.S. and state-only waters at a minimum ratio of one to one or as required by the USACE, CDFG, and RWQCB through their respective permitting processes.	No impacts to jurisdictional resources will result from construction of the Section 3 portion of the Project, as all construction activities will occur within disturbed road limits. Therefore, no compensatory mitigation or habitat restoration is required for Section 3.	Pre and During	N/A

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-01	01	A Stormwater Pollution Prevention Plan shall be prepared to reduce soil erosion during construction	<p>In compliance with the new SWRCB's NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002, effective July 1, 2010), SDG&E shall prepare a project-specific SWPPP before construction begins, and it shall be kept on site throughout the construction process. The SWPPP shall include the following:</p> <ul style="list-style-type: none"> - Identification of pollutant sources and non-stormwater discharges associated with construction activity. - Specifications for BMPs that shall be implemented during project construction to minimize the potential for accidental releases and runoff from the construction areas, including temporary construction yards, pull sites, and helicopter landing zones. Specifications shall include: <ul style="list-style-type: none"> - A plan for training construction crews - A plan for monitoring and inspecting BMPs and site conditions - A plan for sampling and analysis of pollutants (as necessary). - Where applicable, the following shall apply: <ul style="list-style-type: none"> - Construction impacts shall be minimized to the greatest extent possible - Upon completion of construction phases, roadways shall be reduced to minimum widths needed - Areas disturbed during construction shall be revegetated to their natural states - Construction roadways shall follow natural contours to the extent practical and be designed to minimize stream crossings, avoid wetlands, and maintain surface water runoff patterns to prevent erosion - CDFG guidelines for culverts shall be followed to minimize long-term maintenance and meet a 10-year rain event to minimize trapping of sediment. - Where applicable, the following shall apply to reduce the release of contaminants to the local surface and groundwater: <ul style="list-style-type: none"> - For on-site storm drain inlets, mark all inlets with the words "No Dumping! Flows to Sensitive Habitat" or similar. - For landscaping, show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. Show self-retaining landscape, if any. State that final landscape plans will preserve existing native trees, shrubs, and ground cover will cover maximum extent possible. - Design landscaping to minimize irrigation, runoff, and use of pesticides and fertilizers that contribute to stormwater pollution. Select plants that are appropriate for site soils, slopes, climate, wind, sun, rain, land use, ecological consistency, and plant interactions. - For outdoor storage of equipment or materials, show storage areas and how they will be covered and what structural features or grading will be incorporated to prevent pollutants from discharging from the site. - Designate areas for vehicle/equipment repair, maintenance, and cleaning, and document how these areas will be contained to prevent pollutant runoff. - For leaking or failure of large power transformers, have 100% containment at each power transformer. 	The Linear SWPPP was uploaded to SMARTS on November 20, 2012 and submitted to the CPUC on November 27, 2012. The SWPPP will be implemented during construction.	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-02	01	Avoidance and preventative measures to protect local groundwater during excavation	Prior to excavation, a qualified geologist/hydrologist shall determine the depth of groundwater in areas where excavation would occur.	The Geotechnical Investigation Report, which identified depth to groundwater, was submitted to the CPUC on August 1, 2012.	Pre	Complete
Hydrology and Water	HYD-02	02	Avoidance and preventative measures to protect local groundwater during excavation	The project shall be designed to avoid areas of shallow groundwater where feasible. In such areas where groundwater cannot be avoided during excavation, the site shall be dewatered during construction, and materials that could contaminate the groundwater shall be kept at least 200 feet from the dewatering activities. An NPDES permit shall be obtained for proper disposal of water. Treatment may be required prior to discharge.	Procedures for dewatering and proper disposal of water are included in the Project-specific SWPPPs. The Linear SWPPP was submitted to the CPUC on November 27, 2012 and will be implemented during construction. A Notice of Intent for the 138 kV Transmission Line was submitted to the SWRCB on November 20, 2012 and a WDID was received on December 7, 2012.	Design and During	To Be Implemented During Construction
Hydrology and Water	HYD-03	01	Identification of sufficient water supply	<p>Prior to construction SDG&E will prepare comprehensive documentation that identifies one or more confirmed, reliable water sources that when combined meet the project's full water supply construction needs. Documentation will consist of the following:</p> <ul style="list-style-type: none"> Preparation of a groundwater study. For well water that is to be used, the applicant will commission a groundwater study by a qualified hydrogeologist to assess the existing condition of the underlying groundwater/aquifer and all existing wells (with owner's permission) in the vicinity of proposed well location/water sources. The groundwater study will evaluate aquifer properties and aquifer storage. The groundwater study will estimate short and long-term well water supplies from each well proposed to be used, and documentation indicating that each well is capable of producing the total amount of water to be supplied for construction from each well. The groundwater study will estimate short- and long-term impacts of the use of the well(s) on the local groundwater production (short-term extraction for construction water and ongoing O&M water), on all project wells, and on other wells in the project area. The groundwater study will include an assessment of the potential for subsidence brought on by project-related water use in the area. The applicant will provide demonstration of compliance with all applicable laws and regulations and will obtain a County of San Diego Major Use Permit for use of any proposed well prior to construction. Documentation of Purchased Water Source(s). For water that is to be purchased from one or more water/utility district(s), the applicant shall provide written documentation from such district(s) indicating the total amount of water to be provided and the time frame that the water will be made available to the project. The Sweetwater Authority has provided written confirmation of water availability to support the project. <p>Total confirmed water supplies from the combination of above documented sources shall equal the total gallons of water needed through construction of the project.</p>	<p>The Construction Water Supply Plan was approved by the CPUC with additional documentation on January 31, 2013.</p> <p>SDG&E submitted an amended Construction Water Supply Plan to the CPUC on June 20, 2013. The CPUC approved the Amended Construction Water Supply Plan on July 8, 2013.</p>	Design	Complete

Measure Category	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-04	01	Preparation of a Stormwater Management Plan	<p>SDG&E shall commission an SWMP in compliance with the County of San Diego Major Storm Water Management Plan. The SWMP shall be project specific and developed in conjunction with project design. The SWMP shall include site design BMPs that, where applicable, shall:</p> <ul style="list-style-type: none"> - Maintain predevelopment rainfall runoff characteristics. The BMPs shall: Locate the project and road improvement alignments to avoid or minimize impacts to receiving waters or to increase the preservation of critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions; Minimize the project's impervious footprint; Conserve natural and critical areas, such as floodplains, steep slopes, wetlands, and areas with erosive and unstable soil conditions; Where landscape is proposed, drain rooftops, impervious sidewalks, walkways, trails, and patios into adjacent landscaping; Design and locate roadway structures and bridges to reduce the amount of work in live streams, and minimize the construction impacts - Implement the following methods to minimize erosion from slopes: Disturb existing slopes only when necessary; Minimize cut-and-fill areas to reduce slope lengths; Incorporate retaining walls to reduce steepness of slopes or to shorten slopes; Provide benches or terraces on high cut-and-fill slopes to reduce concentration of flows; Round and shape slopes to reduce concentrated flow; Collect concentrated flows in stabilized drains and channels; Protect slopes and channels. - The BMPs shall: Minimize disturbances to natural drainages; Convey runoff safely from the tops of slopes; Vegetate slopes with native or drought-tolerant vegetation; Stabilize permanent channel crossings; Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters. - Include other design principles that are comparable and equally effective. - The SWMP shall also incorporate Low Impact Development Features into the project, including but not limited to: Preserve well-draining soils (Type A or B); Preserve significant trees; Set back development envelope from drainages; Restrict heavy construction equipment access to planned green/open space areas; Re-till soils compacted by construction vehicles/equipment; Collect and reuse upper soil layers of development site containing organic materials; Curb cuts to landscaping; Use rural swales; Use concave median; Use permeable pavements; Pitch pavements toward landscaping; Use cisterns and rain barrels; Downspout to swale; Use vegetated roofs; Use soil amendments; Reuse native soils; Use smart irrigation systems; and Use street trees (HDR 2009b). <p>The SWMP shall ensure that the project follows CDFG guidelines for culverts to minimize long-term maintenance and meet a 10-year rain event to minimize the trapping of sediment.</p>	<p>The CPUC approved the statement of conformance stating that HYD-04 will be fulfilled by the preparation and implementation of the Project-specific SWPPPs on January 30, 2013. The Linear SWPPP was submitted to the CPUC on November 27, 2012. The SWPPP will be implemented during construction.</p>	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-05	01	Implementation of creek-crossing procedures	<p>Where creek crossings can be completed during dry season, with no flows present in the creek, seasonally timed restorative open trenching will be completed. This procedure will use minimum trench widths. Trench cut material will not be placed outside of the creek bed and outside of 100-year inundated areas. Trench fill will be compacted and replaced to existing conditions, including matching existing creek bed gradations, and restoring vegetation. Open trenching restoration will be completed prior to any wet season flows, and will include anti-erosion action plans for any unplanned rainfall during construction. The applicant shall obtain all required permits prior to completing open trenching through drainages. In any case, flows will be isolated from open trenching by best management practices mandated by the General Construction Permit. Areas of trenching would be restored and/or vegetated at completion of work. Where creek crossing cannot be completed during the dry season creek crossing shall use jack-and-bore procedures to avoid direct impacts and shall be conducted in a manner that does not result in sediment-laden discharge or hazardous materials release to the water body. The following measures shall be implemented during horizontal boring (jack-and-bore) operations:</p> <p>(1) Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages.</p> <p>(2) Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of the bank or wetland/riparian boundary. Spoils shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention).</p> <p>(3) Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, and drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times.</p> <p>(4) Immediately following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion, and temporary sediment barriers shall be left in place until restoration is deemed successful.</p> <p>(The applicant shall obtain the required permits prior to conducting creek crossing work. Required permits may include ACOE CWA Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFG Streambed Alteration Agreement 1602. The applicant shall implement all pre- and post-construction conditions identified in the permits issued. The plan shall be submitted to the CPUC, County of San Diego, and ACOE 60 days prior to construction.)</p>	No impacts to jurisdictional water features will occur from construction of Section 3, as all work will be conducted within the road and road shoulder for this portion of the Project and the jack-and-bore method of construction will be utilized in one location along Section 3. The requirements described in this measure for horizontal boring operations will be implemented during construction at the jack-and-bore sites located along Section 3.	Pre, During, and Post	To Be Implemented During Construction
Hydrology and Water	HYD-06	01	Horizontal Directional Drill Contingency Plan	<p>If horizontal directional drilling is to be used during construction SDG&E shall prepare a Horizontal Directional Drill Contingency Plan to address procedures for containing an inadvertent release of drilling fluid (frac-out). The plan shall contain specific measures for monitoring frac-outs, for containing drilling mud, and for notifying agency personnel. The plan shall also discuss spoil stockpile management, hazardous materials storage and spill cleanup, site-specific erosion and sediment control, and housekeeping procedures, as described in the SWPPP. The plan shall be submitted to the CPUC, BLM, and ACOE 60 days prior to construction.</p>	Horizontal directional drilling procedures will not be utilized for construction of Section 3; therefore, this measure is not applicable for Section 3. SDG&E will implement the jack-and-bore requirements provided in MM HYD-5 and also included in the Horizontal Directional Drilling Contingency Plan during construction of Section 3.	Pre	N/A

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-06	02	Horizontal Directional Drill Contingency Plan	SDG&E shall obtain the required permits prior to conducting work associated with horizontal directional drilling activities. Required permits may include U.S. Army Corps of Engineers Clean Water Act Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFG Streambed Alteration Agreement Section 1602. SDG&E shall implement all pre- and post-construction conditions identified in the permits issued for the horizontal directional drilling.	<p>The Section 401 Water Quality Certification was issued on July 31, 2012 and was submitted to the CPUC on August 10, 2012. The USACE 404 Permit was issued on September 19, 2012 and was submitted to the CPUC on September 19, 2012. The CDFG 1600 Agreement was issued October 30, 2012 and was submitted to the CPUC on November 6, 2012.</p> <p>Horizontal directional drilling procedures will not be utilized for construction of Section 3; therefore, this measure is not applicable to this location. SDG&E will implement the jack-and-bore requirements provided in MM HYD-5 and also included in the Horizontal Directional Drilling Contingency Plan during construction of Section 3.</p>	Pre and During	N/A
Hydrology and Water	HYD-07	01	Bury power line below 100-year scour depth	At locations where the buried power line is to be at or adjacent to a streambed capable of scour, the power line shall be located below the expected depth of scour from a 100-year flood, or otherwise protected from exposure by scour that, for purposes of this mitigation measure, also includes lateral (stream bank) erosion and potential scour associated with flows overtopping or bypassing a culvert or bridge crossing.	<p>As shown in Attachment C: Final Engineering Plans, all but one of the water features crossed by the Project will be avoided as the 138 kV Underground Transmission Line will be installed by trenching under the culverts and all drainage features within temporary work areas. A scour analysis for the one location where a jack and bore along Section 3 will occur has been included as Attachment E: Scour Analysis to this NTP request.</p> <p>The Section 3 138 kV Underground Transmission Line will be constructed in accordance with the final engineering plans.</p>	Design and During	To Be Implemented During Construction
Hydrology and Water	HYD-07	02	Bury power line below 100-year scour depth	During final design, a registered civil engineer with expertise in hydrology, hydraulics, and river mechanics shall make a determination of where the underground line could be at risk of exposure through scour or erosion from a 100-year event.	A scour analysis for the one location where a jack and bore along Section 3 will occur has been included as Attachment E: Scour Analysis to this NTP request.	Pre	Complete
Geology, Mineral, Soil	GEO-01	01	Erosion Control and Sediment Transport Control Plan	<p>The Erosion Control and Sediment Transport Control Plan would be included with the project grading plans submitted to the County for review and comment. The plan would be submitted to CPUC and BLM a minimum of 60 days prior to project design and would be prepared in accordance with the standards provided in the Manual of Erosion and Sedimentation Control Measures and consistent with practices recommended by the Resource Conservation District of Greater San Diego County.</p> <p>Implementation of the plan would help stabilize soil in graded areas and waterways and reduce erosion and sedimentation. The plan would designate BMPs that would be implemented during construction activities. Erosion control efforts, such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (e.g., flagging), vehicle mats in wet areas, and retention/settlement ponds, would be installed before extensive soil clearing and grading begins. Appropriate stabilization measures, such as mulching or seeding, would be used to protect exposed areas during construction activities.</p>	Per confirmation by the CPUC on July 18, 2012, the SWPPP will satisfy the requirements of GEO-01. The Linear SWPPP was submitted to the CPUC on November 27, 2012. The SWPPP will be implemented during construction.	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Geology, Mineral, Soil	GEO-01	02	Erosion Control and Sediment Transport Control Plan	Revegetation plans, the design and location of retention ponds, and grading plans would be submitted to the CDFG and ACOE for review in the event of construction near waterways.	Per confirmation by the CPUC on July 18, 2012, the SWPPP will satisfy the requirements of GEO-01. The Linear SWPPP was submitted to the CPUC on November 27, 2012. The SWPPP will be implemented during construction.	Pre	To Be Implemented During Construction
Geology, Mineral, Soil	GEO-02	01	Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design	The design-level geotechnical studies to be performed by SDG&E shall identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures shall be utilized for protection of reinforcement, concrete, and metal-structural components against corrosion, including use of corrosion-resistant materials and coatings, increased thickness of project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems. The geotechnical studies shall also identify areas with potentially expansive or collapsible soils and include appropriate design features, including excavation of potentially expansive or collapsible soils during construction and replacement with engineered backfill, ground-treatment processes, and redirection of surface water and drainage away from expansive foundation soils. Studies shall conform to industry standards of care and ASTM standards for field and laboratory testing. Design shall conform to applicable sections of the County of San Diego grading codes, CBC, and the standard specifications for public works construction. The geotechnical studies prepared by a certified geologist shall be submitted to CPUC and BLM 60 days prior to construction of proposed structures.	The Geotechnical Investigation Report, which includes an assessment of soil characteristics, was submitted to the CPUC on August 1, 2012.	Pre and During	Complete
Geology, Mineral, Soil	GEO-03	01	Conduct geotechnical investigations	The applicant shall perform design-level geotechnical investigations to evaluate the potential for liquefaction, lateral spreading, seismic slope instability, and ground-cracking hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures that meet CBC and IEEE design parameters shall be incorporated into the project designs. Appropriate measures for project facilities could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in underground cables to allow ground deformations without damage to structures. The geotechnical investigations prepared by a certified geologist shall be submitted to CPUC and BLM 60 days prior to construction of proposed structures.	The Geotechnical Investigation Report was submitted to the CPUC on August 1, 2012.	Pre and During	Complete
Public Services and Utilities	PSU-01a	01	Notification of utility service interruption	Prior to construction in which a utility service interruption is known to be unavoidable, SDG&E shall notify members of the public affected by the planned outage by mail of the impending interruption, and shall post flyers informing the public of the service interruption in neighborhoods affected by the planned outage. Copies of notices and dates of public notification shall be provided to the applicable lead agency.	Members of the public will be notified by mail prior to construction activities if a utility service interruption is known to be unavoidable.	Pre and During	To Be Implemented During Construction
Public Services and Utilities	PSU-01b	01	Protect underground utilities	Prior to construction of the transmission/gen-tie line, SDG&E shall submit to the CPUC and BLM written documentation, including evidence of review by the appropriate jurisdictions, including the following: <ul style="list-style-type: none"> · Construction plans designed to protect existing utilities and that show the dimensions and location of the finalized alignment · Records that the applicant provided the plans to affected jurisdiction for review, revision, and final approval · Evidence that the project meets all necessary local requirements · Evidence of compliance with design standards · Copies of necessary permits, agreements, or conditions of approval · Records of discretionary decisions made by the appropriate agencies. 	A memo that confirms approval and completion of review of the items listed in this measure was submitted to the CPUC on June 26, 2013 as an attachment to the Southern Access Road Underground NTP Request.	Pre	Complete

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Services and Utilities	PSU- 01c	01	Coordinate with utility providers	SDG&E shall coordinate with all applicable utility providers with facilities located within or adjacent to the project to ensure that design does not conflict with other facilities prior to construction. In the event of a conflict, the project will be aligned vertically and/or horizontally as appropriate to avoid other utilities and provide adequate operational and safety buffering. Alternately, the other existing facilities may be relocated. Long-term operations and maintenance of the project will be negotiated through easement, purchased ROW, franchise agreement, or joint use agreement.	Documentation of coordination with applicable utility providers regarding the location of facilities and potential conflicts was submitted to the CPUC on June 26, 2013 as an attachment to the Southern Access Road Underground NTP Request.	Design	Complete

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Fire and Fuel	FF-01	01	Develop and implement a Construction Fire Prevention / Protection Plan	<p>San Diego Gas & Electric Company (SDG&E) shall develop a multiagency Construction Fire Prevention/Protection Plan in consultation with the California Department of Forestry and Fire Protection (CAL FIRE), San Diego Rural Fire Protection District (SDRFPD), and San Diego County Fire Authority (SDCFA) to the satisfaction of the CPUC. SDG&E shall monitor construction activities to ensure implementation and effectiveness of the plan. The final plan will be approved by the CPUC prior to the initiation of construction activities and shall be implemented during all construction activities by SDG&E. At minimum, the plan will include the following:</p> <ul style="list-style-type: none"> · Procedures for minimizing potential ignition (vegetation clearing, fuel modification establishment, parking requirements; smoking restrictions, hot work restrictions); Red Flag Warning restrictions; Fire coordinator role and responsibility; Fire suppression equipment on site at all times work is occurring; Requirements of Title 14 of the California Code of Regulations (CCR), Article 8 #918 "Fire Protection" for private land portions; Access road widening (28-foot County roads, 18-foot-wide spur roads); Applicable components of the SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009); Emergency response and reporting procedures; Emergency contact information; Worker education materials; kick-off and tailgate meeting schedules; Other information as provided by CAL FIRE, SDRFPD, SDCFA, CPUC, and Bureau of Land Management (BLM). <p>Additional restrictions will include the following:</p> <ul style="list-style-type: none"> · During the construction phase of the project, SDG&E shall implement ongoing fire patrols. SDG&E shall maintain fire patrols during construction hours and for 1 hour after end of daily construction, and hotwork · Fire Suppression Resource Inventory - In addition to 14 CCR 918.1(a), (b), and (c), SDG&E shall update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on a quarterly basis and provide it to the CAL FIRE, SDRFPD, and SDCFA. · During Red Flag Warning events, as issued daily by the National Weather Service in state responsibility areas (SRAs) and local responsibility areas (LRA), all non-essential, non-emergency construction and maintenance activities shall cease or be required to operate under Hot Work Procedure. · SDG&E and contractor personnel shall be informed of changes to the Red Flag event status and PAL as stipulated by CAL FIRE and CNF. · All construction crews and inspectors shall be provided with radio and/or cellular telephone access that is operational throughout the project area to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the project area immediately upon ignition. · Each crew member shall be trained in fire prevention, initial attack firefighting, and fire reporting. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crewmembers as-needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect. · Each member of the construction crew shall be trained and equipped to extinguish small fires with hand-held fire extinguishers in order to prevent them from growing into more serious threats. Each crew member shall at all times be within 100 feet of a vehicle containing equipment necessary for fire suppression as outlined in the final Construction Fire Prevention/Protection Plan. <p>SDG&E will provide a draft copy of the Construction Fire Prevention/Protection Plan to the CAL FIRE, SDRFPD, and SDCFA for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E and revisions to the plan will address each comment to the satisfaction of the CPUC. The final plan will be approved by the CPUC with input from CAL FIRE, SDRFPD, SDCFA, and BLM, as desired, prior to the initiation of construction activities and provided to SDG&E for implementation during all construction prior to the initiation of construction activities.</p>	SDG&E submitted the Construction Fire Prevention/Protection Plan with the SDRFPD approval letter to the CPUC on December 19, 2012. SDG&E submitted SDCFA and CAL FIRE approval letters for the Construction Fire Prevention/Protection Plan to the CPUC on February 8, 2013. The BLM indicated their approval of the plan on January 23, 2013. The Construction Fire Prevention/Protection Plan will be implemented during construction.	Pre, During, and Post	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Fire and Fuel	FF-02	01	Wildland Fire Prevention and Fire Safety Electric Standard Practice O&M Plan	<p>Revise the Wildland Fire Prevention and Fire Safety Electric Standard Practice Plan (2009) to create the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operational Maintenance Plan. The revised plan will address the ECO Substation Project and will be implemented during all operational maintenance work associated with the project for the life of the project. Important fire safety concepts that will be included in this document are as follows:</p> <ul style="list-style-type: none"> · Implement existing practices including Electric Standard Practice 113.1, Maintenance of existing Remote Automated Weather Stations and territory-wide weather system monitoring, adjusted system reclosing policies (patrols), replacement of wood poles with steel in priority areas, and additional measures as may be developed, participation in San Diego County FireSafe Council and other public outreach. · Guidance on where maintenance activities may occur (non-vegetated areas, cleared access roads, and work pads that are approved as part of the project design plans) Fuel modification buffers required by the Fire Protection Plan (FPP) · When vegetation work will occur (prior to any other work activity) · Timing of vegetation clearance work to reduce likelihood of ignition and or fire spread · Coordination procedures with fire authority · Integration of the project's Construction Fire Prevention/Protection Plan content · Personnel training and fire suppression equipment · Fire safety coordinator role as manager of fire prevention and protection procedures, coordinator with fire authority and educator · Communication protocols · Incorporation of CAL FIRE, San Diego Rural Fire Protection District (SDRFPD), and SDCFA reviewed and approved Response Plan mapping and assessment. · Other information as provided by CAL FIRE, SDRFPD, SDCFA, BLM, and CPUC <p>SDG&E will provide a draft copy of the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operational; Maintenance Plan to CAL FIRE, SDRFPD, SDCFA, BLM, and CPUC for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E and plan revisions will address each comment to the satisfaction of the CPUC. The final plan will be approved by the CPUC prior to energizing the project and provided to SDG&E for implementation during all operational maintenance activities.</p>	The Wildland Fire Prevention and Fire Safety Electric Standard Practice 113.1, which was revised in consultation with relevant agencies, was approved by the CPUC on February 1, 2013. The BLM indicated their approval of the plan on January 23, 2013. The plan will be implemented following construction.	Pre and Post	To Be Implemented Following Construction
Fire and Fuel	FF-03	01	Provide assistance to San Diego Rural Fire Protection District (SDRFPD) and San Diego County Fire Authority (SDCFA)	<p>Provide assistance to SDRFPD and SDCFA to improve the response and firefighting effectiveness near electrical substations, transmission lines, and aerial infrastructure based on project fire risk and protection needs. Assistance by SDG&E shall include providing funding for one SDCFA Fire Code Specialist II position to enforce existing fire code requirements, including but not limited to implementing required fuel management requirements (e.g., defensible space), in priority areas to be identified by the SDCFA for the life of the project. All fuel management activities shall be in accordance with CEQA Guidelines Section 15304 (i), which indicates that the minor land alternation activities will not have a significant effect on the environment, as the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. In addition, SDG&E is to provide funding to allow SDCFA to employ up to four volunteer/reserve firefighters as part-time code inspectors on a stipend basis for up to 90 days per year for the life of the project. The funding for the SDCFA Fire Code Specialist II position and the four volunteer/reserve firefighters as part-time code inspectors will be provided through proportional contributions, to be determined by CPUC and BLM, from SDG&E (and the other applicants) to the SDCFA prior to construction.</p>	<p>A signed MOU between the SDCFA and SDG&E, dated January 2013, was provided to the CPUC on January 28, 2013. SDG&E provided the first annual contribution to the SDCFA and submitted proof of payment to the CPUC on January 29, 2013. The CPUC concurred that the pre-construction components of this measure were satisfied on January 30, 2013.</p> <p>SDG&E will submit annual contributions to the SDCFA during construction and provide proof to the CPUC after every annual payment.</p>	Pre and During	To Be Implemented During Construction

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Fire and Fuel	FF-03	02	Provide assistance to San Diego Rural Fire Protection District (SDRFPD) and San Diego County Fire Authority (SDCFA)	<p>A fixed annual fire mitigation fee of approximately \$116,600 will be provided by SDG&E to SDRFPD for mitigation funding. The funding will be utilized to assist with the purchase and maintenance of a Type I engine with an aqueous film forming foam (AFF) apparatus with a deck gun to apply a heavy stream. In addition, the funding will be utilized to provide for a third volunteer stipend to staff the engine with firefighters and training for electrical firefighting for 10 personnel (2 per year on a 5-year rotation). The fire mitigation fee will be paid annually during the life of the project and terminated upon decommissioning of the substation and related facilities.</p>	<p>A signed MOU between the SDRFPD and SDG&E, dated November 2012, was provided to the CPUC on January 28, 2013. The MOU includes a payment schedule with the initial payment scheduled for six months following the commencement of construction and the annual payment of \$116,600 scheduled on the annual anniversary of the initial payment date.</p> <p>SDG&E will provide an initial payment of \$116,600 to the SDRFPD on September 11, 2013 and provide evidence of payment to the CPUC following the initial payment.</p>	Pre, During, and Post	To Be Implemented During Construction
Fire and Fuel	FF-04	01	Customized Fire Protection Plan for Project	<p>A draft Fire Protection Plan (FPP) will be submitted to CAL FIRE, SDRFPD, and SDCFA at least 90 days before the start of any construction activities. Comment on the draft FPP shall be provided to SDG&E and SDG&E shall resolve each comment in consultation with each responsible agency. The final FPP shall be approved by the CPUC prior to the initiation of construction activities. The FPP will include, at minimum, the following:</p> <ul style="list-style-type: none"> San Diego County FPP Content Requirements (http://www.sdcounty.ca.gov/dplu/docs/Fire-Report-Format.pdf) Rural Fire Protection District Content Requirements: Provisions for fire safety and prevention; Water supply; Fire suppression/detection systems - built-in detection system with notification; Secondary containment; Site security and access; Emergency shut-down provisions Integration into plans prepared to satisfy Mitigation Measures FF-1 and FF-2 <p>The FPP will be incorporated into MM FF-1, the Construction Fire Prevention/Protection Plan, and MM FF-2, the Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009)7 Operational Maintenance Plan. The Customized Fire Protection Plan will incorporate clarifications and additional ECO Substation Project APMs described in Section B of this EIR/EIS.</p>	<p>The SDRFPD approved the Fire Protection Plan on November 7, 2012. SDG&E submitted the SDRFPD-approved Fire Protection Plan to the CPUC with the SDRFPD approval letter on November 12, 2012. The CPUC provided comments on January 9, 2013. SDG&E provided responses to the CPUC's comments on January 16, 2013. SDG&E submitted SDCFA and CAL FIRE approval letters for the Fire Protection Plan to the CPUC on February 8, 2013. The BLM indicated their approval of the plan on January 23, 2013. The Fire Protection Plan will be implemented following construction.</p>	Pre, During, and Post	To Be Implemented Following Construction
Fire and Fuel	FF-06	01	Funding for FireSafe Council	<p>Provide funding for Boulevard/Jacumba/La Posta FireSafe Council with a clarified focus of coordinating a Community Wildfire Protection Plan (CWPP) and Evacuation Plan. Funding for the Boulevard/Jacumba/La Posta FireSafe Council will enable this newly formed organization a means to proactively complete these plans, provisions for applying for grant funding, and ultimately, for implementing fuel reduction and evacuation plans. Funding will be a lump sum, one-time amount with SDG&E providing fair share of CWPP and Evacuation Plan preparation.</p>	<p>SDG&E submitted a proposal for funding the Boulevard/Jacumba/La Posta FireSafe Council to the CPUC on November 12, 2012. The CPUC received concurrence of the funding amount from the BLM on January 15, 2013. SDG&E submitted proof of payment to the FireSafe Council to the CPUC on January 24, 2013.</p>	Pre	Complete
Fire and Fuel	FF-07	01	Preparation of Disturbed Area Revegetation Plan	<p>All areas disturbed during construction activities that will not be continuously included in the long-term maintenance access right-of-way (ROW) will be provided native plant restoration in order to prevent non-native, weedy plants from establishing. Disturbed areas that will be included in the long-term maintenance program will not be revegetated as any plants that establish in these areas will be removed on an ongoing (at least annual) basis.</p> <p>Mitigation Measure FF-7 corresponds with Mitigation Measure Bio-1d and is not a duplicative plan but will be implemented under the biological monitoring program. It directs that the temporary disturbance areas will be revegetated with native plants common to the area through direction detailed in a Habitat Restoration Plan. The Habitat Restoration Plan will be prepared to restore native habitat and to reduce the potential for non-native plant establishment. The restoration plan will incorporate a Noxious Weeds and Invasive Species Control Plan to assist in restoring the construction area to the prior vegetated state and lessen the possibility of establishment of non-native, flammable plant species. A copy of the Revegetation Plan will be provided to the CPUC and BLM.</p>	<p>A memo stating that implementation of BIO-1d and BIO-3a will satisfy all requirements of FF-7 was approved by the CPUC on October 15, 2012. Refer to BIO-1d and BIO-3a for the status of these measures.</p>	Pre, During, and Post	To Be Implemented During Construction

ATTACHMENT C: FINAL ENGINEERING PLANS

GENERAL NOTES

- LOCATIONS OF ALL UNDERGROUND FACILITIES ARE TAKEN FROM AVAILABLE MAPS AND RECORDS. ACTUAL FIELD LOCATIONS OF ALL FOREIGN UTILITIES MUST BE VERIFIED BY CONTRACTOR PRIOR TO TRENCHING. CONTACT USA DIGALERT, 1-800-227-2600, PRIOR TO DIGGING.
- ALL WORK SHALL COMPLY WITH ENGINEERING DRAWINGS, SPECIFICATION NO. TE-0100 & TE-0107, CONTRACT DOCUMENT AND ALL APPLICABLE PROVISIONS OF THE SDG&E UNDERGROUND STANDARDS HANDBOOK, LATEST REVISION.
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF G.O. 128.
- ALL WORK SHALL COMPLY WITH ALL STATE AND LOCAL TRAFFIC CONTROL REGULATIONS.
- ANY DEVIATION FROM ENGINEERING DRAWINGS MUST BE APPROVED BY SDG&E PRIOR TO CONSTRUCTION. MAINTAIN AND UPDATE THE AS-BUILT RECORDS TO DOCUMENT ALL FIELD CHANGES.
- CONDUIT INSTALLATION SHALL FOLLOW SDG&E SPECIFICATIONS 3374.1 THROUGH 3374.3. IF CONDUITS ARE NOT CHAMFERED BY THE MANUFACTURER, THEY MUST BE CHAMFERED IN THE FIELD.
- PROVIDE NECESSARY ANCHORING TO PREVENT CONDUITS FROM FLOATING WHILE THEY ARE BEING ENCASED IN CONCRETE.
- WHEN REQUIRED, USE ONLY PLASTIC STRAPS TO SECURE CONDUITS UNLESS OTHERWISE APPROVED. NO FERROUS METAL SHALL ENCIRCLE AN INDIVIDUAL DUCT.
- CONTRACTOR TO INSTALL NON-MAGNETIC MARKER TAPE ABOVE EACH COLUMN OF CONDUIT ON TOP OF THERMAL BACKFILL PRIOR TO PLACEMENT OF COMPACTED SOIL.
- UNLESS OTHERWISE SPECIFIED OR APPROVED, THE CONDUIT SPACERS SHALL BE INSTALLED AT AN INTERVAL NOT TO EXCEED 6'.
- MINIMUM DEPTH OF BACKFILL ABOVE TOP OF CONDUIT SHALL BE 36" UNLESS NOTED OTHERWISE.
- TWO SEPARATE 4/0 7 STRAND COPPER GROUNDING CABLES TO BE INSTALLED PER CIRCUIT.
- ANY CONDUIT BENDS, SWEEPS OR ELBOWS, WITH A RADIUS GREATER OR EQUAL TO 200 FEET MAY BE BENT IN THE FIELD. ANY BENDS, SWEEPS OR ELBOWS WITH A RADIUS LESS THAN 200' SHALL BE FABRICATED BY A MANUFACTURER TO ENSURE NO DISTORTION TO THE CROSS-SECTION. FABRICATED BENDS, SWEEPS OR ELBOWS CANNOT BE CUT IN THE FIELD.
- CLEARANCE BETWEEN EXISTING UTILITIES AND DUCT BANK SHALL BE A MINIMUM OF 1' UNLESS OTHERWISE NOTED.
- 1' MINIMUM VERTICAL SEPARATION FROM THE BOTTOM OF THE 12KV AND THE TOP OF THE PROPOSED TRENCH WORK.
- CONTRACTOR TO MAINTAIN ACCESS TO ALL PRIVATE DRIVEWAYS DURING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A PERMIT FOR TEMPORARY CONSTRUCTION DEWATERING. A PERMIT IS REQUIRED FROM THE REGIONAL WATER QUALITY CONTROL BOARD FOR ANY DISCHARGE OF GROUNDWATER TO THE ENVIRONMENT. THE CONTRACTOR SHALL COMPLY WITH REGIONAL WATER QUALITY CONTROL BOARD WASTE DISCHARGE PERMIT REQUIREMENTS, AS APPLICABLE. BEFORE STARTING DEWATERING OPERATIONS, THE CONTRACTOR SHALL OBTAIN AUTHORIZATION, AS REQUIRED, FOR THE DISPOSAL OF GROUNDWATER. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAMPLING, TESTING MONITORING, AND REPORTING REQUIREMENTS.
- CONDUITS TO BE SWABBED UNTIL THEY ARE CLEAR OF ALL DEBRIS BY USING MECHANICAL METHODS AND VERIFIED BY SDG&E CONTRACT ADMINISTRATOR. CONTRACTOR TO BLOW AIR AND INSTALL 2500 POUND MULE TAPE, DOCUMENT AND MARK UP PHASING ON VAULT WALLS TO IDENTIFY CORRECT PHASING ALONG ENTIRE ROUTE.
- ALL CABLES AND PULL LINES SHALL BE LABELED IN ACCORDANCE WITH SDG&E SPECIFICATIONS AND PRACTICES. ALL VAULTS AND HAND HOLDS SHALL BE LABELED AND STENCILED IN ACCORDANCE WITH SDG&E SPECIFICATIONS AND PRACTICES.
- FOR TYPICAL ROAD AND VAULT SECTIONS SEE DRAWING 13844-SEC.3-PP-18 - 19.
- ASPHALT CONCRETE SURFACING MATERIAL SHALL BE HAND-RAKED AND COMPACTED TO FORM SMOOTH TAPERED CONNECTIONS ALONG ALL EDGES ADJACENT TO SOIL. THE EDGES OF ASPHALT CONCRETE SHALL BE HAND-RAKED AT 45 DEGREES OR FLATTER, SO AS TO PROVIDE A SMOOTH TRANSITION NEXT TO EXISTING SOIL, INCLUDING THOSE AREAS SCHEDULED FOR SHOULDER BACKING. THE ABOVE SHALL BE DONE TO THE SATISFACTION OF THE DIRECTOR OF PUBLIC WORKS.
- FOR EVERY 1000 FEET OF DUCT BANK INSTALLED, CONTRACTOR SHALL COLLECT TWO (2) TEST CYLINDERS (CONTACT TESTING CONSULTANT FOR APPROPRIATE CYLINDER SIZE) OF DUCT BANK CONCRETE FOR THERMAL TESTING AND APPROVAL.
- FOR EVERY 500 FEET OF DUCT BANK INSTALLED CONTRACTOR SHALL COLLECT TWO (2) TEST CYLINDERS (CONTACT TESTING CONSULTANT FOR APPROPRIATE CYLINDER SIZE) OF THERMAL BACKFILL FOR THERMAL TESTING AND APPROVAL.
- CONTRACTOR IS REQUIRED TO RE-ESTABLISH THE EXISTING EARTHEN DRAINAGE DITCHES TO ORIGINAL CONDITION OR BETTER AFTER CONSTRUCTION.
- CLEARANCE BETWEEN COUNTY MAINTAINED CULVERTS AND 138KV TRENCH MUST BE 2' MINIMUM.
- CONTRACTOR IS REQUIRED TO RESURFACE THE FULL ROAD WIDTH OF OLD HWY 80 AND CARRIZO GORGE WITH RUBBERIZED HOT MIX ASPHALT (RHMA.) MINIMUM OVERLAY THICKNESS WILL BE DETERMINED BY DPW MATERIAL LAB.
- DIRT SHOULDERS ON OLD HWY 80 AND CARRIZO GORGE ROAD ARE TO BE BACKFILLED WITH DG TO THE ELEVATION OF THE NEW OVERLAY FOR THE ENTIRE LENGTH OF THE PROJECT. THE SHOULDER BACKFILL SHALL EXTEND 6' FEET FROM THE EDGE OF PAVEMENT (BUT NOT OUTSIDE SDG&E'S ENVIRONMENTAL LIMITS OF DISTURBANCE) AND COMPACTED TO 90% RC.
- ALL BMP WORK SHALL COMPLY WITH SDG&E'S "BEST MANAGEMENT PRACTICE MANUAL FOR WATER QUALITY CONSTRUCTION," PREPARED BY GEOSYNTEC CONSULTANTS AND REVISED BY SDG&E JULY 2011.
- ENVIRONMENTALLY SENSITIVE AREAS (ESAs) DESIGNATED BY MARKED BOUNDARIES IN THE FIELD ARE OFF-LIMITS TO CONSTRUCTION ACTIVITIES. ARCHAEOLOGICAL MONITORING OF ANY GROUND DISTURBANCE AND/OR NEW CONSTRUCTION ACTIVITY NEAR AN ESA MAY BE REQUIRED. FOLLOWING THE INITIATION OF CONSTRUCTION ACTIVITIES, THE ON-SITE PROFESSIONAL ARCHAEOLOGIST MAY DETERMINE THAT FULL-TIME MONITORING IS NO LONGER REQUIRED.

TRENCH DISTANCES TL13844 TRENCH			CABLE PULLING TENSIONS TL13844 TRENCH			
FROM	TO	LENGTH	FROM	TO	TENSION	LENGTH
STA. 0+00.00 C.P. Z100117	STA. 1+83.01 VAULT 1B	183.01'	VAULT 1B	RISER POLE Z100117	0000.00 LBS	183.01'
STA. 1+83.01 VAULT 1B	STA. 19+79.01 VAULT 2B	1796.00'	VAULT 2B	VAULT 1B	0000.00 LBS	1796.00'
STA. 19+79.01 VAULT 2B	STA. 35+14.01 VAULT 3B	1535.00'	VAULT 2B	VAULT 3B	0000.00 LBS	1535.00'
STA. 35+14.01 VAULT 3B	STA. 53+91.01 VAULT 4B	1877.00'	VAULT 3B	VAULT 4B	0000.00 LBS	1877.00'
STA. 53+91.01 VAULT 4B	STA. 74+06.01 VAULT 5B	2015.00'	VAULT 4B	VAULT 5B	0000.00 LBS	2015.00'
STA. 74+06.01 VAULT 5B	STA. 94+54.76 VAULT 6B	2048.75'	VAULT 5B	VAULT 6B	0000.00 LBS	2048.75'
STA. 94+54.76 VAULT 6B	STA. 108+76.83 VAULT 7B	1422.07'	VAULT 6B	VAULT 7B	0000.00 LBS	1422.07'
STA. 108+76.83 VAULT 7B	STA. 128+57.82 VAULT 8B	1980.99'	VAULT 7B	VAULT 8B	0000.00 LBS	1980.99'
STA. 128+57.82 VAULT 8B	STA. 147+59.88 VAULT 10B	1902.06'	VAULT 8B	VAULT 10B	0000.00 LBS	1902.06'
STA. 147+59.88 VAULT 10B	STA. 150+33.84 C.P. Z100118	273.93'	VAULT 10B	RISER POLE Z100118	0000.00 LBS	273.93'

TOTAL CP. TO CP.=15,033.84'

TL13844 UNDERGROUND TRENCH RISER POLE Z100117 TO RISER POLE Z100118

SURVEY CONTROL

BASIS OF COORDINATES

THE COORDINATES ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 AND ARE EXPRESSED IN TERMS OF THE CALIFORNIA COORDINATE SYSTEM 1983, ZONE VI, AT EPOCH 1991.35 AND ARE BASED ON MONUMENT "SAN DIEGO GPS 31 1990" LOCATED 2.5 MILES NORTHEAST OF JACUMBA, ON THE SOUTH SIDE OF INTERSTATE FREEWAY 8 AT POST MILE 74.9, 400 FEET WEST OF TELEPHONE CALL BOX 8-750 SET AT THE TOP OF A 20' HIGH ROCK CUT.

BASIS OF BEARINGS

BEARINGS ARE REFERENCED TO GRID NORTH AS DEFINED BY THE CALIFORNIA COORDINATE SYSTEM 1983, ZONE VI.

BASIS OF ELEVATION

ELEVATION ARE REFERENCED TO NAVD88 AS DETERMINED LOCALLY BY VERTICAL BENCHMARK "W-612", WITH THE PUBLISHED ELEVATION OF 3203.32SFT (NAVD88 DATUM) LOCATED 10.95 MILES EAST ALONG THE EAST BOUND LANES OF INTERSTATE HIGHWAY 8 FROM THE RIBBONWOOD ROAD OVERPASS AT BOULEVARD, 104.5' SOUTHEAST OF THE CENTERLINE OF THE EASTBOUND HIGHWAY LANES, IN THE TOP OF THE SOUTHWEST END OF THE SOUTHEAST CONCRETE HEADWALL OF CONCRETE BOX CULVERT BC57-201-G-755-00 OF US HIGHWAY 80, 9.5 FEET NORTHEAST OF THE SOUTHWEST HEADWALL.

BENCH MARK

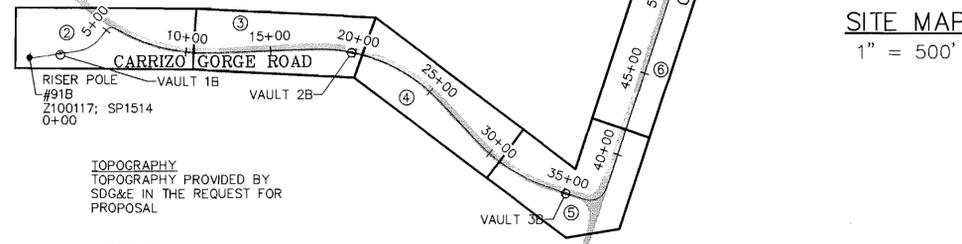
POINT IS BENCHMARK DISK SET IN A CONCRETE HEADWALL "W 612 1941". NAVD88 ELEVATION = 3203.32SFT.

SHEET INDEX

- DWG NO.
- COVER SHEET
 - TL13844 TRENCH PLAN & PROFILE STA 0+00 TO 150+33.81
 - DETAILS
 - ROAD TYPICAL DETAILS
 - TRANSMISSION BORE, TRENCH & CONDUIT

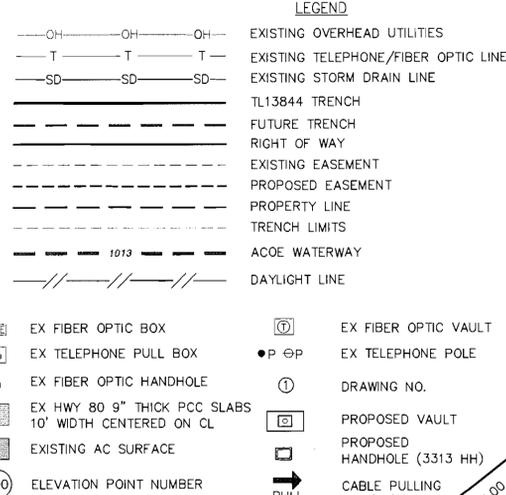
ABBREVIATIONS

AC	ASPHALT CONCRETE	LF	LINEAR FEET
APN	ASSESSORS PARCEL NUMBER	LT	LEFT
BC	BEGIN OF CURVE	MH	MANHOLE
CL	CENTER LINE	OD	OUTSIDE DIAMETER
CMP	CORRUGATED METAL PIPE	OH	OVERHEAD
CNTR	CENTER	PCC	PORTLAND CEMENT CONCRETE
CONC	CONCRETE	POB	POINT OF BEGINNING
CP	CABLE POLE	PVC	POLY-VINYL-CHLORIDE
DIA	DIAMETER	PVT	PRIVATE
DWG	DRAWING	R/W	RIGHT-OF-WAY
EC	END OF CURVE	RCP	REINFORCED CONCRETE PIPE
EL	ELEVATION	REF	REFERENCE
ELEV	ELEVATION	RIM	RIM ELEVATION
EOP	EDGE OF PAVEMENT	RT	RIGHT
EX	EXISTING	SD	STORM DRAIN
FG	FINISH GRADE	SF	SQUARE FEET
FL	FLOW LINE	STA	STATION
FS	FINISH SURFACE	TOP	TOP OF PIPE
HDPE	HIGH-DENSITY POLYETHYLENE	TYP	TYPICAL
HH	HANDHOLE	W/	WITH
IE	INVERT ELEVATION		
LAT	LATERAL		



TOPOGRAPHY PROVIDED BY SDG&E IN THE REQUEST FOR PROPOSAL

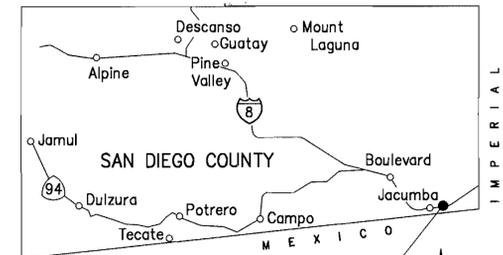
HYDROLOGY SOURCE OF HYDROLOGY IS: ##REPORT## BY HUNSAKER & ASSOCIATES, 9707 WAPLES STREET, SAN DIEGO, CA 92121, DATED ##DATE##



DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY SAN DIEGO GAS AND ELECTRIC COMPANY IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS DESIGNER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

ROSS TWDWELL R.C.E. NO. 77511



PROJECT LOCATION

VICINITY MAP
NO SCALE



UNDERGROUND SERVICE ALERT
CALL TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

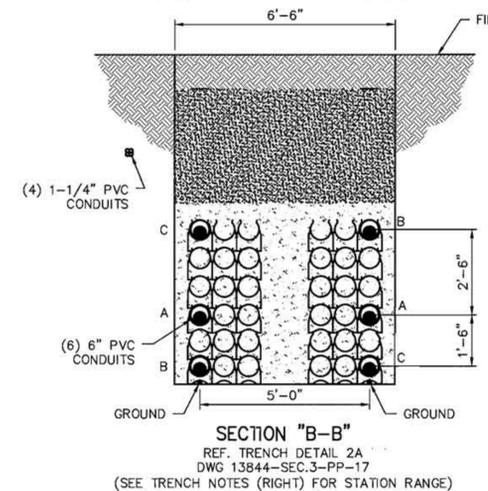
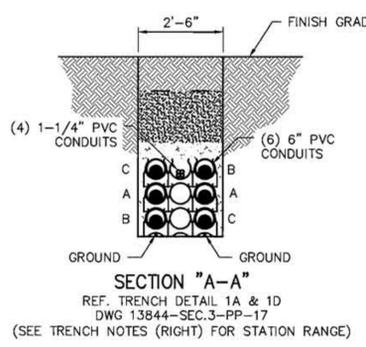
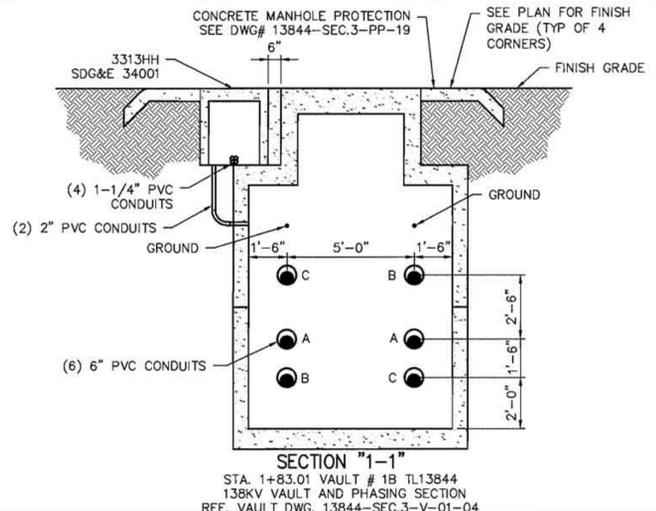
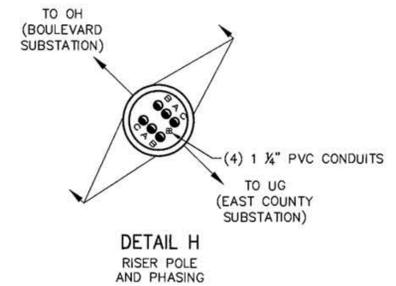
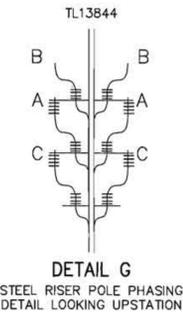
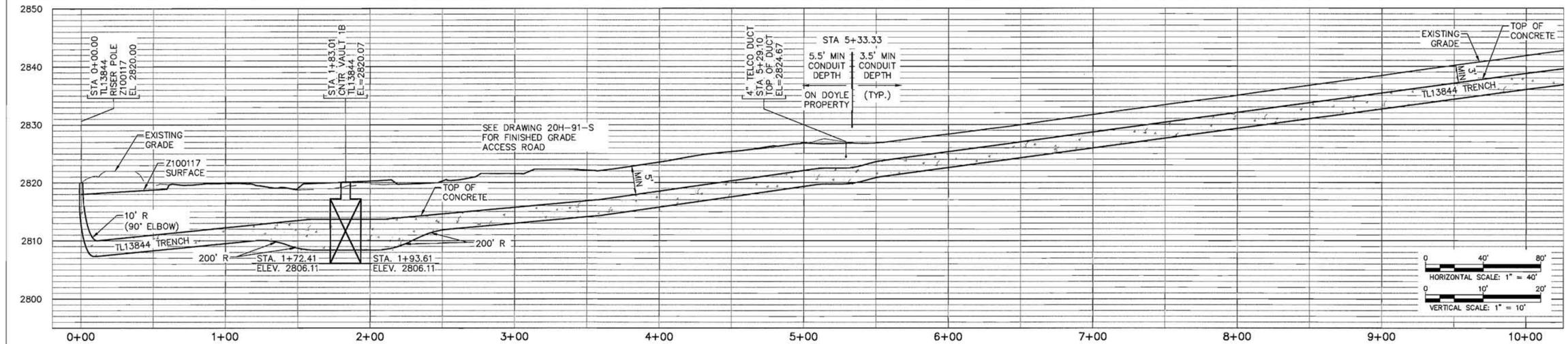
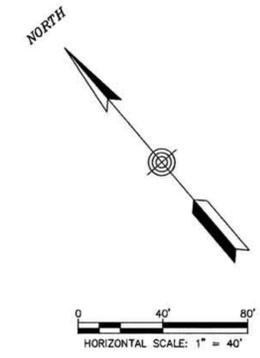
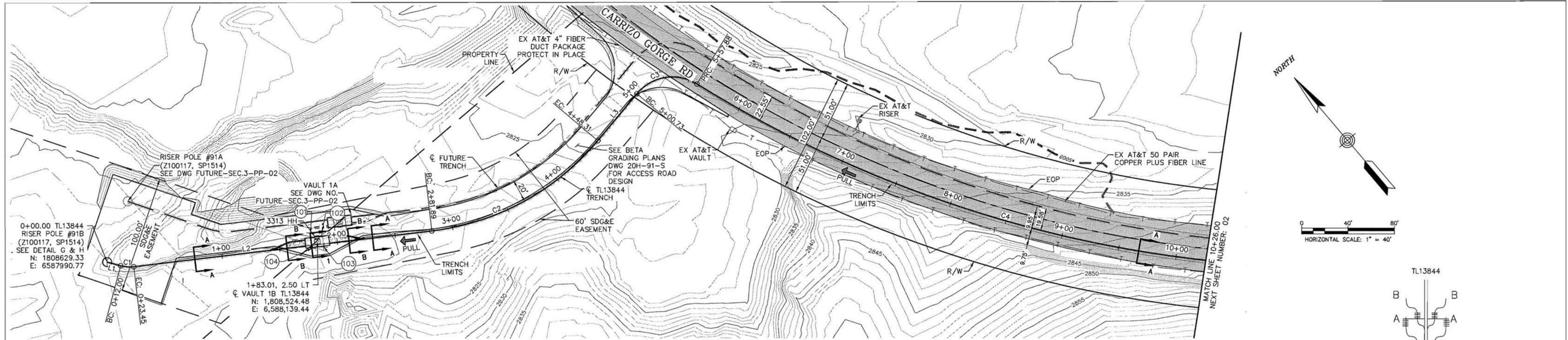
DRAWN BY:	JAB	E							
DATE:	08/31/12	D	XXXX	XXXX	REVISED ALIGNMENT AND NOTES	BETA		6/7/13	
THO. BROS.	N/A	C	XXXX	XXXX	ADDED NOTE 18	BETA		5/29/13	
PROJ. NO.		B	XXXX	XXXX	REVISED PER SDG&E COMMENTS	BETA		4/19/13	
CONST. NO.		A	XXXX	XXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA		11/14/12	
PLAN & PROFILE									
HORIZONTAL:	N/A								
VERTICAL:	N/A								
REV	BUDGET	CONST	ORDER	CHANGE	DWN	CHKD	APPY	DATE	

SDG&E SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING

TL13844 UNDERGROUND 138 kV
BOULEVARD S/S TO EAST COUNTY S/S

SCALE AS NOTED SHEET 1 OF 1

PLAN AND PROFILE
TITLE SHEET
Z100117 TO Z100118
DRAWING NUMBER
13844-SEC.3-PP-01



POINT DATA TABLE				
NUMBER	STATE PLANE NORTHING	STATE PLANE EASTING	ELEVATION	DESCRIPTION
101	1,808,533.91	6,588,139.75	2,820.23'	FG
102	1,808,528.33	6,588,148.05	2,820.33'	FG
103	1,808,517.54	6,588,140.80	2,820.07'	FG
104	1,808,523.12	6,588,132.50	2,819.97'	FG

HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/Delta	RADIUS	DISTANCE
L1	0+00.00	0+12.00	S34° 14' 42\"/>		

TRENCH NOTES

STA 0+00 TO 1+40.39 MAX. REF. SECTION "A-A" DETAIL 1A
 STA 1+62.41 TO 2+03.62 REF. SECTION "B-B" DETAIL 2A
 STA 2+25.63 MIN. TO 5+33.83 REF. SECTION "A-A" DETAIL 1A
 STA 5+33.83 TO STA 10+26 REF. SECTION "A-A" DETAIL 1D

NOTE:
 MIN. / MAX. VALUES ALLOW CONTRACTOR TO ADJUST TRANSITION LENGTHS AS NECESSARY



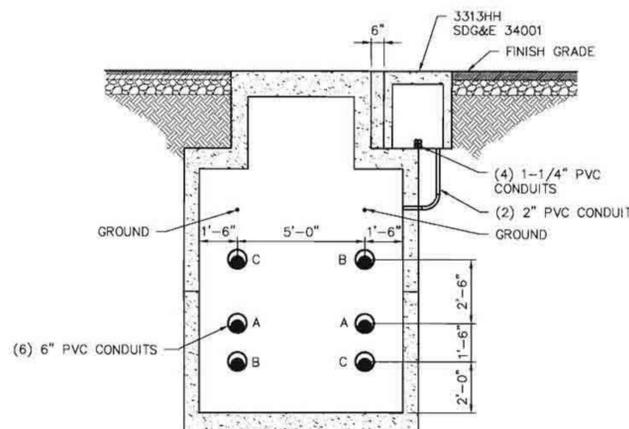
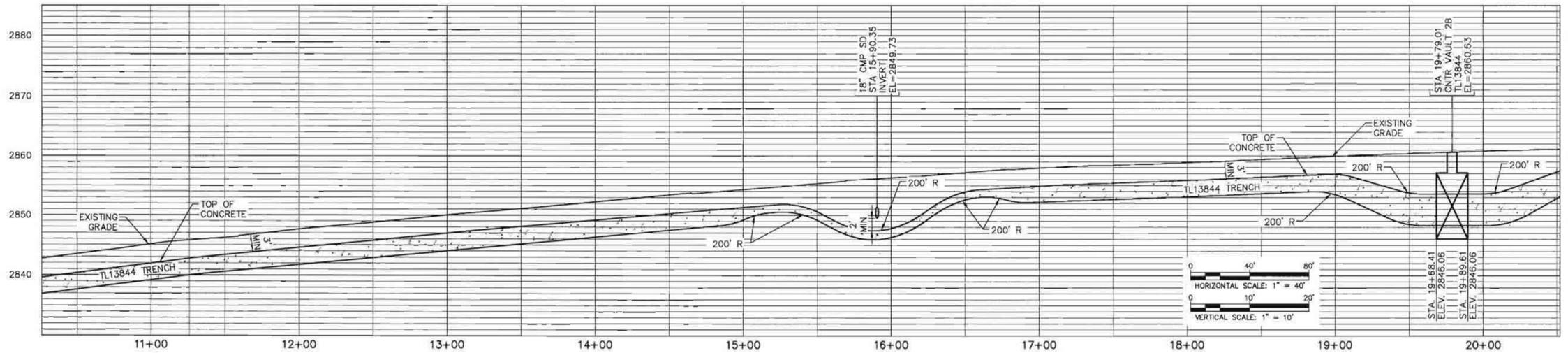
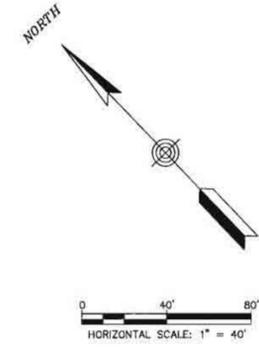
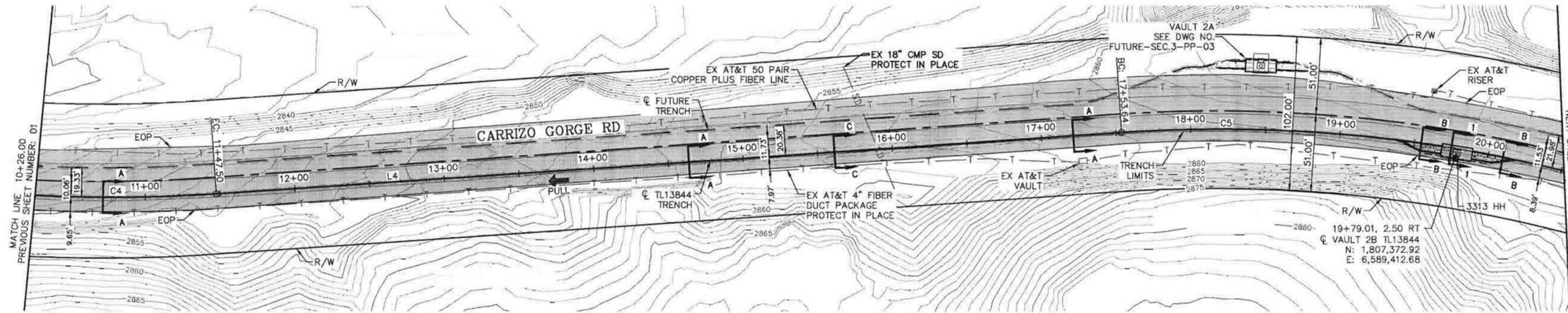
DRAWN BY:	JAB	E						
DATE:	08/31/12	D	XXXX	XXXX	REVISED PROFILE AND DETAILS	BETA		6/14/13
THO. BROS.	N/A	C	XXXX	XXXX	REVISED ALIGNMENT AND DETAILS	BETA		6/7/13
PROJ. NO.		B	XXXX	XXXX	REVISED PER SDG&E COMMENTS	BETA		4/19/13
CONST. NO.		A	XXXX	XXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA		11/14/12
PLAN & PROFILE								
HORIZONTAL: 1"=40'								
VERTICAL: 1"=10'								
REV	BUDGET	CONST ORDER			CHANGE	DWN	CHKD	APPY
								DATE

SDGE SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING

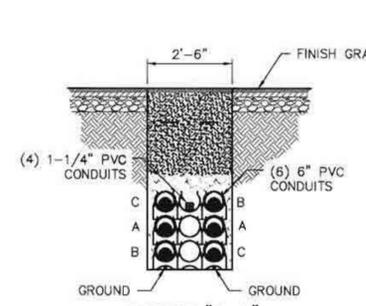
TL13844 UNDERGROUND 138 kV
BOULEVARD S/S TO EAST COUNTY S/S

SCALE 1"=40' SHEET 01 OF 18

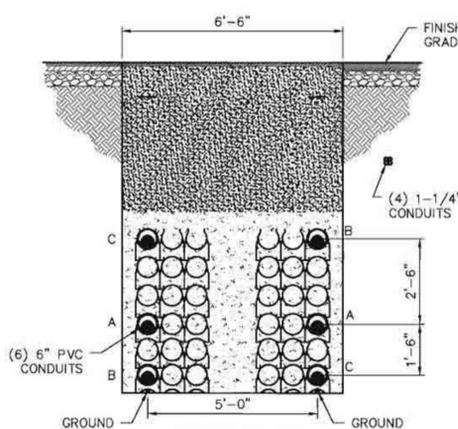
PLAN AND PROFILE
STA 0+00 TO STA 10+26
Z100117 TO Z100118
DRAWING NUMBER
13844-SEC.3-PP-02



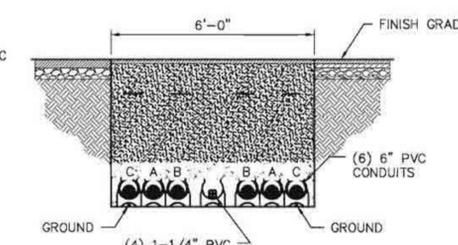
SECTION "1-1"
 STA. 19+79.01 VAULT # 2B TL13844
 138KV VAULT AND PHASING SECTION
 REF. VAULT DWG. 13844-SEC.3-V-01-04



SECTION "A-A"
 REF. TRENCH DETAIL 1D
 DWG 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)

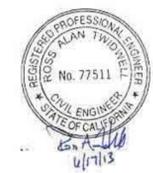


SECTION "B-B"
 REF. TRENCH DETAIL 2D
 DWG 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)



SECTION "C-C"
 REF. TRENCH DETAIL 3A
 SEE DWG. NO. 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)

HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/Delta	RADIUS	DISTANCE
C4	5+57.88	11+47.50	32° 10' 27"	1050.00'	589.62'
L4	11+47.50	17+53.64	S49° 46' 10"E		606.14'
C5	17+53.64	25+91.50	48° 59' 08"	980.00'	837.86'



TRENCH NOTES
 STA 10+26 TO 14+84.65 REF. SECTION "A-A" DETAIL 1D
 STA 15+18.53 TO 16+60.92 REF. SECTION "C-C" DETAIL 3A
 STA 16+93.12 TO 19+37.07 MAX. REF. SECTION "A-A" DETAIL 1D
 STA 19+58.30 TO 19+99.72 REF. SECTION "B-B" DETAIL 2D
 STA 20+20.59 MIN. TO 20+52 REF. SECTION "A-A" DETAIL 1D
NOTE:
 MIN. / MAX. VALUES ALLOW CONTRACTOR TO
 ADJUST TRANSITION LENGTHS AS NECESSARY

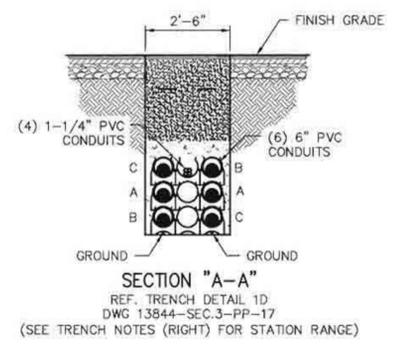
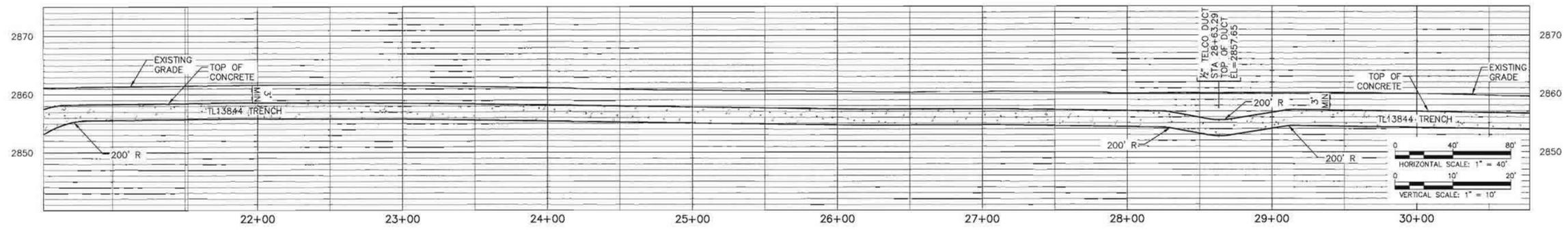
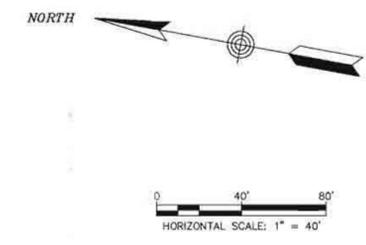
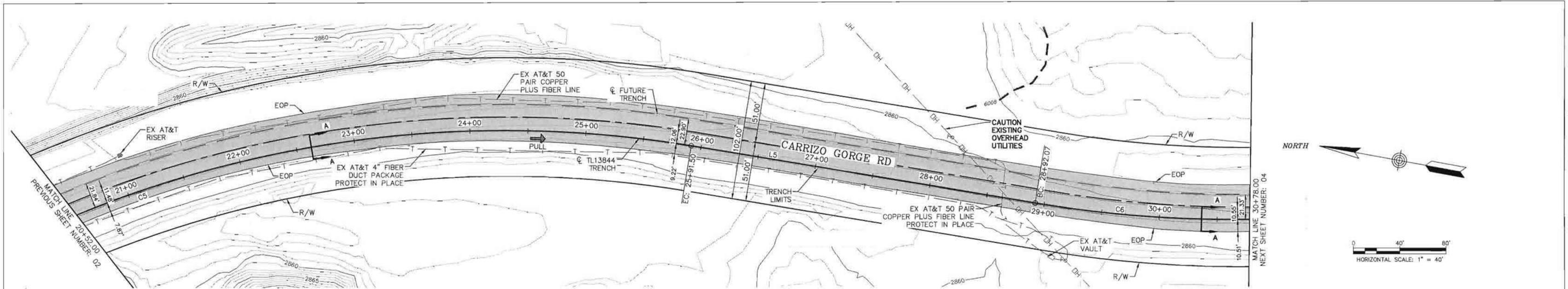


DRAWN BY: JAB
 DATE: 08/31/12
 THO. BROS. N/A
 PROJ. NO.
 CONST. NO.
PLAN & PROFILE
 HORIZONTAL: 1"=40'
 VERTICAL: 1"=10'

REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPV	DATE
E							
D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA			6/14/13
C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA			6/7/13
B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA			4/19/13
A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA			11/14/12

SDG&E SAN DIEGO GAS & ELECTRIC TRANSMISSION ENGINEERING
TL13844 UNDERGROUND 138 KV BOULEVARD S/S TO EAST COUNTY S/S
 SCALE 1"=40' SHEET 02 OF 18

PLAN AND PROFILE
STA 10+26 TO STA 20+52
Z100117 TO Z100118
 DRAWING NUMBER
13844-SEC.3-PP-03



HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
C5	17+53.64	25+91.50	48° 59' 08"	980.00'	837.86'
L5	25+91.50	28+92.07	S0° 47' 02"E		300.58'
C6	28+92.07	34+08.95	28° 28' 32"	1040.00'	516.87'



TRENCH NOTES
 STA 20+52 TO 30+78 REF. SECTION "A-A" DETAIL 1D



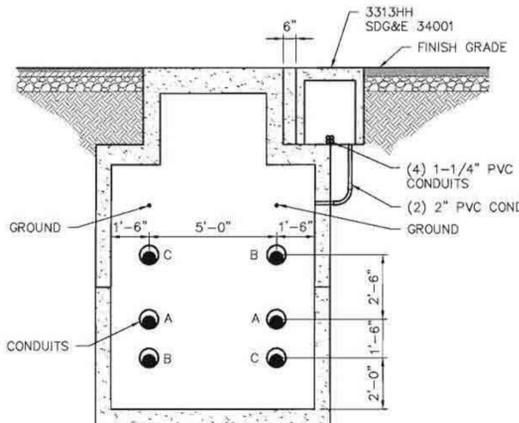
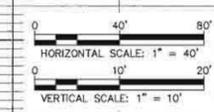
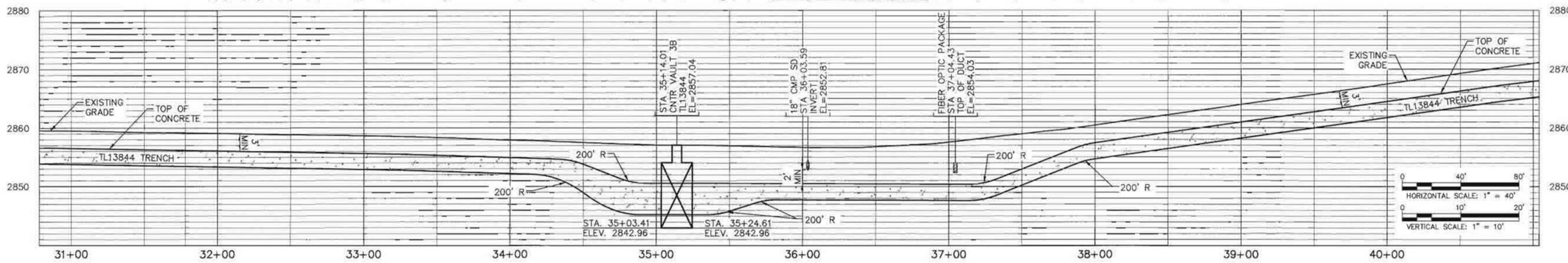
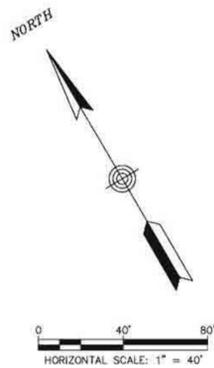
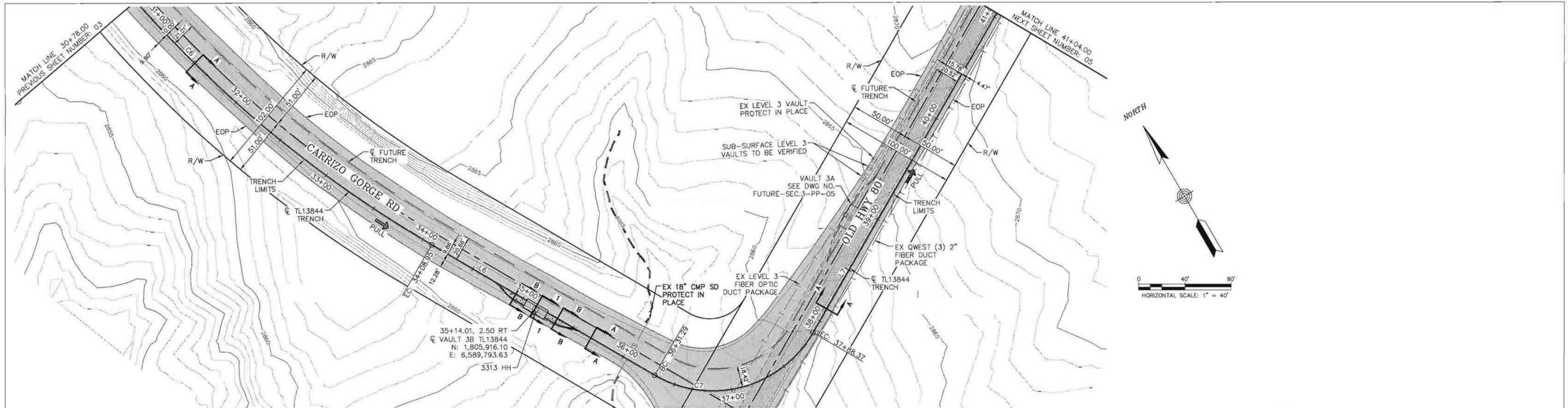
DRAWN BY:	JAB	E							
DATE:	08/31/12	D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA		6/14/13	
THO. BROS.	N/A	C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA		6/7/13	
PROJ. NO.		B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA		4/19/13	
CONST. NO.		A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA		11/14/12	
PLAN & PROFILE									
HORIZONTAL: 1"=40'		REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPY	DATE
VERTICAL: 1"=10'									

SDG&E SAN DIEGO GAS & ELECTRIC TRANSMISSION ENGINEERING

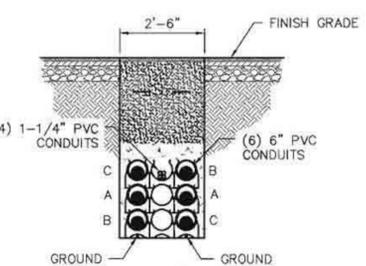
TL13844 UNDERGROUND 138 kV BOULEVARD S/S TO EAST COUNTY S/S

SCALE 1"=40' SHEET 03 OF 18

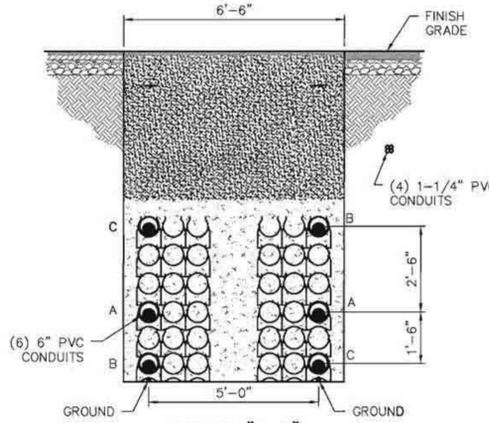
PLAN AND PROFILE
 STA 20+52 TO STA 30+78
 Z100117 TO Z100118
 DRAWING NUMBER
 13844-SEC.3-PP-04



SECTION "1-1"
 STA. 35+14.01 VAULT # 3B TL13844
 138KV VAULT AND PHASING SECTION
 REF. VAULT DWG. 13844-SEC.3-V-01-04



SECTION "A-A"
 REF. TRENCH DETAIL 1D
 DWG 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)



SECTION "B-B"
 REF. TRENCH DETAIL 2D
 DWG 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)

HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
C6	28+92.07	34+08.95	28° 28' 32"	1040.00'	516.87'
L6	34+08.95	36+31.29	S29° 15' 34"E		222.35'
C7	36+31.29	37+88.37	90° 00' 00"	100.00'	157.08'
L7	37+88.37	43+38.93	N60° 44' 26"E		550.56'

TRENCH NOTES

STA 30+78 TO 34+71.39 MAX. REF. SECTION "A-A" DETAIL 1D
 STA 34+93.41 TO 35+34.62 REF. SECTION "B-B" DETAIL 2D
 STA 35+56.63 MIN. TO 41+04 REF. SECTION "A-A" DETAIL 1D

NOTE:
 MIN. / MAX. VALUES ALLOW CONTRACTOR TO
 ADJUST TRANSITION LENGTHS AS NECESSARY



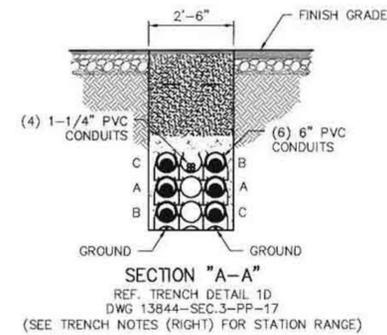
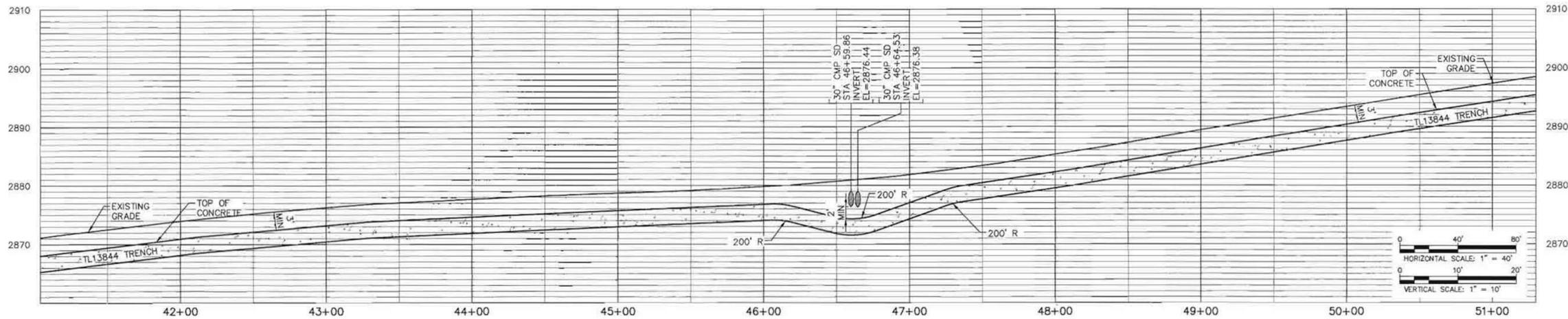
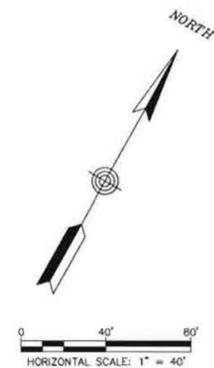
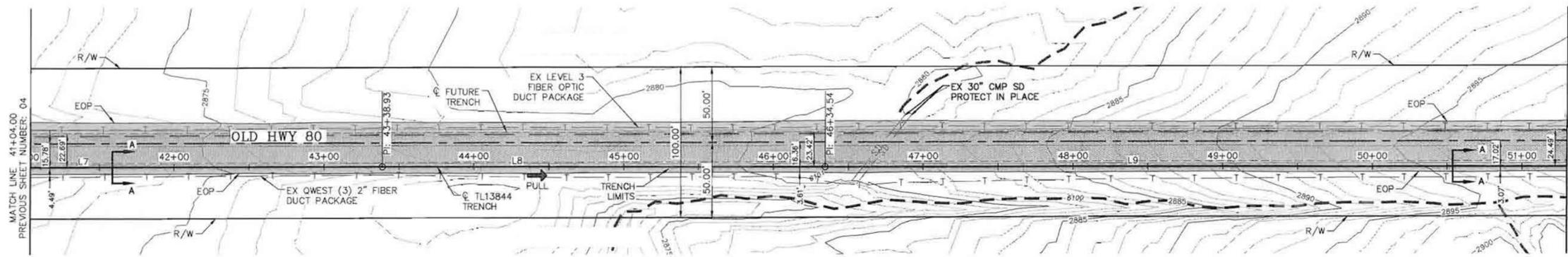
DRAWN BY:	JAB	E					
DATE:	08/31/12	D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA	6/14/13
THO. BROS.:	N/A	C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA	6/7/13
PROJ. NO.:		B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA	4/19/13
CONST. NO.:		A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA	11/14/12
PLAN & PROFILE							
HORIZONTAL: 1"=40'							
VERTICAL: 1"=10'							
REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPY	DATE

SDG&E SAN DIEGO GAS & ELECTRIC TRANSMISSION ENGINEERING

TL13844 UNDERGROUND 138 kV BOULEVARD S/S TO EAST COUNTY S/S

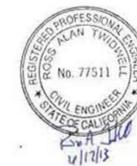
SCALE 1"=40' SHEET 04 OF 18

PLAN AND PROFILE
 STA 30+78 TO STA 41+04
 Z100117 TO Z100118
 DRAWING NUMBER
 13844-SEC.3-PP-05



HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/Delta	RADIUS	DISTANCE
L7	37+88.37	43+38.93	N60° 44' 26"E		550.56'
L8	43+38.93	46+34.54	N60° 51' 09"E		295.62'
L9	46+34.54	52+98.77	N60° 48' 37"E		664.23'

TRENCH NOTES
 STA 41+04 TO 51+30 REF. SECTION "A-A" DETAIL 1D



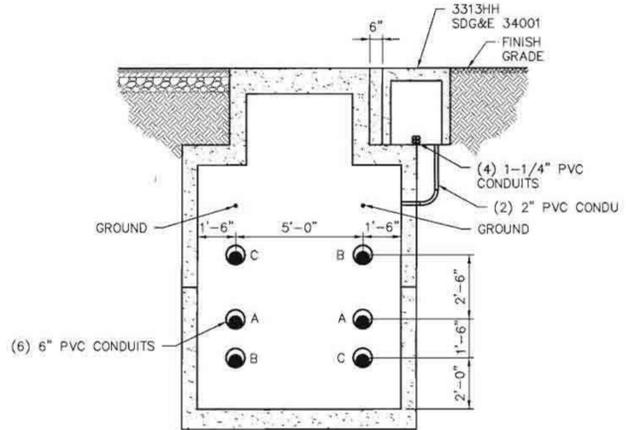
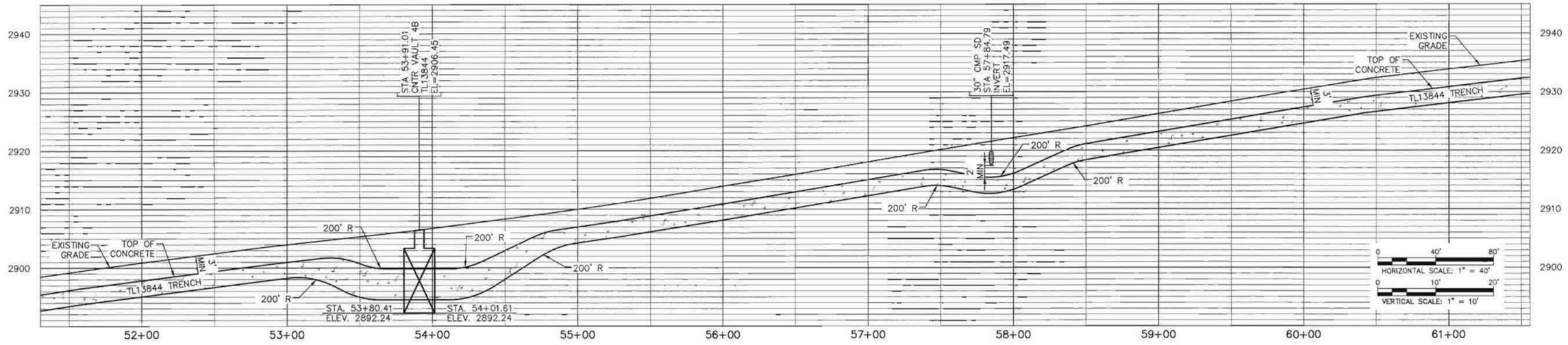
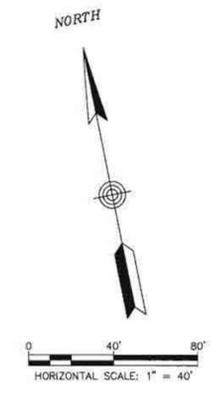
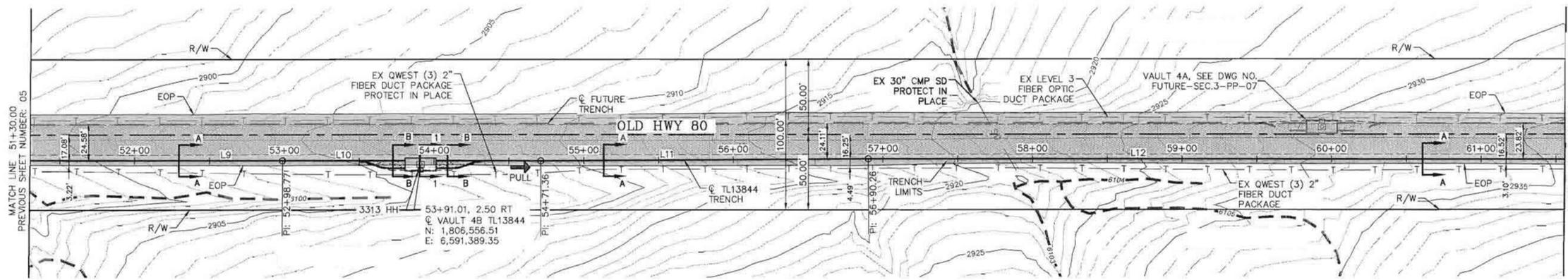
UNDERGROUND SERVICE ALERT
 OF SOUTHERN CALIFORNIA
 CALL TOLL FREE
 1-800-227-2600
 TWO WORKING DAYS BEFORE YOU DIG

DRAWN BY: JAB
 DATE: 08/31/12
 THO. BROS. N/A
 PROJ. NO.
 CONST. NO.
 PLAN & PROFILE
 HORIZONTAL: 1"=40'
 VERTICAL: 1"=10'

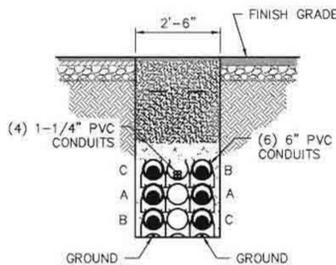
REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPY	DATE
E							
D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA			6/14/13
C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA			6/7/13
B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA			4/19/13
A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA			11/14/12

SDGE SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING
 TL13844 UNDERGROUND 138 kV
 BOULEVARD S/S TO EAST COUNTY S/S
 SCALE 1"=40' SHEET 05 OF 18

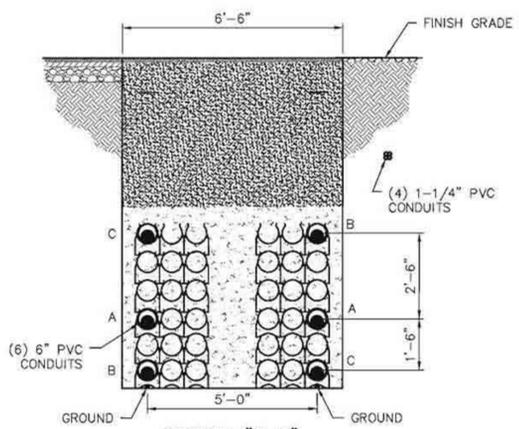
PLAN AND PROFILE
 STA 41+04 TO STA 51+30
 Z100117 TO Z100118
 DRAWING NUMBER
 13844-SEC.3-PP-06



SECTION "1-1"
 STA. 53+91.01 VAULT # 4B TL13844
 138KV VAULT AND PHASING SECTION
 REF. VAULT DWG. 13844-SEC.3-V-01-04



SECTION "A-A"
 REF. TRENCH DETAIL 1D
 DWG 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)



SECTION "B-B"
 REF. TRENCH DETAIL 2B
 DWG 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)

HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
L9	46+34.54	52+98.77	N60° 48' 37"E		664.23'
L10	52+98.77	54+71.36	N60° 46' 50"E		172.59'
L11	54+71.36	56+90.26	N60° 25' 09"E		218.90'
L12	56+90.26	67+63.18	N60° 46' 50"E		1072.91'

TRENCH NOTES

STA 51+30 TO 53+48.39 MAX. REF. SECTION "A-A" DETAIL 1D
 STA 53+70.41 TO 54+11.62 REF. SECTION "B-B" DETAIL 2B
 STA 54+33.63 MIN. TO 61+56 REF. SECTION "A-A" DETAIL 1D

NOTE:
 MIN. / MAX. VALUES ALLOW CONTRACTOR TO
 ADJUST TRANSITION LENGTHS AS NECESSARY



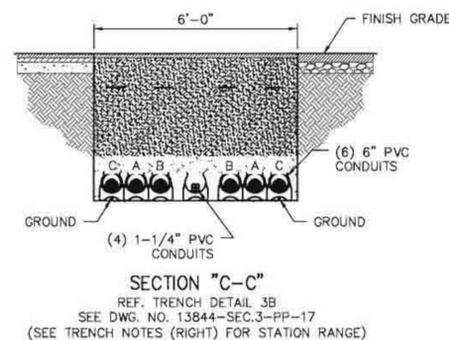
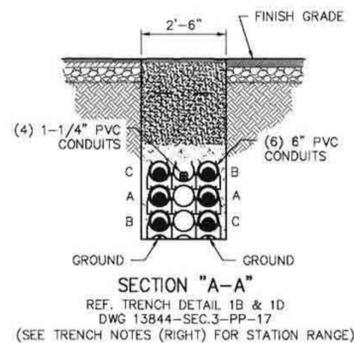
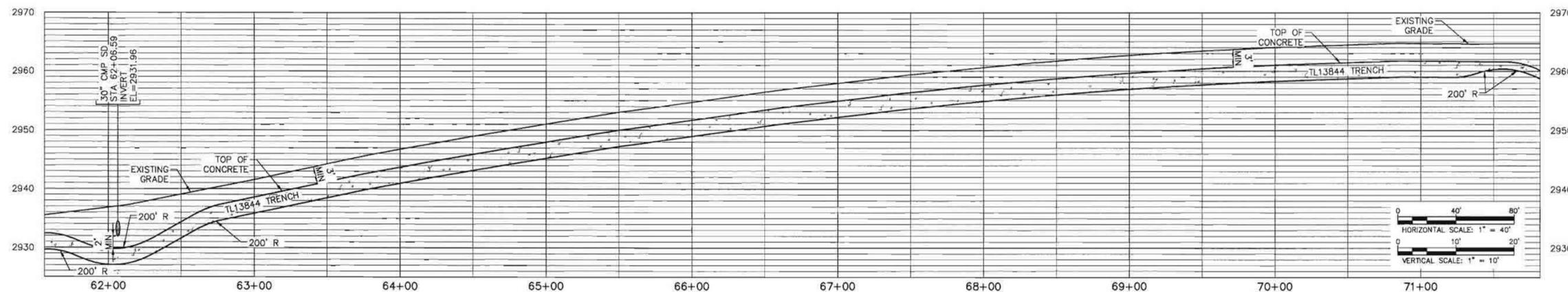
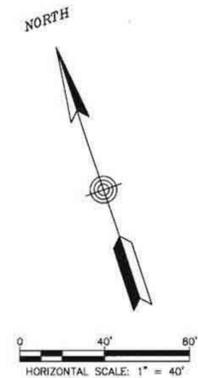
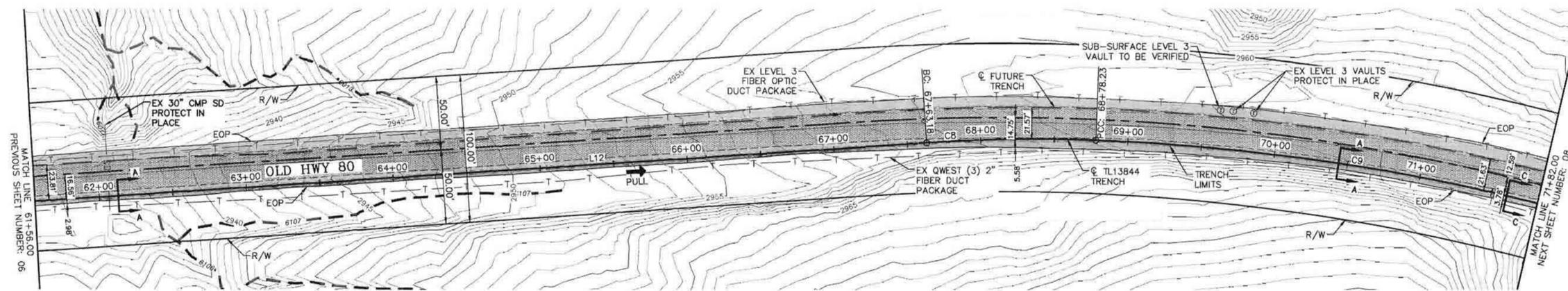
DRAWN BY:	JAB	E								
DATE:	08/31/12	D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA	6/14/13			
THO. BROS.	N/A	C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA	6/7/13			
PROJ. NO.		B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA	4/19/13			
CONST. NO.		A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA	11/14/12			
PLAN & PROFILE										
HORIZONTAL: 1"=40'										
VERTICAL: 1"=10'										
REV	BUDGET	CONST ORDER	CHANGE				DWN	CHKD	APPY	DATE

SDGE SAN DIEGO GAS & ELECTRIC TRANSMISSION ENGINEERING

TL13844 UNDERGROUND 138 kV BOULEVARD S/S TO EAST COUNTY S/S

SCALE 1"=40' SHEET 06 OF 18

PLAN AND PROFILE
 STA 51+30 TO STA 61+56
 Z100117 TO Z100118
 DRAWING NUMBER
 13844-SEC.3-PP-07



HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
L12	56+90.26	67+63.18	N60° 46' 50"E		1072.91'
CB	67+63.18	68+78.23	5° 59' 34"	1100.00'	115.05'
C9	68+78.23	74+52.76	21° 56' 44"	1500.00'	574.53'

TRENCH NOTES

STA 61+56 TO 68+00 REF. SECTION "A-A" DETAIL 1D
 STA 68+00 TO 70+00 REF. SECTION "A-A" DETAIL 1B
 STA 70+00 TO 71+21.28 REF. SECTION "A-A" DETAIL 1D
 STA 71+55.73 TO 71+82 REF. SECTION "C-C" DETAIL 3B

NOTE:
 MIN. / MAX. VALUES ALLOW CONTRACTOR TO
 ADJUST TRANSITION LENGTHS AS NECESSARY.



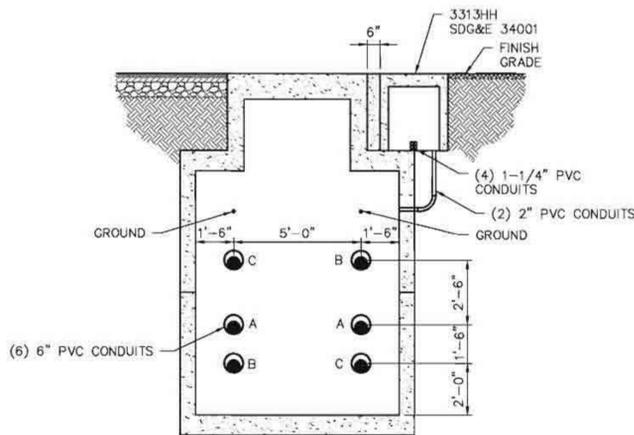
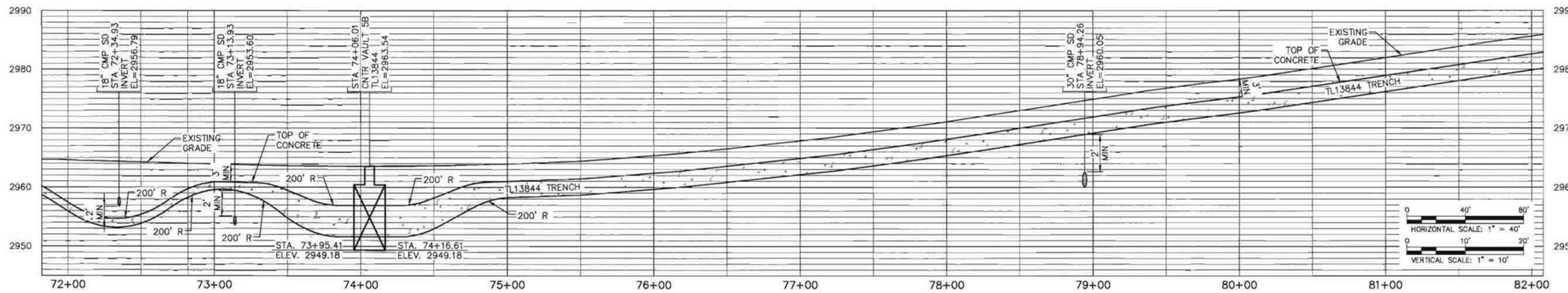
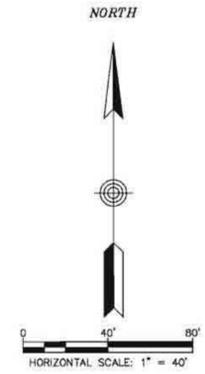
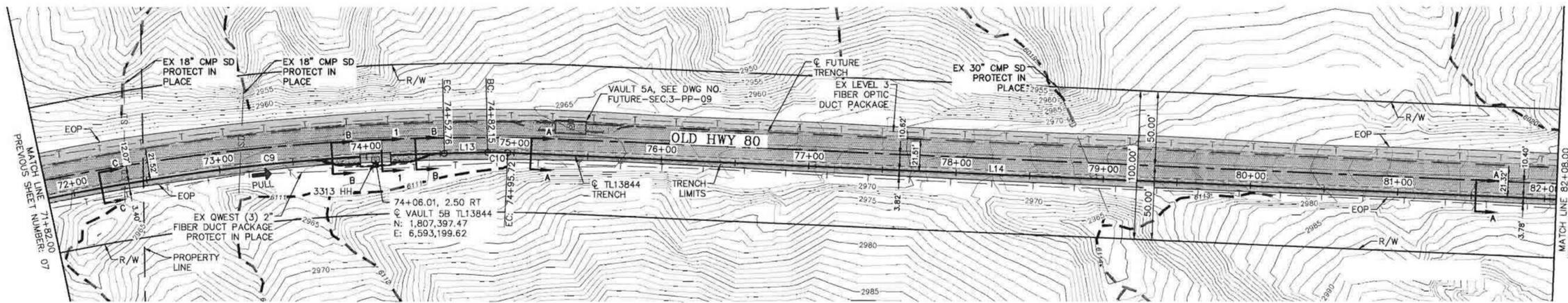
UNDERGROUND SERVICE ALERT
 OF SOUTHERN CALIFORNIA
 CALL TOLL FREE
 1-800-227-2600
 TWO WORKING DAYS BEFORE YOU DIG

DRAWN BY: JAB
 DATE: 08/31/12
 THO. BROS. N/A
 PROJ. NO.
 CONST. NO.
 PLAN & PROFILE
 HORIZONTAL: 1"=40'
 VERTICAL: 1"=10'

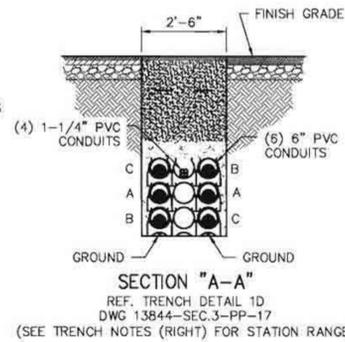
REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPV	DATE
E							
D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA			6/14/13
C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA			6/7/13
B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA			4/19/13
A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA			11/14/12

SDGE SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING
 TL13844 UNDERGROUND 138 kV
 BOULEVARD S/S TO EAST COUNTY S/S
 SCALE 1"=40' SHEET 07 OF 18

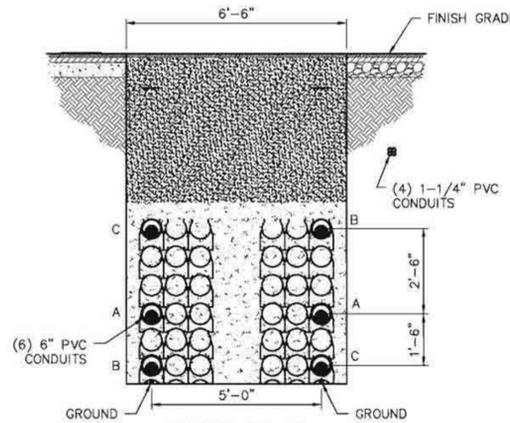
PLAN AND PROFILE
 STA 61+56 TO STA 71+82
 Z100117 TO Z100118
 DRAWING NUMBER
 13844-SEC.3-PP-08



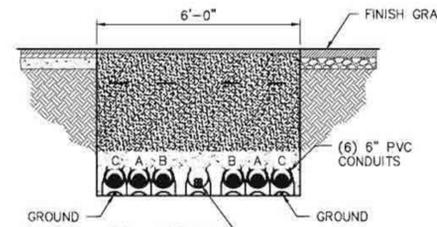
SECTION "1-1"
 STA. 74+06.01 VAULT # 5B TL13844
 138KV VAULT AND PHASING SECTION
 REF. VAULT DWG. 13844-SEC.3-V-01-04



SECTION "A-A"
 REF. TRENCH DETAIL 1D
 DWG 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)



SECTION "B-B"
 REF. TRENCH DETAIL 2D
 DWG 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)



SECTION "C-C"
 REF. TRENCH DETAIL 3B
 SEE DWG. NO. 13844-SEC.3-PP-17
 (SEE TRENCH NOTES (RIGHT) FOR STATION RANGE)

HORIZONTAL CENTERLINE DATA				
SEGMENT	START STATION	END STATION	BEARING/Delta	RADIUS DISTANCE
C9	68+78.23	74+52.76	21° 56' 44"	1500.00' 574.53'
L13	74+52.76	74+82.15	N88° 43' 08"E	29.38'
C10	74+82.15	74+95.72	3° 53' 18"	200.00' 13.57'
L14	74+95.72	90+69.86	S87° 23' 34"E	1574.14'

TRENCH NOTES

STA 71+82 TO 73+06.62 REF. SECTION "C-C" DETAIL 3B
 STA 73+85.35 TO 74+26.66 REF. SECTION "B-B" DETAIL 2D
 STA 74+47.95 MIN. TO 82+08 REF. SECTION "A-A" DETAIL 1D

NOTE:
 MIN. / MAX. VALUES ALLOW CONTRACTOR TO
 ADJUST TRANSITION LENGTHS AS NECESSARY



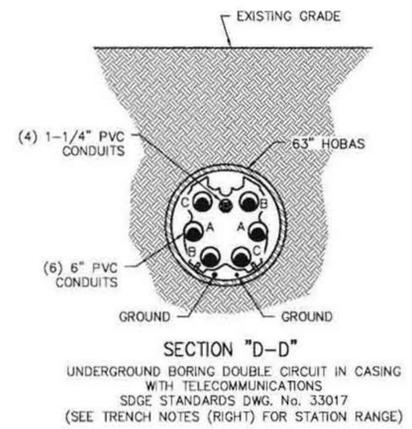
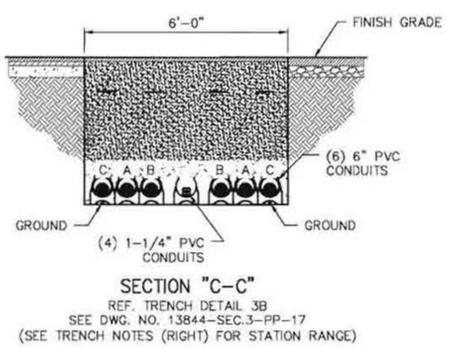
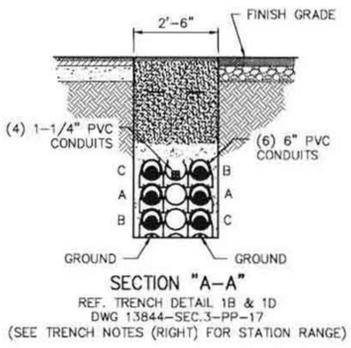
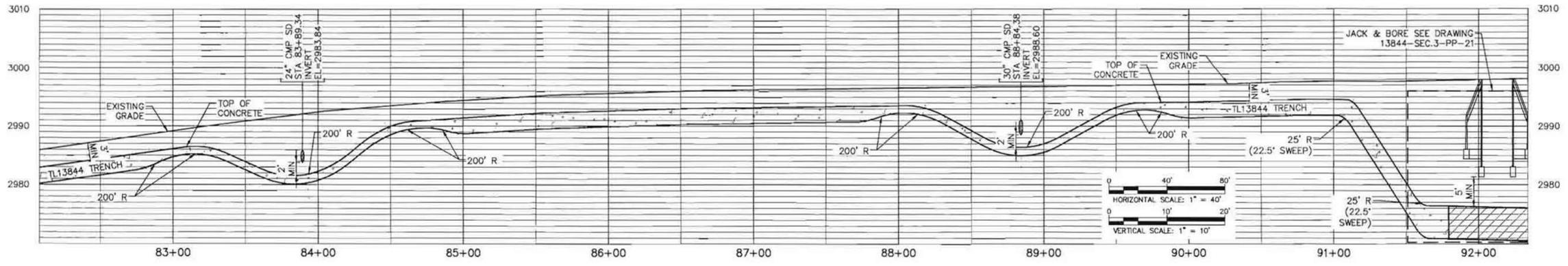
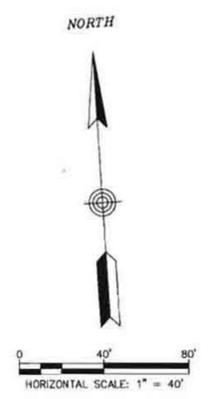
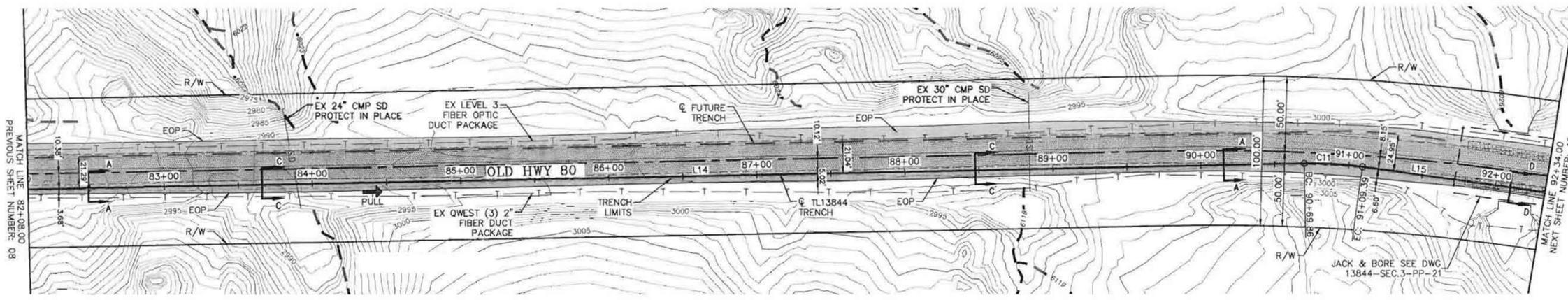
UNDERGROUND SERVICE ALERT
 OF SOUTHERN CALIFORNIA
 CALL TOLL FREE
 1-800-227-2600
 TWO WORKING DAYS BEFORE YOU DIG

DRAWN BY: JAB
 DATE: 08/31/12
 THO. BROS. N/A
 PROJ. NO.
 CONST. NO.
 PLAN & PROFILE
 HORIZONTAL: 1"=40'
 VERTICAL: 1"=10'

E								
D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA		6/14/13		
C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA		6/7/13		
B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA		4/19/13		
A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA		11/14/12		
REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPY	DATE	

SDG&E SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING
TL13844 UNDERGROUND 138 kV
BOULEVARD S/S TO EAST COUNTY S/S
 SCALE 1"=40' SHEET 08 OF 18

PLAN AND PROFILE
STA 71+82 TO STA 82+08
Z100117 TO Z100118
DRAWING NUMBER
13844-SEC.3-PP-09



HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
L14	74+95.72	90+69.86	S87° 23' 34"E	1574.14'	
C11	90+69.86	91+09.39	9° 03' 35"	250.00'	39.53'
L15	91+09.39	93+15.26	S78° 19' 59"E	205.87'	

TRENCH NOTES

STA 82+08 TO 82+72.93 REF. SECTION "A-A" DETAIL 1D
 STA 83+07.22 TO 84+70.93 REF. SECTION "C-C" DETAIL 3B
 STA 85+04.86 TO 87+68.52 REF. SECTION "A-A" DETAIL 1D
 STA 88+02.97 TO 89+68.65 REF. SECTION "C-C" DETAIL 3B
 STA 90+03.68 TO 91+79.51 REF. SECTION "A-A" DETAIL 1B
 STA 91+79.51 TO 92+34 REF. SECTION "D-D"



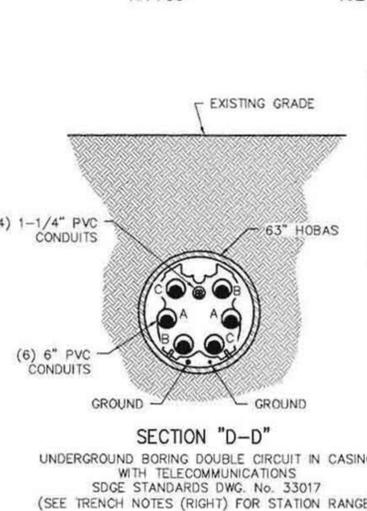
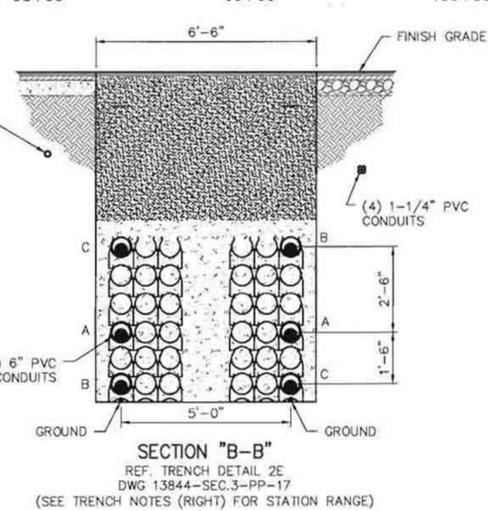
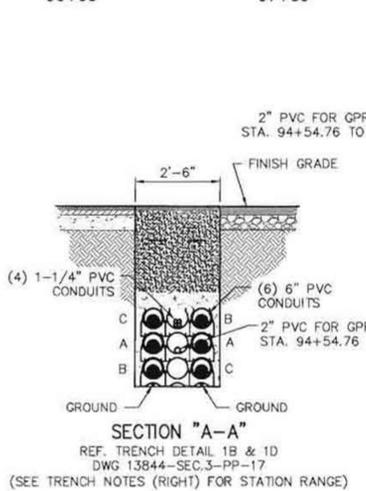
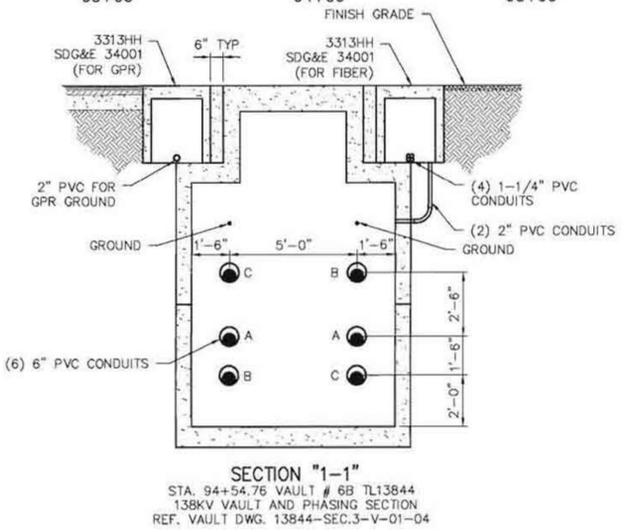
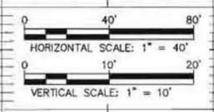
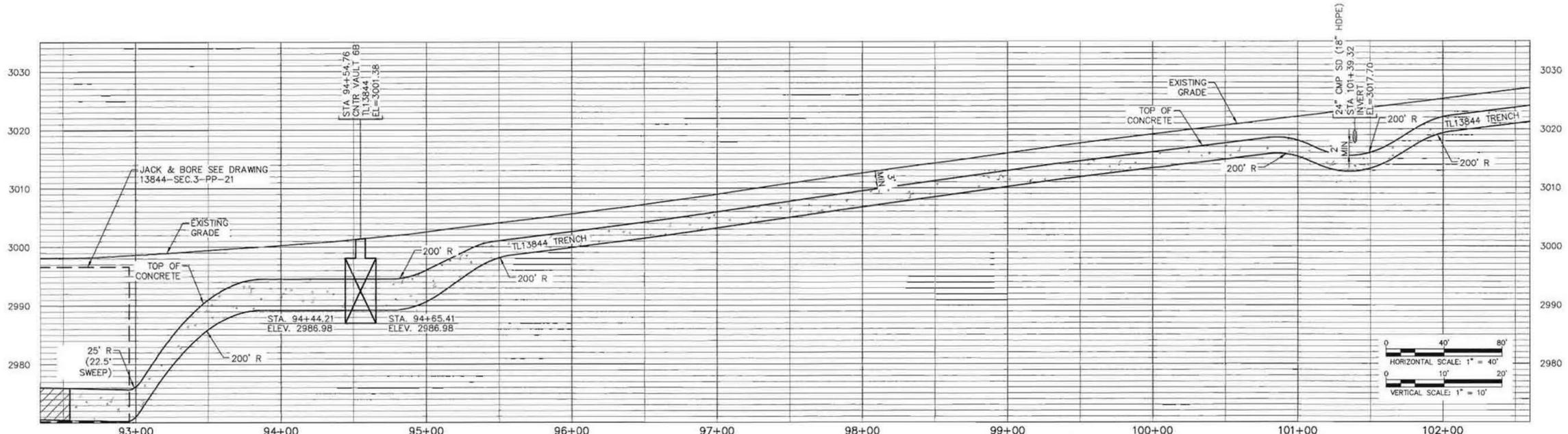
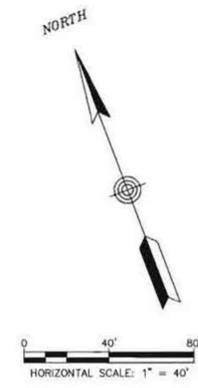
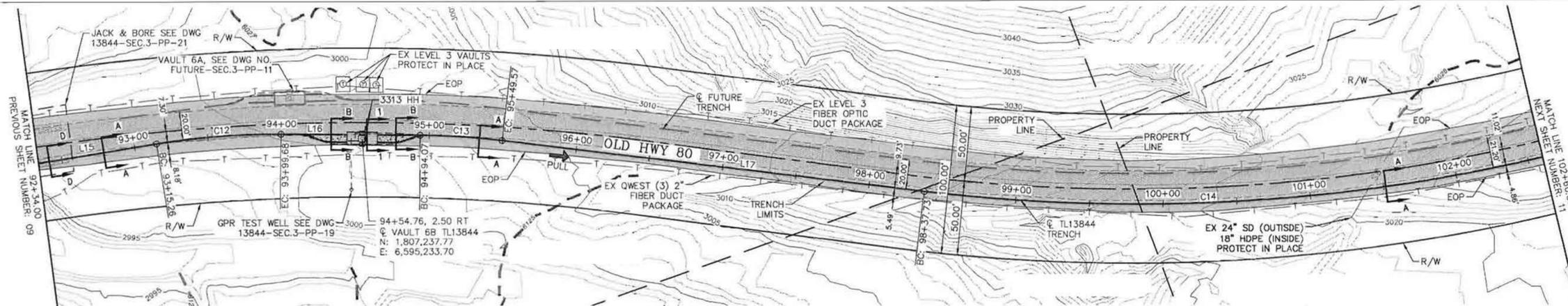
DRAWN BY:	JAB	E							
DATE:	08/31/12	D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA		6/14/13	
THO. BROS.	N/A	C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA		6/7/13	
PROJ. NO.		B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA		4/19/13	
CONST. NO.		A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA		11/14/12	
PLAN & PROFILE									
HORIZONTAL:	1"=40'								
VERTICAL:	1"=10'	REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPY	DATE

SDGE SAN DIEGO GAS & ELECTRIC TRANSMISSION ENGINEERING

TL13844 UNDERGROUND 138 kV BOULEVARD S/S TO EAST COUNTY S/S

SCALE 1"=40' SHEET 09 OF 18

PLAN AND PROFILE
 STA 82+08 TO STA 92+34
 Z100117 TO Z100118
 DRAWING NUMBER
 13844-SEC.3-PP-10



HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
L15	91+09.39	93+15.26	S78° 19' 59"E		205.87'
C12	93+15.26	93+99.68	9° 40' 25"	500.00'	84.42'
L16	93+99.68	94+94.07	S68° 39' 34"E		94.39'
C13	94+94.07	95+49.57	6° 21' 35"	500.00'	55.50'
L17	95+49.57	98+37.73	S62° 17' 59"E		288.16'
C14	98+37.73	111+83.92	63° 28' 56"	1215.00'	1346.19'

TRENCH NOTES

STA 92+34 TO 92+54.51 REF. SECTION "D-D"
 STA 92+54.51 TO 94+12.14 MAX REF. SECTION "A-A" DETAIL 1B
 STA 94+34.16 TO 94+75.37 REF. SECTION "B-B" DETAIL 2E
 STA 94+96.78 MIN TO 102+60 REF. SECTION "A-A" DETAIL 1D

NOTE:
 MIN. / MAX. VALUES ALLOW CONTRACTOR TO
 ADJUST TRANSITION LENGTHS AS NECESSARY



DRAWN BY:	JAB
DATE:	08/31/12
THO. BROS.:	N/A
PROJ. NO.:	
CONST. NO.:	

PLAN & PROFILE
 HORIZONTAL: 1"=40'
 VERTICAL: 1"=10'

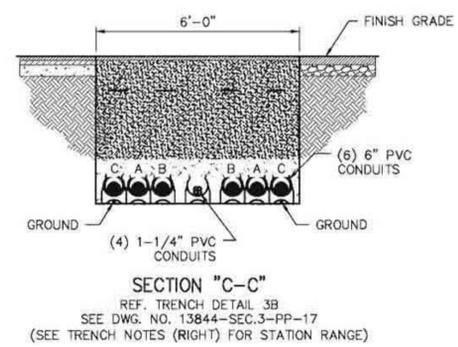
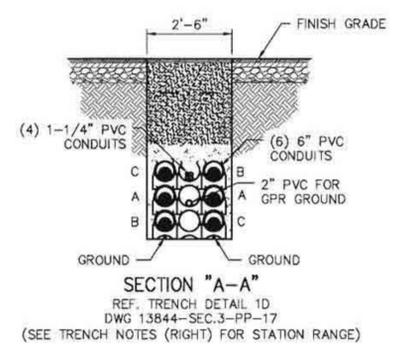
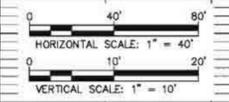
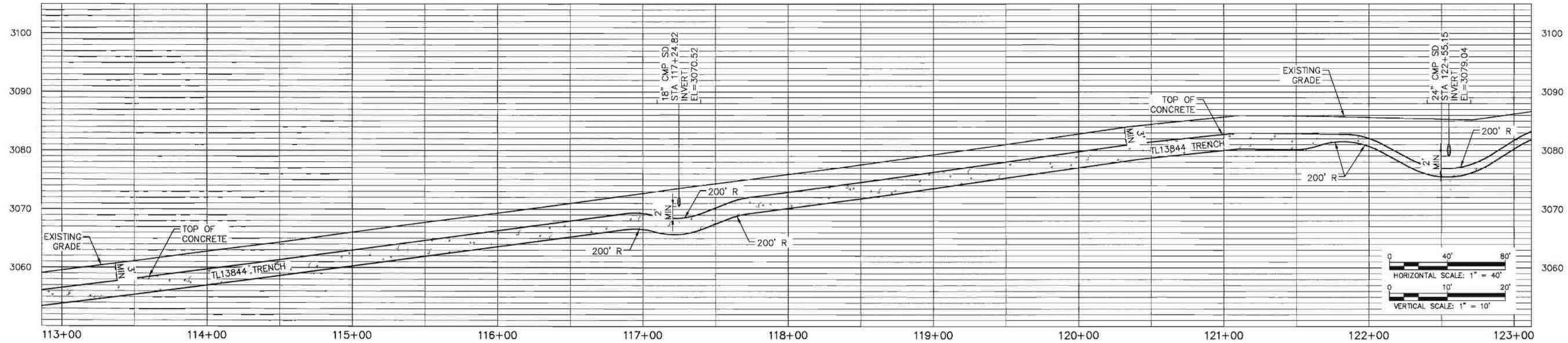
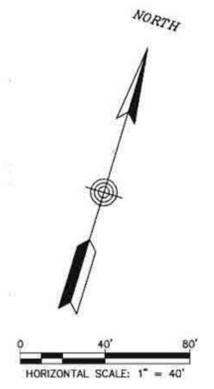
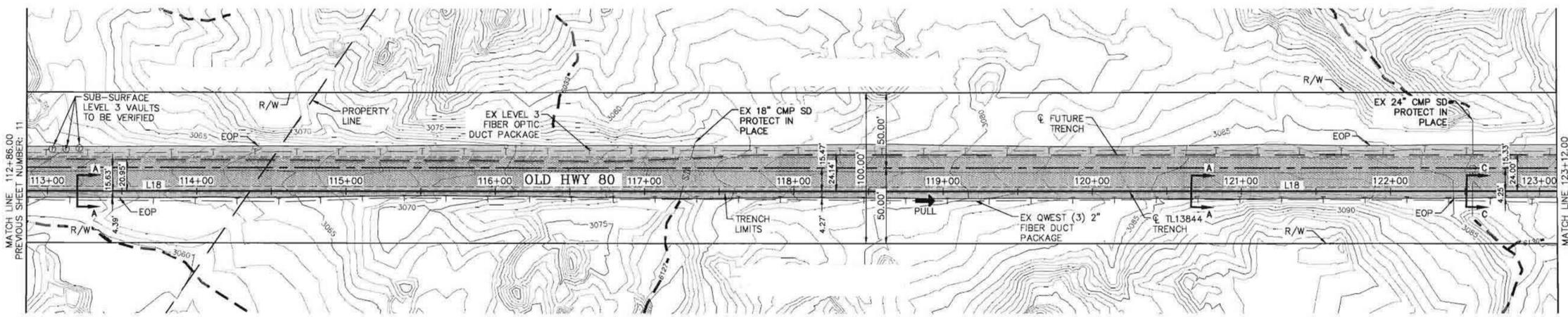
REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPV	DATE
E							
D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA			6/14/13
C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA			6/7/13
B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA			4/19/13
A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA			11/14/12

SDGE SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING

TL13844 UNDERGROUND 138 kV
BOULEVARD S/S TO EAST COUNTY S/S

SCALE 1"=40' SHEET 10 OF 18

PLAN AND PROFILE
STA 92+34 TO STA 102+60
Z100117 TO Z100118
DRAWING NUMBER
13844-SEC.3-PP-11



HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
LIB	111+83.92	130+36.16	N54° 13' 05"E		1852.24'

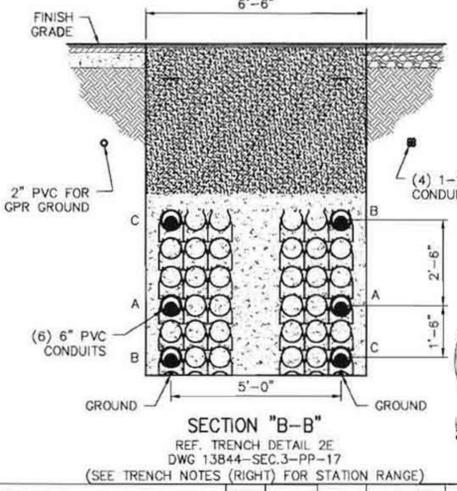
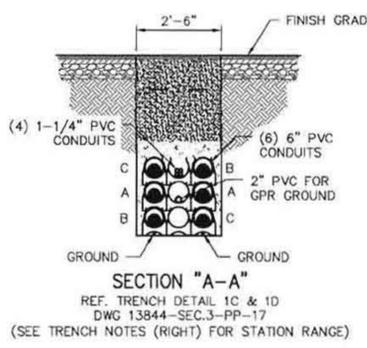
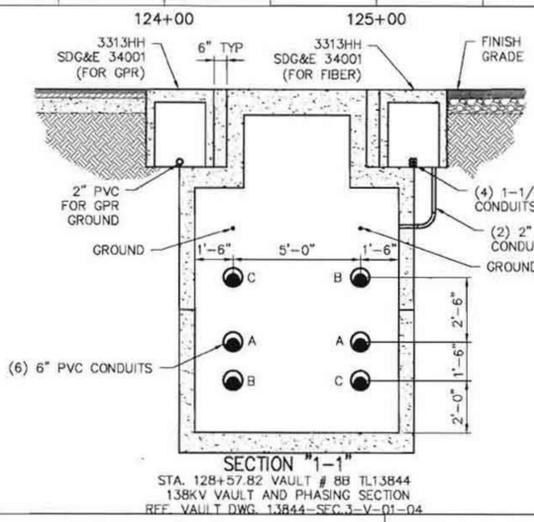
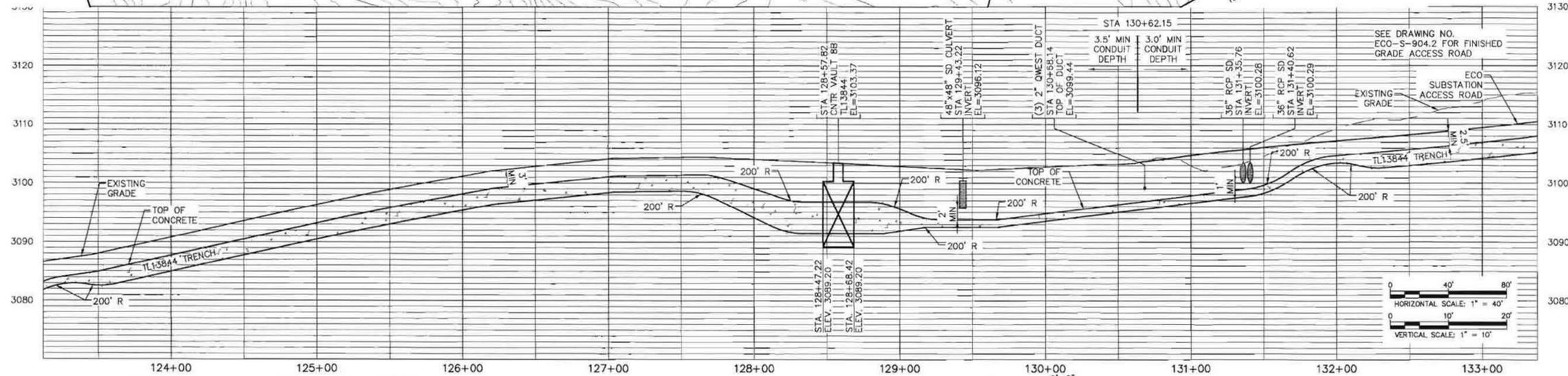
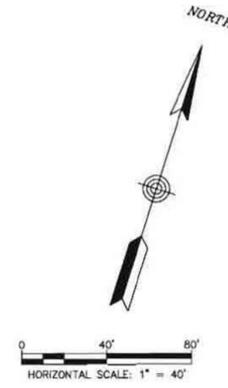
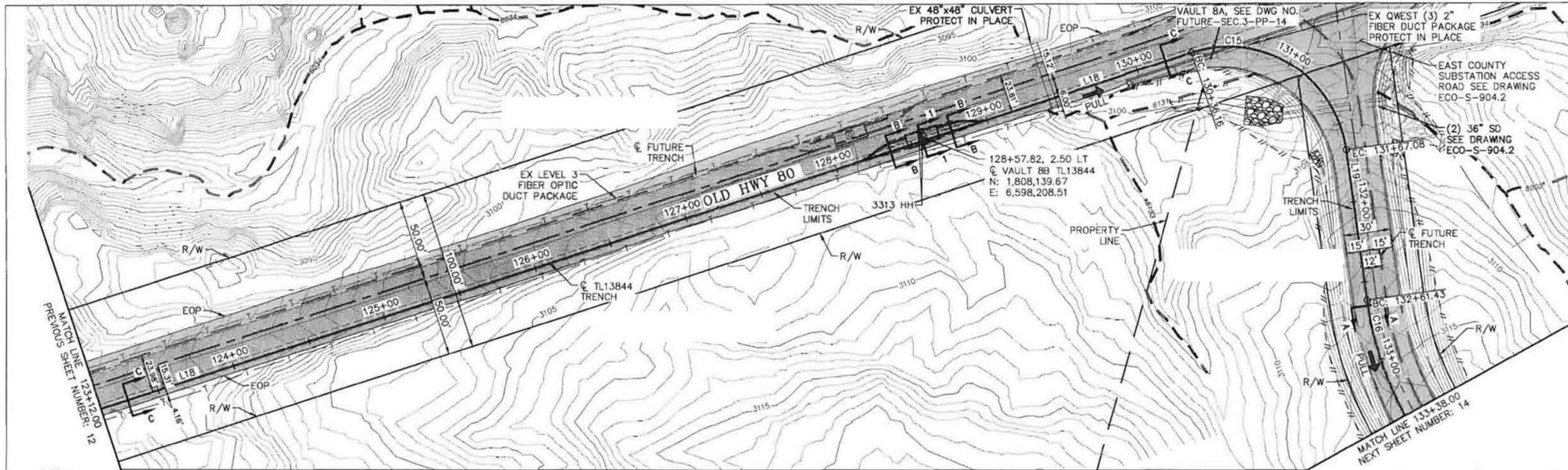
TRENCH NOTES
 STA 112+86 TO 121+48.20 REF. SECTION "A-A" DETAIL 1D
 STA 121+82.64 TO 123+12 REF. SECTION "C-C" DETAIL 3B



DRAWN BY:	JAB	E							
DATE:	08/31/12	D	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA		6/14/13	
THO. BROS.	N/A	C	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA		6/7/13	
PROJ. NO.		B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA		4/19/13	
CONST. NO.		A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA		11/14/12	
PLAN & PROFILE									
HORIZONTAL:	1"=40'								
VERTICAL:	1"=10'								
REV	BUDGET	CONST ORDER			CHANGE	DWN	CHKD	APPY	DATE

SDG&E SAN DIEGO GAS & ELECTRIC
 TRANSMISSION ENGINEERING
 TL13844 UNDERGROUND 138 kV
 BOULEVARD S/S TO EAST COUNTY S/S
 SCALE 1"=40' SHEET 12 OF 18

PLAN AND PROFILE
 STA 112+86 TO STA 123+12
 Z10017 TO Z10018
 DRAWING NUMBER
 13844-SEC.3-PP-13



HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/Delta	RADIUS	DISTANCE
L18	111+83.92	130+36.16	N54° 13' 05"E		1852.24'
C15	130+36.16	131+67.08	100° 01' 01"	75.00'	130.92'
L19	131+67.08	132+61.43	S25° 45' 53"E		94.35'
C16	132+61.43	133+49.44	24° 28' 45"	206.00'	88.01'

TRENCH NOTES

STA 123+12 TO 123+26.38 REF. SECTION "C-C" DETAIL 3B
 STA 123+62.35 TO 128+15.20 MAX. REF. SECTION "A-A" DETAIL 1D
 STA 128+37.22 TO 128+78.42 REF. SECTION "B-B" DETAIL 2E
 STA 129+28.29 MIN. TO 130+64.07 REF. SECTION "C-C" DETAIL 3B
 STA 130+64.07 TO 131+98.26 REF. SECTION "C-C" DETAIL 3C
 STA 132+32.65 TO 133+38.00 REF. SECTION "A-A" DETAIL 1C

NOTE:
 MIN. / MAX. VALUES ALLOW CONTRACTOR TO ADJUST TRANSITION LENGTHS AS NECESSARY



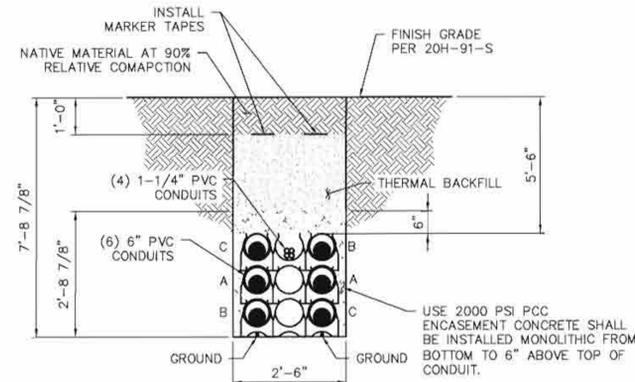
DRAWN BY:	JAB	G	XXXXX	XXXXX	REVISED PROFILE AND DETAILS	BETA		6/14/13	
DATE:	08/31/12	F	XXXXX	XXXXX	REVISED ALIGNMENT AND DETAILS	BETA		6/7/13	
THO. BROS.	N/A	E	XXXXX	XXXXX	LABELLED ACQE WATERWAYS, ADDED R/W & DAYLIGHT LINE	BETA		6/4/13	
PROJ. NO.		D	XXXXX	XXXXX	ADDED ACQE WATERWAYS	BETA		5/29/13	
CONST. NO.		C	XXXXX	XXXXX	REVISED TO START WORK AT R/W	BETA		5/24/13	
PLAN & PROFILE									
HORIZONTAL: 1"=40'									
VERTICAL: 1"=10'									
REV	BUDGET	CONST ORDER	CHANGE			DWN	CHKD	APPY	DATE

SDGE SAN DIEGO GAS & ELECTRIC
 TRANSMISSION ENGINEERING

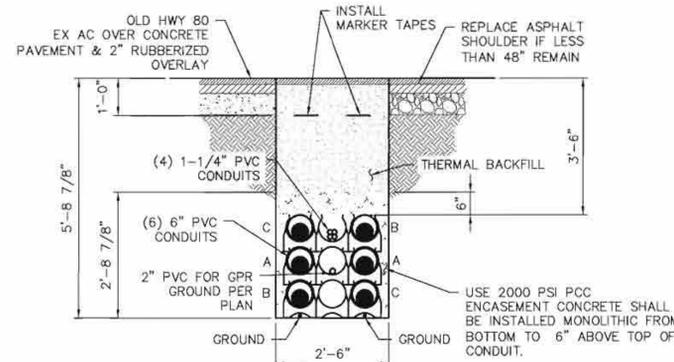
TL13844 UNDERGROUND 138 kV
 BOULEVARD S/S TO EAST COUNTY S/S

SCALE 1"=40' SHEET 13 OF 18

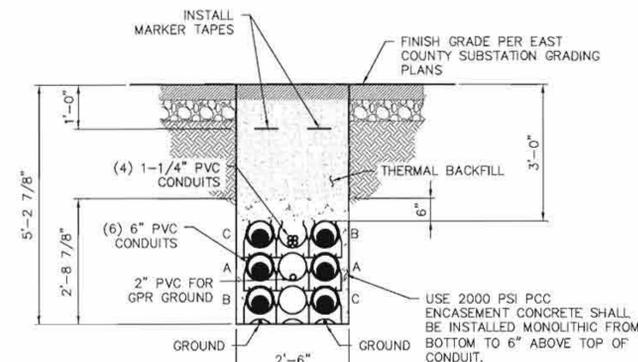
PLAN AND PROFILE
 STA 123+12 TO STA 133+38
 Z10017 TO Z10018
 DRAWING NUMBER
 13844-SEC.3-PP-14



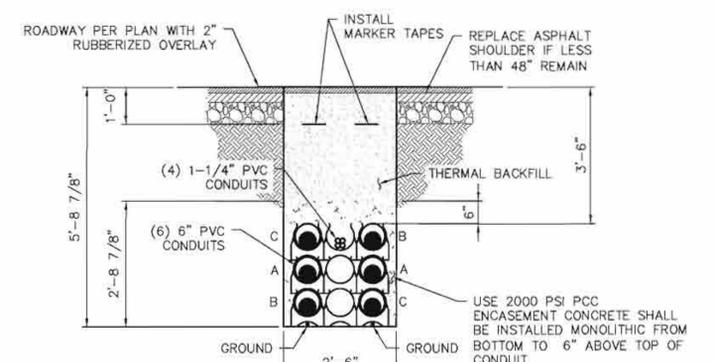
DETAIL 1A
REF. SDG&E STANDARD DWG. 33002 MODIFIED
NO SCALE



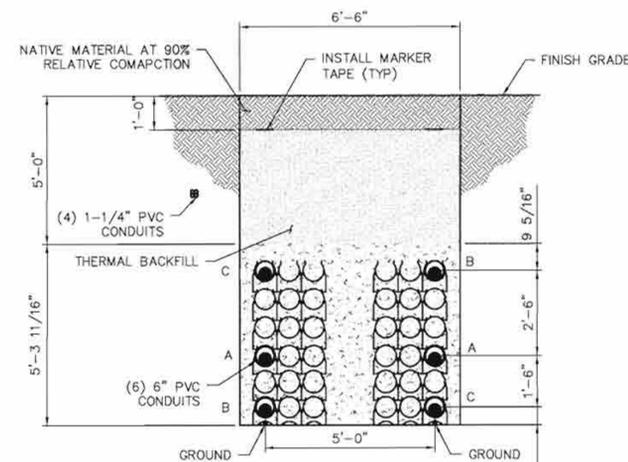
DETAIL 1B
REF. SDG&E STANDARD DWG. 33002 MODIFIED
NO SCALE



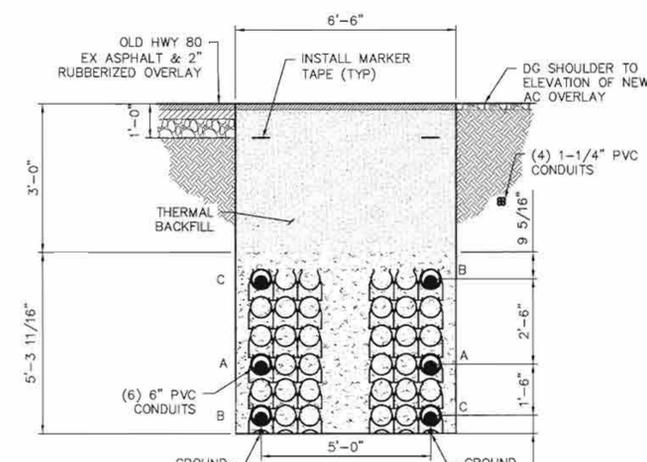
DETAIL 1C
REF. SDG&E STANDARD DWG. 33002 MODIFIED
NO SCALE



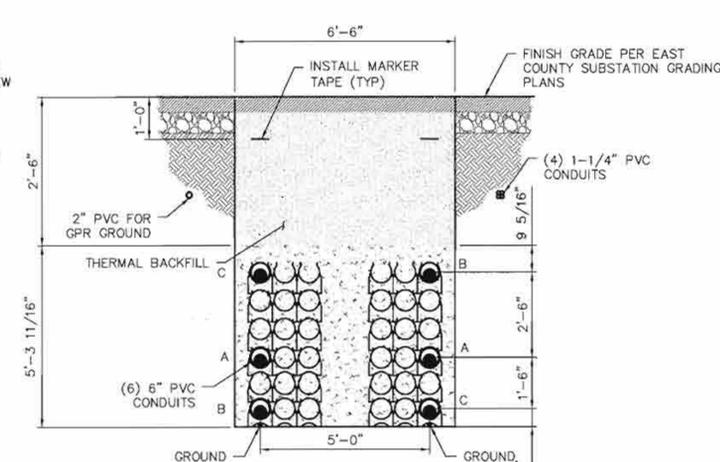
DETAIL 1D
REF. SDG&E STANDARD DWG. 33002 MODIFIED
NO SCALE



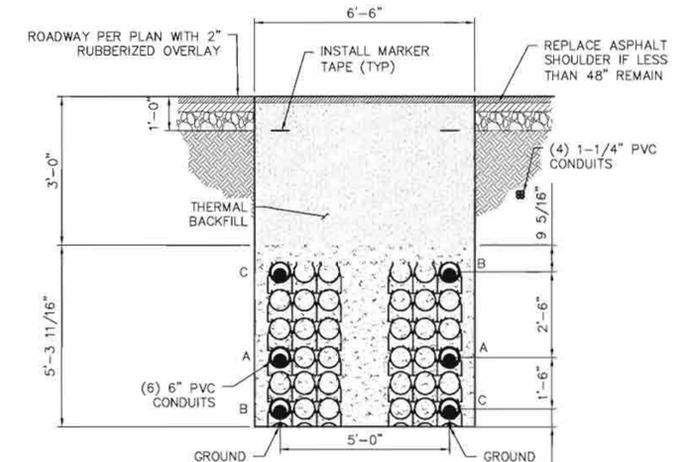
DETAIL 2A
TYPICAL TRENCH TRANSITION TO VAULT DETAIL
NO SCALE



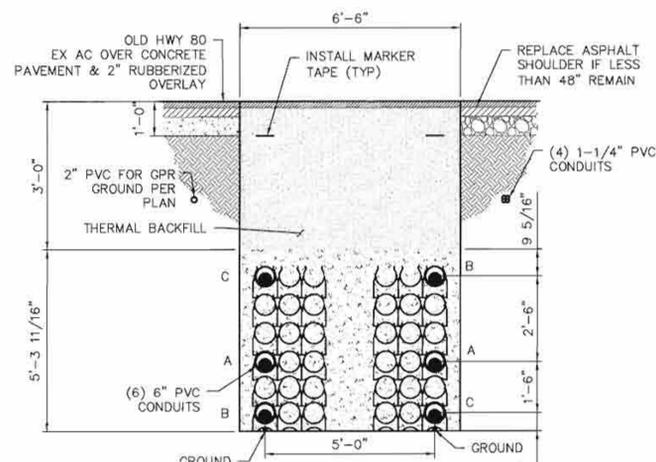
DETAIL 2B
TYPICAL TRENCH TRANSITION TO VAULT DETAIL
NO SCALE



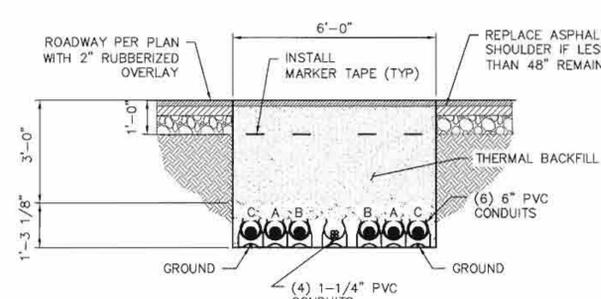
DETAIL 2C
TYPICAL TRENCH TRANSITION TO VAULT DETAIL
NO SCALE



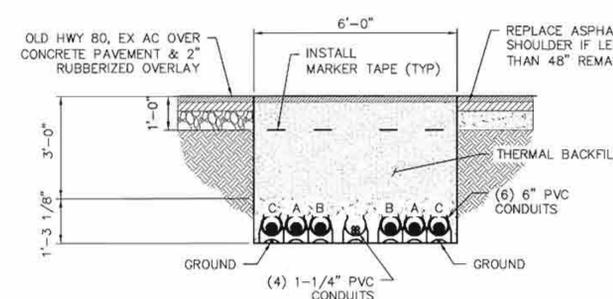
DETAIL 2D
TYPICAL TRENCH TRANSITION TO VAULT DETAIL
NO SCALE



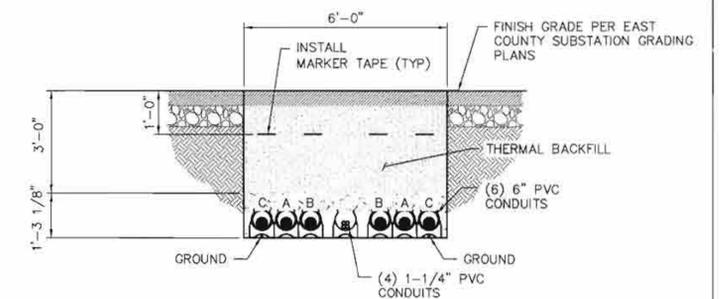
DETAIL 2E
TYPICAL TRENCH TRANSITION TO VAULT DETAIL
NO SCALE



DETAIL 3A
REF. SDG&E STANDARD DWG. 33004 MODIFIED
NO SCALE



DETAIL 3B
REF. SDG&E STANDARD DWG. 33004 MODIFIED
NO SCALE



DETAIL 3C
REF. SDG&E STANDARD DWG. 33004 MODIFIED
NO SCALE

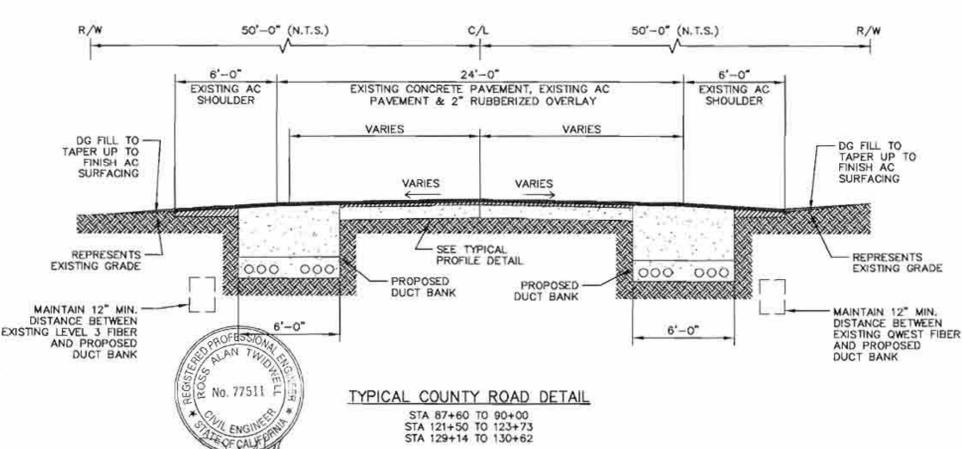
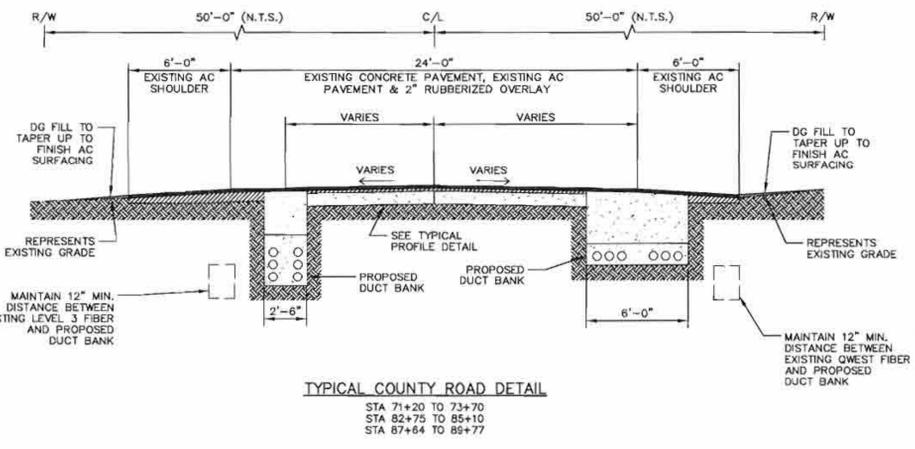
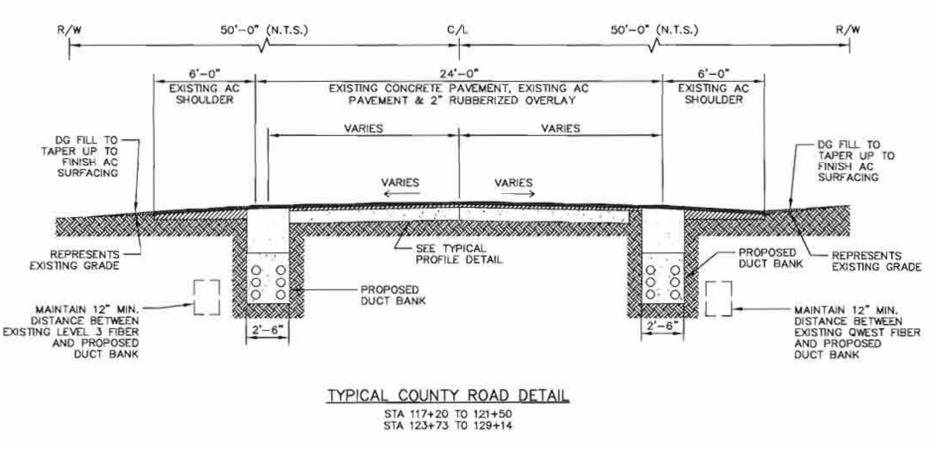
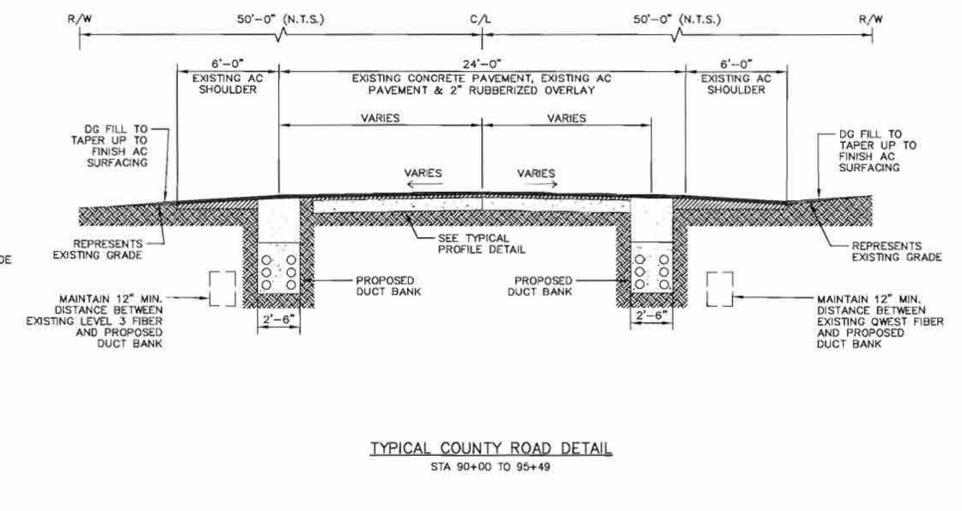
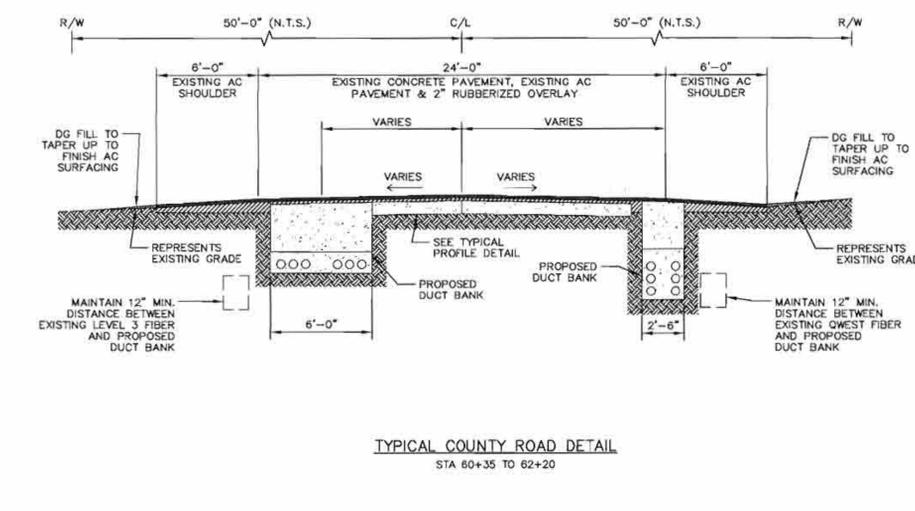
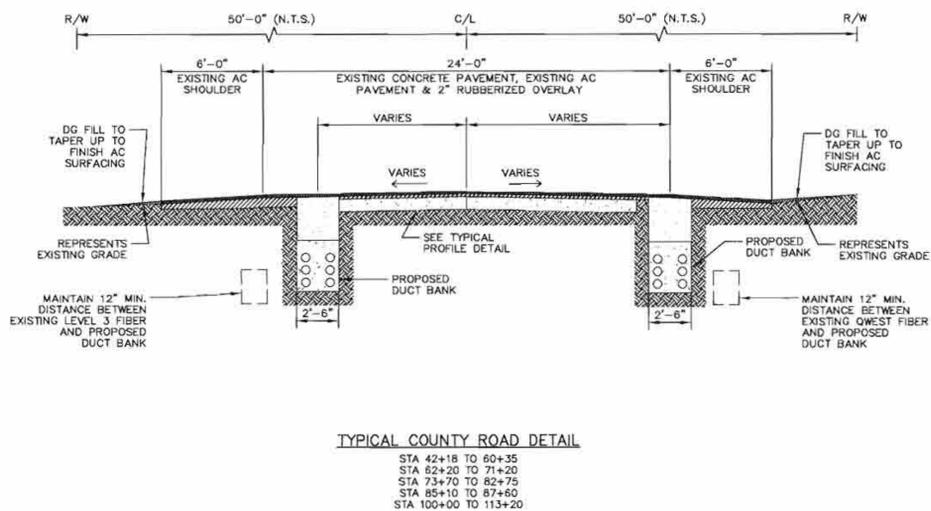
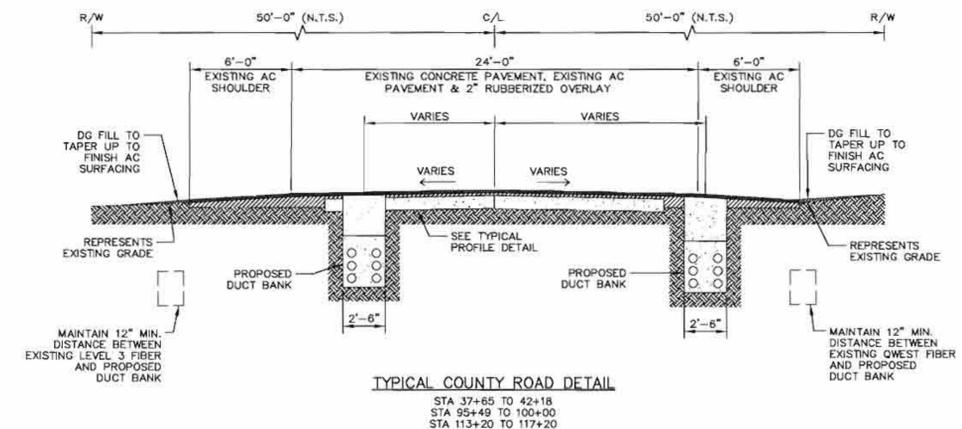
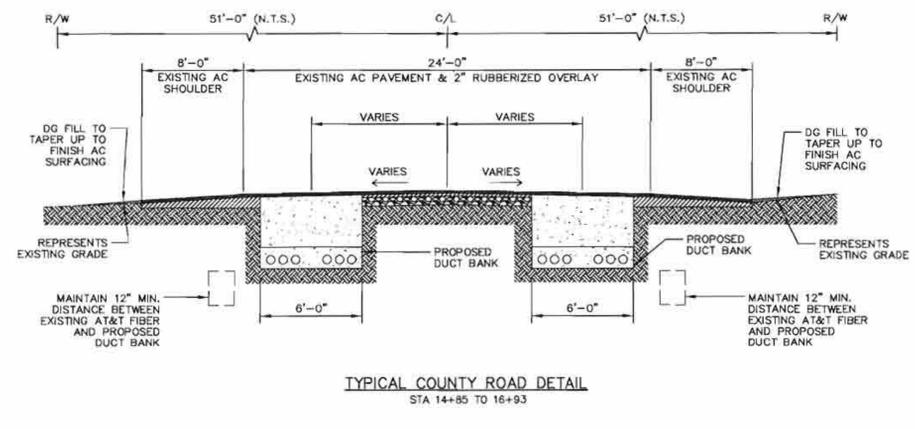
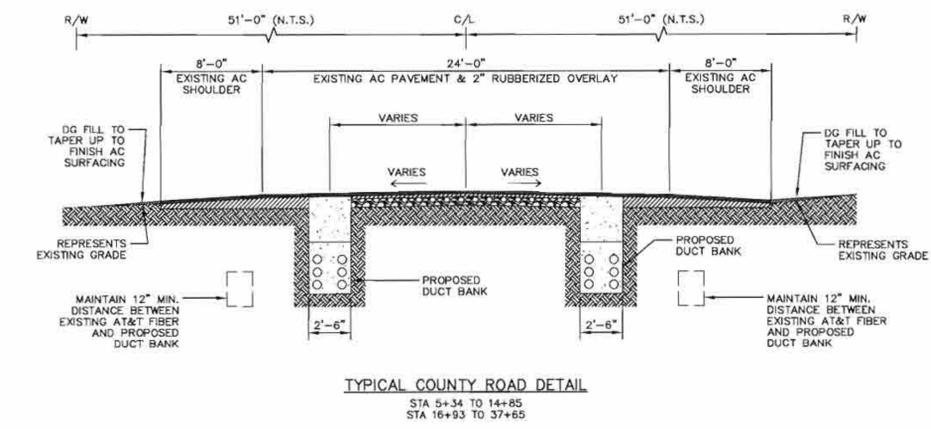


UNDERGROUND SERVICE ALERT
OF SOUTHERN CALIFORNIA
CALL: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

DRAWN BY:	JAB	E				
DATE:	08/31/12	D	XXXXX	XXXXX	ADDED DETAILS 3A, 3B & 3C AND MOVED VAULT PROT.	BETA 6/14/13
THO. BROS.:	N/A	C	XXXXX	XXXXX	REVISED DETAILS	BETA 6/7/13
PROJ. NO.:		B	XXXXX	XXXXX	REVISED PER SDG&E COMMENTS	BETA 4/19/13
CONST. NO.:		A	XXXXX	XXXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA 11/14/12
PLAN & PROFILE						
HORIZONTAL: 1"=40'						
VERTICAL: 1"=10'						
REV	BUDGET	CONST ORDER	CHANGE		DWN	CHKD APPV DATE

SDGE SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING
TL13844 UNDERGROUND 138 kV
BOULEVARD S/S TO EAST COUNTY S/S
SCALE 1"=40' SHEET 16 OF 18

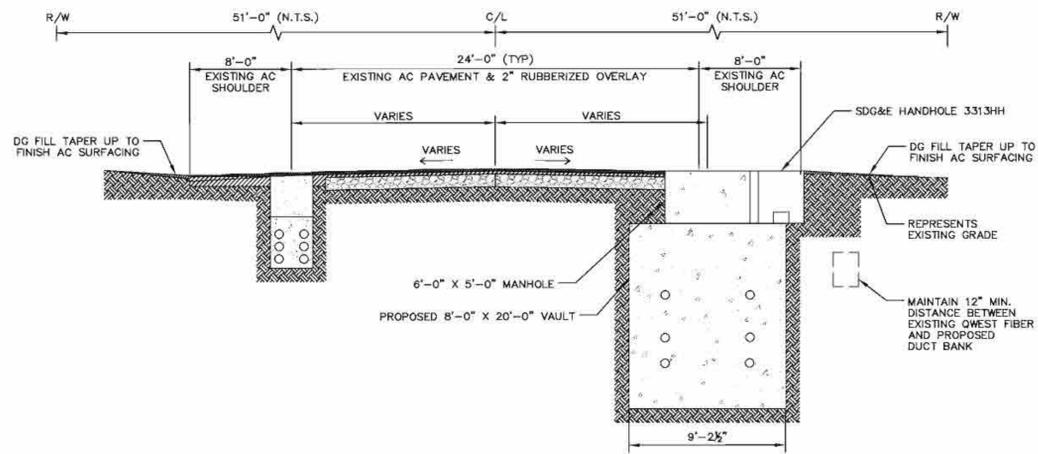
PLAN AND PROFILE
DETAILS
Z100117 TO Z100118
DRAWING NUMBER
13844-SEC.3-PP-17



DRAWN BY:	JAB	E							
DATE:	08/31/12	D							
THO. BROS.	N/A	C	XXXXX	XXXXX	ADDED NEW DETAILS & UPDATED STATIONS	BETA		6/14/13	
PROJ. NO.		B	XXXXX	XXXXX	ADDED STATION RANGE	BETA		6/7/13	
CONST. NO.		A	XXXXX	XXXXX	NEW DRAWING	BETA		4/19/13	
PLAN & PROFILE									
HORIZONTAL:	N/A								
VERTICAL:	N/A	REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPV	DATE

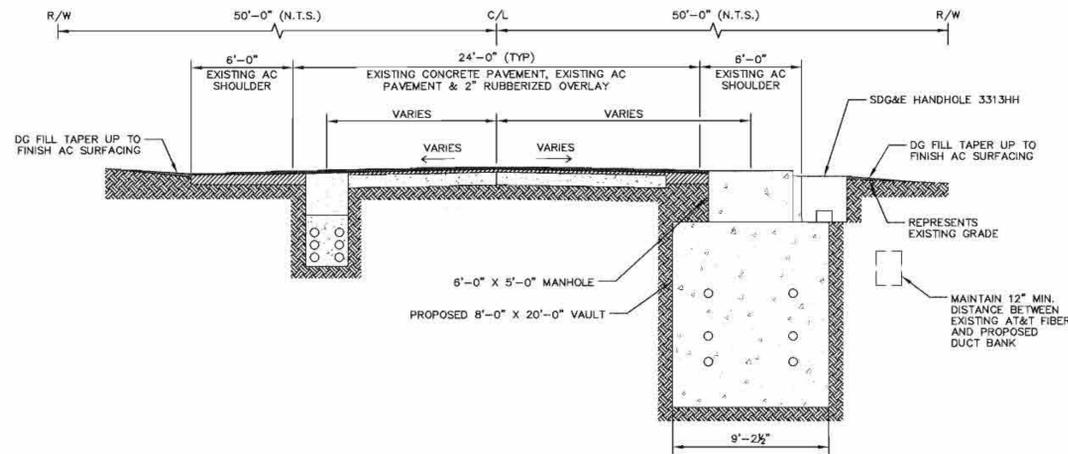
SDGE SAN DIEGO GAS & ELECTRIC TRANSMISSION ENGINEERING
 TL13844 UNDERGROUND 138 kV BOULEVARD S/S TO EAST COUNTY S/S
 SCALE N/A SHEET 17 OF 18

PLAN AND PROFILE COUNTY ROAD SECTIONS Z100117 TO Z100118
 DRAWING NUMBER 13844-SEC.3-PP-18



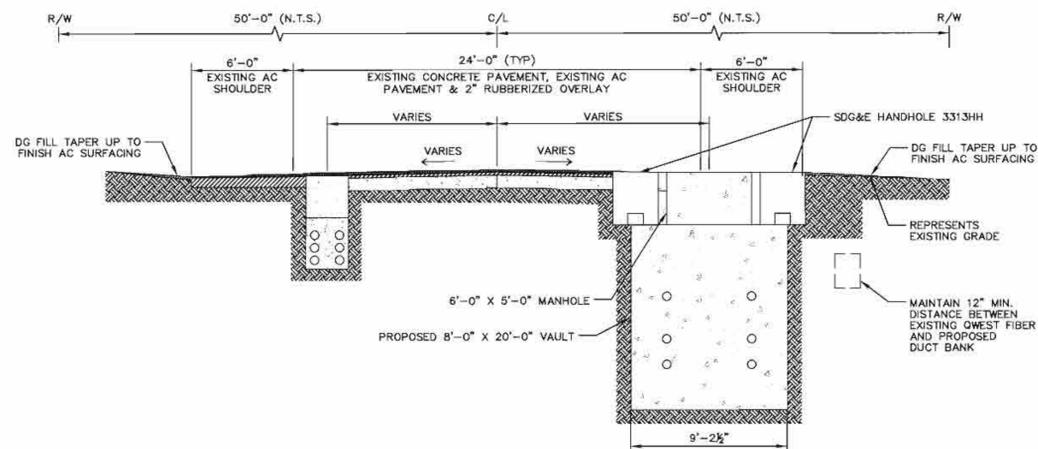
TYPICAL COUNTY ROAD DETAIL

STA 19+59 TO 19+99
STA 34+94 TO 53+34



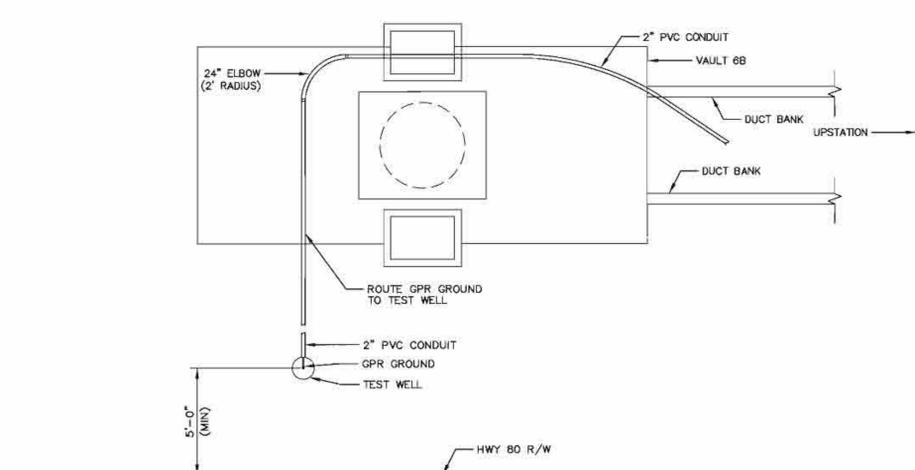
TYPICAL COUNTY ROAD DETAIL

STA 53+71 TO 54+11
STA 73+86 TO 74+26



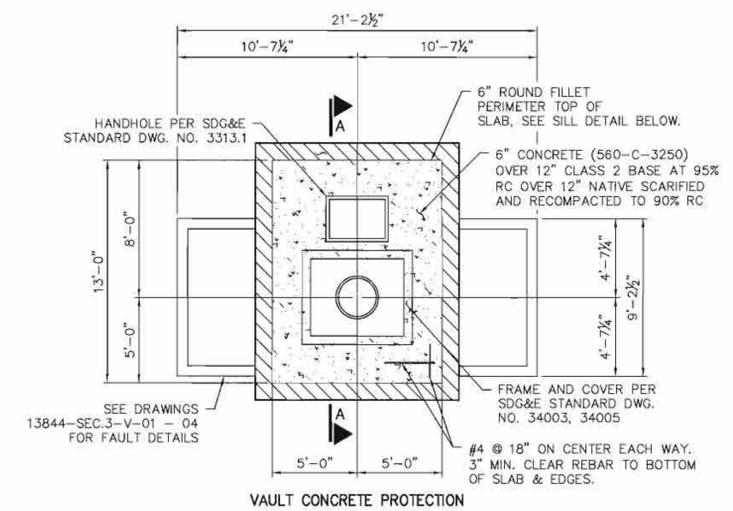
TYPICAL COUNTY ROAD DETAIL

STA 94+34 TO 94+74
STA 108+56 TO 108+96
STA 128+38 TO 128+77

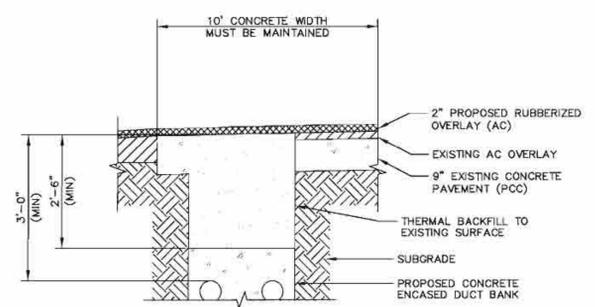


GPR GROUND TEST WELL LOCATION DETAIL

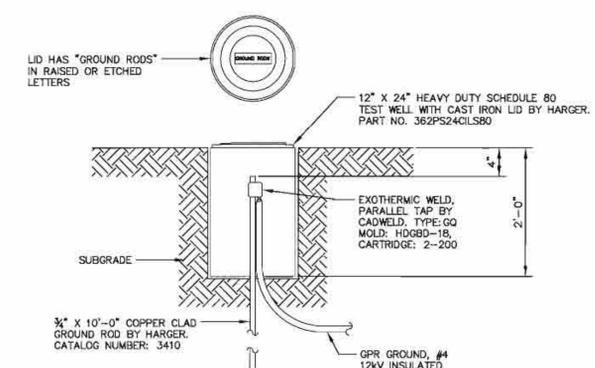
* TEST WELL PLACED WITHIN APPROVED PROJECT WORK LIMITS



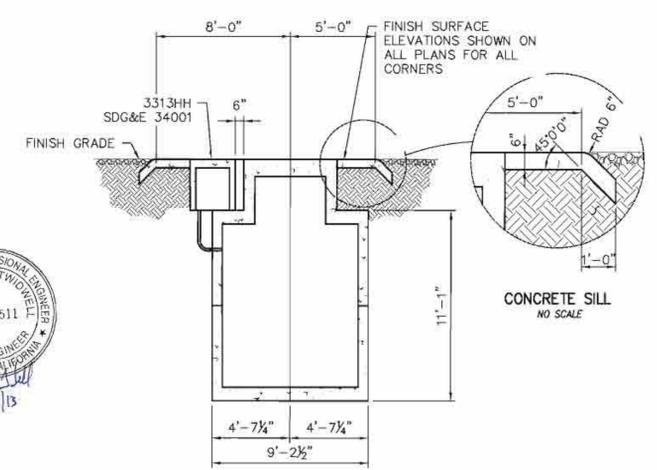
VAULT CONCRETE PROTECTION



TYPICAL HWY 80 PROFILE DETAIL



GPR GROUND TEST WELL DETAIL



SECTION A-A
NO SCALE



UNDERGROUND SERVICE ALERT
OF SOUTHERN CALIFORNIA
CALL: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

DRAWN BY:	JAB	E							
DATE:	08/31/12	D							
THO. BROS.	N/A	C	XXXXX	XXXXX	ADDED NEW DETAILS AND UPDATED STATIONS	BETA		6/14/13	
PROJ. NO.		B	XXXXX	XXXXX	ADDED STATION RANGE	BETA		6/7/13	
CONST. NO.		A	XXXXX	XXXXX	NEW DRAWING	BETA		4/19/13	
PLAN & PROFILE									
HORIZONTAL:	N/A								
VERTICAL:	N/A								
REV	BUDGET	CONST ORDER			CHANGE	DWN	CHKD	APPY	DATE

SDGE SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING
TL13844 UNDERGROUND 138 kV
BOULEVARD S/S TO EAST COUNTY S/S
SCALE N/A SHEET 18 OF 18

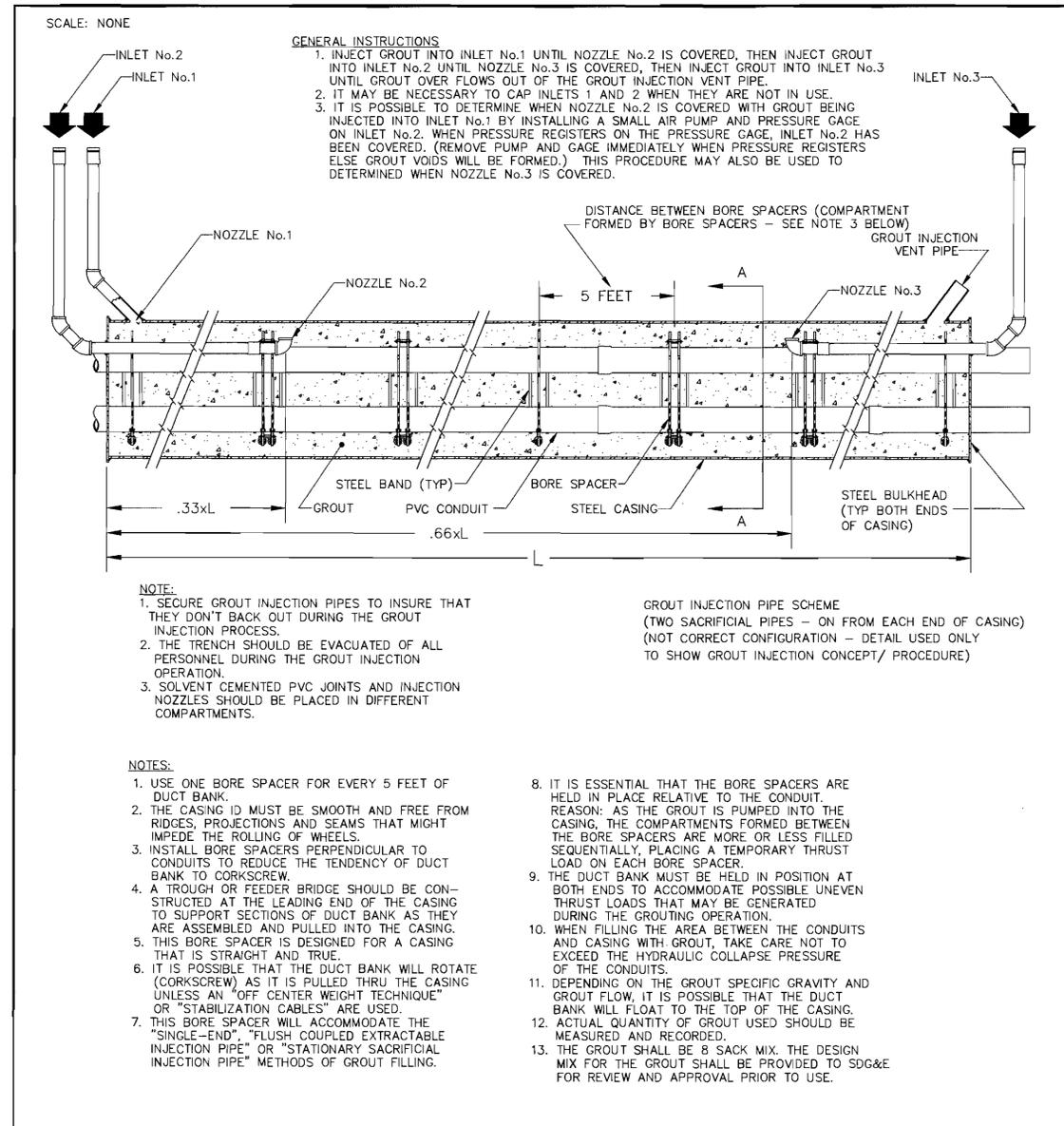
PLAN AND PROFILE
COUNTY ROAD SECTIONS
Z100117 TO Z100118
DRAWING NUMBER
13844-SEC.3-PP-19

TRANSMISSION BORE, TRENCH & CONDUIT

STANDARD CONSTRUCTION NOTES

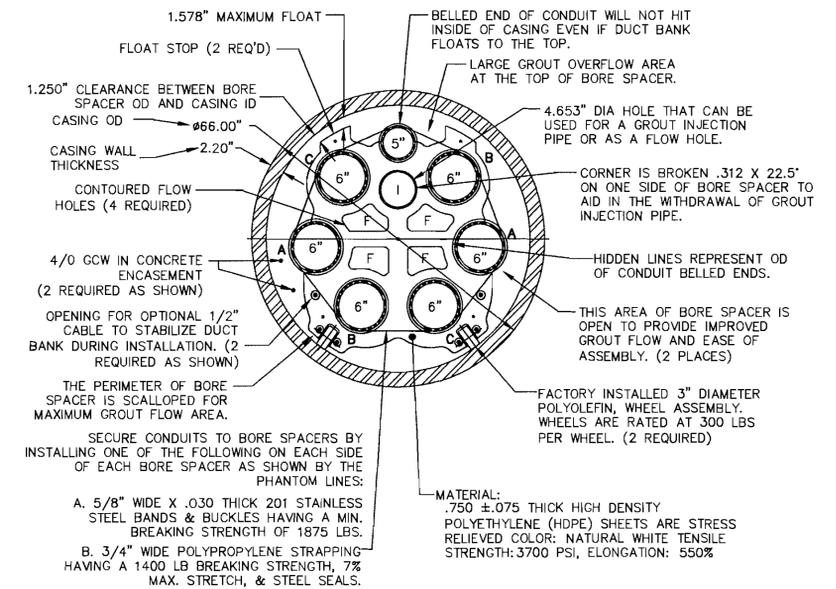
- SUBCONTRACTOR TO RESTORE ALL FACILITIES, IMPROVEMENTS, LANDSCAPING, ETC., TO THE ORIGINAL CONDITION BY THE COMPLETION OF WORK OR AS SHOWN ON PLANS.
- SUBCONTRACTOR SHALL NOT STORE EQUIPMENT, TOOLS, AND MATERIAL WITHIN FIFTEEN FEET FROM THE CENTERLINE OF ANY TRAVEL LANES.
- SUBCONTRACTOR SHALL REMOVE ALL TOOLS, EQUIPMENT, AND MATERIALS FROM PREMISES PROMPTLY UPON COMPLETION OF WORK, RESTORING PREMISES TO THE SAME STATE AND CONDITION AS WHEN SUBCONTRACTOR ENTERED THEREON.
- SUBCONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH APPLICABLE CALIFORNIA PUBLIC UTILITIES COMMISSION AND OSHA REGULATIONS.
- SUBCONTRACTOR SHALL NOT USE OR STORE HAZARDOUS SUBSTANCES, AS DEFINED BY THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR PETROLEUM OR OIL AS DEFINED BY APPLICABLE ENVIRONMENTAL LAWS ON THE RIGHT-OF-WAY.

UNDERGROUND CONVERSION AT BRIDGE STA: 91+79.51 TO 92+54.51



	TRANSMISSION LINE TL13844	
	CARRIER PIPE	CASING PIPE
CONTENT TO BE HANDLED	138KV TLS & TELECOMM	7 CONDUITS
OUTSIDE DIAMETER	6-6" & 1-5"	66"
PIPE MATERIALS	PVC	GRP
SPECIFICATION AND GRADE	EPC-80	63" HOBAS
WALL THICKNESS	.375"	2.20"
ACTUAL WORKING PRESSURE	---	---
TYPE OF JOINT	SOLVENT CEMENTED PVC	BELL SPIGOT
COATING	GROUT (8 SACK)	NONE
METHOD OF INSTALLATION	---	JACKING
SEALS: BOTH ENDS: <input checked="" type="checkbox"/>	TYPE: BULKHEADS	
BURY: (MIN.)	5 FT. 0 IN.	
TYPE, SIZE AND SPACING OF INSULATORS OR SUPPORTS	0.75" THICK HDPE, 5' SPACING	
CATHODIC PROTECTION	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

NOTES:
*ALL WORK SHALL CONFORM TO SPECIFICATIONS TE 0107 & DWG. No. 31001



SECTION "A-A" 63" HOBAS PIPE,
6-6" CONDUITS & 1-5" CONDUIT



BETA



UNDERGROUND SERVICE ALERT
OF SOUTHERN CALIFORNIA

CALL TOLL FREE
1-800-227-2600

TWO WORKING DAYS BEFORE YOU DIG

DRAWN BY:	JAB	E							
DATE:	08/31/12	D							
THO. BROS.	N/A	C	XXXX	XXXX	REVISED TO 63" HOBAS AND REVISED ALIGNMENT	BETA		6/7/13	
PROJ. NO.		B	XXXX	XXXX	REVISED PER SDG&E COMMENTS	BETA		4/19/13	
CONST. NO.		A	XXXX	XXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA		11/14/12	
PLAN & PROFILE									
HORIZONTAL:	N/A								
VERTICAL:	N/A	REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPV	DATE



SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING

TL13844 UNDERGROUND 138 kV
BOULEVARD S/S TO EAST COUNTY S/S

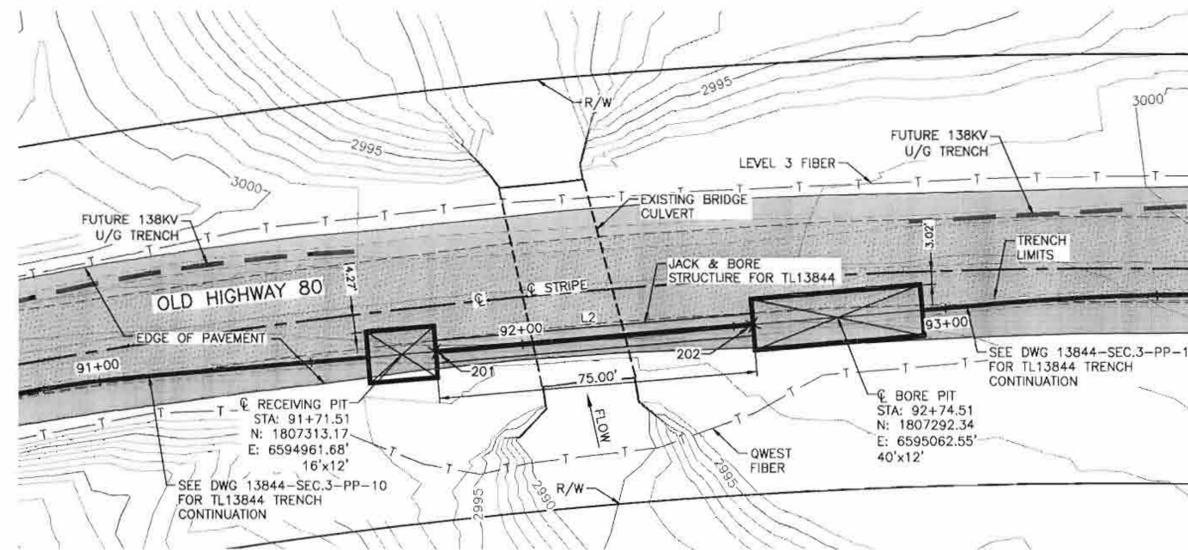
SCALE N/A SHEET 1 OF 2

PLAN AND PROFILE
JACK AND BORE
Z100117 TO Z100118

DRAWING NUMBER
13844-SEC.3-PP-20

TRANSMISSION BORE, TRENCH & CONDUIT

UNDERGROUND CONVERSION AT BRIDGE STA: 91+79.51 TO 92+54.51



GENERAL NOTES

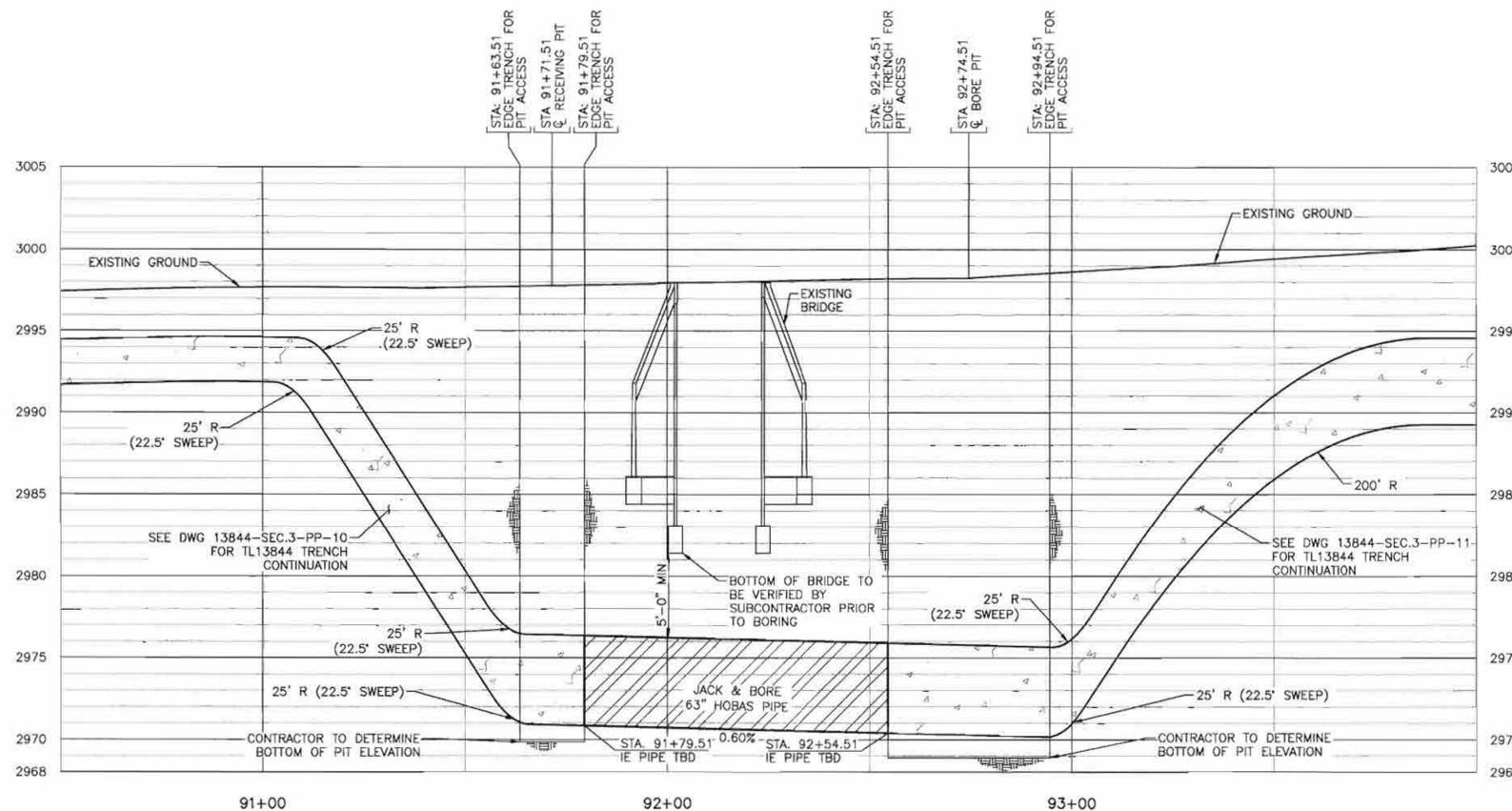
1. LOCATIONS OF ALL UNDERGROUND FACILITIES ARE TAKEN FROM AVAILABLE MAPS AND RECORDS. ACTUAL FIELD LOCATIONS OF ALL FOREIGN UTILITIES MUST BE VERIFIED BY CONTRACTOR PRIOR TO TRENCHING. CONTACT USA DIGALERT, 1-800-227-2600, PRIOR TO DIGGING.
2. ALL WORK SHALL COMPLY WITH ENGINEERING DRAWINGS, SPECIFICATION NO. TE-0107, CONTRACT DOCUMENT AND ALL APPLICABLE PROVISIONS OF THE SDG&E UNDERGROUND STANDARDS HANDBOOK, LATEST REVISION.
3. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF G.O. 128.
4. ALL WORK SHALL COMPLY WITH ALL STATE AND LOCAL TRAFFIC CONTROL REGULATIONS.
5. ANY DEVIATION FROM ENGINEERING DRAWINGS MUST BE APPROVED BY BETA PRIOR TO CONSTRUCTION. MAINTAIN AND UPDATE THE AS-BUILT RECORDS TO DOCUMENT ALL FIELD CHANGES.
6. CLEARANCE BETWEEN EXISTING UTILITIES AND DUCT BANK SHALL BE A MINIMUM OF 1' UNLESS OTHERWISE NOTED.
7. CONTRACTOR TO POTHOLE ALL UTILITY CROSSING POSITIONS BEFORE CONSTRUCTION.
8. CONTRACTOR SHALL PROVIDE SHORING OF PITS AND SHALL ENSURE COMPLETE PROTECTION OF EXISTING CULVERT BOX.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A PERMIT FOR TEMPORARY CONSTRUCTION DEWATERING. A PERMIT IS REQUIRED FROM THE REGIONAL WATER QUALITY CONTROL BOARD FOR ANY DISCHARGE OF GROUNDWATER TO THE ENVIRONMENT. COUNTY OF SAN DIEGO DEPARTMENT REQUIRES A PERMIT FOR ANY DISCHARGE OF GROUNDWATER TO THE SANITARY SEWER SYSTEM. THE CONTRACTOR SHALL COMPLY WITH REGIONAL WATER QUALITY CONTROL BOARD WASTE DISCHARGE PERMIT REQUIREMENTS, AS APPLICABLE. BEFORE STARTING DEWATERING OPERATIONS, THE CONTRACTOR SHALL OBTAIN AUTHORIZATION, AS REQUIRED, FOR THE DISPOSAL OF GROUNDWATER. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAMPLING, TESTING MONITORING, AND REPORTING REQUIREMENTS.

ABBREVIATIONS

CL	CENTER LINE	RG	ROUGH GRADE
IE	INVERT ELEVATION	R/W	RIGHT-OF-WAY
OBS.	OBSOLETE	STA	STATION

LEGEND

— T — T — T —	EXISTING TELCO LINE
— — — — —	EXISTING CONTOURS
— — — — —	RIGHT OF WAY
— — — — —	CENTER LINE



RECEIVING PIT ACCESS		
START	END	TOTAL LENGTH
STA. 91+63.51	STA. 91+79.51	16'

63" CASING		
START	END	TOTAL LENGTH
STA. 91+79.51	STA. 92+54.51	75'

BORE PIT ACCESS		
START	END	TOTAL LENGTH
STA. 92+54.51	STA. 92+94.51	40'

POINT DATA TABLE

POINT #	NORTHING	EASTING	REMARKS
201	1807311.55	6594969.51	BEGIN HOBAS
202	1807296.39	6595042.96	END HOBAS
L2	BEARING COURSE: S 78°19'59" E DISTANCE=75.00'		



UNDERGROUND SERVICE ALERT
OF SOUTHERN CALIFORNIA
CALL TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

DRAWN BY:	JAB	E							
DATE:	08/31/12	D	XXXX	XXXX	REVISED PROFILE	BETA		6/14/13	
THO. BROS.	N/A	C	XXXX	XXXX	REVISED TO 63" HOBAS AND REVISED ALIGNMENT	BETA		6/7/13	
PROJ. NO.		B	XXXX	XXXX	REVISED PER SDG&E COMMENTS	BETA		4/19/13	
CONST. NO.		A	XXXX	XXXX	TRENCH / SUBSTRUCTURES AND CABLE INSTALLATION	BETA		11/14/12	
		REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPV	DATE

SDG&E SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING
TL13844 UNDERGROUND 138 kV
BOULEVARD S/S TO EAST COUNTY S/S
SCALE AS NOTED SHEET 2 OF 2

PLAN AND PROFILE
JACK AND BORE
Z100117 TO Z100118
DRAWING NUMBER
13844-SEC.3-PP-21

ATTACHMENT D: LU-2 LETTER REPORT



Don Houston
Environmental Project Manager
1010 Tavern Road
Alpine, CA 91901
(T) XXX-XXX-XXX
(F) XXX-XXX-XXX

June 26, 2013

Ms. Amy Baker
Project Manager
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

**Re: Mitigation Measure LU-2 for the East County Substation Project Components:
Section 3, 138 Kilovolt [kV] Underground Within Old Highway 80 and Carrizo Gorge Road**

Dear Ms. Baker:

San Diego Gas & Electric Company (SDG&E) has prepared this letter report to demonstrate compliance with Mitigation Measure (MM) LU-2 as required by the Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) for the East County Substation Project (Project). Specifically, this letter report addresses landowners affected by the East County Substation Section 3 underground alignment and associated components of the Project. As required by MM LU-2, SDG&E notified landowners with property through which the Project would pass and this letter report summarizes communications with those property owners affected by the above-reference portion of the Project.

MM LU-2 has been inserted below for your reference:

LU-2. Revise project elements to minimize land use conflicts. At least 90 days prior to completing final transmission line design for the approved route, SDG&E shall notify landowners of parcels through which the alignment would pass regarding the specific location of the ROW, individual towers, staging areas, access roads, or other facilities associated with the project that would occur on the subject property. The notified parties shall be provided at least 30 days in which to identify conflicts with any planned development on the subject property and to work with SDG&E to identify potential reroutes of the alignment that would be mutually acceptable to SDG&E and the landowner. Property owners whose land may be divided into potentially uneconomic parcels shall be afforded this same opportunity, even if development plans have not been established. SDG&E shall endeavor to accommodate these reroutes only to the extent that they are reasonable and feasible, do not create a substantial increase in cost, and do not create adverse impacts to resources or to other properties that would be greater in magnitude than impacts that would occur from construction and operation of the alignment as originally planned.

SDG&E shall provide a written report to the CPUC/BLM providing evidence of the notice to landowners and copies of any responses to the notice within 30 days of the notice closing date for responses. SDG&E shall also identify in the documentation submitted to the CPUC

and BLM whether reroutes recommended by the landowner or SDG&E can be accommodated. Where they cannot be accommodated, the reasons shall be provided. SDG&E shall provide information sufficient for the CPUC and BLM to determine that the reroute creates no more adverse impact than the originally planned alignment location. SDG&E shall include environmental information consistent with that required for a variance. Where a reroute is proposed, the CPUC or BLM will review and agree to accept or reject individual reroutes. The CPUC or BLM may also recommend compromise reroutes for any of the parcels for which responses were provided in a timely fashion.

Typically, notification to landowners was delivered using a standardized letter that was sent by certified mail, Federal Express, or hand delivered. The notification letter included a map showing the landowner’s property, the proposed right-of-way, tower locations, and other Project facilities. The landowners were given 30 days or more to make comments and request changes. A notification letter template is included as Attachment A: Notification Letter Template for reference purposes.

Any comments or change requests from the landowner, known as Landowner Requests (LORs), were submitted to SDG&E’s Right-of-Way Agents via face-to-face meetings, written correspondences, and telephone calls. An initial feasibility review was performed by SDG&E managers of the Land, Environmental, and Engineering Departments using the screening criteria described below.

Screening Criteria
1. Adds new property owner crossings
2. Adds new angles
3. Increases existing line angles
4. Requires moving existing angle structures
5. Increases impacts to land use and environmental resources
6. Increases or transfers visual impacts
7. Increases property impacts to cause full-takes
8. Increases business impacts
9. Increases costs
10. Eliminates unnecessary access to facilities
11. Jeopardizes future transmission structure positions within right-of-way
12. Moves alignment closer to existing residences/businesses
13. Results in a non-compliance with agency requirements

If the LOR passed the screening criteria, it was then recommended to the SDG&E Engineering Team for inclusion into the final Project design. If the LOR was deemed infeasible, the landowner was informed and the decision was documented.

As depicted in Attachment B: Project Map, two landowners are associated with this portion of the Section 3 underground alignment—the Board of Supervisors of the County of San Diego (County) and Bureau of Land Management (BLM).

An existing Franchise Agreement executed June 3, 1968 and a Memorandum of Agreement executed on August 14, 2010 provide SDG&E with land rights for County land and the execution of the Right-of-Way Grant on December 19, 2012 satisfy land rights for BLM-administered land. During negotiation of these agreements, SDG&E resolved any landowner requests made.

As demonstrated by this letter report and attachments, SDG&E has met the requirements of MM LU-2 for the Project’s Section 3 alignment by providing adequate notice to landowners and accommodating any LORs to the

extent that they are reasonable and feasible, do not create a substantial increase in cost, and do not create adverse impacts to resources or to other properties that would be greater in magnitude than impacts that would occur from construction and operation of the Project as originally planned.

Sincerely,

A handwritten signature in black ink that reads "Don Houston". The signature is written in a cursive, slightly slanted style.

Don Houston
Environmental Project Manager
San Diego Gas & Electric Company

Enclosed: Attachment A: Notification Letter Template
Attachment B: Project Map

cc: Anne Marie McGraw, Insignia Environmental
Jeffrey Coward, Insignia Environmental
Kirstie Reynolds, San Diego Gas & Electric Company
David Hochart, Dudek

ATTACHMENT A: NOTIFICATION LETTER TEMPLATE



[Agent's name]
Right of Way Agent

San Diego Gas & Electric Company (SDG&E)
Land Services
8335 Century Park Ct., CP 11D
San Diego, CA 92123-1582

Tel: xxx-xxx-xxxx
Fax: xxx-xxx-xxxx
[Agent's email]

Date: _____

VIA FEDERAL EXPRESS [or, VIA CERTIFIED MAIL, VIA HAND DELIVERY]

[Addressee]

SUBJECT: Electric Transmission Line 13844 for the East County Substation Project (ECO) –
Offer of compensation for easement; your Assessors Parcel Number _____

Dear _____:

As you are aware, San Diego Gas & Electric (SDG&E) is proposing to acquire easements for the construction of the above-referenced electric transmission line project. This will require the acquisition of an easement over a portion of your property.

This project will provide access to renewable energy and improve electric grid reliability and reduce the potential for outages in communities such as Jacumba, Boulevard and Campo.

You were previously contacted during the appraisal phase of this project and were offered an opportunity to meet with SDG&E's independent appraiser during the inspection of the property. A market-value appraisal has now been completed. Based on that appraisal and by this letter SDG&E makes its offer to purchase an easement from you in the amount of \$_____.

The following documents are enclosed for your review and action:

1. One copy of a surveyed map for your information, which shows the location/area of SDG&E's proposed easement acquisition
2. One original and one copy of an Easement, by which you convey this property interest to SDG&E
3. One copy of the Summary of the Basis of the Amount Established as Just Compensation for your information
4. Two originals and one copy of the Easement Contract, which establishes terms and conditions primarily related to the payment of compensation for the easement
5. One copy of a brochure entitled Property Owner's Information Pamphlet on Use of Eminent Domain in California

However, please note that it is our desire to reach a settlement without the use of eminent domain. The pamphlet is being provided for information purposes.

6. Request for Taxpayer Identification Number and Certification (W-9)

7. Statement of Information

8. Certification of Trust *[If applicable]*

Separate instructions are also enclosed to assist you in completing certain of these documents (Attachment 1).

It is SDG&E's sincere hope that this offer is acceptable and we can proceed with the easement acquisition. If you are not satisfied with the offer of compensation, you will be given a reasonable opportunity to present relevant material, which will be carefully considered.

Project construction requires that easement acquisitions be completed promptly. A response to this offer would be appreciated as quickly as possible, but no later than fifteen (15) days from date of letter. Otherwise, I will contact you to further discuss this matter.

If you have any questions or concerns, do not hesitate to call me at the number above.

Thank you for your cooperation.

Sincerely,

Enclosures

ATTACHMENT 1

Instructions for Completing Documents

Easement Contract

1. Sign and date the original and one copy of the contract where indicated by a signature tag.
2. Return these to the right of way agent named in the transmittal letter. The third copy is for your records. At the time the contract is approved by SDG&E, you will be provided a fully executed copy for your files.

Easement

1. In the presence of a notary public, sign the “Original” Easement on the tagged signature page, and enter the date you sign on the line above the signature block.

If it is inconvenient for you to arrange for a notary, please inform the right of way agent (also a notary public), who can meet with you and notarize the document.
2. Return the original notarized Easement to the right of way agent. The copy is for your records.

Please return the following documents to the right of way agent in the enclosed envelope:

1. A signed original and duplicate copy of the Easement Contract
2. Original signed and notarized Easement
3. Original completed and signed W-9 form, a requirement of our Accounting Dept.
4. Original completed and signed Statement of Information, which is a title company requirement (Please note that additional title company requirements may apply.)

[If applicable]:

5. Certification of Trust- as your property is held in a trust, this is a title company requirement in order to verify the existence and status of the trust.

ATTACHMENT B: PROJECT MAP

Attachment B: Project Map has been redacted due to its confidential nature.

ATTACHMENT E: SCOUR ANALYSIS

OLD HIGHWAY 80 SCOUR ANALYSES

Jacumba, CA



June 2013

Prepared For:

Beta Engineering
9990 Mesa Rim Road
San Diego, CA 92121

Prepared By:

Nolte Associates, Inc.
15070 Avenue of Science, #100
San Diego, CA 92128



Scott Berkebile, P.E., CFM

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 Introduction	1
1.1 Purpose and Scope	1
2.0 Hydrology and Hydraulics	1
2.1 Hydrology	1
2.2 Hydraulics	3
3.0 Scour Analyses	3
3.1 Long-term aggradation and degradation	3
3.2 General Scour.....	4
3.2.1 Lacey Equation	4
3.3 Local Scour	4
3.3.1 HEC-18 Equation.....	5
3.4 Total Scour.....	5
4.0 Summary and Conclusions	5
5.0 References	6

FIGURES

Figure 1 Study Location Map

APPENDICES

Appendix A HEC-RAS Results and Workmap
Appendix B Scour Calculations
Appendix C Site Photographs

1.0 INTRODUCTION

Nolte Associates, Inc. has been retained by Beta Engineering to perform a scour analysis for a San Diego Gas and Electric (SDG&E) proposed underground transmission line under Carrizo Gorge Road and Old Highway 80 near Jacumba, California. Along this proposed route, there are sixteen culvert crossings that will be impacted. For all crossings, the proposed underground transmission line will be installed directly underneath the roadways. All but one of the sixteen crossings are pipes with hard bottoms, therefore scour potential is none for the transmission duct package to be installed directly underneath the culvert crossings, based on a qualitative analysis. Installing a cut-off wall or riprap at the culvert entrances would further protect against undermining of the native soil. The only crossing without a hard bottom was analyzed in detail by creating a HEC-RAS hydraulic model using known 100-year flows and a channel grain size distribution curve. Hydraulic results indicate that the estimated scour depth will be 6.52 feet. Given that the top of the duct package will be installed a minimum of 8 feet below the channel bottom, scour countermeasures would not be needed.

1.1 Purpose and Scope

Quantifying the total scour depth limits at the one soft bottom culvert crossing was the ultimate concern of this analysis. The scour components at the crossing consist of long-term aggradation/degradation, general scour, and local scour. Because the one soft bottom culvert crossing does not have abutments within the flow area nor piers, the local scour analysis was limited to contraction scour only.

Field reconnaissance was performed to assess the geomorphic conditions at the one soft bottom culvert crossing. This assessment was used for the long-term aggradation/degradation component of the total scour. This evaluation was qualitative in nature, as a trend, equilibrium, and/or sediment transport analysis was not a part of this scope of work.

A steady-state Army Corps of Engineers HEC-RAS (version 4.1.0) model was prepared to perform the scour calculations. Significant model data such as geometry, cross-section location, and roughness values were inputted by Nolte Associates, Inc. using best available one-foot contour data. The 100-year flow data was prepared by Hunsacker & Associates, Inc. and assumed to be correct as that review and modification was outside the scope of this project.

The following sections provide further discussion of the hydrologic and hydraulic components of the analyses, scour methodology, and results.

2.0 HYDROLOGY AND HYDRAULICS

2.1 Hydrology

Hydrology for all sixteen crossings, including the one soft bottom culvert crossing was performed by Hunsacker and Associates, Inc. in Spring 2013 using County of San Diego methodology. The Culvert Crossing Summary Table and Work Map are included in Appendix A for reference. For the one soft bottom culvert crossing, the 100-year flow was determined to be 1,248 cubic feet-per-second (cfs). This flow was used in the hydraulic model and scour analysis for this study.

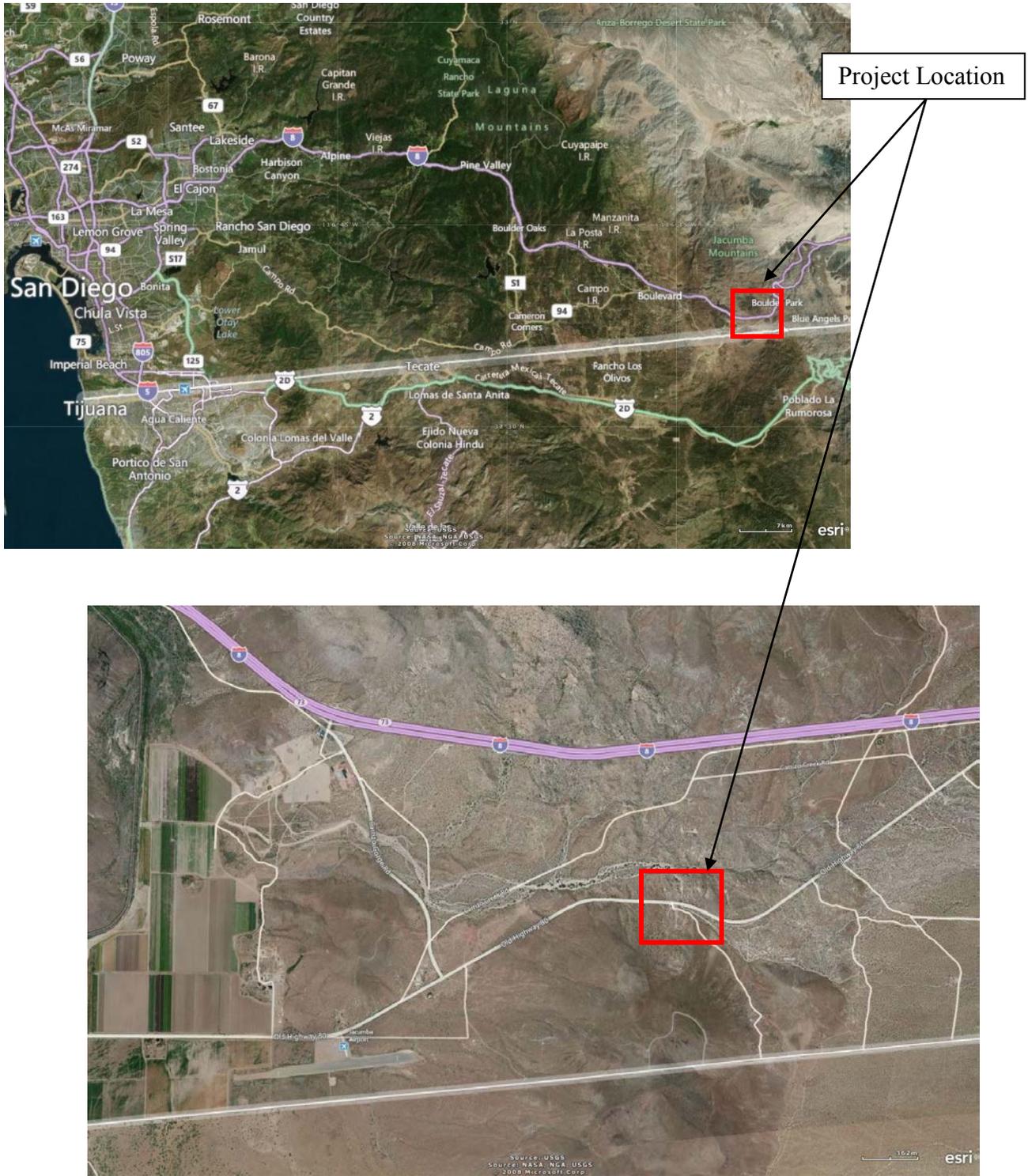


Figure 1: Study Location Map

2.2 Hydraulics

As previously mentioned, a HEC-RAS model was prepared by Nolte Associates, Inc. for the scour calculations presented within this report. This model contained cross-sections cut at 20-100 foot intervals which extend approximately 300 feet downstream and approximately 300 upstream of the one soft bottom culvert crossing. Cross section data was extracted from 1-foot contour topography from Beta Engineering. Roughness coefficients were set to 0.03 for the portion of the channel which contains the 100-year discharge and 0.04 for the overbanks due to presence of semi-thick brush. Based on field reconnaissance performed on June 12, 2013, ground cover in the vicinity of the one soft bottom culvert crossing primarily consists of small shrubs and brush with sporadic bare areas and occasional larger trees and dense vegetation (see photographs in Appendix C).

Downstream boundary condition used normal depth with a slope of 0.027 and run at sub-critical flow regime. The 100-year water surface elevation (WSEL) just upstream of culvert crossing was approximately 2,995.68 feet. At this water surface elevation, the average depth just upstream of the culvert crossing is approximately 5.7 feet. The corresponding 100-year velocity just upstream of the culvert crossing is approximately 10.2 feet-per-second (fps). These values, in addition to others, were used in the scour analyses presented within Section 3.0. Appendix A includes the hydraulic summary table of the complete model and cross-section plots at the soft bottom culvert crossing location.

3.0 SCOUR ANALYSES

Scour depths for the one soft bottom culvert crossing were estimated by considering long-term aggradation and degradation, general scour, and local scour. The long-term aggradation and degradation assessment was performed based on field reconnaissance and was not quantitative in nature. Scour relationships described within the Federal Highway Administration (FHWA) Hydraulic Engineering Circular No. 18 (HEC-18), entitled "Evaluating Scour at Bridges" (April 2012) and the Bureau of Reclamation's "Computing Degradation and Local Scour" (Pemberton and Lara dated January 1984) were selected for the analyses.

At the time this study was prepared, a site specific geotechnical investigation was performed for the channel at this culvert crossing. The investigation collected a soil sample to prepare a grain size distribution curve with a D_{50} (particle size for which 50 percent are finer than), which is required for scour calculations. From the grain size distribution curve, a D_{50} value of 0.62 mm was used in the scour analysis.

Appendix B contains the scour calculations and Sections 3.1 through 3.4 discuss the equations, assumptions, and results of the analyses.

3.1 Long-Term Aggradation and Degradation

Long-term changes in streambed elevations may be caused by either aggradation (filling) or degradation (cutting) over time. Geomorphic streambed changes occur continuously in rivers and streams and must be distinguished from short-term (local) scour which may be observed only at a structure site. Local scour is created by structural (for example, contraction of flow through the culvert opening) hydraulic factors while long-term geomorphic effects are a

characteristic of the stream in general. Long-term general scour effects are noticeable throughout the reach, rather than just at a structure where scour holes are expected to be cut and filled as each storm event passes.

During the June 12, 2013 site visit, it was noted that sediment deposition occurs at the upstream side of the culvert crossing but less deposition occurs at the downstream side. However, in the immediate vicinity of the culvert crossing, there did not appear to be any evidence of erosion. As a result, long-term degradation at the culvert crossing site was assumed to be inconsequential to the overall scour depth.

3.2 General Scour

General scour is the process of removal of material across most or all of the channel as a result of increased shear stresses and velocities on bed materials due to localized hydraulic parameters. In this study, general scour was the component of total scour resulting from the passage of the 100-year design storm. Because sediment transport modeling was beyond the scope of this report, empirical equations were used to estimate general scour. Specifically, the Lacey equation from the Bureau of Reclamation's "Computing Degradation and Local Scour" publication was used for this calculation. Section 3.2.1 presents this equation and the results but Appendix B contains the calculations.

3.2.1 Lacey Equation

$$\text{Lacey equation: } d_s = Z \left(0.47 \left(\frac{Q}{f} \right)^{1/3} \right)$$

Where:

- Z = 0.25 (Straight reach)
- Q = design discharge, cfs
- f = Lacey's silt factor (=1.76(D_m)^{1/2})
- D_m = mean grain size (approximated by D₅₀), mm

The results of the Lacey equation indicate a scour depth of approximately 1.13 feet.

3.3 Local Scour

Local scour for this project was comprised exclusively of contraction scour. Contraction scour for this project was computed using the HEC-18 equation. Section 3.3.1 presents this equation and the results but Appendix B contains the calculations. The scour component in HEC-RAS uses the same HEC-18 equation and those results are also included in Appendix B.

3.3.1 HEC-18 Equation

HEC-18 Contraction Scour (live-bed) equation: $\frac{y_2}{y_1} = \left(\frac{Q_2}{Q_1}\right)^{6/7} \left(\frac{W_1}{W_2}\right)^{k_1}$

$$y_s = y_2 - y_0$$

Where:

- y_1 = average depth in the upstream main channel, ft
- y_2 = average depth in the contracted section, ft
- y_s = scour depth, ft
- y_0 = existing depth in the contracted section before scour, ft
- Q_1 = flow in the upstream channel transporting sediment, cfs
- Q_2 = flow in the contracted channel, cfs
- W_1 = bottom width (or top) of the upstream main channel that is transporting bed material, ft
- W_2 = bottom width (or top) of the main channel in the contracted section less pier widths, ft
- k_1 = determined by the following table

V^*/ω	k_1	Mode of Bed Material Transport
< 0.50	0.59	Mostly contact bed material discharge
0.50 to 2.0	0.64	Some suspended bed material discharge
> 2.0	0.69	Mostly suspended bed material discharge

- $V^* = (gy_1S_1)^{1/2}$, shear velocity in the upstream section, ft/s
- ω = fall velocity of bed material based on the D_{50} , ft/s (HEC-18 Figure 6.8)
- g = acceleration of gravity, 32.2 ft/s²
- S_1 = slope of energy grade line of main channel, ft/ft

The results of the HEC-18 equation indicate a local depth of approximately 6.52 feet.

3.4 Total Scour

The result of the general scour calculation was approximately 1.13 feet. The local scour calculations resulted in a depth of approximately 6.52 feet. The long-term degradation was assumed negligible based on field reconnaissance. In this case, the local scour will be the governing factor in quantifying the total scour depth. Therefore, the total scour depth is approximately 6.52 feet.

4.0 SUMMARY AND CONCLUSIONS

The purpose of this study was to determine a scour depth for sixteen culvert crossings under Carrizo Gorge Road and Old Highway 80 for the proposed underground transmission line. For all crossings, the proposed underground transmission line will be installed directly underneath the roadways. All but one of the sixteen crossings are pipes with hard bottoms, therefore scour

scour potential is none for the transmission duct package to be installed directly underneath the culvert crossings, based on a qualitative analysis. Installing a cut-off wall or riprap at the culvert entrances would further protect against undermining of the native soil. The only crossing without a hard bottom was analyzed in detail by creating a HEC-RAS hydraulic model using known 100-year flows and a channel grain size distribution curve. Hydraulic results indicate that the estimated scour depth will be 6.52 feet. Given that the top of the duct package will be installed a minimum of 8 feet below the channel bottom, scour countermeasures would not be needed.

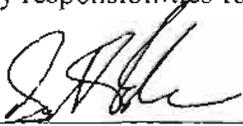
5.0 REFERENCES

1. Computing Degradation and Local Scour. Ernest L. Pemberton and Joseph M. Lara, January 1984.
2. Hydraulic Engineering Circular No. 18 Evaluating Scour at Bridges. U.S. Department of Transportation Federal Highway Administration, Fifth Edition, April 2012.
3. Hydrologic Engineering Center River Analysis System (HEC-RAS). U.S. Army Corps of Engineers, Version 4.1.0, January 2010.
4. Sieve Summary – ECO Substation. GEOCON, Inc., June 2013.
5. Culvert Summary Table. Hunsacker & Associates, Inc., Spring 2013.

DECLARATION OF RESPONSIBLE CHARGE

I hereby declare that I am the engineer of work for this hydraulic study. That I have exercised responsible charge over the project’s drainage study as defined in Section 6703 of the Business and Professions Code, and that the hydraulic analyses are consistent with current standards.

I understand that the check of this hydraulic study by the County of San Diego or other regulatory agencies is confined to a review only and does not relieve me, as engineer of work, of my responsibilities for these hydraulic analyses.



Scott Berkebile
RCE 66153, Exp. 06/30/14

June 14, 2013

Date

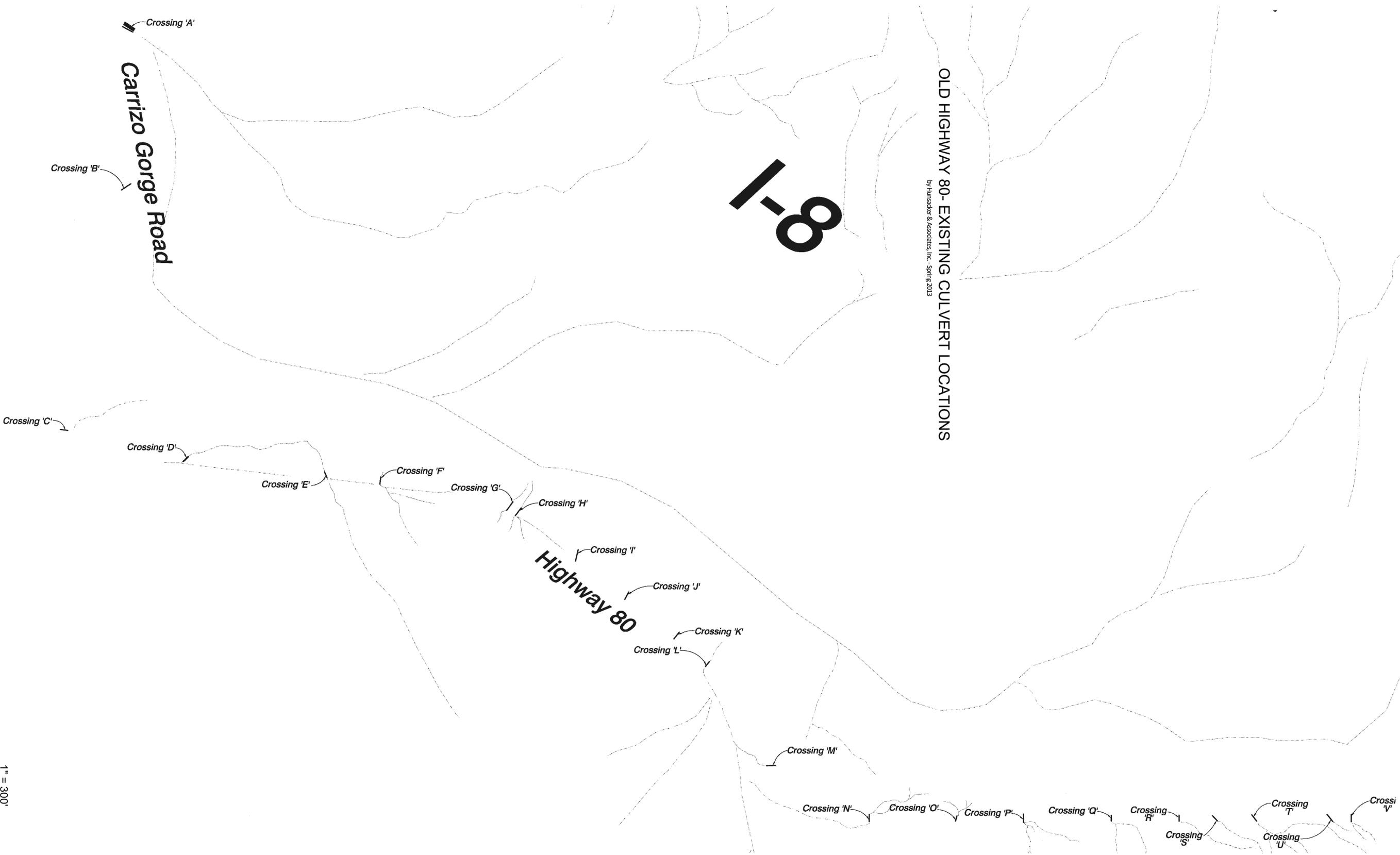


APPENDIX A
HEC-RAS RESULTS

OLD HIGHWAY 80 CULVERT ANALYSIS
SAN DIEGO COUNTY, CALIFORNIA

by Hunsacker & Associates, Inc. - Spring 2013

Culvert Crossing Identification	Existing Description	Q100 (cfs)	A (acres)	Upstream invert (feet)	Downstream Invert (feet)	Pipe Length (feet)	Pipe Slope	Existing Deficiency?	Change Needed for 1' Freeboard	HW Elev (Elev)	Velocity (fps)	Rip Rap Design			
												Gradation	Length (feet)	Width (feet)	Thickness (feet)
B	18" CMP	5.95	2.8	2851.88	2845.26	87.10	7.60%	None		2853.33	12.14	1/2 Ton	10	4.5	3.4
C	18" CMP	22.74	21.4	2853.29	2852.58	58.56	1.21%	Overtops Street	2- 18" RCP	2855.93	7.43	#2 Backing	10	12	1.0
D	2- 30" CMP	38.55	33.3	2878.08	2876.00	54.04	3.85%	< 1' Freeboard	3- 24" RCP	2880.00	11.26	1/2 Ton	10	17.5	3.4
E	30" CMP	26.73	20.4	2917.66	2916.65	50.01	2.02%	< 1' Freeboard	2- 24" RCP	2919.73	9.1	#2 Backing	10	12	1.0
F	30" CMP	21.62	16.2	2932.78	2927.70	56.50	8.99%	Oversized		2935.92	17	2- Ton	10	6	5.4
G	18" CMP	7.13	5.1	2958.62	2948.21	81.08	12.84%	None		2960.27	16.14	2-Ton	10	4.5	5.4
H	18" CMP	9.13	6.1	2956.16	2945.42	73.40	14.63%	None		2958.17	17.91	2- Ton	10	4.5	5.4
I	30" CMP	26.63	17.5	2962.25	2954.03	89.38	9.20%	Oversized		2966.36	19.03	2- Ton	10	6	5.4
J	24" CMP	9.34	6.3	2985.70	2978.02	66.51	11.55%	Oversized		2987.75	16.37	2- Ton	10	4.5	5.4
K	30" CMP	23.18	15.4	2989.92	2984.03	65.23	9.03%	Oversized		2993.34	17.55	2- Ton	10	6	5.4
L	Bridge	1,248.00	676.5	2989.63	2987.05	77.24	3.34%	< 1' Freeboard		2998.29	20.3				
M	18" HDPE	10.19	5.8	3018.63	3017.27	70.35	1.93%	None		3020.94	8.76	#2 Backing	10	4.5	1.0
N	18" CMP	7.40	3.8	3046.58	3045.81	55.38	1.39%	None		3048.29	7.2	#2 Backing	10	4.5	1.0
O	18" CMP	2.13	0.8	3071.24	3070.37	41.73	2.08%	None		3072.01	5.98	#2 Backing	10	4.5	1.0
P	24" CMP	21.28	12.9	3080.23	3075.62	63.35	7.28%	None		3083.32	15.88	1-Ton	10	6	4.3
Q	4' x 4' Box Culvert	242.41	275.1	3096.33	3095.00	43.67	3.05%	Overtops Street	Add 4' x 4' Box Culvert	3101.76	14.55	1-Ton	16	12	4.3



Crossing 'A'

Carrizo Gorge Road

Crossing 'B'

Crossing 'C'

Crossing 'D'

Crossing 'E'

Crossing 'F'

Crossing 'G'

Crossing 'H'

Highway 80

Crossing 'I'

Crossing 'J'

Crossing 'K'

Crossing 'L'

Crossing 'M'

Crossing 'N'

Crossing 'O'

Crossing 'P'

Crossing 'Q'

Crossing 'R'

Crossing 'S'

Crossing 'T'

Crossing 'U'

Crossing 'V'

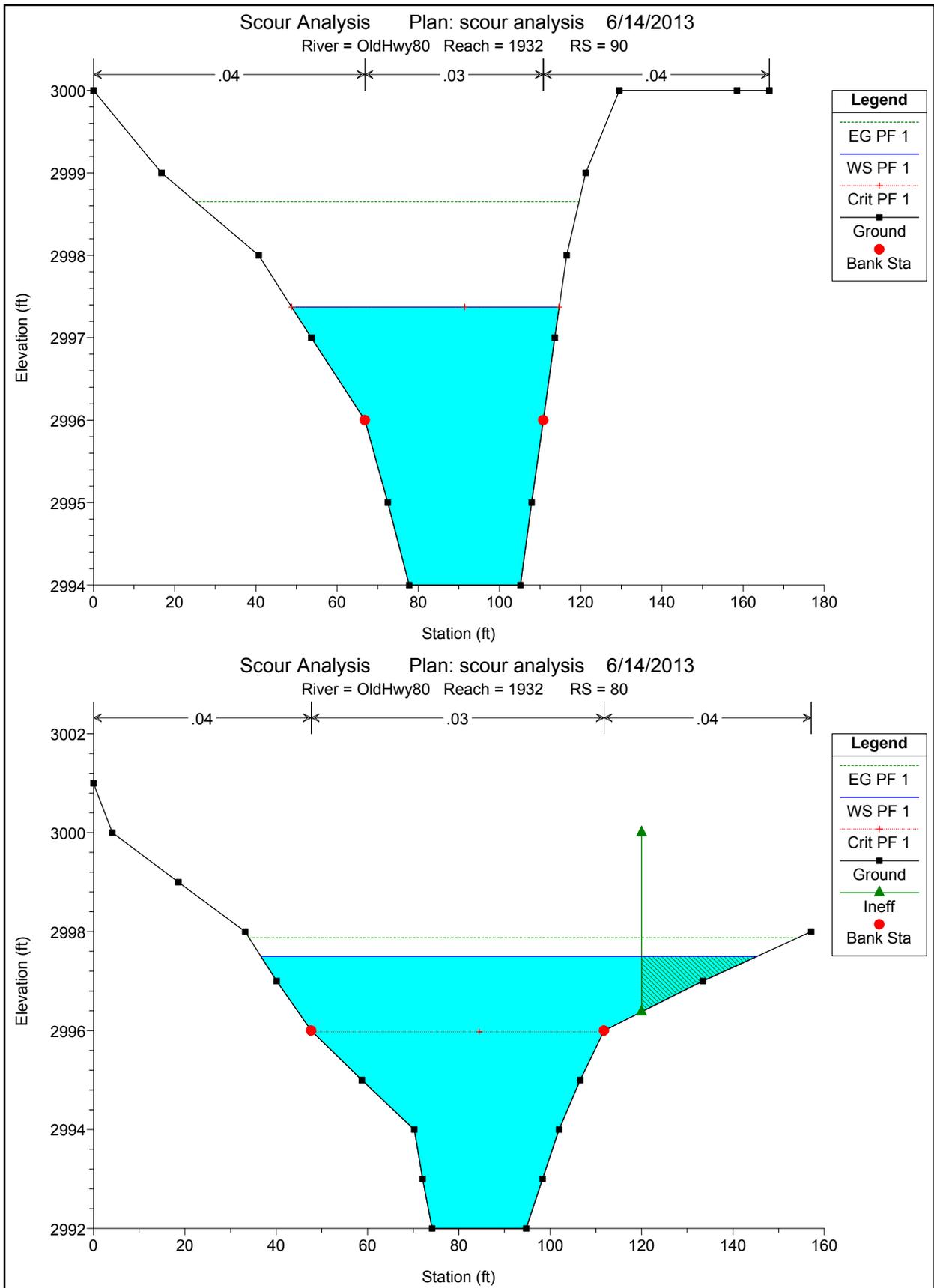
1-8

OLD HIGHWAY 80 - EXISTING CULVERT LOCATIONS
by Hunsicker & Associates, Inc. - Spring 2013

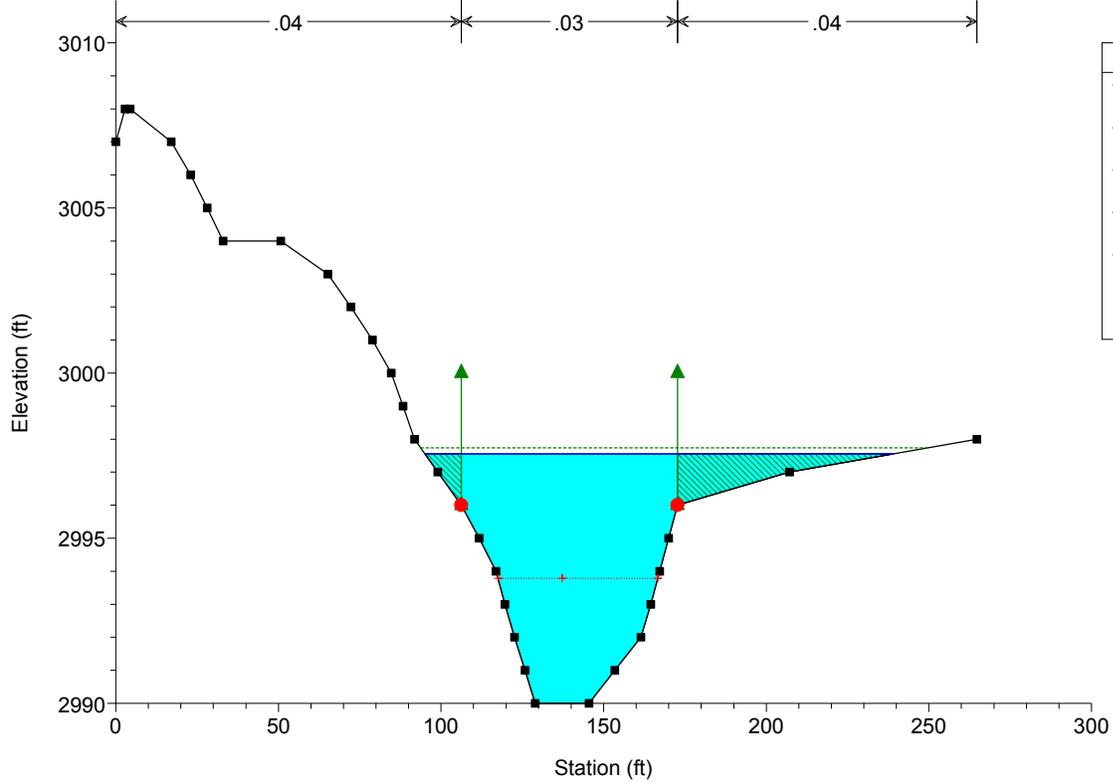
1" = 300'

HEC-RAS Plan: scour River: OldHwy80 Reach: 1932 Profile: PF 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
1932	90	PF 1	1248.00	2994.00	2997.37	2997.37	2998.65	0.008125	9.20	146.53	65.88	0.94
1932	80	PF 1	1248.00	2992.00	2997.50	2995.98	2997.88	0.001734	4.98	263.65	108.65	0.45
1932	70	PF 1	1248.00	2990.00	2997.55	2993.78	2997.74	0.000509	3.42	364.95	144.10	0.26
1932	60	PF 1	1248.00	2990.00	2995.68	2994.70	2997.28	0.006201	10.15	123.21	22.08	0.75
1932	55	Bridge										
1932	50	PF 1	1248.00	2988.00	2992.79	2992.79	2995.18	0.011865	12.42	100.51	21.24	1.00
1932	40	PF 1	1248.00	2988.00	2991.63	2991.63	2993.06	0.009128	9.60	131.93	51.15	0.99
1932	30	PF 1	1248.00	2987.00	2990.95	2990.95	2992.17	0.007746	8.98	150.24	75.06	0.91
1932	20	PF 1	1248.00	2986.00	2989.69	2989.69	2990.76	0.010229	8.31	152.42	77.22	0.99
1932	10	PF 1	1248.00	2983.00	2986.91	2986.91	2987.82	0.009564	7.69	168.36	97.87	0.95

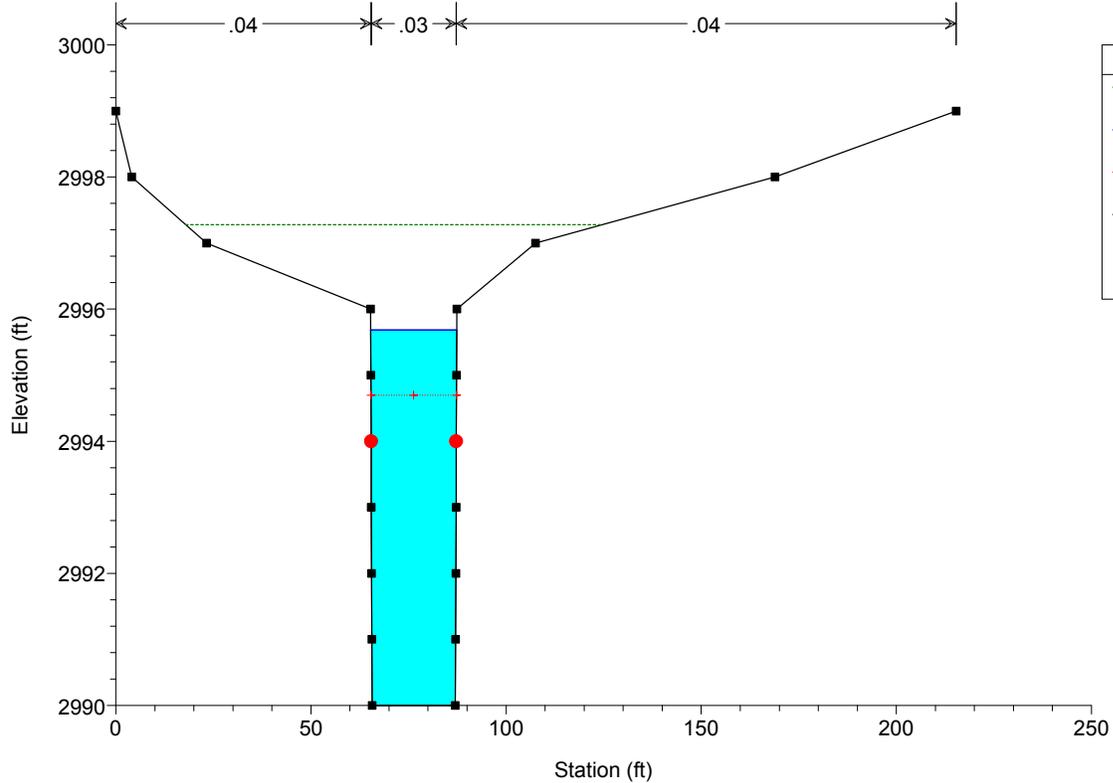


Scour Analysis Plan: scour analysis 6/14/2013
 River = OldHwy80 Reach = 1932 RS = 70

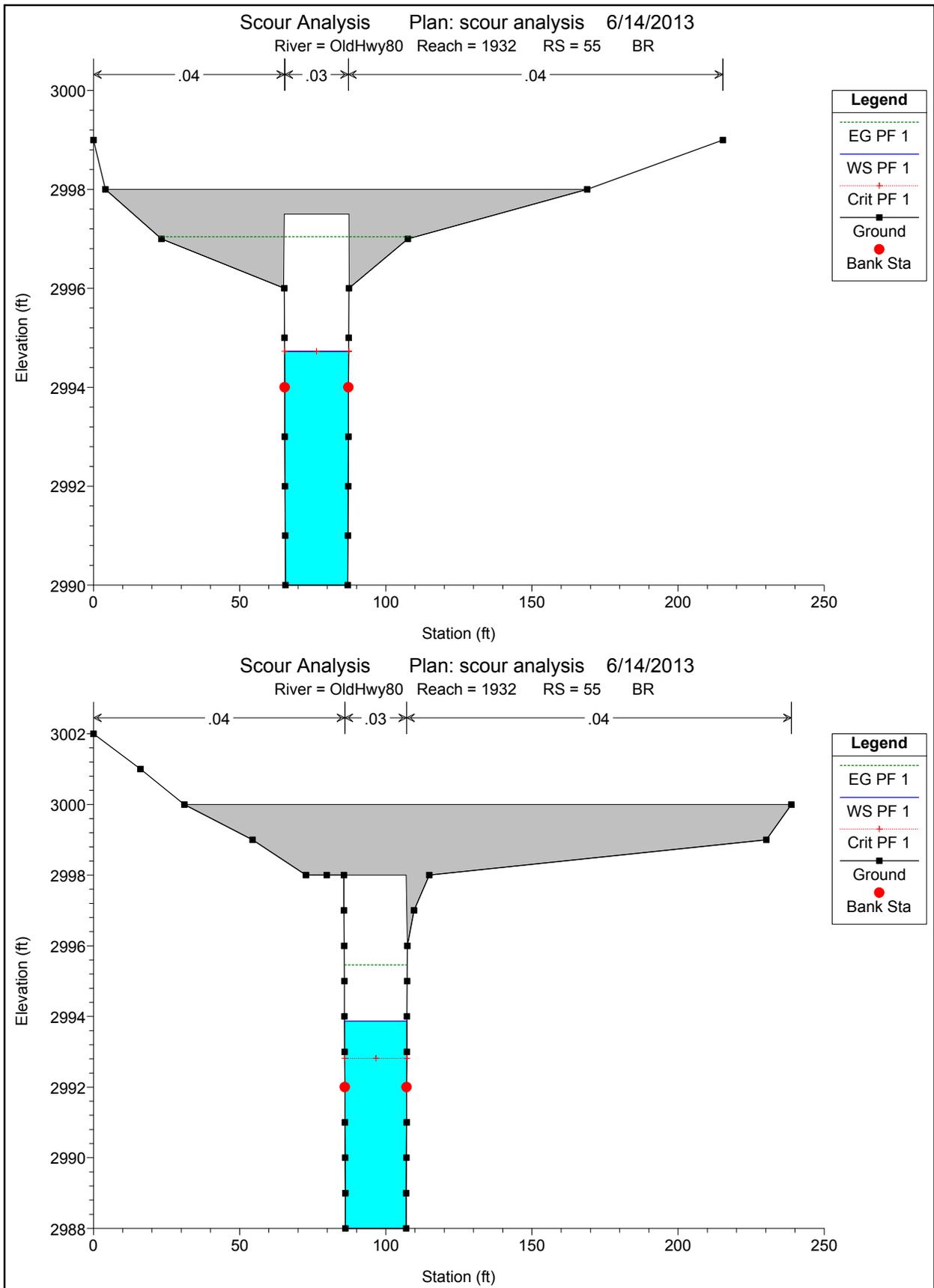


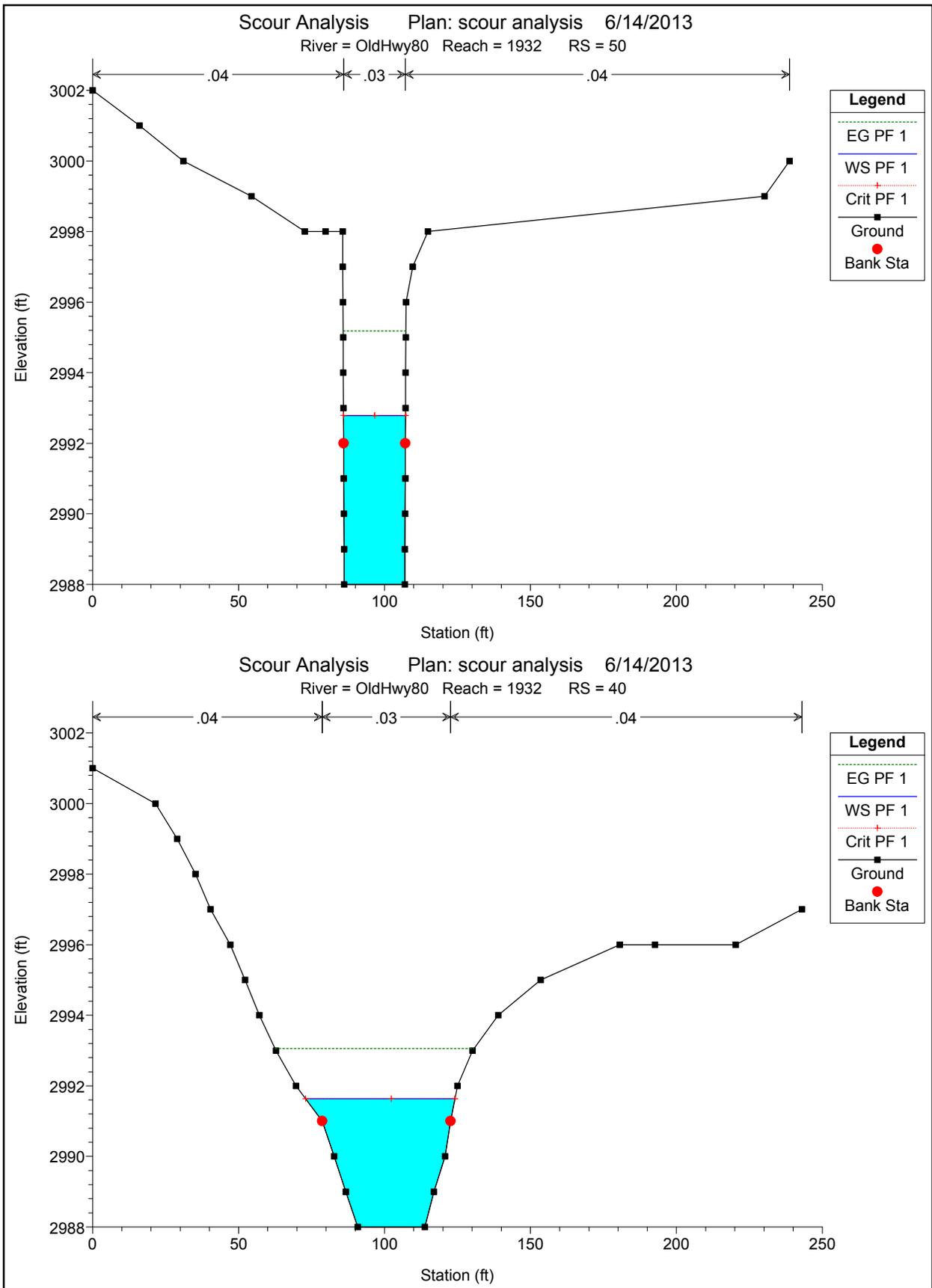
Legend	
EG PF 1	(Dashed green line)
WS PF 1	(Blue line)
Crit PF 1	(Red dashed line with cross)
Ground	(Black line with squares)
Ineff	(Green triangle)
Bank Sta	(Red circle)

Scour Analysis Plan: scour analysis 6/14/2013
 River = OldHwy80 Reach = 1932 RS = 60



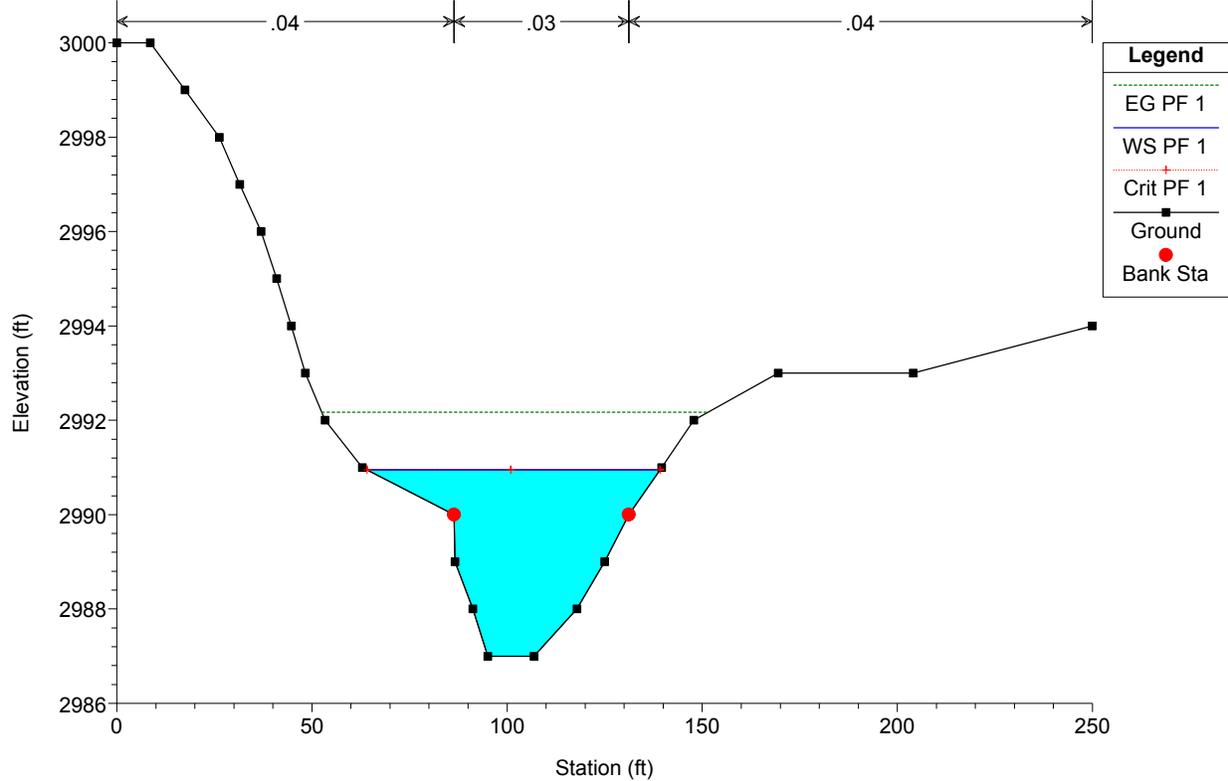
Legend	
EG PF 1	(Dashed green line)
WS PF 1	(Blue line)
Crit PF 1	(Red dashed line with cross)
Ground	(Black line with squares)
Ineff	(Green triangle)
Bank Sta	(Red circle)





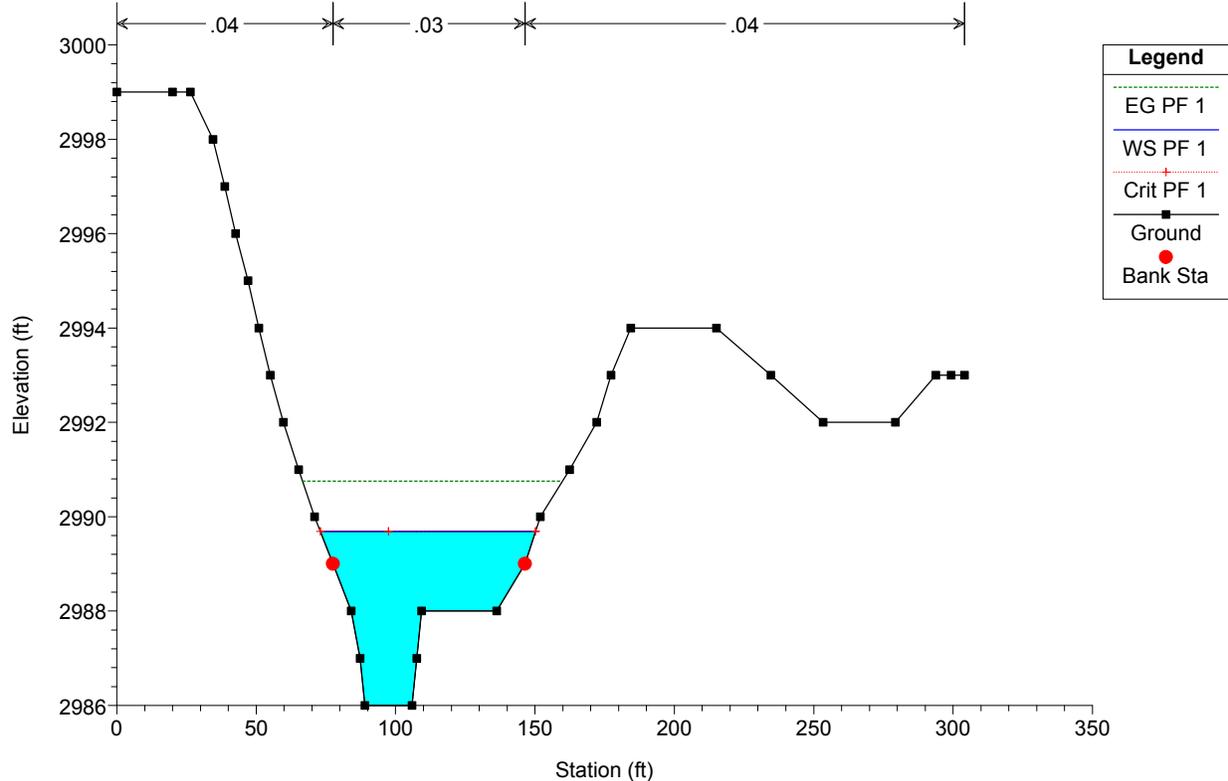
Scour Analysis Plan: scour analysis 6/14/2013

River = OldHwy80 Reach = 1932 RS = 30



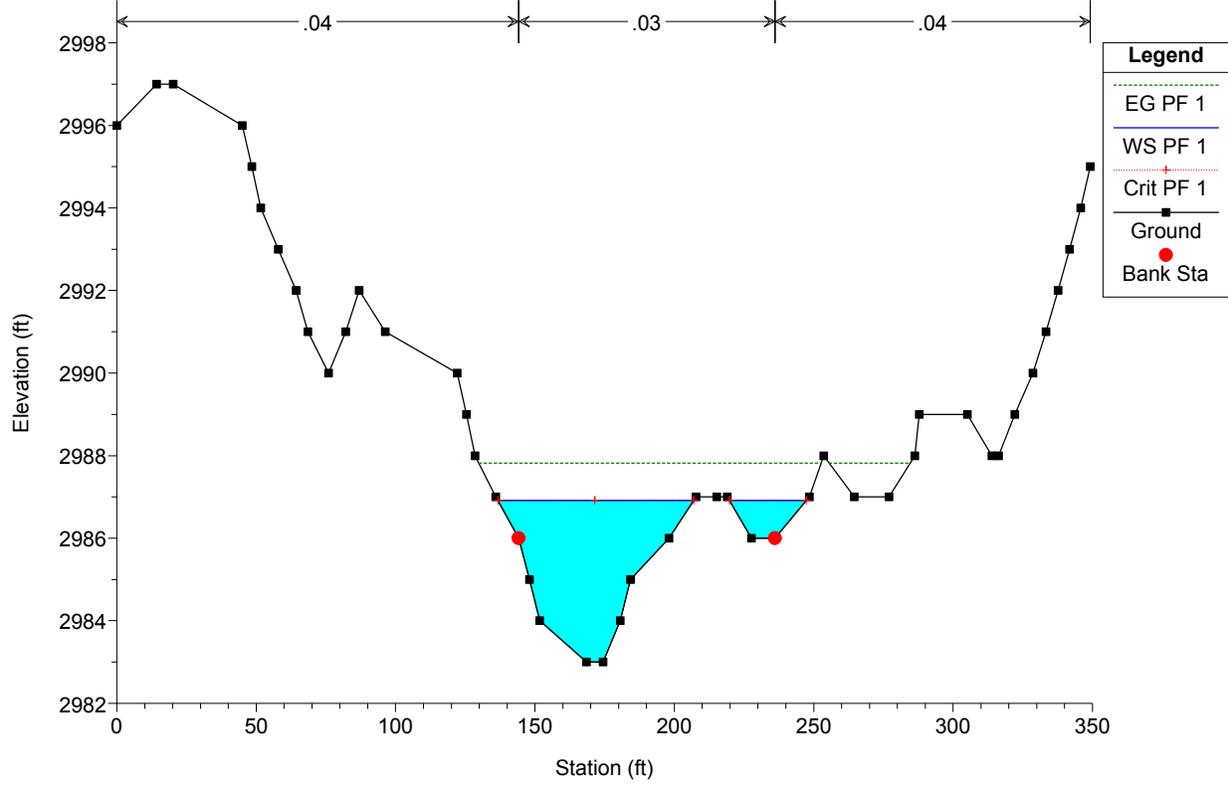
Scour Analysis Plan: scour analysis 6/14/2013

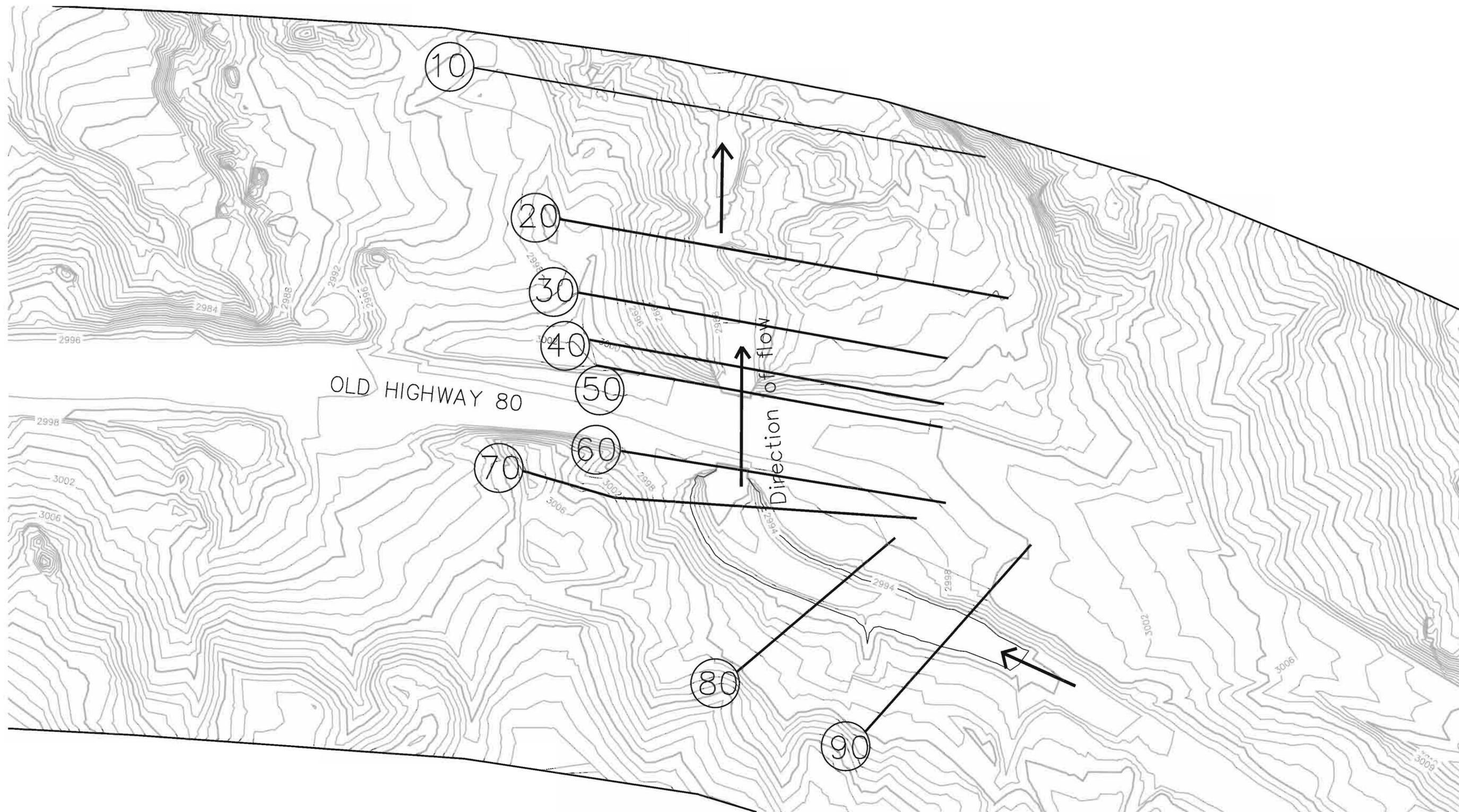
River = OldHwy80 Reach = 1932 RS = 20



Scour Analysis Plan: scour analysis 6/14/2013

River = OldHwy80 Reach = 1932 RS = 10





PRELIMINARY
NOT FOR CONSTRUCTION

DATE:	TIME:	NO.	BY	DATE	REVISIONS:
SERVER:	LAYOUT:				
PATH:					
DRAWING NAME:					
PAGE SETUP:					
DESIGNER:	PROJ. MGR:				



16070 AVENUE OF SCIENCE, SUITE 100
858.385.0500 TEL. 858.385.0400 FAX

SAN DIEGO, CA 92128
WWW.NIV5.COM

OLD HIGHWAY 80 SCOUR ANALYSIS

PREPARED FOR: BETA

DATE SUBMITTED: JUNE 2013

SHEET NUMBER	1
OF SHEETS	1
SCALE	VERTICAL: 1" = 10' HORIZONTAL: 1" = 40'
JOB NUMBER	SDB053801

REVISIONS:

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

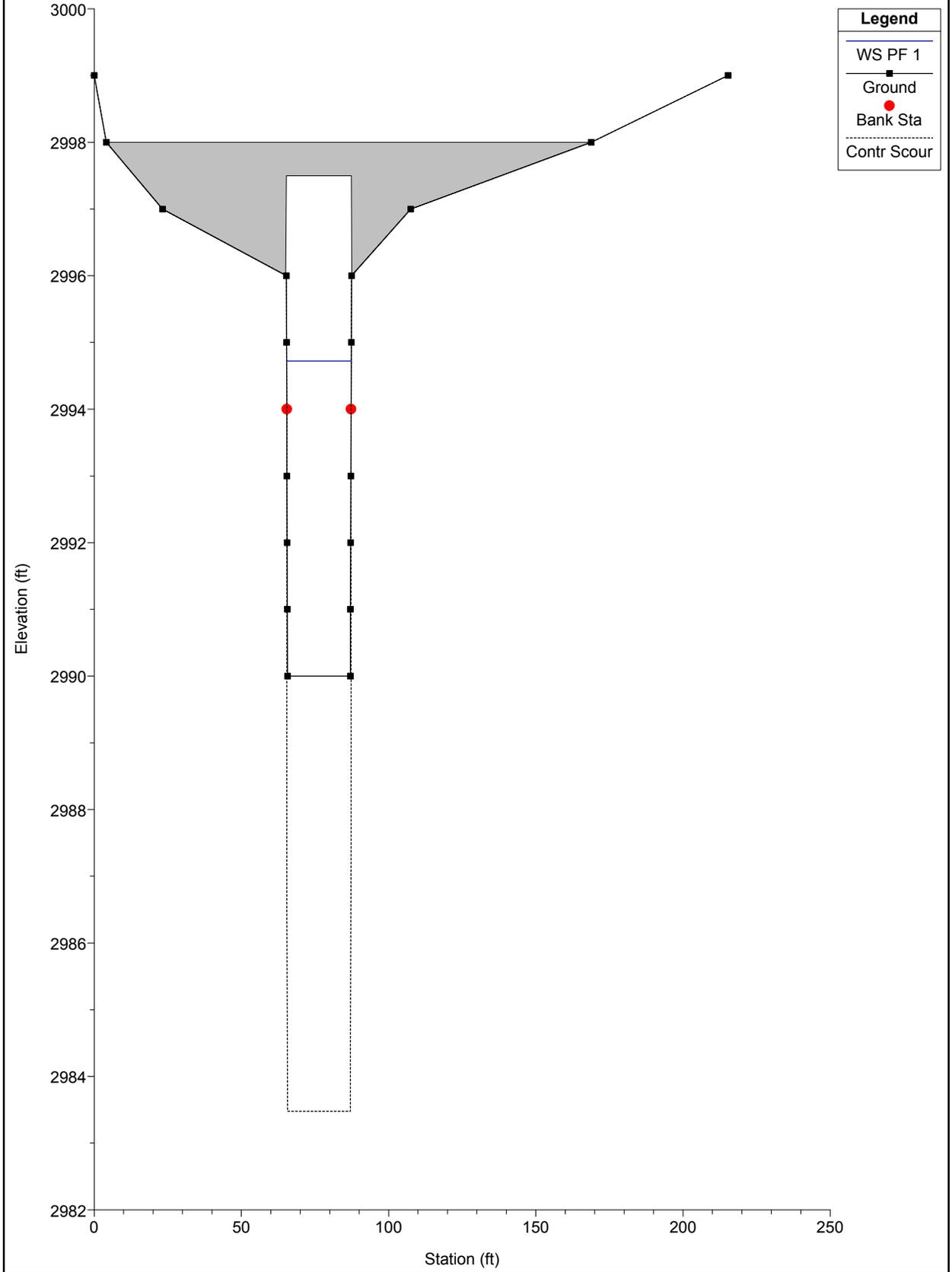
APPENDIX B
SCOUR CALCULATIONS

Contraction Scour

	Left	Channel	Right
Ys (ft):		6.52	
Vc (ft/s):	1.36	1.88	1.33
Equation:		Live	

Combined Scour Depths

Bridge Scour RS = 55



Contraction Scour

	Left	Channel	Right
Input Data			
Average Depth (ft):		5.49	
Approach Velocity (ft/s):		3.42	
Br Average Depth (ft):	0.36	4.68	0.36
BR Opening Flow (cfs):	0.01	1247.99	0.01
BR Top WD (ft):	0.05	21.83	0.06
Grain Size D50 (mm):	0.62	0.62	0.62
Approach Flow (cfs):		1248.00	
Approach Top WD (ft):		66.52	
K1 Coefficient:	0.590	0.640	0.590
Results			
Scour Depth Ys (ft):		6.52	
Critical Velocity (ft/s):	1.36	1.88	1.33
Equation:		Live	

Combined Scour Depths

Lacey Equation:

$$d_s = z \left[0.47 \left(\frac{Q}{f} \right)^{1/3} \right]$$

d_s - scour depth

z - 0.25 (straight reach)

Q - design discharge, cfs - 1248 cfs

f - Lacey's silt factor ($= 1.76 (D_m)^{1/2}$)

D_m - mean grain size (approximated by D_{50}), mm

$$D_m = 0.62 \text{ mm}$$

$$z = 0.25$$

$$Q = 1248 \text{ cfs}$$

$$\begin{aligned} f &= 1.76 (D_m)^{1/2} \\ &= 1.76 (0.62)^{1/2} \\ &= 1.386 \end{aligned}$$

$$\begin{aligned} d_s &= 0.25 \left[0.47 \left(\frac{1248}{1.386} \right)^{1/3} \right] \\ &= \underline{\underline{1.134 \text{ feet}}} \end{aligned}$$

The results of the Lacey equation indicate a scour depth of approximately 1.13 feet

Old Hwy 80 - 1932 Scour Analysis

SUBJECT

JOB NO.

DESIGNED BY

DATE

CHECKED BY

NV5

BRIDGE ENGINEERING

HEC-18 Equation:

$$y_s = y_2 - y_0$$
$$y_2 = y_1 \left(\frac{Q_2}{Q_1} \right)^{6/7} \left(\frac{w_1}{w_2} \right)^{k_1}$$

y_s = Local scour depth

y_2 = Average depth under lower cord

y_1 = Average depth upstream

y_0 = Existing depth of flow

Q_1 = flow in upstream main channel

Q_2 = flow in contracted channel

w_1 = bottom width of upstream main channel

w_2 = bottom width of channel in contracted section

k_1 = exponent used in live-bed equation

$$y_2 = 5.49 \left(\frac{1247.99}{1248.00} \right)^{6/7} \left(\frac{66.52}{21.83} \right)^{0.64}$$

$$= 5.49 \times 0.9999 \times 2.040 = \underline{\underline{11.199 \text{ ft}}}$$

$$y_s = y_2 - y_0 = 11.199 - 4.68 = \underline{\underline{6.519 \text{ ft}}}$$



Project Name: **ECO SUBSTATION**
 Project Location:
 Engr/Geol: **TM**

File# **G1522-32-01**
 City/ County:

Sample #	A					
Top of Sample Depth (ft.)						
Sample Color	BROWN					
Sample Description:	SW-SM - Well-graded SAND with silt					
Test Data By: AM	LL=	PL=	LL=	PL=	LL=	PL=
	Screen #	% Pass	Screen #	% Pass	Screen #	% Pass
	6"	100.0	6"		6"	
	5"	100.0	5"		5"	
	4"	100.0	4"		4"	
	3"	100.0	3"		3"	
	2"	98.3	2"		2"	
	1-1/2"	97.5	1-1/2"		1-1/2"	
	1"	97.1	1"		1"	
	3/4"	96.8	3/4"		3/4"	
	1/2"	95.9	1/2"		1/2"	
	3/8"	95.4	3/8"		3/8"	
	#4	93.3	#4		#4	
	#8	86.1	#8		#8	
	#16	70.9	#16		#16	
#30	49.0	#30		#30		
#50	24.1	#50		#50		
#100	10.3	#100		#100		
#200	5.2	#200		#200		

Sample #						
Top of Sample Depth (ft.)						
Sample Color						
Sample Description:						
Test Data By: AM	LL=	PL=	LL=	PL=	LL=	PL=
	Screen #	% Pass	Screen #	% Pass	Screen #	% Pass
	6"		6"		6"	
	5"		5"		5"	
	4"		4"		4"	
	3"		3"		3"	
	2"		2"		2"	
	1-1/2"		1-1/2"		1-1/2"	
	1"		1"		1"	
	3/4"		3/4"		3/4"	
	1/2"		1/2"		1/2"	
	3/8"		3/8"		3/8"	
	#4		#4		#4	
	#8		#8		#8	
	#16		#16		#16	
#30		#30		#30		
#50		#50		#50		
#100		#100		#100		
#200		#200		#200		

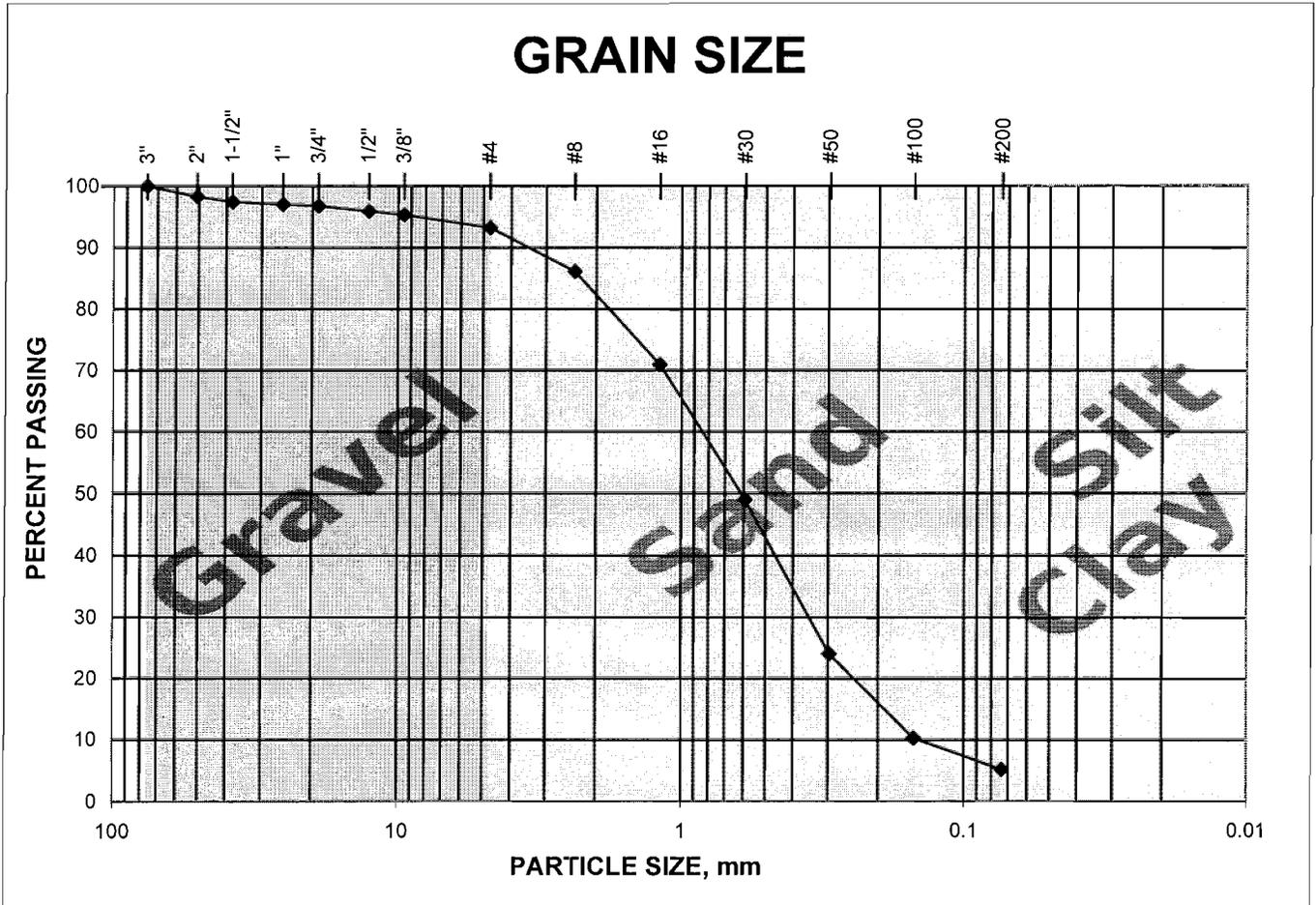
GEOCON

INLAND EMPIRE

1

GRAIN SIZE ANALYSIS

PROJECT NAME	ECO SUBSTATION
PROJECT NUMBER	G1522-32-01
SAMPLE NUMBER	A
TESTED BY	AM



**APPENDIX C
PHOTOGRAPHS**

OLD HIGHWAY 80 SITE VISIT PHOTOGRAPHS 06/12/2013



LOOKING SOUTH IN UPSTREAM DIRECTION FROM THE BRIDGE



LOOKING NORTH IN DOWNSTREAM DIRECTION FROM THE BRIDGE



LOOKING NORTH TOWARDS THE BRIDGE FROM UPSTREAM



UNDER THE BRIDGE LOOKING DOWNSTREAM



RIGHT BANK AT THE BRIDGE ON THE UPSTREAM SIDE



LEFT BANK AT THE BRIDGE ON THE UPSTREAM SIDE



LEFT BANK AT THE BRIDGE ON THE DOWNSTREAM SIDE



RIGHT BANK AT THE BRIDGE ON THE DOWNSTREAM SIDE

ATTACHMENT F: TRANSMISSION LINE TRAFFIC CONTROL PLAN

**SAN DIEGO GAS & ELECTRIC COMPANY
TRANSMISSION LINE
TRAFFIC CONTROL PLAN**

JULY 2013



TABLE OF CONTENTS

1 – INTRODUCTION..... 1
2 – OBJECTIVES 1
3 – APPLICABLE REGULATIONS 1
4 – MITIGATION MEASURES..... 1
5 – PLAN IMPLEMENTATION 3
6 – REFERENCES..... 3

LIST OF TABLES

Table 1: Transmission Line Crosswalk for Mitigation Measure TRA-1 4

LIST OF ATTACHMENTS

- Attachment A: Draft Section 3-A Traffic Control Plan
- Attachment B: Draft Section 3-B Traffic Control Plan
- Attachment C: Section 1 Traffic Control Plan
- Attachment D: Draft Carrizo Gorge & Old Highway 80 Curb-Grade Plan
- Attachment E: Draft Jewel Valley Curb-Grade Plan
- Attachment F: Draft Old Highway 80 Overhead Crossing
- Attachment G: General Traffic Control Plan
- Attachment H: Old Highway 80 Overhead Plan & Profile
- Attachment I: San Diego County Site Distance Standards
- Attachment J: Agency Briefing Summary

1 – INTRODUCTION

This Traffic Control Plan (Plan) describes how San Diego Gas & Electric Company (SDG&E) and its contractors plan to reduce traffic impacts during construction and operation of the 138 kilovolt (kV) transmission line component (transmission line) associated with the East County (ECO) Substation Project (Project). The Project involves the construction of a new 500/230/138 kV ECO Substation, rebuild of the Boulevard Substation in a new location, and construction of an approximately 14-mile-long 138 kV transmission line, consisting of overhead and underground segments in southeastern San Diego County.

This Plan was prepared in accordance with Mitigation Measure (MM) TRA-1 of the Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) for the Project, which includes guidelines for reducing impacts associated with construction-related traffic and procedures to be followed in the field. MM TRA-1 requires the Plan to be consistent with the California Department of Transportation's (Caltrans's) standards and regulations. This Plan was developed to ensure compliance with federal, state, and local regulations, as well as the requirements stipulated by the Bureau of Land Management (BLM) and California Public Utilities Commission (CPUC) in the MMCRP.

2 – OBJECTIVES

The purpose of this Plan is to support compliance with the MMCRP throughout the duration of construction and operation of the 138 kV transmission line. The contents of this Plan are intended to accomplish the following objectives:

- Reduce impacts of construction-related traffic
- Maintain consistency with MM TRA-1, as specified in the MMCRP, as well as with relevant federal, state, and local ordinances

3 – APPLICABLE REGULATIONS

This Plan conforms to the regulatory ordinances outlined by Caltrans, the CPUC, and the County of San Diego. Ordinances to be adhered to include the following:

- Caltrans's Manual on Uniform Traffic Control Devices (MUTCD)
- Caltrans's Work Area Traffic Control Handbook (WATCH) Manual
- County of San Diego Department of Public Works Public Road Standards

4 – MITIGATION MEASURES

TRA-1: Prepare and implement a Traffic Control Plan. At minimum, the plan will include the following:

- SDG&E shall encourage carpooling to the construction site to reduce personal vehicle traffic in the Project area to the greatest extent possible.

- SDG&E will consider the specific object sizes, weights, origin, destination, and unique handling requirements, and evaluate alternative transportation approaches.
- Measures such as informational signs and flaggers shall be implemented when equipment may result in blocked roadways, and traffic cones or similar shall be implemented to identify any necessary changes in temporary lane configuration.
- Flaggers and directional guidance for bicyclists along Old Highway 80 shall be used.
- All Caltrans' standards for utility encroachments shall be met.
- The plan shall be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook (WATCH) Manual.
- Clearances or overhead crossings shall conform to regulations of the CPUC and BLM, and the number of crossings shall be minimized.
- New installations under an existing roadbed shall be made by the boring-and-jacking method. No trenching under the traveled way will occur.
- For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled-access rights-of-way (ROWs).
- Utilities shall not be located in median areas.
- Transverse crossings shall be normal (90°) to the highway alignment where practical. If impractical, skews of up to 30° from normal may be allowed.
- Supports for overhead lines crossing freeways shall be located outside the controlled-access ROW and not on cut-or-fill slopes, and shall not impair sight distances. All installations shall be placed as close to the ROW line as possible. Aboveground utilities shall be outside of the clear recovery zone (20 feet from edge-of-travel way for conventional highways and 30 feet for freeways and expressways). Allowance shall be made for future widening of the highways.
- New installations shall not impair sight distances.
- SDG&E shall coordinate in advance with the applicants for the other two connected actions. This effort shall include coordinating the timing of construction of the various projects to reduce potential conflicts.
- SDG&E shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The County will then notify respective police, fire, ambulance, and paramedic services. SDG&E shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities, and advise of any access restrictions that could impact their effectiveness.

SDG&E shall provide a draft copy of the Traffic Control Plan to the agencies listed for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E, and plan revisions will address each comment to the satisfaction of the commenting agency. The final plan will be submitted to the CPUC and BLM with input from commenting agencies and provided to SDG&E for implementation during all construction activities.

5 – PLAN IMPLEMENTATION

Table 1: Transmission Line Crosswalk for Mitigation Measure TRA-1 describes SDG&E’s implementation of this Plan throughout construction and operation of the 138 kV overhead and underground transmission line. The guidelines outlined in Table 1: Transmission Line Crosswalk for Mitigation Measure TRA-1 will reduce construction-related traffic impacts; meet the regulatory ordinances set forth by federal, state, and local agencies; and establish notification requirements for emergency personnel. The attachments referenced in this plan marked “Draft” are currently in review with the County of San Diego and will become final once approval has been received. Copies of the final plans will be submitted to the CPUC and BLM prior to commencing work in the affected Project area.

6 – REFERENCES

Caltrans. 2012. MUTCD.

Caltrans. 2012. WATCH Manual.

County of San Diego Department of Public Works. March 2012. Public Road Standards.

Table 1: Transmission Line Crosswalk for Mitigation Measure TRA-1

Mitigation Measure Requirement	Mitigation Measure Implementation
SDG&E shall encourage carpooling to the construction site to reduce personal vehicle traffic in the project area to the greatest extent possible.	The Safe Worker and Environmental Awareness Program, which is mandatory to work on the Project ROW, encourages carpooling to and from the construction site.
SDG&E will consider the specific object sizes, weights, origin, destination, and unique handling requirements, and evaluate alternative transportation approaches.	SDG&E’s construction contractor will utilize specialized equipment delivery professionals for the delivery of large equipment deliveries to work sites. These professionals will consider the specific object sizes, weights, origin, destination, unique handling requirements, and evaluate alternative transportation approaches for each delivery, as needed. In addition, required permits will be obtained from appropriate cities, counties, and other agencies, such as Caltrans, as needed.
Measures such as informational signs and flaggers shall be implemented when equipment may result in blocked roadways, and traffic cones or similar shall be implemented to identify any necessary changes in temporary lane configuration.	<p>The measures that will be implemented when equipment/material deliveries or construction activities cause blocked or restricted roadways or temporary impacts to the movement of traffic in the Project area are described in the following attachments for the various Project components:</p> <ul style="list-style-type: none"> • Attachment A: Draft Section 3-A Traffic Control Plan (provides traffic control measures to be implemented during the construction of the underground trench package A along Section 3)¹ • Attachment B: Draft Section 3-B Traffic Control Plan (provides traffic control measures to be implemented during the construction of the underground trench package B along Section 3)¹ • Attachment C: Section 1 Traffic Control Plan (provides traffic control measure to be implemented during construction of the underground trench package in Section 1)² • Attachment D: Draft Carrizo Gorge & Old Highway 80 Curb-Grade Plan (provides traffic control measures to be implemented at the three road aprons identified along Carrizo Gorge Road and Old Highway 80) • Attachment E: Draft Jewel Valley Curb-Grade Plan (provides traffic control measures to be implemented at the one road apron identified along Jewel Valley Road)

¹ Section 3 of the 138 kV transmission line is located between Old Highway 80 Riser Poles Steel Pole (SP-) 91A/B and SP-105A/B.

² Section 1 of the 138 kV transmission line is located between the rebuilt Boulevard Substation site and Riser Poles SP-38A/B.

Mitigation Measure Requirement	Mitigation Measure Implementation
	<ul style="list-style-type: none"> • Attachment F: Draft Old Highway 80 Overhead Crossing (provides traffic control measures to be implemented at the one overhead crossing along Section 2 over Old Highway 80)³ • Attachment G: General Traffic Control Plan (provides traffic control measures to be implemented if equipment/material loading/unloading occurs along public or private road shoulders) <p>In addition, traffic control measures will be implemented in compliance with Federal Aviation Administration guidelines in the event helicopters carrying external loads travel across roadways.</p>
<p>Flaggers and directional guidance for bicyclists along Old Highway 80 shall be used.</p>	<p>Flaggers and directional guidance for bicyclists and motorists along Old Highway 80 shall be used during construction and for any equipment loading/unloading along the road shoulder in accordance with Note #8 of Attachment A: Draft Section 3-A Traffic Control Plan and Attachment B: Draft Section 3-B Traffic Control Plan.</p>
<p>All Caltrans' standards for utility encroachments shall be met.</p>	<p>All Caltrans' standards will be met for utility encroachments. The underground transmission line was designed in accordance to General Order (GO)-128 and Caltrans standards, which purports a minimum depth of 42 inches (3.5 feet) along Old Hwy 80 and Carrizo Gorge. The approximate depth between the top of road to top of the conduit for the Project along Section 1 and Section 3 underground is three to six feet. Caltrans standards require clearances for overhead crossing to conform to regulations of the CPUC. As shown in Attachment H: Old Highway 80 Overhead Plan & Profile, overhead crossings for the Project are in conformance with GO-95.</p>
<p>The plan shall be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook (WATCH) Manual.</p>	<p>The WATCH Manual (as described on the cover of the manual) conforms to the standards and guidance of the CA-MUTCD. As shown in Note #2 on Attachment A: Draft Section 3-A Traffic Control Plan, Attachment B: Draft Section 3-B Traffic Control Plan, Attachment C: Section 1 Traffic Control Plan, and Attachment F: Draft Old Highway 80 Overhead Crossing, all traffic control plans have been developed in accordance with Caltrans' MUTCD.</p>
<p>Clearances for overhead crossings shall conform to regulations of the CPUC and BLM, and the number of crossings shall be minimized.</p>	<p>Attachment H: Old Highway 80 Overhead Plan & Profile demonstrates that clearances for the overhead crossing at Old Highway 80 will conform to GO-95. The number of crossings has been limited to one.</p>

³ Section 2 of the 138 kV transmission line is located between SP-38A/B and SP-91A/B, inclusive of the riser poles.

Mitigation Measure Requirement	Mitigation Measure Implementation
<p>New installations under an existing roadbed shall be made by the boring-and-jacking method. No trenching under the traveled way will occur.</p>	<p>New underground installations will be installed within or adjacent to existing roadbeds, as described in C.4.1.2 and D.2.4.2 of the Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS), which states that the 138 kV underground alignment will “be installed underground and where possible within existing roadways” in order to minimize disturbance to undisturbed areas. Moreover, as described in Comment E3-24- to SDG&E’s Attachment A- Updated Project Description and ECO Substation Alternative Site, “the duct banks will be installed using the direct trenching method on construction in all but two locations” that will either be utilizing jack-and-bore or horizontal directional drilling (HDD) methodology. In the CPUC’s Responses to Comments on the Final EIR/EIS, the CPUC responded to Comment E3-24 that “the EIR/EIS has been revised to incorporate these changes as summarized in Table 1, which lists changes incorporated into the EIR/EIS from “Attachment A- Updated Project Description and ECO Substation Alternative Site, East County Substation Project Draft EIR-EIS” of SDG&E’s comment letter. On page E3-6, Table 1- Preliminary Partial 138 kV line underground design, describes that only two locations of the underground alignment were to utilize a jack-and-bore or HDD construction methodology.</p>
<p>For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled-access rights-of-way (ROWs).</p>	<p>There are no installations on or crossings of freeways or expressways associated with the Project. No poles or other overhead structures will be installed within controlled-access ROWs.</p>
<p>Utilities shall not be located in median areas.</p>	<p>No roadways with medians will be affected by the Project. No poles or other overhead structures will be installed within median areas.</p>
<p>Transverse crossings shall be normal (90°) to the highway alignment where practical. If impractical, skews of up to 30° from normal may be allowed.</p>	<p>As depicted in Attachment H: Old Highway 80 Overhead Plan & Profile, the overhead 138 kV transmission line will cross Old Highway 80 at approximately 90 degrees.</p>

Mitigation Measure Requirement	Mitigation Measure Implementation
<p>Supports for overhead lines crossing freeways shall be located outside the controlled-access ROW and not on cut-or-fill slopes, and shall not impair sight distances. All installations shall be placed as close to the ROW line as possible. Aboveground utilities shall be outside of the clear recovery zone (20 feet from edge-of-travel way for conventional highways and 30 feet for freeways and expressways). Allowance shall be made for future widening of the highways.</p>	<p>As depicted in Attachment F: Draft Old Highway 80 Overhead Crossing, a boom truck along with appropriate traffic control will be utilized to support the overhead crossing at Old Highway 80. Traffic control will ensure sight distances are not impaired. Use of the boom truck will be temporary. No permanent structures will be installed that would impact the future widening of the highway, ROW or the recovery zone.</p>
<p>New installations shall not impair sight distances.</p>	<p>As described in Attachment D: Draft Carrizo Gorge & Old Highway 80 Curb-Grade Plan and Attachment E: Draft Jewel Valley Curb-Grade Plan, the road aprons are designed in compliance with the County of San Diego's requirements, which include site distance standards DS-20A and 20B, included as Attachment I: San Diego County Site Distance Standards.</p>
<p>SDG&E shall coordinate in advance with the applicants for the other two connected actions. This effort shall include coordinating the timing of construction of the various projects to reduce potential conflicts.</p>	<p>SDG&E will provide notifications to Energia Sierra Juarez U.S. Transmission LLC (ESJ) as required by the mutual ROW Agreement with ESJ. SDG&E will maintain communications during construction with ESJ's project manager, Alberto Abreu. SDG&E will also maintain communications with the Tule Project management personnel and will keep them advised of the construction schedule to avoid any potential conflicts.</p>
<p>SDG&E shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The County will then notify respective police, fire, ambulance, and paramedic services. SDG&E shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities, and advise of any access restrictions that could impact their effectiveness.</p>	<p>SDG&E has met with the United States Customs and Border Patrol, County of San Diego, Carrizo Gorge Railway Police, San Diego Rural Fire Protection District, San Diego County Fire Authority, and the San Diego County Sheriff's Department regarding the location of the Project, as well as the nature, timing, and duration of the anticipated construction activities and potential access restrictions. Specific threats and risks to the Project have also been discussed with many of these agencies. Attachment J: Agency Briefing Summary describes the coordination efforts through which SDG&E has engaged with these agencies to date. Communications with all of these agencies are ongoing and will be maintained throughout construction by Jack Strumsky (Security Lead) and Dennis Baldrige (Project Fire Marshall) of SDG&E. SDG&E will continue to provide updates to these agencies on schedule and access restrictions that could affect Project workers, the agencies, or the community.</p>

ATTACHMENT A: DRAFT SECTION 3-A TRAFFIC CONTROL PLAN

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE

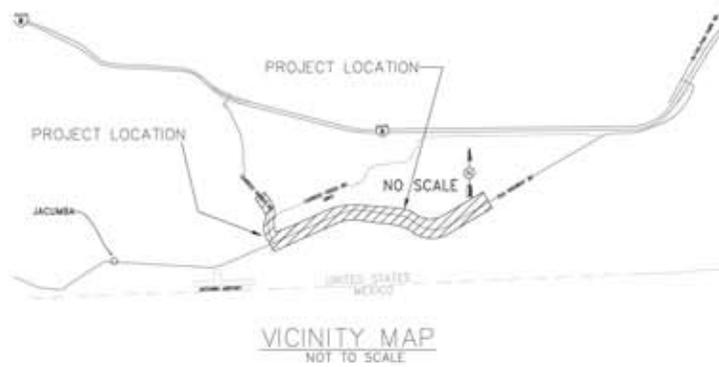


INDEX OF SHEETS

No.	Description
1	TITLE SHEET
2	NOTES, LEGEND AND PLAN OVERVIEW
3	TC-1 CARRIZO GORGE RD. CROSSING
4	TC-2 CARRIZO GORGE RD. CROSSING
5	TC-3 CARRIZO GORGE RD. TYPICAL FLAGGING
6	TC-3 CARRIZO GORGE RD. TYPICAL FLAGGING
7	TC-4 VAULT 2A INSTALLATION
8	TC-4 VAULT 2A INSTALLATION
9	TC-5 VAULT 3A INSTALLATION
10	TC-5 VAULT 3A INSTALLATION
11	TC-6 OLD HWY. 80 TYPICAL FLAGGING
12	TC-7 VAULT 8A INSTALLATION
13	TC-8 VAULT 8A INSTALLATION
14	TC-9 BORING/RECEIVING PIT AND VAULT 8A
15	TC-10 VAULT 7A INSTALLATION
16	TC-11 VAULT 8A AND OLD HWY. 80 CROSSING
17	TC-12 OLD HWY. 80 CROSSING

COUNTY OF SAN DIEGO, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

**TRAFFIC CONTROL
PLANS FOR
CONSTRUCTION OF
OLD HIGHWAY 80 RISER POLE SP91A TO SP105A
TL13844 TRENCH UNDERGROUND CONVERSION
In the Vicinity of: JACUMBA, CA**



REVISIONS BY: DATE COUNTY OF SAN DIEGO, PUBLIC WORKS SECTION

CONTRACTOR'S OBLIGATION: The Contractor shall be responsible for obtaining all necessary permits and approvals for the construction of the project. The Contractor shall be responsible for obtaining all necessary permits and approvals for the construction of the project. The Contractor shall be responsible for obtaining all necessary permits and approvals for the construction of the project.

CO's
TRAFFIC CONTROL, INC.
1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

BETA ENGINEERING	DESIGNER	DATE
ESHAQ DONALD	8/4/13	
COORDINATOR	DATE	

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY:	DATE				
APPROVED BY:	DATE				

TL13844 UNDERGROUND 138KV SP91A-SP105A JACUMBA, CA	TITLE SHEET
---	-------------

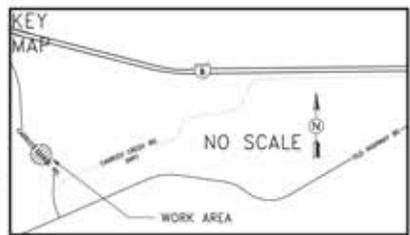
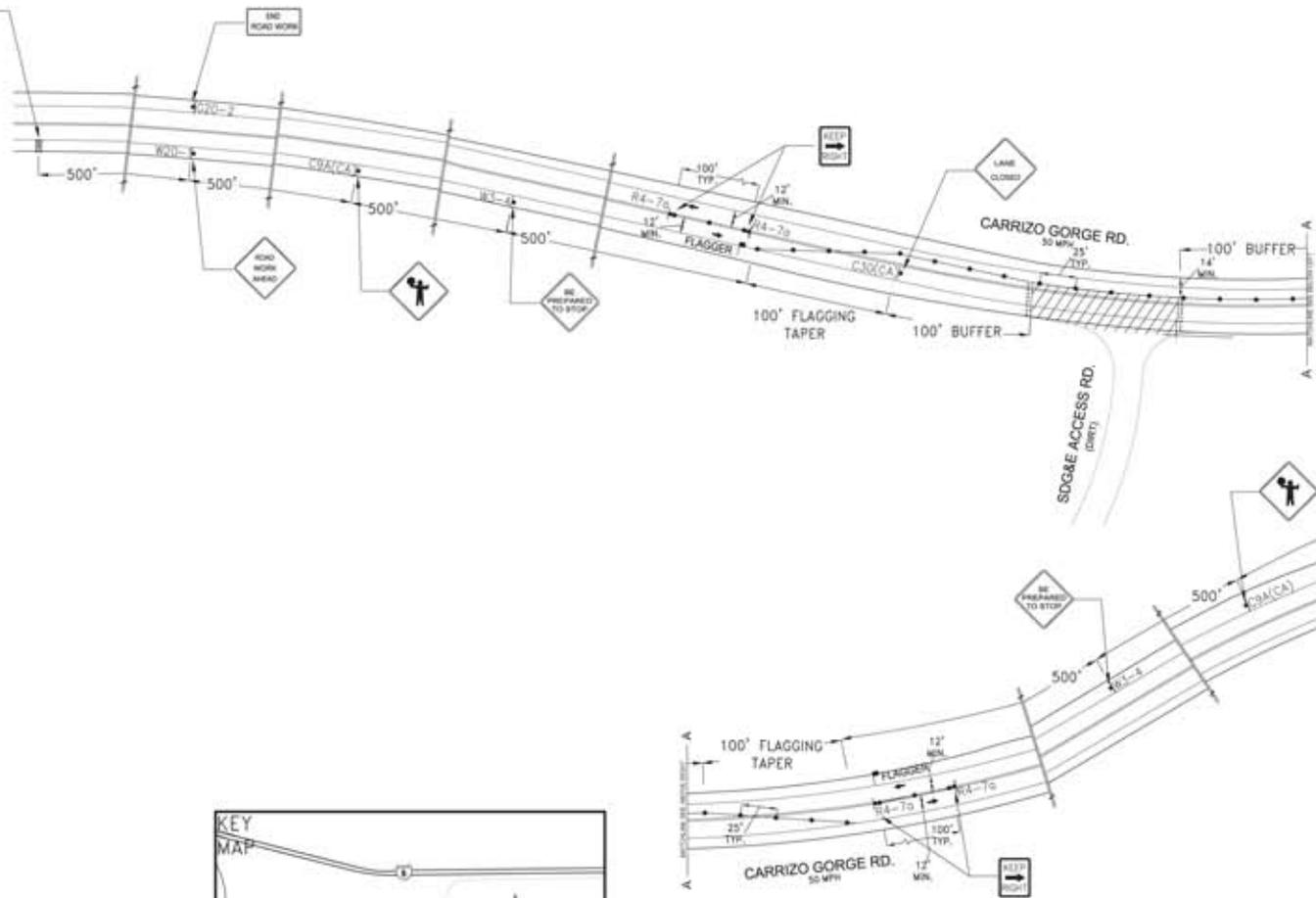
SCALE: 1" = 40'	

© 2013 Traffic Control, Inc. All rights reserved. No part of this publication may be reproduced without the prior written permission of Traffic Control, Inc.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLAN	BY	DATE

CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP



- LEGEND:**
- FLASHING BEACON
 - DIRECTION OF TRAVEL
 - CONE/DIAPHRAGM
 - BARRICADE
 - FLAGGER
 - SIGN
 - RAILROAD TRACKS
 - FLASHING ARROW SIGN
 - CHANGEABLE MESSAGE SIGN
 - WORK AREA
 - SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.
1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

DESIGN ENGINEER	BRUCE YARALIN
CHECK ENGINEER	
DESIGN DATE	6/7/13

REVIEWED BY: DATE COUNTY OF SAN DIEGO PUBLIC WORKS SECTION

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

REVISION	BY	DATE

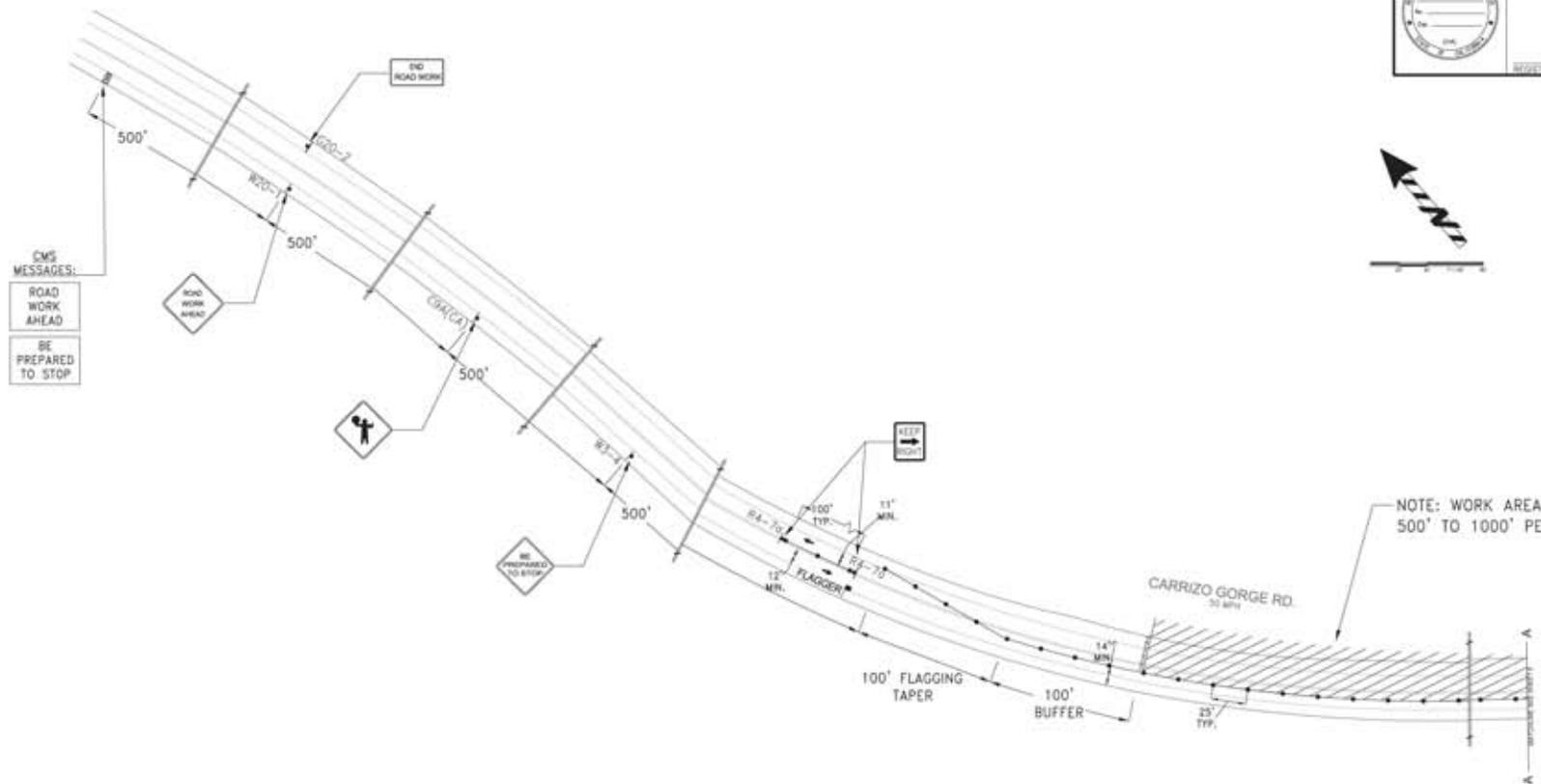
COORDINATOR'S NAME	TL13844 UNDERGROUND 138KV
	SP91A-SP105A JACUMBA, CA
	PHASE 1- CARRIZO RD. CROSSING

SCALE: HORIZ. 1"=40'	VERT. 1"=10'

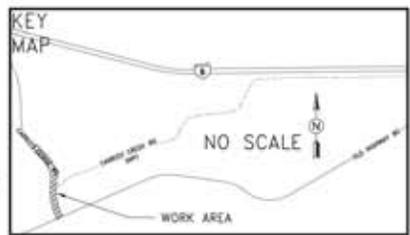
I:\Users\jacob.jacobson\public\proj\138KV\Carrizo_Signs\138KV_Carrizo_Signs.dwg Plot Date: 06/27/2013 4:23pm 2/24

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE



NOTE: WORK AREA APPROXIMATELY
500' TO 1000' PER DAY.



- LEGEND:**
- ⚡ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - ▲ CONE/DIAPHRAGM
 - ⚡ BARRICADE
 - ⚡ FLAGGER
 - ▲ SIGN
 - ==== RAILROAD TRACKS
 - ⚡ FLASHING ARROW SIGN
 - ⚡ CHANGEABLE MESSAGE SIGN
 - ⚡ WORK AREA
 - ⚡ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

REVIEWED BY: _____ DATE: _____ COUNTY OF SAN DIEGO PUBLIC WORKS SECTION

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY:	DATE:	REVISION:	BY:	APPROVED:	DATE:
APPROVED BY:	DATE:				

BETA ENGINEERING	COORDINATOR'S NAME:	TL13844 UNDERGROUND 138KV
ESSEN DONALD	DATE:	SP91A-SP105A JACUMBA, CA
		PHASE 3- TYPICAL FLAGGING

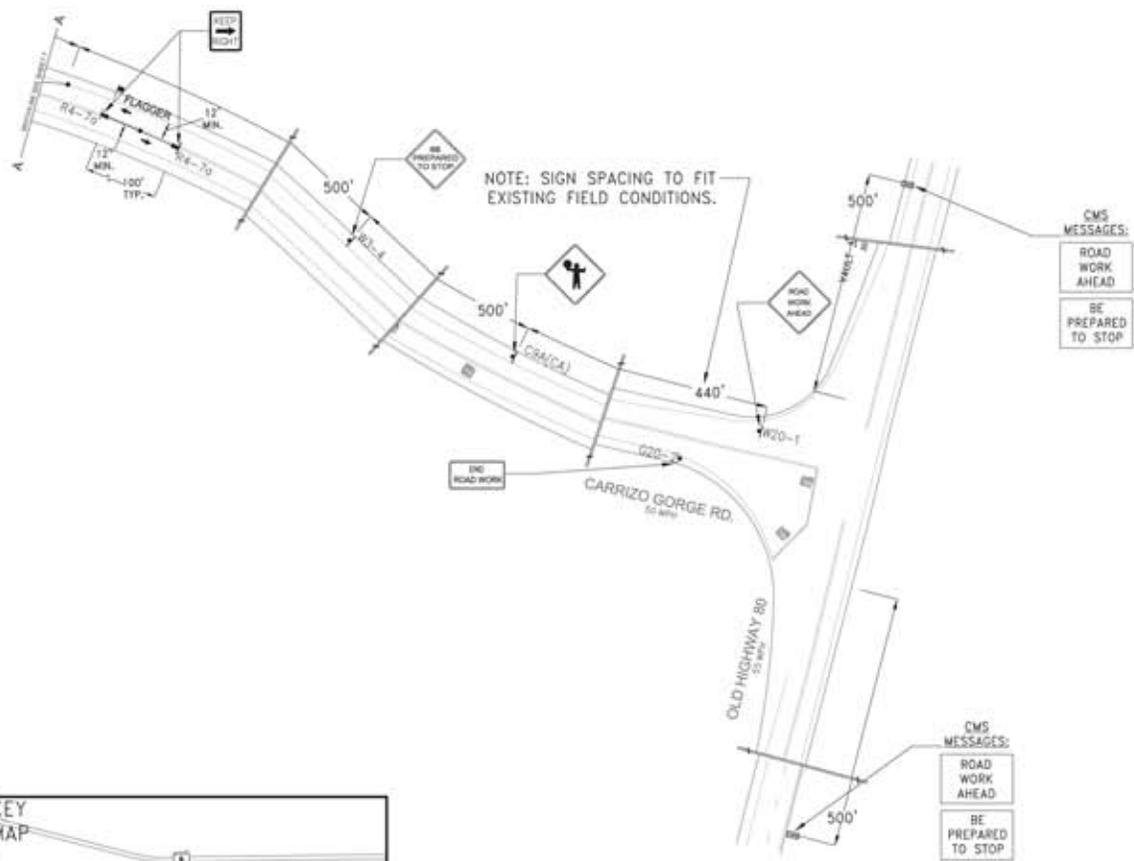
BRIAN YARALDE
WORK #:
TEL: 619 444 4444
FAX: 619 444 4444
DATE: 6/4/13

SCALE:	1" = 40'	DATE:	

© 2013 Traffic Control, Inc. All rights reserved. No part of this publication may be reproduced without the prior written permission of Traffic Control, Inc.

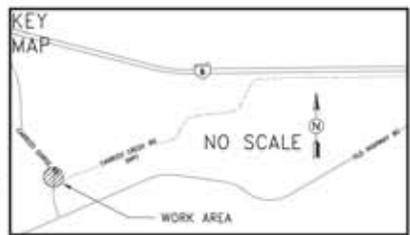
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE



CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP

CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP



- LEGEND:**
- ⚡ FLASHING BEACON
 - ➔ DIRECTION OF TRAVEL
 - ⬮ CONE/DIAPHRAGM
 - ⚡ BARRICADE
 - ⚡ FLAGGER
 - ⬮ SIGN
 - ==== RAILROAD TRACKS
 - ⚡ FLASHING ARROW SIGN
 - ⚡ CHANGEABLE MESSAGE SIGN
 - ⚡ WORK AREA
 - ⚡ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (619) 259-0357

BETA ENGINEERING
BRIAN DONALD
K/A/T/S
DATE: 8/4/18

REVIEWED BY: DATE: COUNTY OF SAN DIEGO PUBLIC WORKS SECTION

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

REVISION	BY	DATE

COORDINATOR'S NAME
XXXX X XXXX X
CHECK SIGN
FIELD NUMBER

TL13844 UNDERGROUND 138KV
SP91A-SP105A JACUMBA, CA
PHASE 4- VAULT 2A INSTALLATION

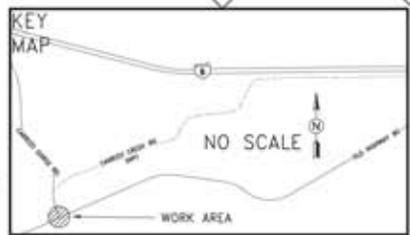
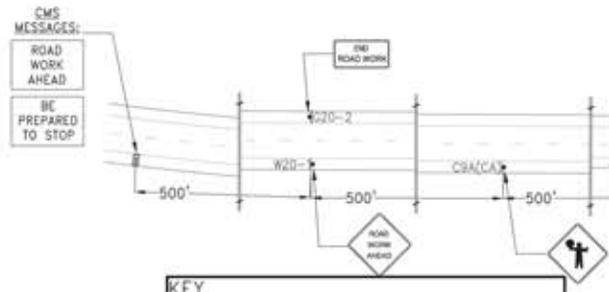
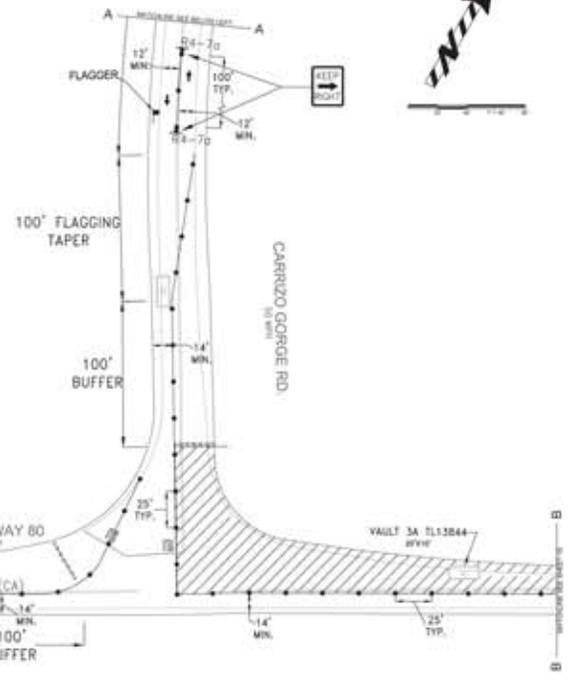
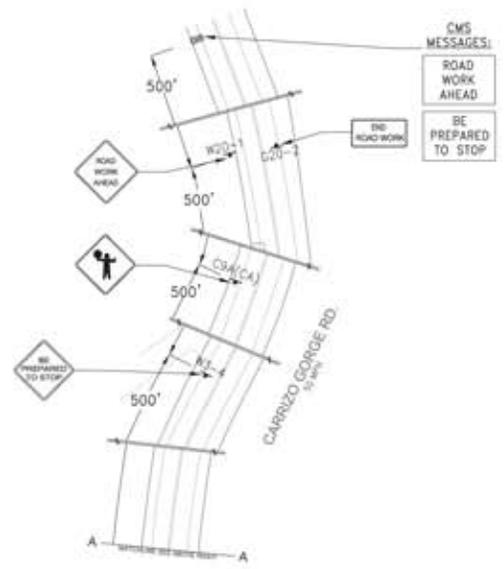
SCALE: 1/4" = 1'-0"	DATE: 8/17/18

© 2018 Engineering Control Group, Inc. All Rights Reserved. This drawing is the property of Engineering Control Group, Inc. and shall not be reproduced without the written consent of Engineering Control Group, Inc.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLAN	BY	DATE
REVISED	BY	DATE
DATE	BY	DATE

REGISTERED CIVIL ENGINEER "SA" 10000



- LEGEND:**
- FLASHING BEACON
 - DIRECTION OF TRAVEL
 - CONE/DIAPHRAGM
 - BARRICADE
 - FLAGGER
 - SIGN
 - RAILROAD TRACKS
 - FLASHING ARROW SIGN
 - CHANGEABLE MESSAGE SIGN
 - WORK AREA
 - SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

DESIGNER	BRADY YARALDE
CHECKER	TRISTANA MUEY-SHANK
DATE	6/4/18
SCALE	AS SHOWN

RECOMMENDED BY	DATE	APPROVED BY	DATE

PROJECT NO.	TL13844	DATE	06/17/2018
PROJECT NAME	SP91A-SP105A JACUMBA, CA	SCALE	AS SHOWN
PHASE	PHASE 5- VAULT 3A INSTALLATION	DATE	06/17/2018

REVIEWED BY: COUNTY OF SAN DIEGO PUBLIC WORKS SECTION DATE

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295

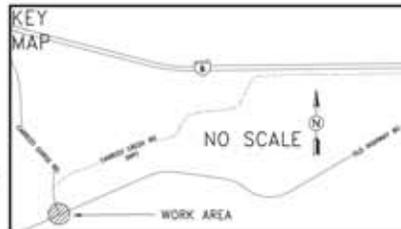
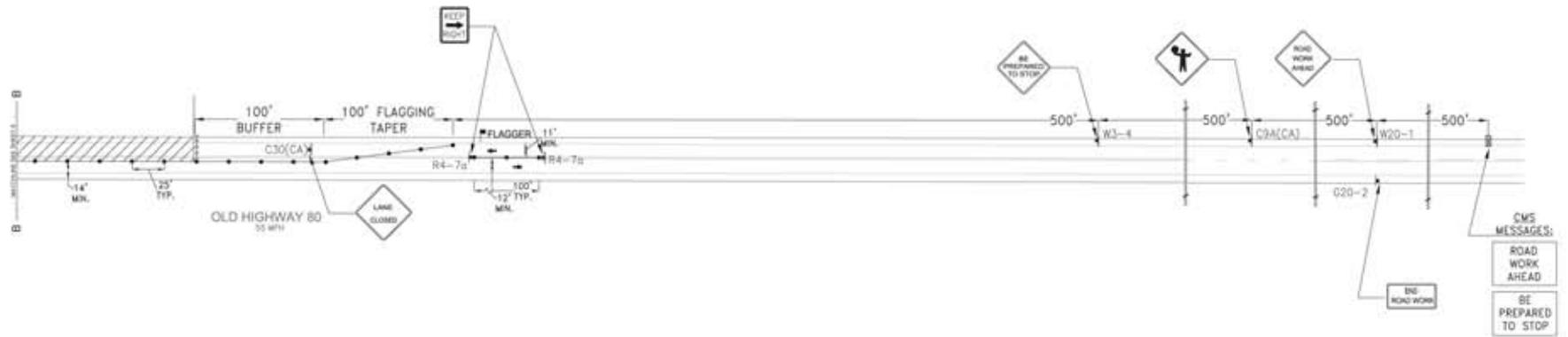


© 2018 Engineering/Construction Group, Inc. All Rights Reserved. This drawing is the property of Engineering/Construction Group, Inc. and shall not be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Engineering/Construction Group, Inc.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE

REVISIONS: CH. ENGRS. "SA"



- LEGEND:**
- ⚡ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - CONE/DIAPHRAGM
 - BARRICADE
 - ⚡ FLAGGER
 - ◀ SIGN
 - === RAILROAD TRACKS
 - ◻ FLASHING ARROW SIGN
 - ◻ CHANGEABLE MESSAGE SIGN
 - ◻ WORK AREA
 - Ⓢ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES

NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP

REVISIONS BY: COUNTY OF SAN DIEGO PUBLIC WORKS SECTION DATE

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY:	DATE:	REVISION:	BY:	APPROVED:	DATE:
APPROVED BY:	DATE:				

BETA ENGINEERING
15150 JACUMBA RD. SUITE 100
JACUMBA, CA 92027
TEL: (619) 441-1111
FAX: (619) 441-1112
WWW.BETAENGINEERING.COM

CO's
TRAFFIC CONTROL, INC.
1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (619) 259-0357

TL13844 UNDERGROUND 138KV
SP91A-SP105A JACUMBA, CA
PHASE 5- VAULT 3A INSTALLATION

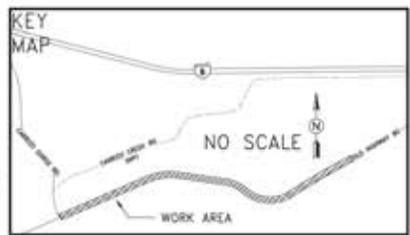
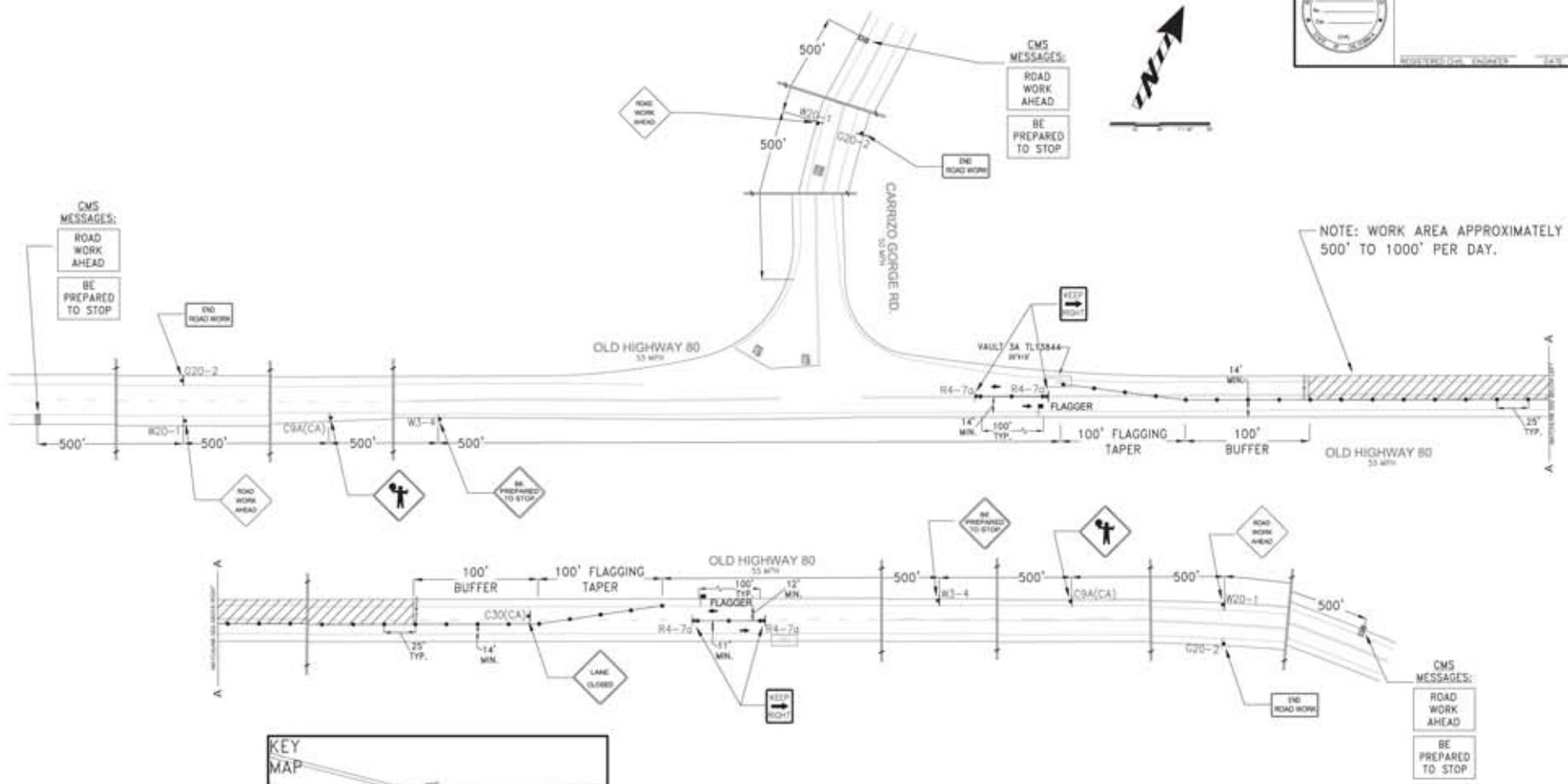
SCALE: HORIZ. 1"=40'	VERT. NONE
DATE: 03/09	BY: JAC
PROJECT: TL13844	DATE: 03/09
PROJECT: SP91A-SP105A	DATE: 03/09

© 2009 Engineering Control, Inc. All Rights Reserved. This drawing is the property of Engineering Control, Inc. and shall not be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Engineering Control, Inc.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE

REVISIONS: CH. ENGINEER SAJ



- LEGEND:**
- ⚡ FLASHING BEACON
 - ➔ DIRECTION OF TRAVEL
 - ⚠ CONE/Delineator
 - ⚡ BARRICADE
 - 👤 FLAGGER
 - ⬇️ SIGN
 - 🚊 RAILROAD TRACKS
 - ➔ FLASHING ARROW SIGN
 - 📄 CHANGEABLE MESSAGE SIGN
 - 🚧 WORK AREA
 - Ⓜ️ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES

NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (619) 259-0357

BETA ENGINEERING

ESHA DONALD
REGISTRATION NO. 4002

COORDINATOR'S NAME: TL13844 UNDERGROUND 138KV
PROJECT NAME: SP91A-SP105A JACUMBA, CA
DATE: 6/4/18

REVIEWED BY: _____ DATE: _____ COUNTY OF SAN DIEGO PUBLIC WORKS SECTION

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____

REVISIONS:

NO.	DESCRIPTION	DATE

DATE: 6/4/18

SCALE: 1/4" = 1'-0"

PROJECT: TL13844 UNDERGROUND 138KV
SP91A-SP105A JACUMBA, CA

PHASE 6- TYPICAL FLAGGING

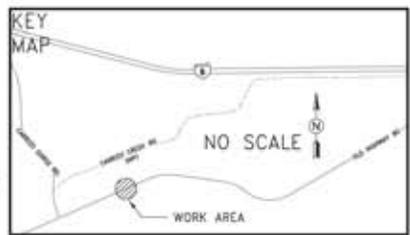
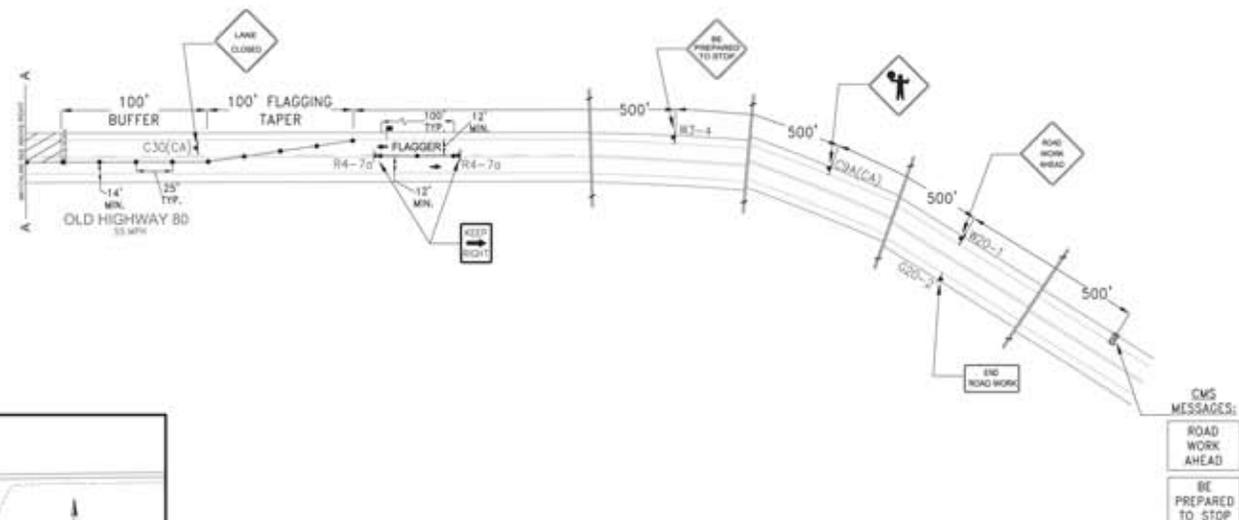
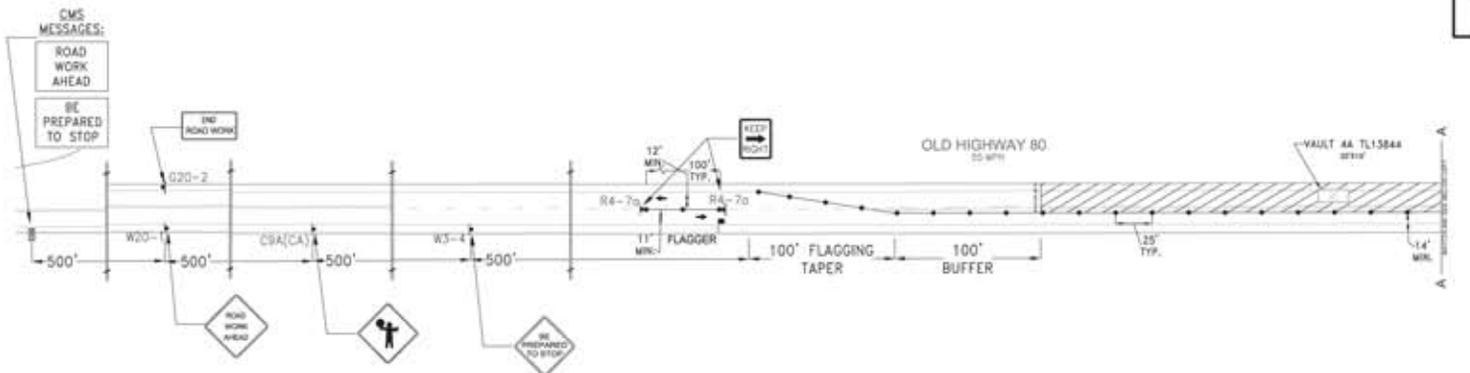
DATE: 6/4/18

© 2018 Engineering Control Group, Inc. All Rights Reserved. This drawing is the property of Engineering Control Group, Inc. and shall not be reproduced without the written consent of Engineering Control Group, Inc.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE

REGISTERED CIVIL ENGINEER SEAL



- LEGEND:**
- ⚡ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - ▲ CONE/DIAPHRAGM
 - ⚡ BARRICADE
 - ⚡ FLAGGER
 - ▲ SIGN
 - ==== RAILROAD TRACKS
 - ⚡ FLASHING ARROW SIGN
 - ⚡ CHANGEABLE MESSAGE SIGN
 - ⚡ WORK AREA
 - ⚡ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (619) 259-0357

REVIEWED BY: _____ DATE: _____ COUNTY OF SAN DIEGO PUBLIC WORKS SECTION

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

REVISION	BY	DATE

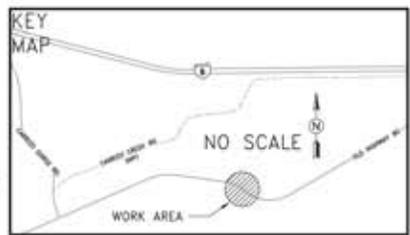
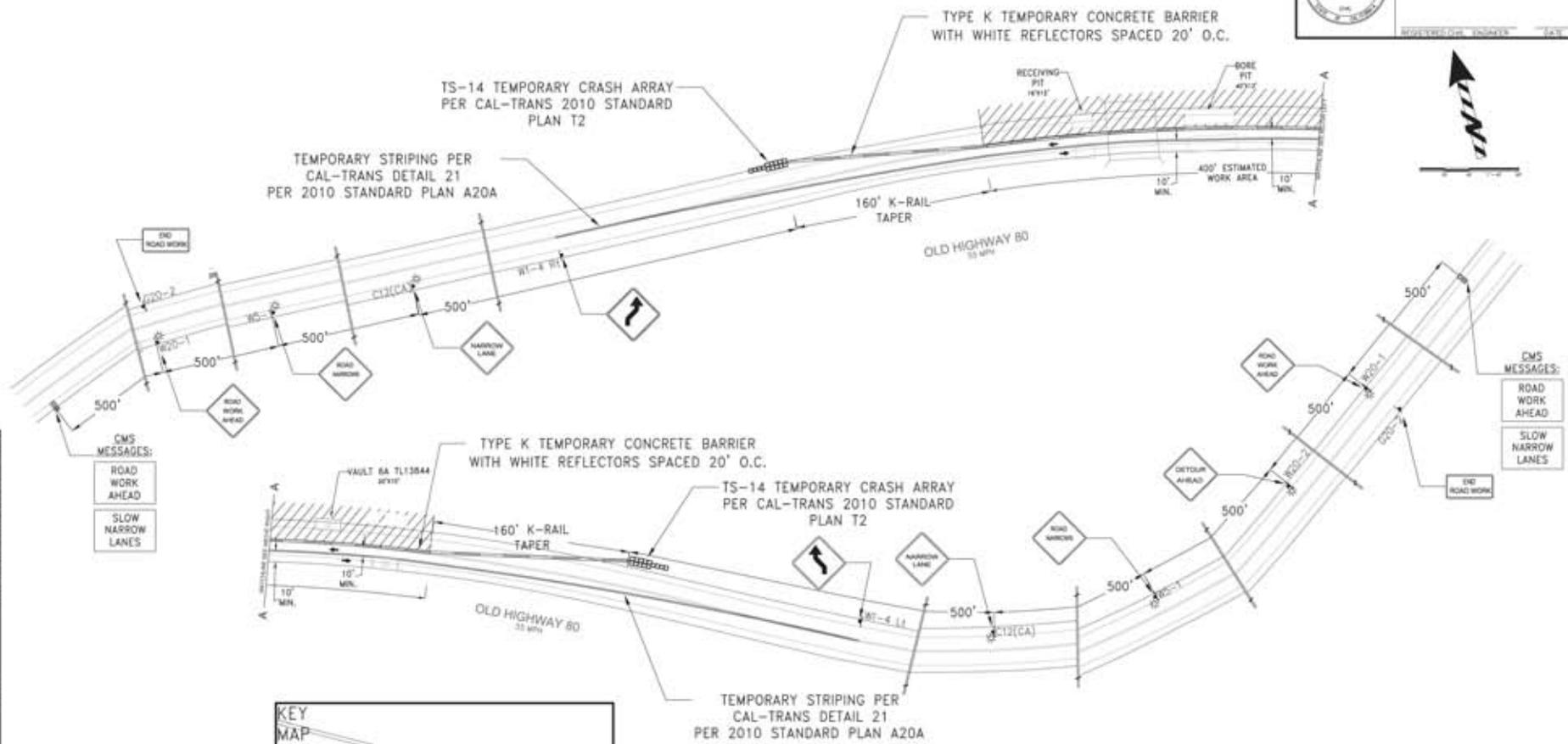
BETA ENGINEERING	COORDINATOR'S SIGNATURE
ESHAQ DONALD	DATE

PROJECT NO.	SCALE	DATE
TL13844	1" = 40'	08/17/2017
SP91A-SP105A	DATE	
JACUMBA, CA		
PHASE 7- VAULT 4A INSTALLATION		

© 2017 Beta Engineering, Inc. All rights reserved. No part of this document may be reproduced without the written permission of Beta Engineering, Inc. 11/2017/08/17/2017

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE



- LEGEND:**
- ⚡ FLASHING BEACON
 - ➔ DIRECTION OF TRAVEL
 - ⚠ CONE/DIAPHRAGM
 - ⚡ BARRICADE
 - ⚡ FLAGGER
 - ⚡ SIGN
 - ==== RAILROAD TRACKS
 - ⚡ FLASHING ARROW SIGN
 - ⚡ CHANGEABLE MESSAGE SIGN
 - ⚡ WORK AREA
 - ⚡ SIGNALIZED INTERSECTION

NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.
NOTE: ALL CONFLICTING STRIPING SHALL BE REMOVED BY EITHER SAND-BLASTING OR GRINDING AND RESTORED AT THE COMPLETION OF THE PROJECT.

CO's
TRAFFIC CONTROL, INC.

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (619) 259-0357

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

REVISION	BY	DATE

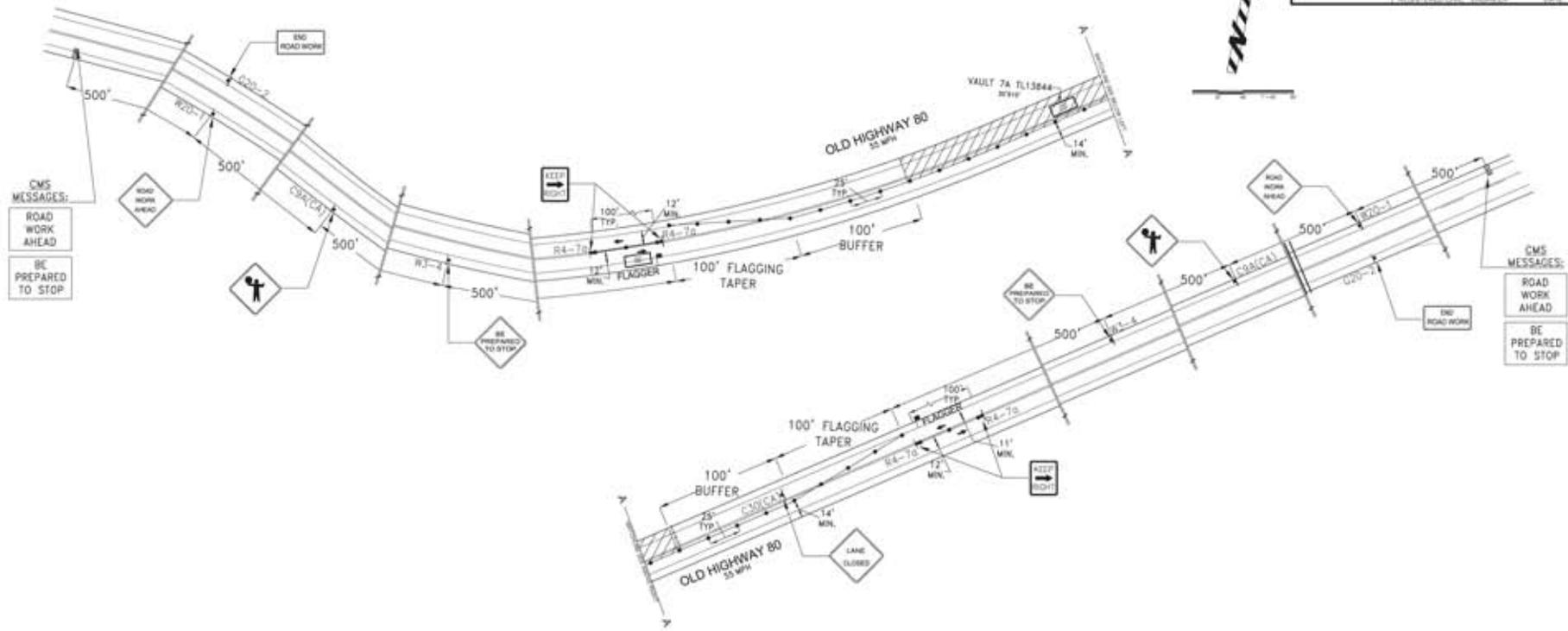
BETA ENGINEERING	COORDINATOR

TL13844 UNDERGROUND 138KV	SCALE: HORIZ. 1"=40'	VERT. 1"=10'
SP91A-SP105A JACUMBA, CA	DATE: 03/09	4.0 XXXX
PHASE 9- BORING & VAULT 6A INSTALL	DATE: 12/08	17 000000

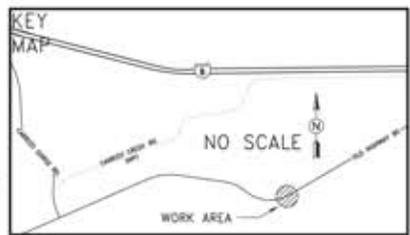
© 2009 Engineering/Construction Group, Inc. All Rights Reserved. This drawing is the property of Engineering/Construction Group, Inc. and shall not be reproduced without the written consent of Engineering/Construction Group, Inc.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLAN	BY	DATE
REVISED	BY	DATE
DATE	BY	DATE



REVISIONS BY: DATE COUNTY OF SAN DIEGO SPW DESIGN SECTION



- LEGEND:**
- ⚡ FLASHING BEACON
 - ➔ DIRECTION OF TRAVEL
 - ⚠ CONE/DIAPHRAGM
 - ⚡ BARRICADE
 - 🚧 FLAGGER
 - ⬇️ SIGN
 - 🚋 RAILROAD TRACKS
 - ➔ FLASHING ARROW SIGN
 - 📄 CHANGEABLE MESSAGE SIGN
 - 🚧 WORK AREA
 - Ⓜ️ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.
LIC# 918076

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (619) 259-0357

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

REVISION	BY	DATE

DESIGN ENGINEER	COORDINATOR
ESHAQ DONALD	COORONAT'S ADVY
DATE: 6/7/13	DATE: 6/7/13

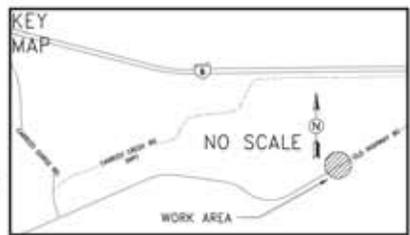
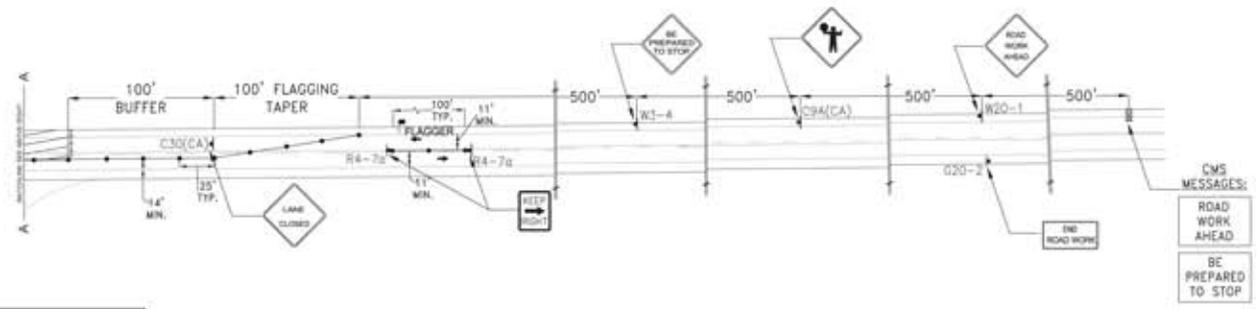
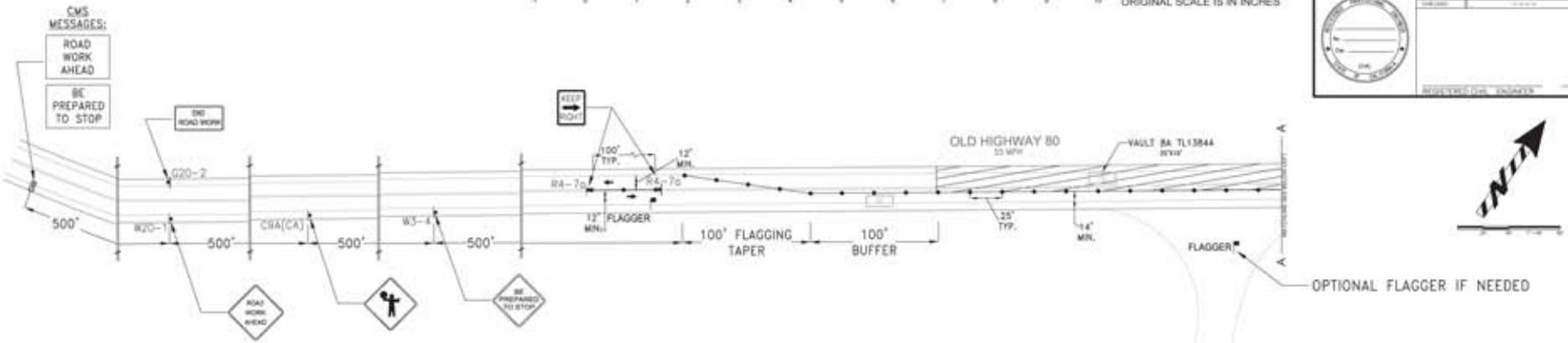
PROJECT NAME	SCALE	SHEET NO.	TOTAL SHEETS
TL13844 UNDERGROUND 138KV SP91A-SP105A JACUMBA, CA	1"=40'	13	17
PHASE 1D- VAULT 7A INSTALLATION			

© 2013 County of San Diego Department of Public Works. All rights reserved. This document is the property of the County of San Diego and is not to be distributed outside the County of San Diego.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE

REVISIONS: CH. ENGINEER SAJ



- LEGEND:**
- FLASHING BEACON
 - DIRECTION OF TRAVEL
 - CONE/DIAPHRAGM
 - BARRICADE
 - FLAGGER
 - SIGN
 - RAILROAD TRACKS
 - FLASHING ARROW SIGN
 - CHANGEABLE MESSAGE SIGN
 - WORK AREA
 - SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

REVISIONS BY: DATE COUNTY OF SAN DIEGO PUBLIC WORKS SECTION

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8500 OVERLAND AVENUE, SAN DIEGO, CA 92123-1295



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

REVISION	BY	APPROVED	DATE

BETA ENGINEERING	COORDINATOR'S NAME
ESHAQ DONALD	TL13844
	SP91A-SP105A
	PHASE 11- VAULT BA INSTALL & XING

SCALE: HORIZ. 1"=40'	VERT. 1"=10'
DATE: 03/08	BY: SAJ

© 2008 Engineering Control, Inc. All Rights Reserved. No. 11 (Underground) Rev. 11 (02/08/08) Rev. 11 (02/08) 11 (02/08) 11 (02/08) 11 (02/08)

ATTACHMENT B: DRAFT SECTION 3-B TRAFFIC CONTROL PLAN

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

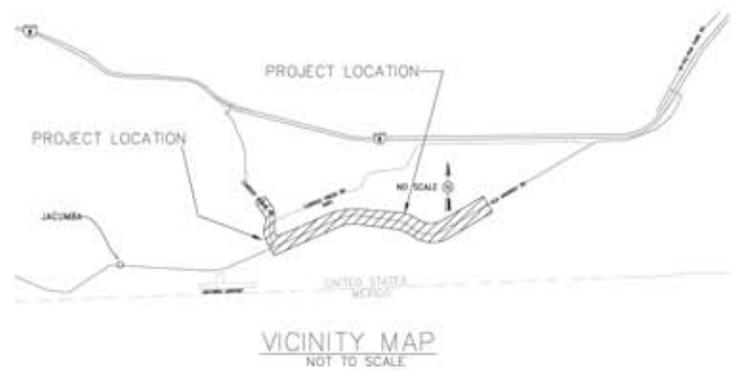
PLANS	BY	DATE

INDEX OF SHEETS

No.	Description
1	TITLE SHEET
2	NOTES, LEGEND AND PLAN OVERVIEW
3	TC-1 CONDUIT INSTALLATION FROM ACCESS RD
4	TC-2 CARRIZO GORGE RD. TYPICAL FLAGGING
5	TC-3 VAULT 2B INSTALLATION
6	TC-3 VAULT 2B INSTALLATION
7	TC-4 VAULT 3B AND OLD HWY. 80 CROSSING
8	TC-4 VAULT 3B AND OLD HWY. 80 CROSSING
9	TC-5 OLD HWY. 80 CROSSING
10	TC-6 OLD HWY. 80 TYPICAL FLAGGING
11	TC-7 VAULT 4B INSTALLATION
12	TC-8 VAULT 5B INSTALLATION
13	TC-9 BORING/RECEIVING PIT AND VAULT 6B
14	TC-9 BORING/RECEIVING PIT AND VAULT 6B
15	TC-10 VAULT 7B INSTALLATION
16	TC-11 VAULT 8B INSTALLATION

COUNTY OF SAN DIEGO, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

TRAFFIC CONTROL PLANS FOR CONSTRUCTION OF OLD HIGHWAY 80 RISER POLE SP91B TO SP105B TL13844 TRENCH UNDERGROUND CONVERSION In the Vicinity of: JACUMBA, CA



REVIEWED BY: COUNTY OF SAN DIEGO (FOR DESIGN SECTION) DATE: _____

CONTRACTOR'S OBLIGATION:
PROVIDING A WORKING PLAN AND WORKING DRAWINGS OF UNDERGROUND UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT PROPERTIES AND PUBLIC AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS TO ORIGINAL OR BETTER CONDITION AFTER COMPLETION OF WORK.

CO's
TRAFFIC CONTROL, INC.
LIC# 819076

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

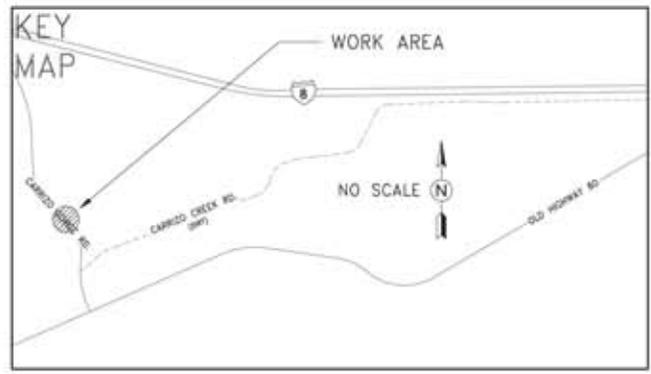
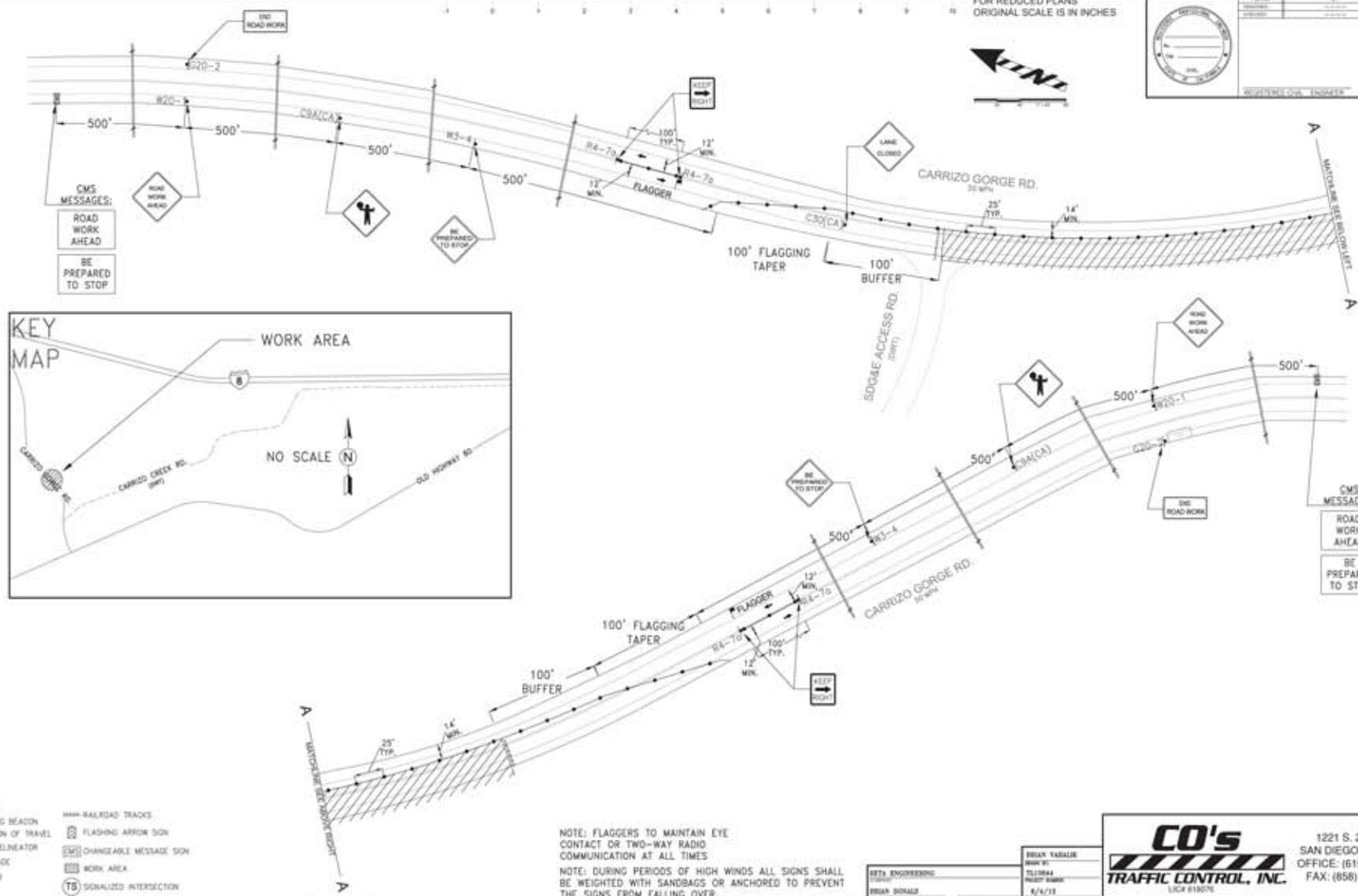
DETA ENGINEERING	BRIAN YARBLE
DATE: _____	DATE: _____
BY: BRIAN DONALD	DATE: 8/6/13
PROJECT NO: _____	SCALE: _____

COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 8000 OVERLAND AVENUE, SAN DIEGO, CA 92123-1298		RECOMMENDED BY: _____ DATE: _____	BY: _____	APPROVED DATE: _____	COORDINATE HERE: _____	TL13844 UNDERGROUND 138KV SP91B-SP105B JACUMBA, CA
		APPROVED BY: _____ DATE: _____	DATE: _____	DATE: _____	DATE: _____	TITLE SHEET

TRAFFIC CONTROL, INC. 1221 S. 26th St. San Diego, CA 92113. License No. 819076. © 2013. All Rights Reserved.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE



- LEGEND:**
- ★ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - + CONE/DELINEATOR
 - BARRICADE
 - ⚡ FLAGGER
 - SIGN
 - ==== RAILROAD TRACKS
 - ◻ FLASHING ARROW SIGN
 - ◻ CHANGEABLE MESSAGE SIGN
 - ◻ WORK AREA
 - ◻ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES

NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.
LIC# 819076

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

BETH ENGINEERING	BRIAN DONALD	DATE	8/4/11
PROJECT ENGINEER	DATE		

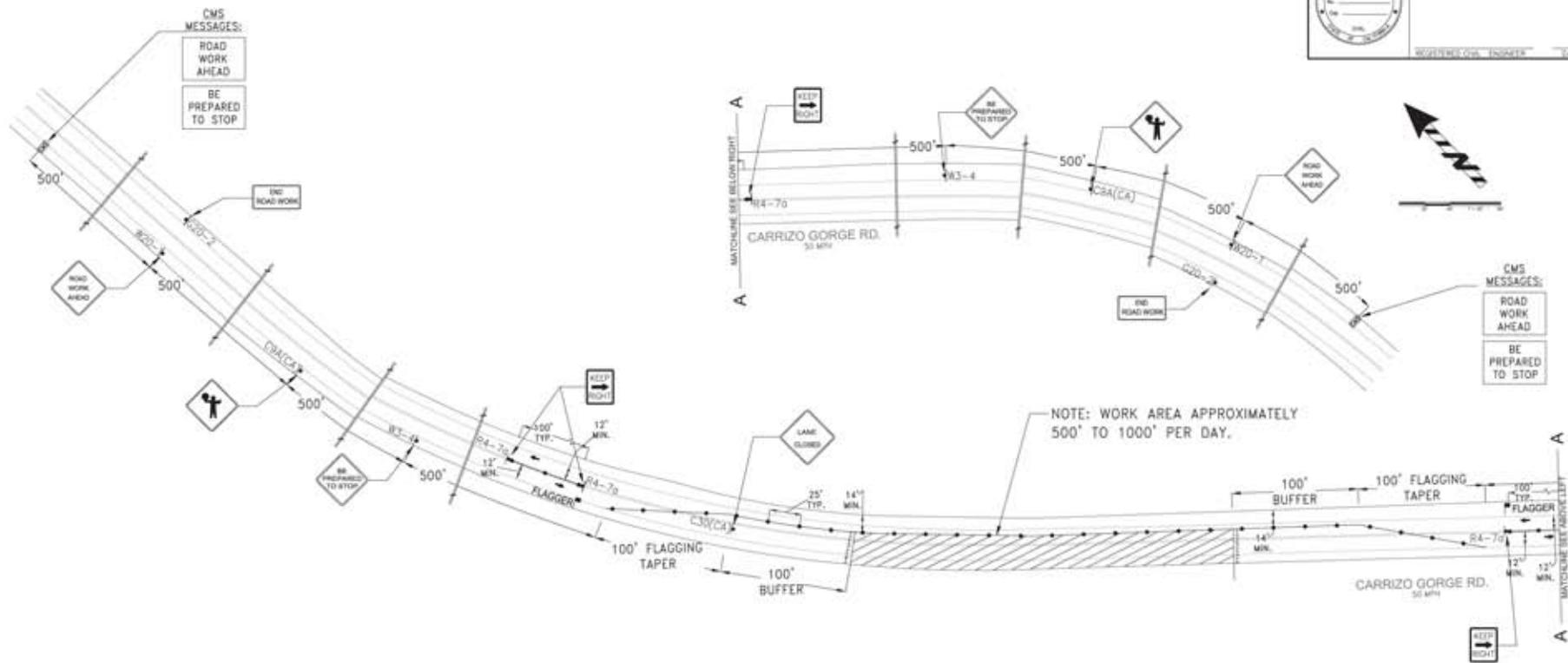
REVISIONS BY: COUNTY OF SAN DIEGO P.W. DESIGN SECTION DATE

<p>COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 8000 OVERLAND AVENUE, SAN DIEGO, CA 92123-1298</p>		RECOMMENDED BY: _____ DATE: _____	DESIGNED BY: _____ DATE: _____	APPROVED BY: _____ DATE: _____	<p>COORDINATE NO.:</p> <p>XXXX - XX XXXX - G</p> <p>JOB# 13844</p> <p>FILE# 13844-01</p>	<p>TL13844 UNDERGROUND 138KV SP91B-SP105B JACUMBA, CA PHASE 1- CONDUIT INSTALLATION</p>	<p>SCALE: 1" = 40'</p> <p>DATE: 8/4/11</p> <p>BY: B.D.</p>
		<p>APPROVED BY: _____ DATE: _____</p> <p>Assistant Traffic Control Section Engineer</p>	<p>DATE: _____</p>	<p>DATE: _____</p>	<p>DATE: _____</p>	<p>DATE: _____</p>	<p>DATE: _____</p>

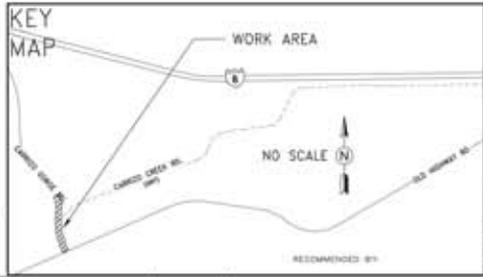
P:\2011 Engineering\Projects\13844 - 138KV SP91B-SP105B JACUMBA CA\13844-01.dwg, Tuesday, 8/23/11 10:58:11 AM, 5/4/11, 13844.dwg

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE



NOTE: WORK AREA APPROXIMATELY
500' TO 1000' PER DAY.



- LEGEND:**
- ⚡ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - + CONE/DELINEATOR
 - BARRICADE
 - ⚠ FLAGGER
 - SIGN
 - RRRRA RAILROAD TRACKS
 - ◻ FLASHING ARROW SIGN
 - ◻ CHANGEABLE MESSAGE SIGN
 - ◻ WORK AREA
 - ◻ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES

NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.
LIC# 819076

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

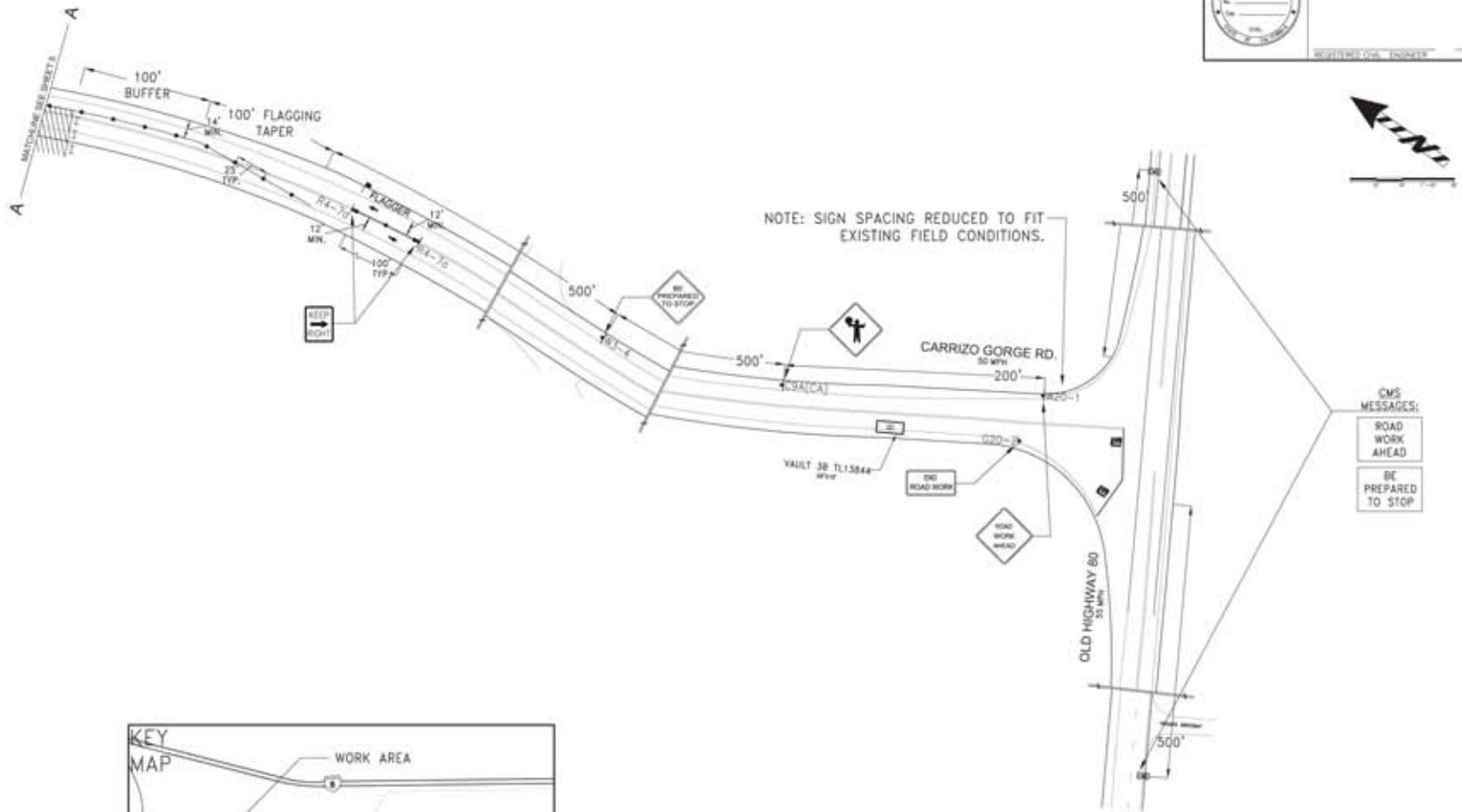
REVISIONS BY: COUNTY OF SAN DIEGO PDM DESIGN SECTION DATE

<p>COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 8000 OVERLAND AVENUE, SAN DIEGO, CA 92123-1298</p>			<p>APPROVED BY: _____ DATE _____</p> <p>RECOMMENDED BY: _____ DATE _____</p>	<p>DESIGNED BY: _____ DATE _____</p> <p>CHECKED BY: _____ DATE _____</p>	<p>APPROVED DATE _____</p> <p>COORDINATE HERE: _____</p>	<p>BRIAN YARBARK OWNER TEL: (619) 239-8200 FAX: (619) 239-8200 DATE: 8/4/11 LIC# 819076</p>	<p>TL13844 UNDERGROUND 138KV SP91B-SP105B JACUMBA, CA PHASE 2. TYP. FLAGGING BTWN VAULTS</p>	<p>SCALE: 1" = 100'</p> <p>DATE: 8/4/11</p> <p>BY: _____</p>
--	--	--	--	--	--	---	--	--

© 2011 Traffic Control, Inc. All rights reserved. This drawing is the property of Traffic Control, Inc. and shall not be reproduced without written permission.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

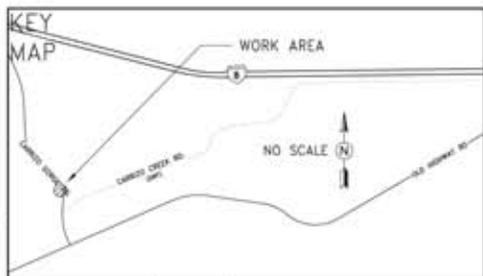
PLANS	BY	DATE



NOTE: SIGN SPACING REDUCED TO FIT EXISTING FIELD CONDITIONS.

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP



- LEGEND:**
- FLASHING BEACON
 - DIRECTION OF TRAVEL
 - CONE/DELINEATOR
 - BARRICADE
 - FLAGGER
 - SIGN
 - RAILROAD TRACKS
 - FLASHING ARROW SIGN
 - CHANGEABLE MESSAGE SIGN
 - WORK AREA
 - SIGNALIZED INTERSECTION

REVISIONS BY: _____ DATE: _____ COUNTY OF SAN DIEGO PDM DESIGN SECTION

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8000 OVERLAND AVENUE, SAN DIEGO, CA 92123-1290



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

DESIGNED BY:	DATE:	CHECKED BY:	DATE:

BRIAN DONALD
8/7/13



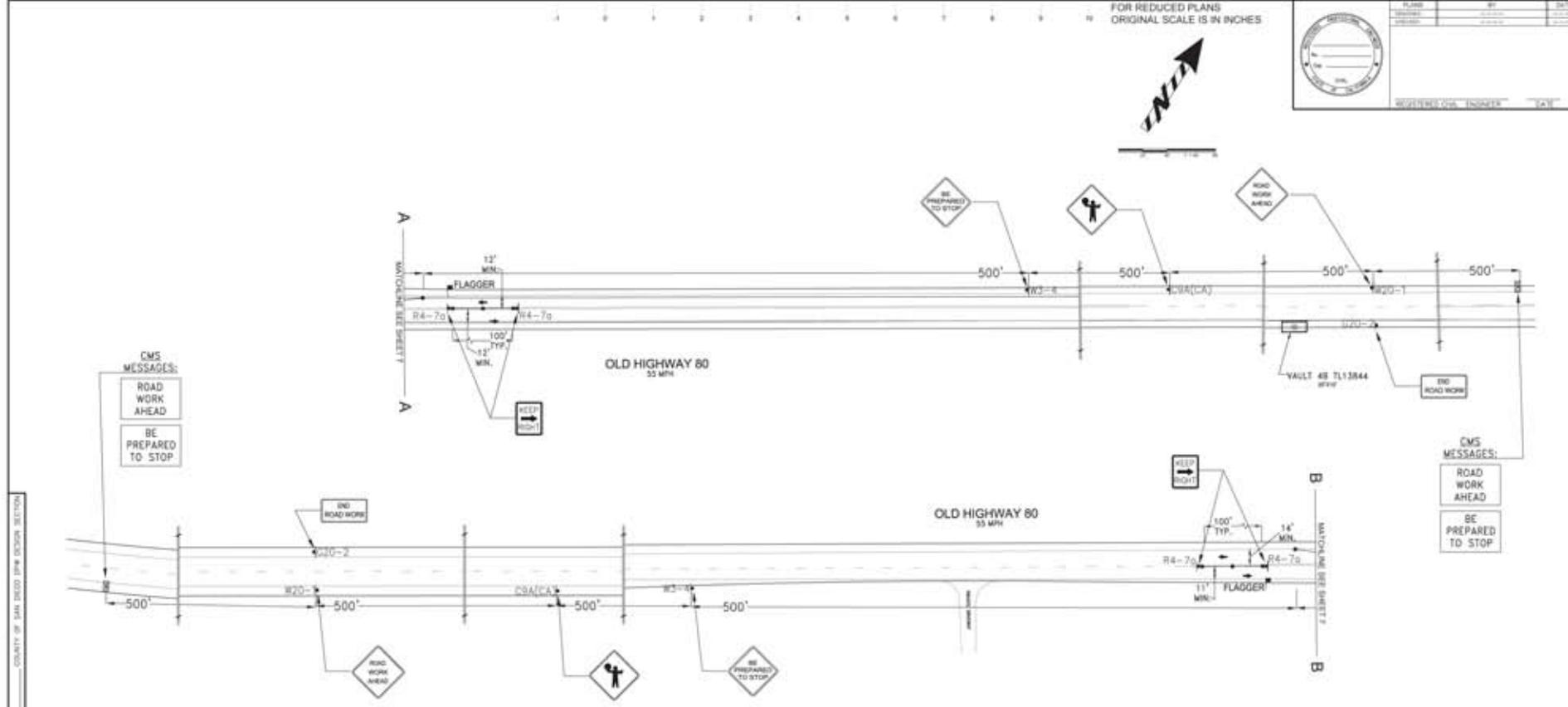
1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-6200
FAX: (658) 259-0357

TL13844 UNDERGROUND 138KV
SP91B-SP105B JACUMBA, CA
PHASE 3- VAULT 2B INSTALLATION

SCALE:	DATE:	BY:

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE
REGISTERED ENGINEER "A/E"		



CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP

CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP



NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

- LEGEND:
- FLASHING BEACON
 - DIRECTION OF TRAVEL
 - CONE/DELINEATOR
 - BARRICADE
 - FLAGGER
 - SIGN
 - RAILROAD TRACKS
 - FLASHING ARROW SIGN
 - CHANGEABLE MESSAGE SIGN
 - WORK AREA
 - SIGNALIZED INTERSECTION

COUNTY OF SAN DIEGO PUBLIC WORKS SECTION
 DATE: _____

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8000 OVERLAND AVENUE, SAN DIEGO, CA 92123-1290



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

DESIGNED BY:	DATE:
CHECKED BY:	DATE:
IN CHARGE:	DATE:

BETA ENGINEERING	DATE:
BRIAN DONALD	DATE:

BRIAN YARBLE	DATE:
FLORIAN	DATE:
8/7/13	DATE:

CO's
TRAFFIC CONTROL, INC.
LIC# 819076

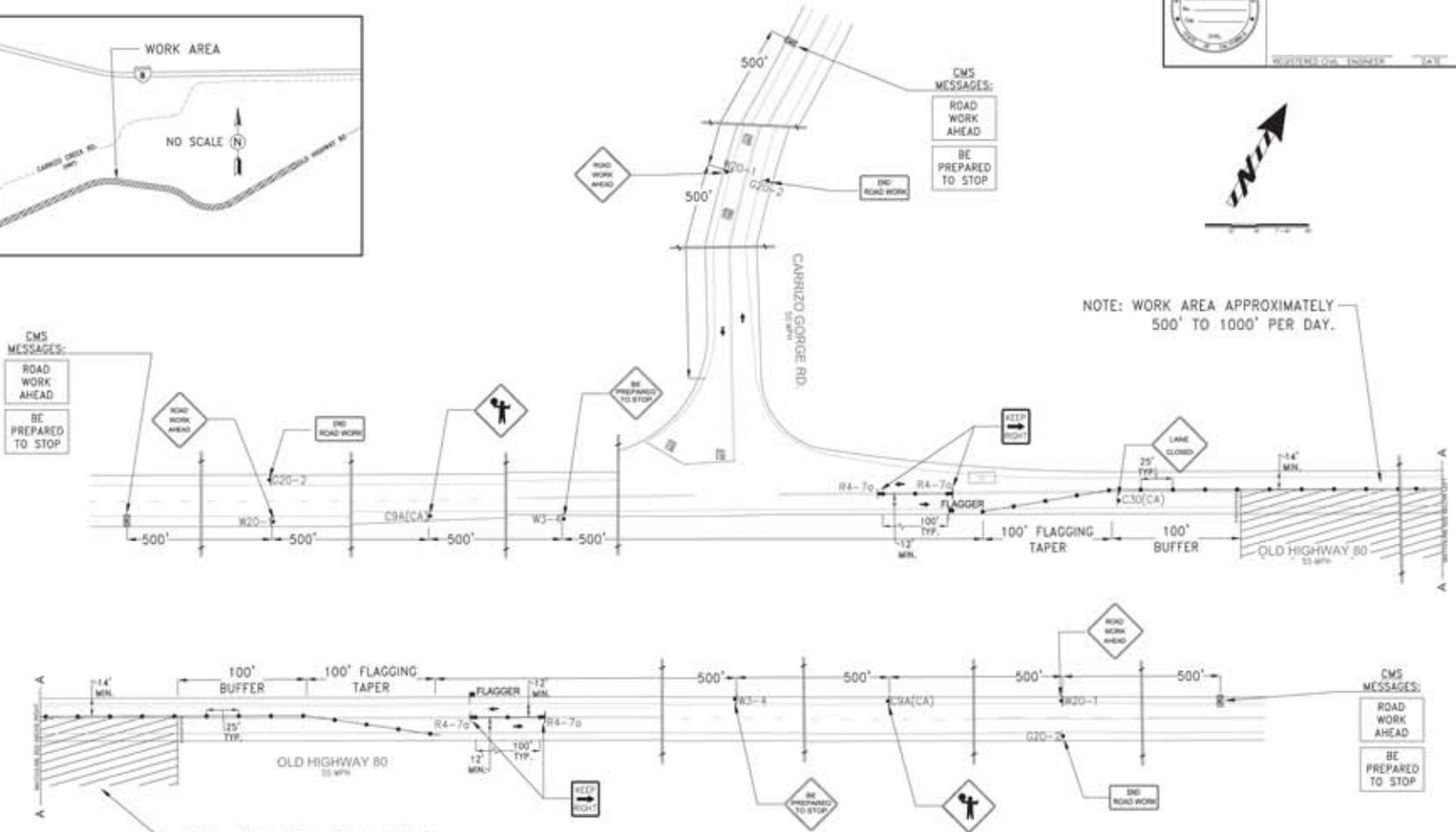
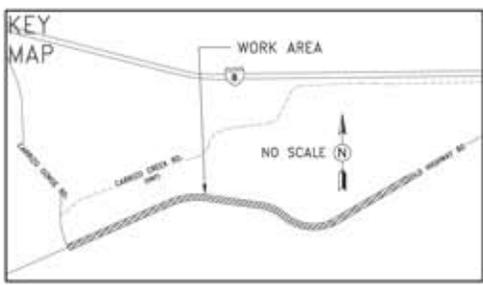
1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

TL13844 UNDERGROUND 138KV
SP91B-SP105B JACUMBA, CA
PHASE 4- STREET XING & VAULT 3B

SCALE:	DATE:
BY:	DATE:

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE



NOTE: WORK AREA APPROXIMATELY
500' TO 1000' PER DAY.

NOTE: WORK AREA APPROXIMATELY
500' TO 1000' PER DAY.

- LEGEND:**
- ★ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - + CONE/DELINEATOR
 - BARRICADE
 - ⚠ FLAGGER
 - SIGN
 - RAILROAD TRACKS
 - ◻ FLASHING ARROW SIGN
 - ◻ CHANGEABLE MESSAGE SIGN
 - ◻ WORK AREA
 - ◻ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.
LIC# 819076

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

BETH ENGINEERING	BRIAN YARBLE
DATE: 8/4/13	DATE: 8/4/13
BY: BRIAN DONALD	BY: BRIAN DONALD

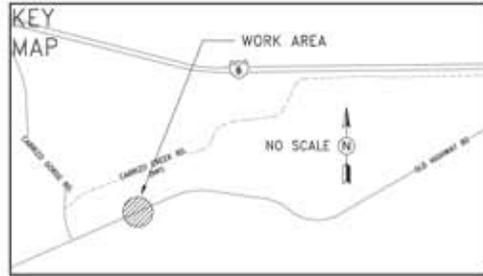
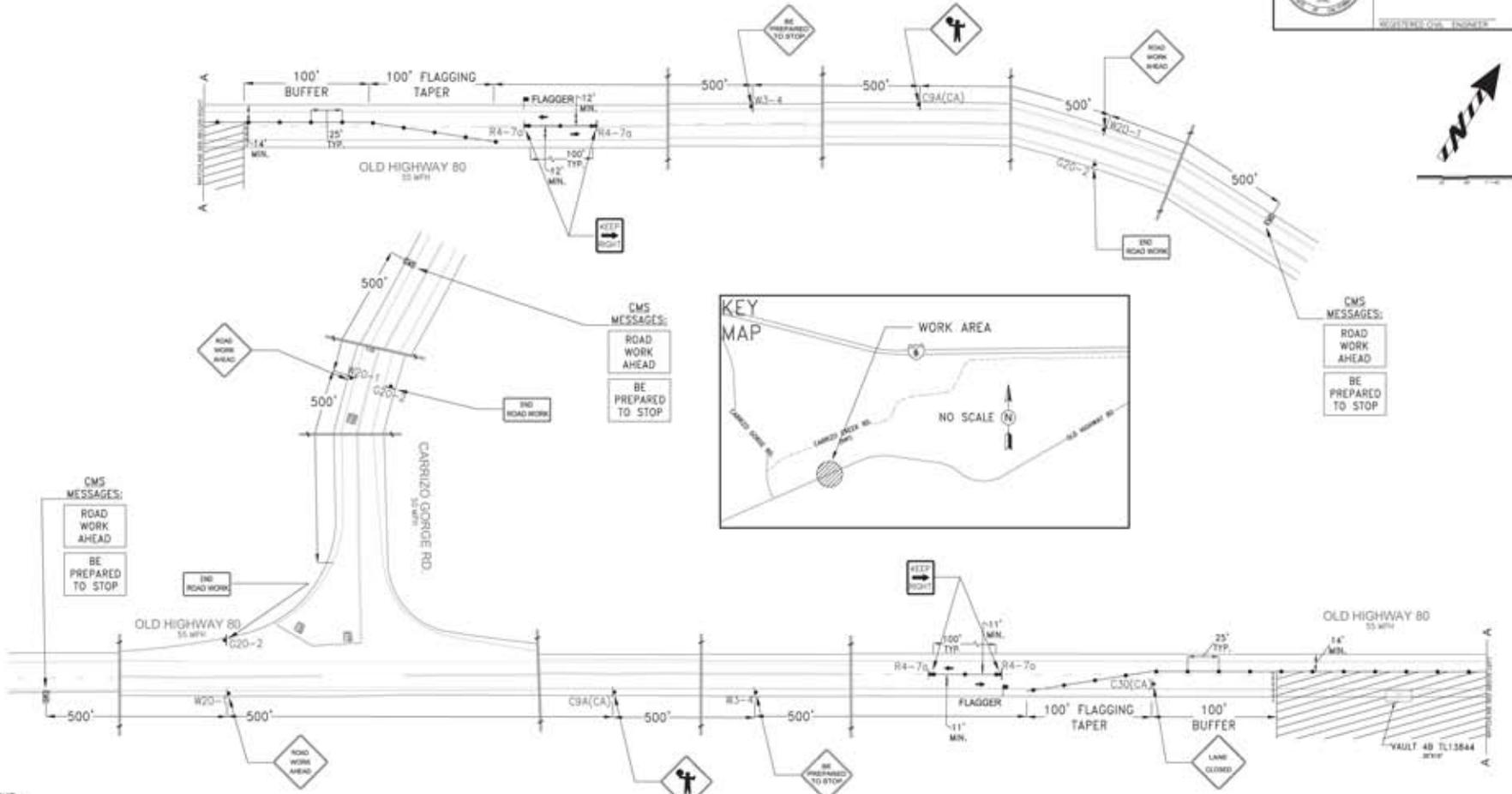
COUNTY OF SAN DIEGO PUBLIC DESIGN SECTION
 DATE:

COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 8000 OVERLAND AVENUE, SAN DIEGO, CA 92123-1298		RECOMMENDED BY: _____ DATE: _____	DESIGNED BY: _____ DATE: _____	CHECKED BY: _____ DATE: _____	APPROVED BY: _____ DATE: _____	PROJECT NO: TL13844 PROJECT NAME: SP91B-SP105B JACUMBA, CA PHASE: PHASE 6- TYPICAL FLAGGING	SCALE: _____ SHEET NO: _____ OF _____
		APPROVED BY: _____ DATE: _____	PROJECT NO: _____ PROJECT NAME: _____ PHASE: _____	SCALE: _____ SHEET NO: _____ OF _____			

© 2013 Traffic Control, Inc. All rights reserved. This drawing is the property of Traffic Control, Inc. and shall not be reproduced without the written consent of Traffic Control, Inc.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PROJECT NO.	DATE
ISSUE NO.	DATE
DATE	DATE
DATE	DATE



CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP

CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP

CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP

- LEGEND:**
- ★ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - + CONE/DELINEATOR
 - BARRICADE
 - ⚡ FLAGGER
 - SIGN
 - RAILROAD TRACKS
 - ◻ FLASHING ARROW SIGN
 - ◻ CHANGEABLE MESSAGE SIGN
 - ◻ WORK AREA
 - ◻ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.
LIC# 819076

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

DATE	BY	APPROVED	DATE
8/4/13	BRIAN DONALD		

BRIAN TABALIN
PROJECT NO.
8/4/13

REVISED BY: COUNTY OF SAN DIEGO PDM DESIGN SECTION DATE

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8000 OVERLAND AVENUE, SAN DIEGO, CA 92123-1290



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

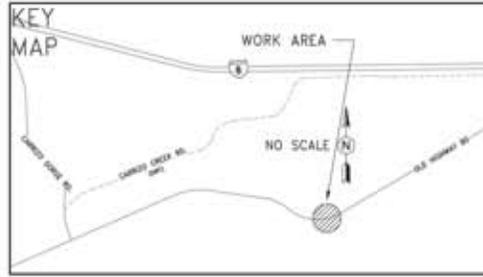
REVISIONS	BY	APPROVED	DATE	COORDINATE MARK

PROJECT NO.	DATE	ISSUE NO.	DATE
SP91B-SP105B	8/4/13	01	8/4/13
PHASE 7- VAULT 4B INSTALLATION			

© 2013 Traffic Control, Inc. All rights reserved. This drawing is the property of Traffic Control, Inc. and shall not be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Traffic Control, Inc.

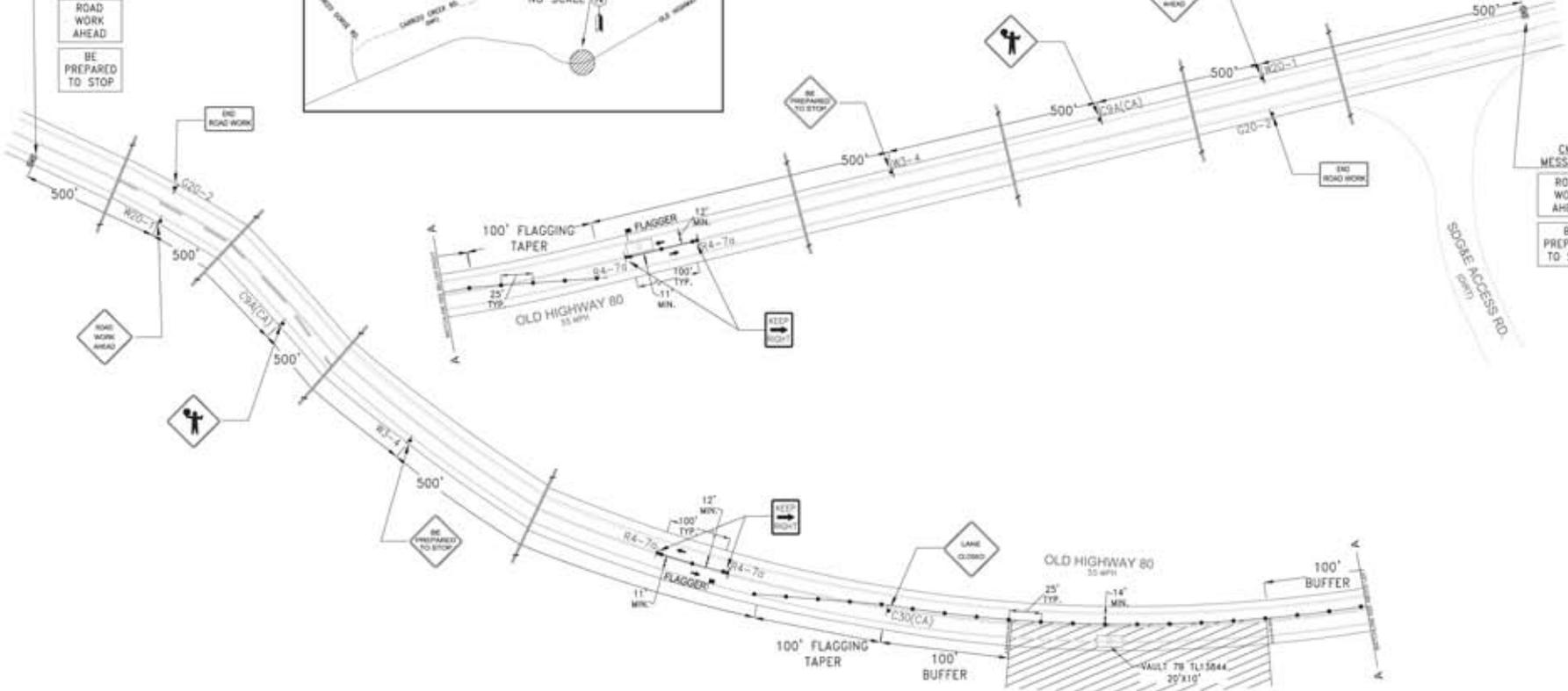
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

PLANS	BY	DATE



CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP

CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP



REVISIONS BY: COUNTY OF SAN DIEGO P&E DESIGN SECTION DATE

- LEGEND:**
- ★ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - + CONE/DELINEATOR
 - || BARRICADE
 - ⚡ FLAGGER
 - SIGN
 - ==== RAILROAD TRACKS
 - ◀ FLASHING ARROW SIGN
 - ◻ CHANGEABLE MESSAGE SIGN
 - ◻ WORK AREA
 - ⊞ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES
NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

CO's
TRAFFIC CONTROL, INC.
LIC# 819076

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-8200
FAX: (658) 259-0357

<p>COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 8000 OVERLAND AVENUE, SAN DIEGO, CA 92123-1298</p>			<p>RECOMMENDED BY: _____ DATE: _____</p> <p>APPROVED BY: _____ DATE: _____</p> <p><i>William T. Taylor, County Engineer</i></p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	DESCRIPTION				<p>BY: _____ DATE: _____</p> <p>COORDINATE NO.:</p> <table border="1"> <tr> <td>XXXX</td> <td>XX</td> <td>XXXX</td> <td>XX</td> </tr> </table> <p>JOB# 13844</p> <p>FILE# 13844</p>	XXXX	XX	XXXX	XX	<p>PROJECT NO.:</p> <p>TL13844 UNDERGROUND 138KV SP91B-SP105B JACUMBA, CA PHASE 10- VAULT 7B INSTALLATION</p>	<p>SCALE: _____</p> <p>SHEET NO. _____ OF _____</p>
NO.	DATE	DESCRIPTION															
XXXX	XX	XXXX	XX														

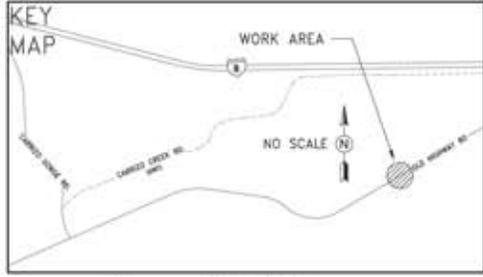
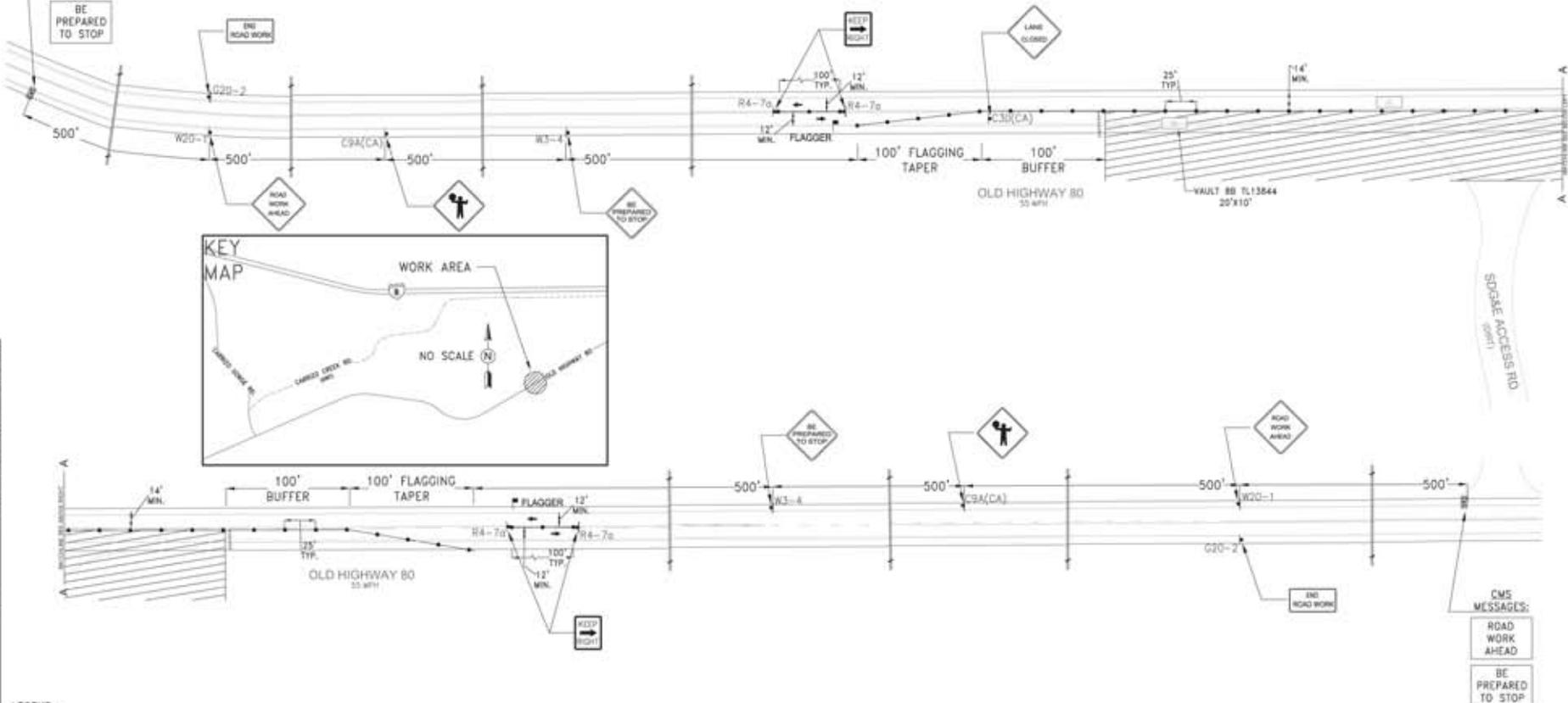
© 2008 Engineering/Construction Group, Inc. All rights reserved. No part of this document may be reproduced without written permission from Engineering/Construction Group, Inc.

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES



PLANS	BY	DATE

CMS MESSAGES:
ROAD WORK AHEAD
BE PREPARED TO STOP



- LEGEND:
- ★ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - + CONE/DELINEATOR
 - BARRICADE
 - ⚠ FLAGGER
 - SIGN
 - HHH RAILROAD TRACKS
 - ◻ FLASHING ARROW SIGN
 - ◻ CHANGEABLE MESSAGE SIGN
 - ◻ WORK AREA
 - ◻ SIGNALIZED INTERSECTION

NOTE: FLAGGERS TO MAINTAIN EYE CONTACT OR TWO-WAY RADIO COMMUNICATION AT ALL TIMES

NOTE: DURING PERIODS OF HIGH WINDS ALL SIGNS SHALL BE WEIGHTED WITH SANDBAGS OR ANCHORED TO PREVENT THE SIGNS FROM FALLING OVER.

DETA ENGINEERING	BRIAN YARBAN
DATE	DATE
BRIAN DONALD	8/6/13

CO's
TRAFFIC CONTROL, INC.
LIC# 819076

1221 S. 26th ST.
SAN DIEGO, CA 92113
OFFICE: (619) 239-6200
FAX: (658) 259-0357

REVISIONS BY: COUNTY OF SAN DIEGO PDM DESIGN SECTION DATE

P:\Data Engineering\Projects\Large\808\808_0813\808_0813_11.dwg 08/06/13 11:00am 5/4/13/13/13

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
8000 OVERLAND AVENUE, SAN DIEGO, CA 92123-1200



RECOMMENDED BY:	DATE:
APPROVED BY:	DATE:

REVISIONS	BY	APPROVED	DATE

COORDINATE NORTH	XXXX	XXXX	XXXX

TL13844 UNDERGROUND 138KV	SCALE: 1"=50'
SP91B-SP105B JACUMBA, CA	DATE: 8/6/13
PHASE 11- VAULT 88 TO ACCESS RD.	

ATTACHMENT C: SECTION 1 TRAFFIC CONTROL PLAN

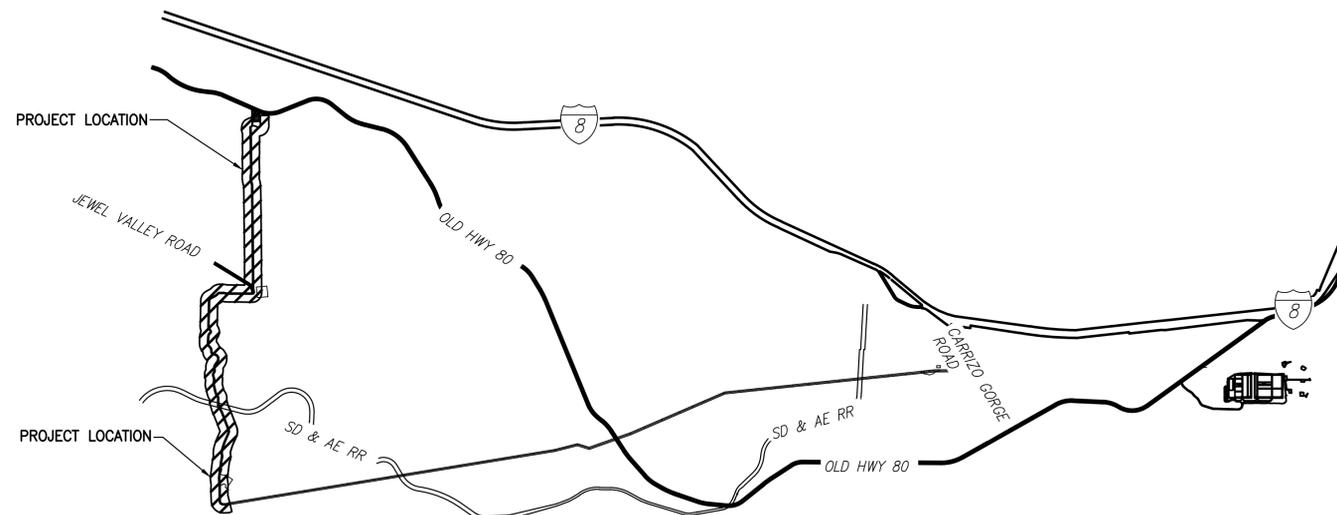
TRAFFIC CONTROL PLANS FOR CONSTRUCTION OF BOULEVARD SUBSTATION TO RISER POLE SP38 TL13844 TRENCH UNDERGROUND CONVERSION

TRAFFIC CONTROL GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE APPROVED PLANS AND APPROVED REVISIONS. ANY CHANGES OR REVISIONS THEREFROM SHALL BE APPROVED BY SDG&E.
- THIS TRAFFIC CONTROL PLAN SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF EACH OF THE FOLLOWING MANUALS: CALTRANS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND CALIFORNIA SUPPLEMENT; STANDARD SPECIFICATIONS FOR PUBLIC WORK, CONSTRUCTION, AND CITY AMENDMENTS, AND THE WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH) MANUAL.
- EXCEPT WHERE OTHERWISE SHOWN ON THE PLANS, ALL TRENCHES SHALL BE BACKFILLED OR TRENCH PLATED AT THE END OF EACH WORK DAY. THE TRENCH PLATE SHALL BE RECESSED AND TACK WELDED AND PLACED WITHIN THE EXISTING ROADWAY SUCH THAT THE TRENCH PLATE WILL NOT BE DISLODGED. CONTRACTOR SHALL MONITOR TRENCH PLATES DURING NON-WORKING HOURS TO ENSURE THAT THEY DO NOT BECOME DISLODGED. UPON COMPLETION OF EXCAVATION BACKFILL, THE CONTRACTOR SHALL PROVIDE A SATISFACTORY SURFACE FOR TRAFFIC. WHEN CONSTRUCTION OPERATIONS ARE NOT ACTIVELY IN PROGRESS, THE CONTRACTOR SHALL MAINTAIN ALL TRAVEL LANES, BIKE LANES, AND PEDESTRIAN WALKWAYS IN THE RIGHT-OF-WAY EXCEPT WHEN OTHERWISE SHOWN ON THE PLAN.
- THE CONTRACTOR SHALL REPAIR OR REPLACE ALL EXISTING IMPROVEMENTS WITHIN THE RIGHT-OF-WAY WHICH ARE NOT DESIGNATED FOR PERMANENT REMOVAL (TRAFFIC SIGNS, STRIPING, PAVEMENT MARKERS, PAVEMENT MARKINGS, LEGENDS, CURB MARKINGS, LOOP DETECTORS, TRAFFIC SIGNAL EQUIPMENT, ETC.) WHICH ARE REMOVED OR DAMAGED AS A RESULT OF OPERATION, REPAIRS, AND REPLACEMENTS; AND SHALL BE AT LEAST EQUAL TO EXISTING IMPROVEMENTS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON A CITY STREET TO SUPPLY, INSTALL, AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED, TO ENSURE THE SAFE MOVEMENT OF TRAFFIC, PEDESTRIANS, AND BICYCLISTS THROUGH OR AROUND THE WORK AREA, AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
- ALL ADVANCE WARNING SIGNS INSTALLATION SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SAFETY DEVICES SUCH AS BARRICADES, DELINEATORS, AND SIGNS. SAFETY DEVICES MUST BE IN GOOD CONDITION AND PROPERLY PLACED AS REQUIRED BY THE TRAFFIC CONTROL PLAN.
- UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CONTRACTOR NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE APPROVED PLANS AND APPROVED REVISIONS. ANY CHANGES OR REVISIONS THEREFROM SHALL BE APPROVED BY SDG&E.
- THE CONTRACTOR SHALL PROPERLY GRADE ALL TEMPORARY TRAVELWAYS TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING OF WATER. CONTRACTOR SHALL CONTROL SURFACE WATER TO AVOID DAMAGE TO ADJOINING PROPERTIES OR TO FINISHED WORK ON THE SITE AND SHALL TAKE REMEDIAL MEASURES TO PREVENT EROSION OF FRESHLY GRADED AREAS UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED TO THE SATISFACTION OF SDG&E.
- ALL TEMPORARY TRAVELWAYS SHALL BE CUT AND TRIMMED TO GRADE TO PRODUCE SMOOTH SURFACES AND UNIFORM CROSS SECTIONS. TEMPORARY TRAVELWAYS SHALL BE RE-GRADED TO THE FINAL GRADING DESIGN AFTER INSTALLATION. ALL STONES, ROOTS AND OTHER WASTE MATERIALS EXPOSED ON THE EXCAVATION OR EMBANKMENT SLOPES WHICH ARE LIABLE TO BECOME LOOSENEED, SHALL BE REMOVED AND DISPOSED OF.
- WHERE GRADING DOES NOT OCCUR, ALL EXISTING PLANT MATERIAL IS TO BE PROTECTED IN PLACE. NO CONSTRUCTION EQUIPMENT WILL BE ALLOWED TO TRAVEL THROUGH AND DAMAGE ANY OF THESE AREAS. ALL AREAS OF NATURAL MATERIAL SHALL BE FENCED UNDER THE DIRECTION OF THE PROJECT BIOLOGIST. CONTRACTOR WILL BE RESPONSIBLE TO REPAIR ANY AND ALL DAMAGE/IMPACTS TO THESE AREAS.
- THE CONTRACTOR SHALL ENFORCE ALL SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS, DURING THE COURSE OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE RESPECTIVE UTILITY COMPANIES PRIOR TO GRADING OR TRENCHING.
- IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE 1-800-422-4133, TWO DAYS BEFORE EXCAVATION.

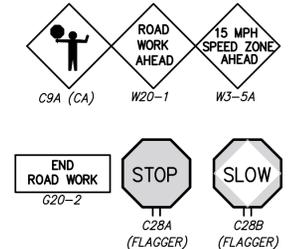


VICINITY MAP
NO SCALE

TRAFFIC CONTROL LEGEND:

- CONES AT SPACING INDICATED ON PLANS
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY TRAVELWAY
- SIGN ON TYPE III BARRICADE
- TRAFFIC CONTROL SIGNS, AS NOTED
- MINIMUM LANE WIDTH AS INDICATED
- FLAGGER, WITH SIGN NOTED

CONSTRUCTION SIGNS:



UNDERGROUND SERVICE ALERT
OF SOUTHERN CALIFORNIA
CALL: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

DRAWN BY:	DAA	E																			
DATE:	6/11/13	D																			
THO. BROS.		C																			
PROJ. NO.		B																			
CONST. NO.		A	XXXX	XXXX	ISSUED FOR APPROVAL		DAA													6/21/13	
TRAFFIC CONTROL																					
HORIZONTAL:	NONE																				
VERTICAL:	NONE	REV	BUDGET	CONST ORDER	CHANGE		DWN	CHKD	APPV	DATE											

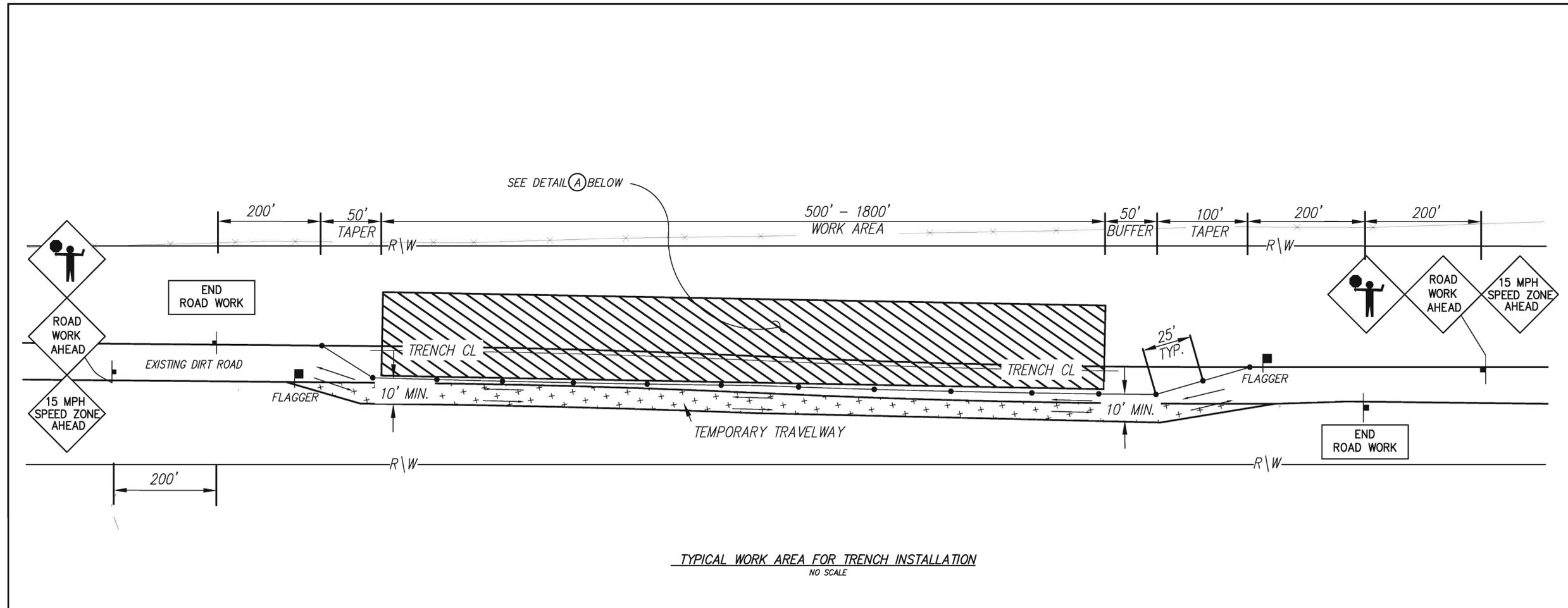
SDG&E SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING

TITLE SHEET
TL13844

SCALE SHEET 1 OF 3

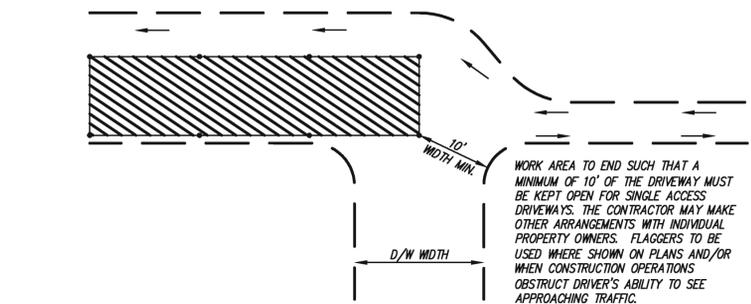
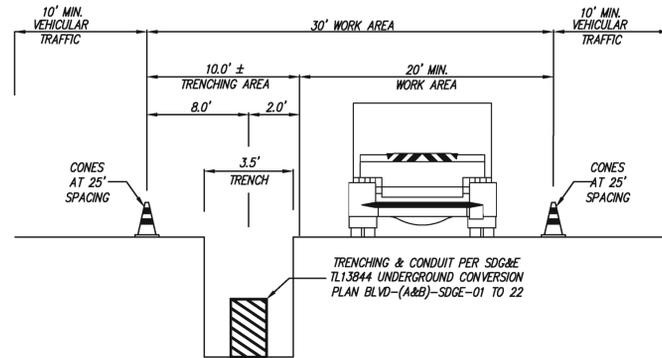
TRAFFIC CONTROL PLAN
BOULEVARD SUBSTATION-SP38
BOULEVARD, CA

DRAWING NUMBER
TCP-C-01



TRAFFIC CONTROL NOTES

1. ALL PORTABLE SIGNS TO BE ANCHORED WITH SANDBAGS.
2. STAGING SHALL CORRESPOND TO THE CONTRACTOR'S DAILY WORK AREA. ALL STAGING OPERATIONS SHALL PROVIDE ACCESS TO RESIDENTIAL DRIVEWAYS, AND CONFORM TO OTHER REQUIREMENTS OF THIS PLAN.
3. THE CONTRACTOR SHALL FOLLOW THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR RECOMMENDED SIGN SPACING FOR ADVANCE WARNING SIGNS AND RECOMMENDED TAPER LENGTH AND DEVICE SPACING FOR CHANNELIZING TAPERS.
4. DIMENSIONS OF WORK AREA MAY VARY DUE TO DIFFICULT TERRAIN. CONTRACTOR TO VERIFY ADEQUATE AREA BEFORE STAGING.



DRAWN BY:	DAA	E								
DATE:	6/11/13	D								
THO. BROS.		C								
PROJ. NO.		B								
CONST. NO.		A	XXXX	XXXX	ISSUED FOR APPROVAL	DAA	6/21/13			
TRAFFIC CONTROL HORIZONTAL:	NONE	REV	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPV	DATE	
TRAFFIC CONTROL VERTICAL:	NONE									

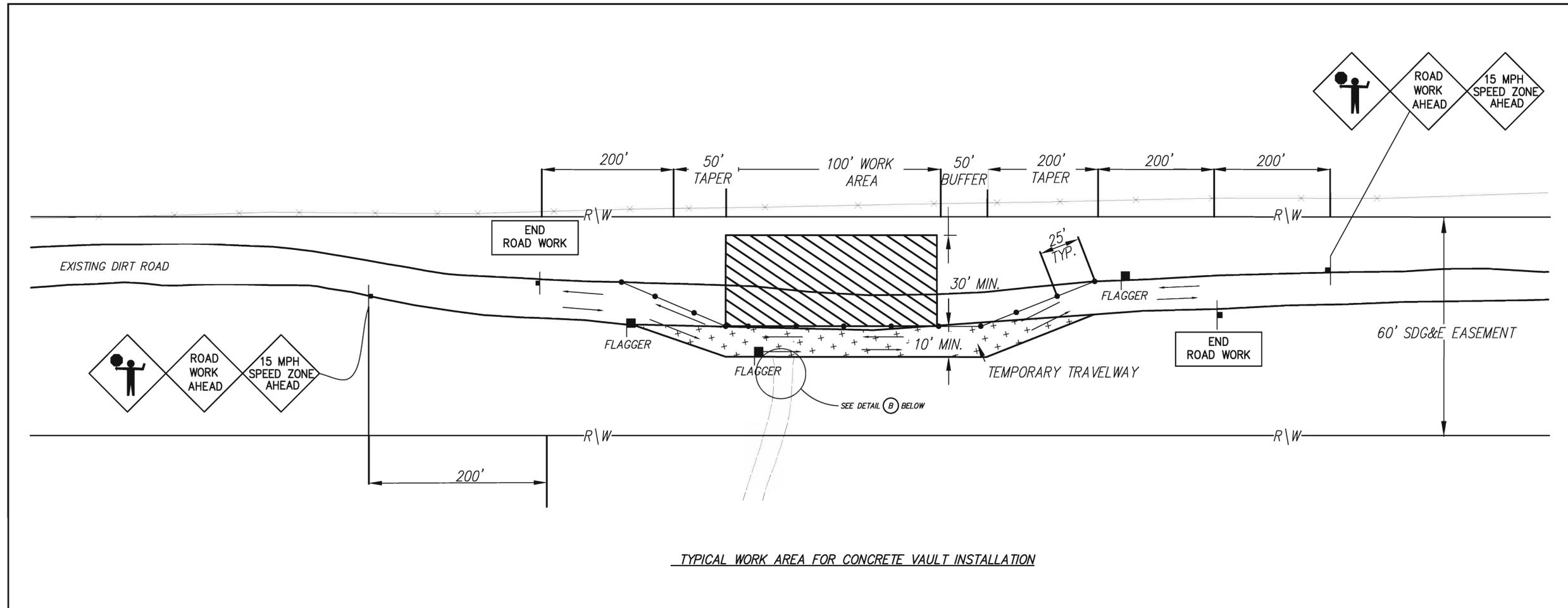
SDGE SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING

TRENCH TL13844

SCALE SHEET 2 OF 3

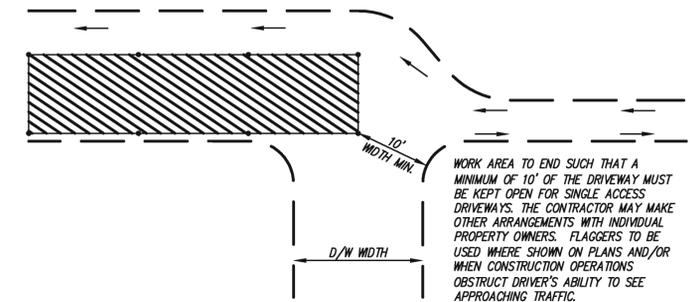
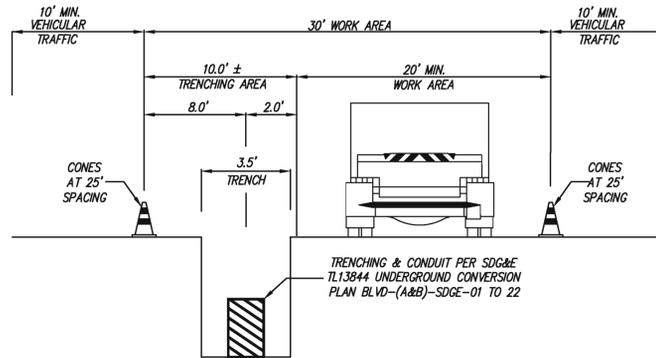
TRAFFIC CONTROL PLAN
BOULEVARD SUBSTATION-SP38
BOULEVARD, CA

DRAWING NUMBER
TCP-C-02



TRAFFIC CONTROL NOTES

1. ALL PORTABLE SIGNS TO BE ANCHORED WITH SANDBAGS.
2. STAGING SHALL CORRESPOND TO THE CONTRACTOR'S DAILY WORK AREA. ALL STAGING OPERATIONS SHALL PROVIDE ACCESS TO RESIDENTIAL DRIVEWAYS, AND CONFORM TO OTHER REQUIREMENTS OF THIS PLAN.
3. THE CONTRACTOR SHALL FOLLOW THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR RECOMMENDED SIGN SPACING FOR ADVANCE WARNING SIGNS AND RECOMMENDED TAPER LENGTH AND DEVICE SPACING FOR CHANNELIZING TAPERS.
4. DIMENSIONS OF WORK AREA MAY VARY DUE TO DIFFICULT TERRAIN. CONTRACTOR TO VERIFY ADEQUATE AREA BEFORE STAGING.



UNDERGROUND SERVICE ALERT
OF SOUTHERN CALIFORNIA
CALL TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

DRAWN BY:	DAA
DATE:	6/11/13
THO. BROS.	
PROJ. NO.	-
CONST. NO.	-
TRAFFIC CONTROL HORIZONTAL:	NONE
TRAFFIC CONTROL VERTICAL:	NONE

E									
D									
C									
B									
A									
REVISION	BUDGET	CONST ORDER	CHANGE	DWN	CHKD	APPV	DATE	DAA	6/21/13

SDGE SAN DIEGO GAS & ELECTRIC TRANSMISSION ENGINEERING
VAULTS TL13844
SCALE SHEET 3 OF 3

TRAFFIC CONTROL PLAN
BOULEVARD SUBSTATION-SP38
BOULEVARD, CA
DRAWING NUMBER
TCP-C-03

ATTACHMENT D: DRAFT CARRIZO GORGE & OLD HIGHWAY 80 CURB-GRADE PLAN

EAST COUNTY SUBSTATION PROJECT

IMPROVEMENTS ALONG CARRIZO GORGE & OLD HWY 80

SDG&E MAINTENANCE ROAD TRANSITION PAVING PLANS

GENERAL NOTES

- A PERMIT SHALL BE OBTAINED FROM THE SAN DIEGO COUNTY DEPARTMENT OF PUBLIC WORKS FOR ANY WORK WITHIN THE COUNTY PUBLIC STREET RIGHT-OF-WAY.
- THE STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH SAN DIEGO COUNTY STANDARDS AND AS APPROVED BY THE COUNTY'S MATERIALS LABORATORY.
- APPROVAL OF THESE IMPROVEMENT PLANS AS SHOWN DOES NOT CONSTITUTE APPROVAL OF ANY CONSTRUCTION OUTSIDE THE PROJECT BOUNDARY.
- IMPORT MATERIAL SHALL BE OBTAINED FROM A LEGAL SITE.
- ALL SLOPES OVER THREE FEET IN HEIGHT WILL BE PLANTED IN ACCORDANCE WITH SAN DIEGO COUNTY SPECIFICATIONS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY AGENCIES, ADVISE THEM OF THE PROPOSED IMPROVEMENTS AND BEAR THE COST OF RELOCATIONS, IF NEEDED.
- THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK. NOTICE OF PROPOSED WORK SHALL BE GIVEN TO THE FOLLOWING AGENCIES: SAN DIEGO GAS & ELECTRIC, PACIFIC BELL, CABLE TV, WATER DISTRICT, AND SANITATION DISTRICT.
- A SOILS REPORT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
- LOCATION AND ELEVATION OF IMPROVEMENTS TO BE MET BY WORK TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR WILL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
- ALL MAJOR SLOPES SHALL BE ROUNDED INTO EXISTING TERRAIN TO PROVIDE A CONTOURED TRANSITION FROM CUT OR FILL FACES TO NATURAL GROUND AND ABUTTING CUT OR FILL SURFACES.
- NOTWITHSTANDING THE MINIMUM STANDARDS SET FORTH IN THE GRADING ORDINANCE AND NOTWITHSTANDING THE APPROVAL OF THESE GRADING PLANS, THE PERMITTEE IS RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY. NO PERSON SHALL EXCAVATE ON LAND SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJOINING PUBLIC STREET, SIDEWALK ALLEY, FUNCTION OF ANY SEWAGE DISPOSAL SYSTEM, OR ANY OTHER PUBLIC OR PRIVATE PROPERTY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM SETTLING, CRACKING, EROSION SILTING, SCOUR OR OTHER DAMAGE WHICH MIGHT RESULT FROM THE GRADING DESCRIBED ON THIS PLAN. THE COUNTY WILL HOLD THE PERMITTEE RESPONSIBLE FOR CORRECTION OF NON-DEPICTED IMPROVEMENTS WHICH DAMAGE ADJACENT PROPERTY.
- POWER SOURCES AND RUNS SERVING STREET LIGHTS SHALL BE SHOWN ON THE "AS-BUILT" IMPROVEMENT DRAWINGS. ALL SOURCES SHALL BE LOCATED WITHIN THE DEDICATED RIGHT-OF-WAY, OR WITHIN EASEMENTS DEDICATED TO THE COUNTY OF SAN DIEGO.
- SPECIAL CONDITION: IF ANY ARCHEOLOGICAL RESOURCES ARE DISCOVERED ON THE SITE OF THIS GRADING DURING GRADING OPERATIONS, SUCH OPERATIONS WILL CEASE IMMEDIATELY, AND THE PERMITTEE WILL NOTIFY THE DIRECTOR OF PUBLIC WORKS OF THE DISCOVERY. GRADING OPERATIONS WILL NOT COMMENCE UNTIL THE PERMITTEE HAS RECEIVED WRITTEN AUTHORITY FROM THE DIRECTOR OF PUBLIC WORKS.
- PRIVATE ROAD IMPROVEMENTS SHOWN HEREON ARE FOR INFORMATION ONLY. COUNTY OFFICIALS SIGNATURE HEREON DOES NOT CONSTITUTE APPROVAL OR RESPONSIBILITY OF ANY KIND FOR THE DESIGN OR CONSTRUCTION OF THESE PRIVATE IMPROVEMENTS. (IF APPLICABLE)
- FINISHED GRADING SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER AND INSPECTED BY THE COUNTY ENGINEER FOR DRAINAGE CLEARANCE.
- CONTRACTOR TO PROVIDE R-VALUE TEST RESULTS.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 47033 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATION BY THE COUNTY OF SAN DIEGO IS CONFINED TO REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

BY: ALISA S. VALPANDO DATE: _____
RCE NO. 47945 EXPIRES: _____

CONTRACTOR'S NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD COUNTY OF SAN DIEGO HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF COUNTY OF SAN DIEGO PROFESSIONALS.

ENGINEER'S NOTE

UNAUTHORIZED CHANGES & USES: THE ENGINEER OF WORK PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

BASIS OF COORDINATES

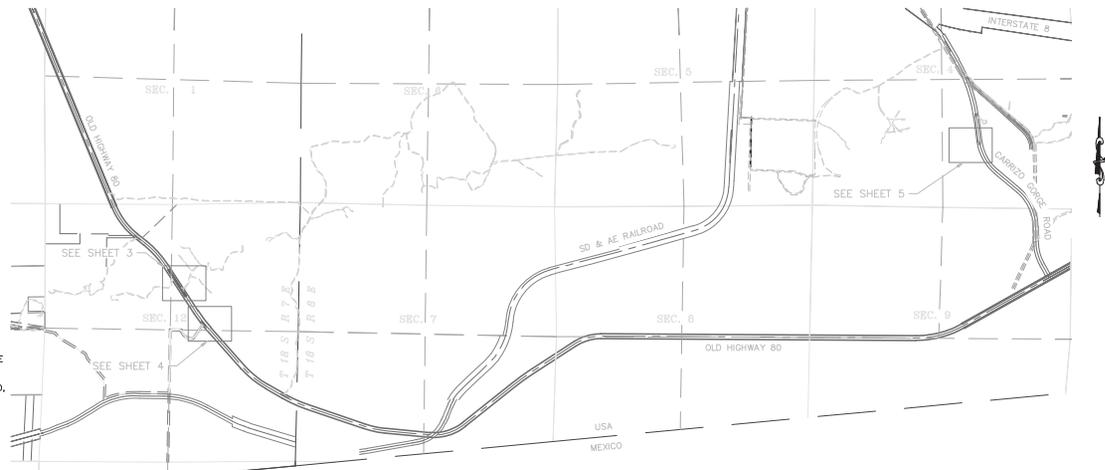
THE BASIS OF COORDINATES OF THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM, ZONE 6, NAD 83 (1992). THE COORDINATES ARE DISPLAYED IN US SURVEY FEET. THE BASIS OF ELEVATIONS IS NAVD 88. ELEVATIONS ARE DISPLAYED IN US SURVEY FEET.

TOPOGRAPHY

SITE TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY INLAND AERIAL SURVEYS, INC. (PROJECT NO. 08-77231) FOR NOLTE & ASSOCIATES DATED FEBRUARY 26, 2008 AND JANUARY 12, 2012. CONTOURS SHOWN ON THIS PLAN WERE ADDED TO ORIGINAL AERIAL TONS BY A FIELD SURVEY DONE BY NOLTE & ASSOCIATES ON AUGUST 20, 2012 AND BY HUNSAKER & ASSOCIATES ON JANUARY 30, 2013.

LEGAL DESCRIPTION

THIS PRIVATE ACCESS ROAD IS A PORTION OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 17 SOUTH, RANGE 7 EAST, SAN BERNARDINO MERIDIAN IN THE OF COUNTY OF SAN DIEGO, CALIFORNIA.



KEY MAP
SCALE: 1" = 1,200'

IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE, ACCORDING TO THESE PLANS, THE CURRENT SAN DIEGO COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR IMPROVEMENTS OF SUBDIVISION STREETS AND STANDARD REFERENCE DRAWINGS. WATER FACILITIES WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND DRAWINGS OF THE WATER DISTRICT.

AC	ASPHALT CONCRETE PAVING		PROPOSED ASPHALT
BP	BEGINNING POINT		
CL	CENTERLINE		RIGHT-OF-WAY LINE
EG	EXISTING GRADE		CENTERLINE
EP	EDGE OF PAVEMENT		TRAFFIC SIGN
FG	FINISHED GRADE		EDGE OF PAVEMENT
FL	FLOW LINE		
GB	GRADE BREAK		
EP	EDGE OF PAVEMENT		
RD	ROAD		PROPOSED CONTOURS
EA	EACH		EXISTING CONTOURS
RP	RADIUS POINT		EXITING U.G. FIBER LINE
ROW	RIGHT OF WAY		
GB	GRADE BREAK		
ETW	EDGE OF TRAVEL WAY		
EX	EXISTING		
RC	RELATIVE COMPACTION		RIP RAP PER SDRSO D-40 & PLAN

SHEET INDEX:

1	TITLE SHEET
2	TRAFFIC CONTROL DETAILS
3-5	TRANSITION PAVING PLANS

STORMWATER TREATMENT CONTROL BMPs			
DESCRIPTION/TYPE	SHEET	MAINTENANCE CATEGORY	REVISIONS
N/A			

*BMP'S TO BE INSTALLED PER PROJECT SWPPP AND WDO NO. 737C365199

UNDERGROUND SERVICE ALERT

CALL-TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

"CAUTION":
REMEMBER THAT THE USA CENTER NOTIFIES ONLY THOSE UTILITIES BELONGING TO THE CENTER. THERE COULD BE OTHER UTILITIES

HUNSAKER & ASSOCIATES
SAN DIEGO, INC.

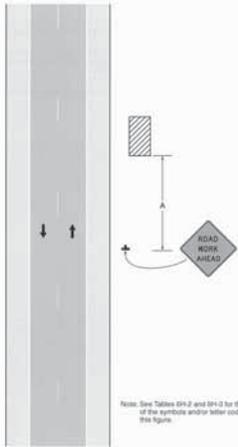
PLANNING 9747 Miraflores Street
DIVERSIFIED San Diego, CA 92121
SLEWING 619-591-0000

LEGAL DESCRIPTION	ENGINEER OF WORK	COUNTY APPROVED CHANGES
ASSESSORS' PARCEL NO.	NO.	DESCRIPTION
RECORD PLAN	APPROVED BY	DATE
NAME: ALISA S. VALPANDO		
PHONE NO. 608-558-4500		
ADDRESS: 3707 IMPALES STREET SAN DIEGO, CA 92108		

BENCH MARK	
NAME: 11118	LOCATION: N 1838891.823 E 6422319.031
DESCRIPTION: USBM	ELEVATION: 2442.400' DATUM: NAVD 88
NAME: HOT SPRINGS	LOCATION: N 1804471.890 E 6582919.609
DESCRIPTION: USBM	ELEVATION: 2799.320' DATUM: NAVD 88
NAME: 000710	LOCATION: N 1846863.196 E 6638006.483
DESCRIPTION: USBM	ELEVATION: 426.958' DATUM: NAVD 88

PRIVATE CONTRACT	
SHEET	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS
IMPROVEMENT PLAN FOR: SDG&E MAINTENANCE ROADS TITLE SHEET	
RECOMMENDED FOR APPROVAL:	APPROVED:
DESIGNED BY: CG	CHECKED BY: CG
DATE: 12/21/13	APPROVAL DATE: 12/21/13

Figure 6H-1. Work Beyond the Shoulder (TA-1)



Typical Application 1

Notes for Figure 6H-1—Typical Application 1
Work Beyond the Shoulder

- Guidance:
- If the work space is in the median of a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.
- Options:
- The ROAD WORK AHEAD sign may be replaced with other appropriate signs such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.
 - The ROAD WORK AHEAD sign may be omitted where the work space is behind a barrier, more than 24 inches behind the curb, or 15 feet or more from the edge of any roadway.
 - For short-term, short duration or mobile operation, all signs and channelizing devices may be illuminated if a vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
 - Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.
- Standard:
- Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Table 6H-2. Meaning of Symbols on Typical Application Diagrams

	Arrow board		Dismount vehicle
	Arrow board support or trailer (shown facing down)		Sign (shown facing left)
	Changeable message sign or support trailer		Surveyor
	Channelizing device		Temporary barrier
	Crash cushion		Temporary barrier with warning light
	Direction of temporary traffic detour		Traffic or pedestrian signal
	Direction of traffic		Type 3 Garbage
	Flagger		Type 3 Garbage
	High-level warning device (flag tree)		Warning light
	Longitudinal channelizing device		Work space
	Luminaire		Work vehicle
	pavement markings that should be removed for a long term project		

Table 6H-3. Meaning of Letter Codes on Typical Application Diagrams

Road Type	A	B	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	200 feet	100 feet	200 feet
Rural	300 feet	100 feet	400 feet
Expressway / Freeway	1,000 feet	1,000 feet	2,000 feet

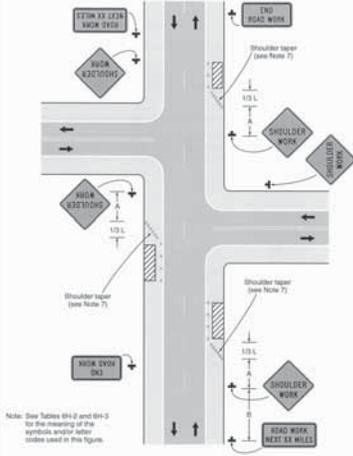
* Speed category to be determined by highway agency
 * The minimum spacing (A, B, and C) and the minimum number of signs (B) is shown in this table. The minimum number of signs from the combination of part of distances on the far right. The B distance is the distance between the first and second signs. The C distance is the distance between the second and third signs. (The "A" sign is the sign at a three sign area that is closest to the TTC area. The "B" sign is the sign that is furthest upstream from the TTC area.)

Table 6H-4. Formulas for Determining Taper Length

Speed (S)	Taper Length (L) in feet
40 mph or less	$L = \frac{S^2}{2}$
40 mph or more	$L = 10S$

Where: L = taper length in feet
 S = speed in feet per hour
 * - posted speed limit, or 40 mph (20 mph) speed limit, whichever is the greater.
 * - posted speed limit, or 40 mph (20 mph) speed limit, whichever is the greater.

Figure 6H-3. Work on the Shoulders (TA-3)

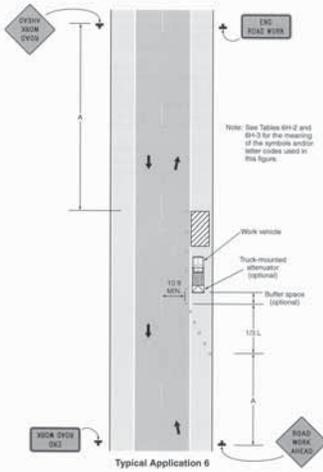


Typical Application 3

Notes for Figure 6H-3—Typical Application 3
Work on the Shoulders

- Guidance:
- A SHOULDER WORK sign should be placed on the left side of the roadway for a divided or one-way street and if the left shoulder is affected.
- Options:
- When a road sign may be used instead of SHOULDER WORK signs.
 - The SHOULDER WORK AHEAD sign on an intersecting roadway may be omitted when drivers emerging from that roadway will maintain another advance warning sign prior to this activity area.
 - For short duration operations of 60 minutes or less, all signs and channelizing devices may be illuminated if a vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
 - Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.
- Standard:
- Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.
 - When posted shoulders having a width of 1 foot or more are closed, at least one advance warning sign shall be used. In addition, channelizing devices shall be used to close the shoulder to advance to determine the beginning of the work zone and direct vehicular traffic to remain within the trenched area.

Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)

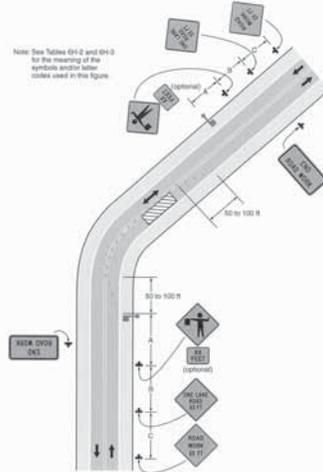


Typical Application 6

Notes for Figure 6H-6—Typical Application 6
Shoulder Work with Minor Encroachment

- Guidance:
- All lanes should be a minimum of 10 feet in width as measured to the next face of the channelizing devices.
 - The treatment should be used on a minor road having low speeds. For higher-speed traffic conditions, a lane closure should be used.
- Options:
- For short-term use on low-volume, low-speed roadways with vehicular traffic that does not include longer and wider heavy commercial vehicles, a minimum lane width of 9 feet may be used.
 - When the opposite shoulder is suitable for carrying vehicular traffic and of adequate width, lanes may be shifted by use of closely-spaced channelizing devices, provided that the minimum lane width of 10 feet is maintained.
 - Additional advance warning may be appropriate, such as a ROAD NARROWS sign.
 - Temporary traffic barriers may be used along the work space.
 - The shadow vehicle may be omitted if a taper and channelizing devices are used.
 - A truck-mounted attenuator may be used on the shadow vehicle.
 - For short-duration work, the taper and channelizing devices may be omitted if a shadow vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
 - Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.
- Standard:
- Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies. Signs legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.
 - Shadow and work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights.
 - Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Figure 6H-10. Lane Closure on a Two-Lane Road Using Flaggers (TA-10)

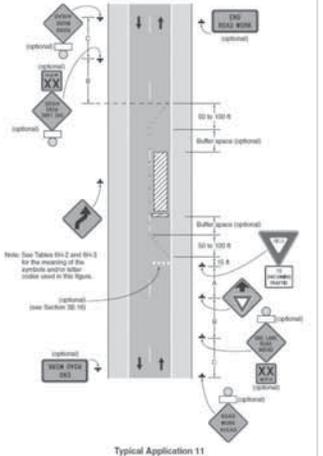


Typical Application 10

Notes for Figure 6H-10—Typical Application 10
Lane Closure on a Two-Lane Road Using Flaggers

- Options:
- For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).
 - The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short-duration operations.
 - Flashing warning lights and/or flags may be used to call attention to the advance warning signs. A BE PREPARED TO STOP sign may be added to the sign series.
 - The buffer space should be extended so that the two-way traffic taper is placed before a horizontal (or even vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.
- Guidance:
- At night, flagger stations shall be illuminated, except in emergencies.
- Standard:
- When used, the BE PREPARED TO STOP sign should be located between the Flagger sign and the ONE LANE ROAD sign.
 - When a grade crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the grade crossing, the TTC zone should be extended so that the transition area precedes the grade crossing.
 - When a grade crossing equipped with active warning devices exists within the activity area, provisions should be made for keeping flaggers informed as to the activation status of these warning devices.
 - When a grade crossing exists within the activity area, drivers operating on the left-hand side of the normal center line should be provided with comparable warning devices as for drivers operating on the right-hand side of the normal center line.
 - Early coordination with the railroad company or light rail transit agency should occur before work starts.
- Option:
- A flagger or a sworn law enforcement officer may be used at the grade crossing to minimize the probability that vehicles are stopped within 15 feet of the grade crossing, measured from both sides of the outside curb.

Figure 6H-11. Lane Closure on a Two-Lane Road with Low Traffic Volumes (TA-11)



Typical Application 11

Notes for Figure 6H-11—Typical Application 11
Lane Closure on a Two-Lane Road with Low Traffic Volumes

- Options:
- This TTC zone application may be used as an alternate to the TTC application shown in Figure 6H-10 (using flaggers) when the following conditions exist:
 - Vehicle traffic volumes are such that sufficient gaps exist for vehicular traffic that meet yield.
 - Road users from both directions are able to see approaching vehicular traffic through and beyond the work zone and have sufficient visibility of approaching vehicles.
 - The Type B flashing warning lights may be placed on the ROAD WORK AHEAD and the ONE LANE ROAD AHEAD signs whenever a night lane closure is necessary.

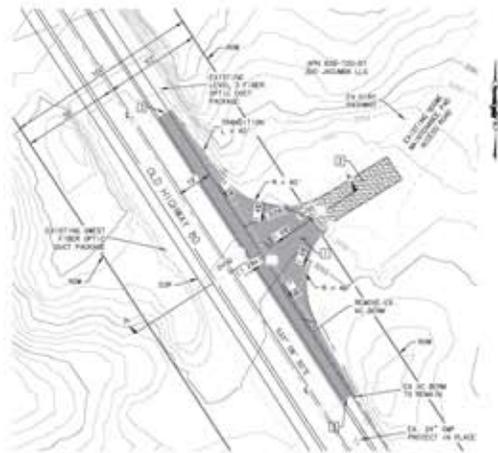
HUNSAKER & ASSOCIATES
 SAN DIEGO, CALIFORNIA
 REGISTERED PROFESSIONAL ENGINEER
 No. 4796
 Exp. 12/31/13
 CIVIL
 ADDRESS: 9707 MAPLES STREET
 SAN DIEGO, CA 92121

RECORD PLAN
 NAME: ALISA S. VALPANDO
 R.C.E.
 DATE:

ENGINEER OF WORK
 COUNTY APPROVED CHANGES
 NO. DESCRIPTION APPROVED BY DATE

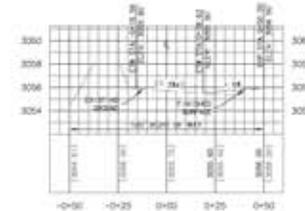
BENCH MARK
 NAME: H116
 LOCATION: N 1838891.823 E 6422219.031
 DESCRIPTION: USBM
 ELEVATION: 2442.400' DATUM: NAVD_88
 NAME: HOT SPRINGS
 LOCATION: N 1804471.890 E 6582919.609
 DESCRIPTION: USBM
 ELEVATION: 2299.320' DATUM: NAVD_88
 NAME: SCOTTLIO
 LOCATION: N 1846863.196 E 6638006.483
 DESCRIPTION: USBM
 ELEVATION: 476.958' DATUM: NAVD_88

PRIVATE CONTRACT
 SHEET 2 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 5 SHEETS
 IMPROVEMENT PLAN FOR:
SDG&E MAINTENANCE ROADS TRAFFIC CONTROL DETAILS
 RECOMMENDED FOR APPROVAL: APPROVED:
 DESIGNER OF WORK: JAMES H. WILSON, INC. CHECKED BY: APPROVED PLAN NO.
 DATE: 11/11/13 EP: DATE: APPROVAL DATE:

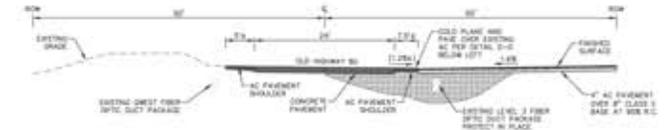


HORIZONTAL CENTERLINE DATA				
SEGMENT	START STATION	END STATION	BEARING/DELTA ANGLE	DISTANCE
L1	0+00.00	0+00.00	N67°10' N7Y	0.00'

POINT DATA TABLE				
NUMBER	STATE PLANE NORTHING	STATE PLANE EASTING	ELEVATION	DESCRIPTION
1	1,800,913.26	6,977,402.10	2,226.90'	BS
2	1,800,916.34	6,977,402.80	2,226.90'	PS
3	1,800,914.10	6,977,404.80	2,226.90'	PS
4	1,800,920.46	6,977,409.70	2,226.90'	PS
5	1,800,913.86	6,977,414.80	2,226.91'	PS
6	1,800,480.80	6,977,419.21	2,226.20'	PS
7	1,800,430.31	6,977,421.28	2,224.41'	PS
8	1,800,407.68	6,977,423.00	2,224.70'	BS
9	1,800,484.24	6,977,423.00	2,224.70'	BS
10	1,800,224.24	6,977,428.17	2,226.70'	BS
11	1,800,221.84	6,977,414.00	2,226.90'	PS
12	1,800,280.41	6,977,400.00		ROAD POINT
13	1,800,480.28	6,977,401.00		ROAD POINT
14	1,800,520.70	6,977,402.40		PS



CROSS PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'



SECTION A-A
SCALE: 1" = 10'

ACCESS TO OLD HIGHWAY 80
SCALE: 1" = 30'

QUANTITIES

- 1 PAVEMENT SECTION 2,980 SF
- 2 CONSTRUCTION ENTRANCE 721 SF
- 3 SARKUT 10 LF

ESTIMATED QUANTITIES

- CUT: 0 CY
- FILL: 27 CY
- REIN: 27 CY

DISTURBED AREA

- ROAD: 2,980 SF

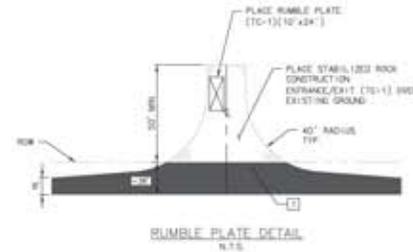
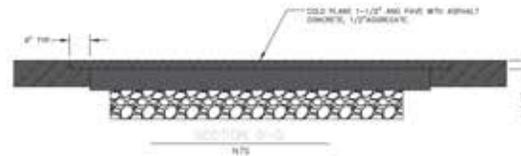
LENGTH OF ACCESS ROAD: 39 LF

CONSTRUCTION NOTE:

1. CONSTRUCT 4" ASPHALT CONCRETE OVER 8" CLASS 4 AGGREGATE BASE. REQUIRES COUNTY OF SD LAB APPROVAL AND 6-VLUE TESTING WITH REPORT TO COUNTY OF SD LAB PRIOR TO CONSTRUCTION.
2. CONSTRUCT STABILIZED CONSTRUCTION APPROACH ENTRANCE PER CD-1.
3. SARKUT EXISTING AC PAVEMENT AND JOIN TO EXISTING CONCRETE PANELS.
4. PROVIDE CONSTRUCTION TRAFFIC CONTROL AS APPROPRIATE. TA-6, TA-10 OR TA-11 RESTORE TO TWO LANE OPERATION AT NIGHT. TA-1, TA-3, OR TA-6 AT NIGHT AS APPROPRIATE PER SETING ON SHEET CD-2.

NOTE:

1. THE PAVEMENT STRUCTURAL SECTION SUBGRADE SHALL BE PREPARED AS FOLLOWS: 1/2 INCHES OF SUBGRADE SHALL BE SCARIFIED AND RECOMPACTED TO 98% RELATIVE COMPACTION PER NEW DIBEST. IN ADDITION THE SUBGRADE SHOULD BE PROOF ROLLED TO ELIMINATE PLUMPING OF SUBGRADE.
2. STABILIZED ROCK SHALL BE CRUSHED AGGREGATE GREATER THAN 3" BUT SMALLER THAN 6" COMPACT TO FILL JOG SPACES TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
3. ANGLE OF DEPARTURE BETWEEN OLD HIGHWAY 80 AND SDC&E MAINTENANCE ROAD ACCESS ROAD IS 2.88 WHICH IS LESS THAN THE MAXIMUM ANGLE OF DEPARTURE OF 2.08 FOR SECTION 6.7N OF THE COUNTY OF SAN DIEGO PUBLIC STANDARDS (2012).
4. 20:1 PER STORM WATER BMP HARD BIOD. ROCK SHALL BE COMPACTED PER NOTE ABOVE.
5. EXISTING DRAINAGE FACILITIES (DITCHES, CULVERTS, DRAINS, TRENCHES, ETC.) IN THE ROAD RIGHT-OF-WAY TO BE PROTECTED IN PLACE OR RESTORED IN KIND.



INSPECTION:

TO REQUEST AN INSPECTION, CALL PRIVATE DEVELOPMENT CONSTRUCTION INSPECTION DURING NORMAL BUSINESS HOURS AT (619) 584-3165 AT LEAST 24 HOURS BEFORE START AND FINISH OF WORK. WHEN CALLING FOR AN INSPECTION, REFER TO THE COMPUTER GENERATED TRAFFIC PERMIT NUMBER AND THE JOB SITE ADDRESS OF YOUR SITE. IN MOST CASES, CONSTRUCTION INSPECTION REQUIRES ONE (1) WORKING DAY NOTICE FOR INSPECTIONS. WE MAY NOT BE ABLE TO PROVIDE NEXT DAY INSPECTIONS IN SOME OF THE MORE REMOTE AREAS OF THE COUNTY OF SAN DIEGO. PLEASE VERIFY WITH THE PERSON TAKING THE INSPECTION REQUEST WHAT DAY THE INSPECTOR WILL BE OUT TO THE SITE.



LEGAL DESCRIPTION
ASSESSORS PARCEL NO. _____
RECORD PLAN _____
NAME: _____
R.C.E. _____
DATE: _____

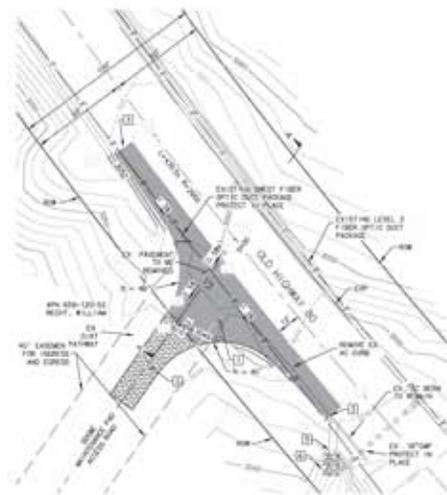


NAME: ALVA S. HUNSAKER
PHONE NO. 619-584-3165
ADDRESS: 6100 BAYVIEW STREET
SAN DIEGO, CA 92121

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION	APPROVED BY	DATE

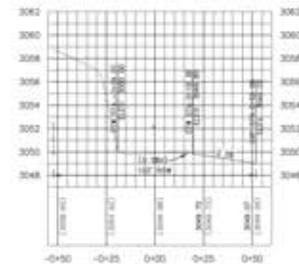
BENCH MARK	
NAME: 22118	LOCATION: N. 1838891.803 E. 8822219.821
DESCRIPTION: UBM	ELEVATION: 2842.630 DATE: 3/26/08
NAME: 202120202	LOCATION: N. 1804421.892 E. 8882518.809
DESCRIPTION: UBM	ELEVATION: 2299.320 DATE: 3/26/08
NAME: 20071410	LOCATION: N. 1838881.188 E. 8826008.483
DESCRIPTION: UBM	ELEVATION: 278.938 DATE: 3/26/08

PRIVATE CONTRACT	
PROJECT NO. _____	CITY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS
IMPROVEMENT PLAN FOR: SDC&E MAINTENANCE ROAD OLD HIGHWAY 80 ENTRANCE TRANSITION PAVING	
PREPARED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
APPROVED FOR BY: _____	DATE: _____

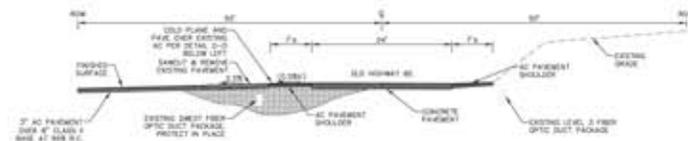


HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
1,2	840.00	854.00	S87°20'30"W		14.00'

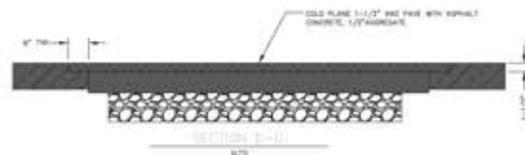
POINT DATA TABLE				
NUMBER	STATE PLANE NORTHING	STATE PLANE EASTING	ELEVATION	DESCRIPTION
14	1,804,714.30	6,370,886.10	3,048.80'	PS
15	1,804,708.10	6,370,886.70	3,048.12'	PS
16	1,804,701.71	6,370,883.30	3,048.80'	PS
17	1,804,700.98	6,370,911.97	3,048.81'	PS
18	1,804,701.30	6,370,937.24	3,049.14'	PS
19	1,804,807.04	6,370,906.12	3,050.12'	PS
20	1,804,848.18	6,370,880.52	3,050.74'	PS
21	1,804,850.42	6,370,886.76	3,050.81'	PS
22	1,804,850.39	6,370,941.70	3,048.89'	PS
23	1,804,786.43	6,370,930.82	3,048.89'	PS
24	1,804,701.63	6,370,971.46	3,049.07'	PS
25	1,804,786.34	6,370,973.19	3,049.07'	PS
26	1,804,707.83	6,370,974.22	3,049.07'	PS
27	1,804,786.30	6,370,974.76	3,049.07'	PS



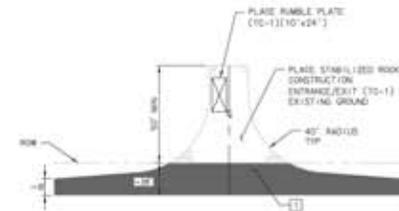
CROSS SECTION PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'



CROSS SECTION 1-1
SCALE: 1" = 10'



CROSS SECTION 2-1
N.T.S.



BUMBLE PLATE DETAIL
N.T.S.

- QUANTITIES**
- 1) PAVEMENT SECTION 8117 SF
 - 2) CONSTRUCTION (ENTRANCE) 797 SF
 - 3) SANDLOT 80 LF
 - 4) SPILLWAY (FOR 3-22) 30 LF
 - 5) 8" P-40P 114 CY
 - 6) NO. 2 BAKING ROCK CLASS 34 1 FT (FOR D-40, TYPE 1)
- EARTHWORK QUANTITIES**
- CL1 28 CY
 - FILL 1 CY
 - NET 25 CY
- DISTURBED AREA**
ROAD 3228 SF
- LENGTH OF ACCESS ROAD = 40 LF

- CONSTRUCTION NOTE**
- 1) CONSTRUCT 4" ASPHALT CONCRETE OVER 8" CLASS B AGGREGATE BASE. REQUIRE COUNTY OF SD LAB APPROVAL AND R-VALUE TESTING WITH REPORT TO COUNTY OF SD LAB PRIOR TO CONSTRUCTION.
 - 2) CONSTRUCT STABILIZED CONSTRUCTION APPROACH ENTRANCE PER TC-1.
 - 3) SANDLOT EXISTING AC PAVEMENT AND JOIN TO EXISTING CONCRETE FURROWS.
 - 4) PROVIDE CONSTRUCTION TRAFFIC CONTROL AS APPROPRIATE TA-6, TA-10 OR TA-11 RESTORE TO TWO LANE OPERATION AT NIGHT WITH TA-1, SA-1 OR TA-8 AT NIGHT AS APPROPRIATE PER DETAIL OR SHEET SD-2.

- NOTE**
1. THE PAVEMENT STRUCTURAL SECTION SUBGRADE SHALL BE PREPARED AS FOLLOWS: 12 INCHES OF SUBGRADE SHALL BE SCARIFIED AND RECOMPACTED TO 98% RELATIVE COMPACTION PER ASTM D1557. IN ADDITION THE SUBGRADE SHOULD BE PROOF ROLLED TO ELIMINATE PUMPING OF SUBGRADE.
 2. STABILIZED ROCK SHALL BE CRUSHED AGGREGATE GREATER THAN 3" BUT SMALLER THAN 6" COMPACT TO FILL VOID SPACES TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
 3. ANGLE OF DEPARTURE BETWEEN OLD HIGHWAY 80 AND SOGGE MAINTENANCE ROAD ACCESS ROAD IS 2.8% WHICH IS LESS THAN THE MAXIMUM ANGLE OF DEPARTURE OF 7.0% PER SECTION 8.7N OF THE COUNTY OF SAN DIEGO PUBLIC STANDARDS (2012).
 4. TC-1 PER STORM WATER BMP (MAD) BOOK. ROCK SHALL BE COMPACTED PER NOTE ABOVE.
 5. EXISTING DRAINAGE FACILITIES (DITCHES, CULVERTS, SWALES, TRENCHES, ETC.) IN THE ROAD RIGHT-OF-WAY TO BE PROTECTED IN PLACE OR RESTORED IN KIND.

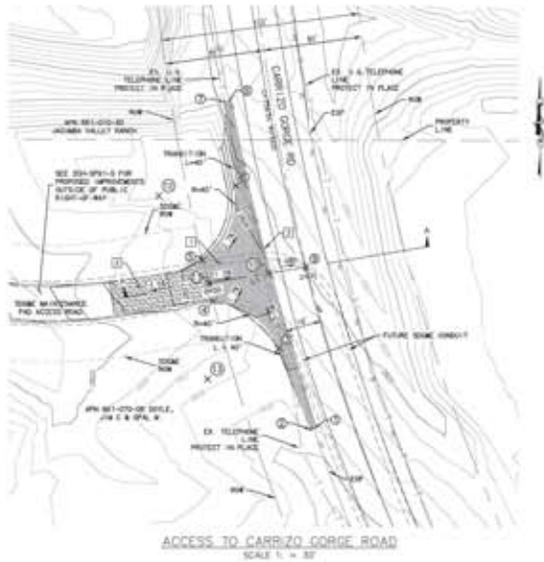
INSPECTORS:
TO REQUEST AN INSPECTION, CALL PRIVATE DEVELOPMENT CONSTRUCTION INSPECTION DURING NORMAL BUSINESS HOURS AT (609) 884-2165 AT LEAST 24 HOURS BEFORE START AND FINISH OF WORK. WHEN CALLING FOR AN INSPECTION, REFER TO THE COMPUTER GENERATED TRAFFIC PERMIT NUMBER AND THE JOB SITE ADDRESS OF YOUR SITE. IN MOST CASES, CONSTRUCTION INSPECTION REQUIRES ONE (1) WORKING DAY NOTICE FOR INSPECTION. WE MAY NOT BE ABLE TO PROVIDE NEXT DAY INSPECTIONS IN SOME OF THE MORE REMOTE AREAS OF THE COUNTY OF SAN DIEGO. PLEASE VERIFY WITH THE PERSON MAKING THE INSPECTION REQUEST WHAT DAY THE INSPECTOR WILL BE OUT TO THE SITE.



LEGAL DESCRIPTION	ENGINEER OF WORK	COUNTY APPROVED CHANGES
ADJESSORS PARCEL NO. _____	NAME: ALAN S. HUNSAKER PHONE NO. 760.941.1100 ADDRESS: 1100 NORTH MAIN STREET ESCONDIDO, CA 92026	NO. _____ DESCRIPTION _____ APPROVED BY _____ DATE _____
RECORD PLAN		
NAME: _____ R.E.E. _____ DATE: _____		

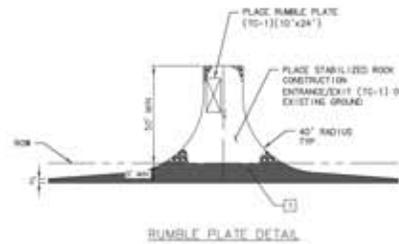
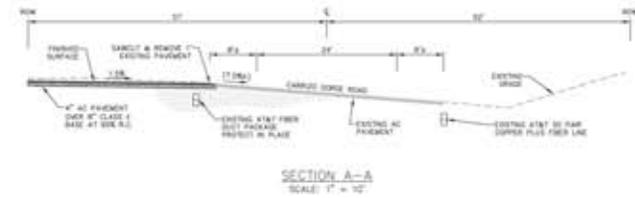
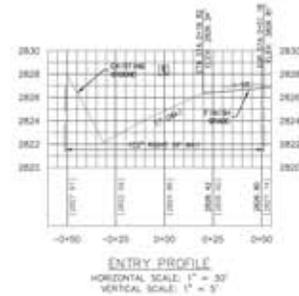
BENCH MARK	
NAME: 2218	LOCATION: S. 182890.822 E. 842218.821
DESCRIPTION: USBM	ELEVATION: 2264.500' DATUM: NAVD 83
NAME: JST SPRING	LOCATION: S. 180447.889 E. 838291.820
DESCRIPTION: USBM	ELEVATION: 2268.500' DATUM: NAVD 83
NAME: 220218	LOCATION: S. 178882.08 E. 838291.821
DESCRIPTION: USBM	ELEVATION: 2268.500' DATUM: NAVD 83

PRIVATE CONTRACT	
SHEET _____	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS
IMPROVEMENT PLAN FOR SOGGE MAINTENANCE ROAD OLD HIGHWAY 80 ENTRANCE TRANSITION PAVING	
APPROVED BY: _____	DATE: _____
APPROVED BY: _____	DATE: _____



HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/Delta	RADIUS	DISTANCE
L-1	0+00.00	0+87.00	180° 31' 17"		87.00

POINT DATA TABLE				
NUMBER	STATE PLANE NORTHING	STATE PLANE EASTING	ELEVATION	DESCRIPTION
1	1,808,476.46	9,388,478.97	2,829.22'	CS
2	1,808,476.20	9,388,477.08	2,829.24'	TS
3	1,808,417.40	9,388,460.88	2,827.62'	PS
4	1,808,441.27	9,388,428.91	2,828.88'	TS
5	1,808,462.41	9,388,421.93	2,828.78'	TS
6	1,808,502.76	9,388,438.92	2,829.51'	PS
7	1,808,542.71	9,388,432.18	2,829.67'	TS
8	1,808,544.10	9,388,435.12	2,829.58'	TS
9	1,808,468.98	9,388,475.00	2,829.28'	CS
10	1,808,402.72	9,388,458.45	2,828.24'	TS
11	1,808,468.98	9,388,424.51	2,828.81'	TS
12	1,808,462.32	9,388,398.76	---	ROAD END POINT
13	1,808,401.28	9,388,424.22	---	ROAD END POINT



INSPECTIONS
 TO REQUEST AN INSPECTION, CALL PRIVATE DEVELOPMENT CONSTRUCTION INSPECTION DURING NORMAL BUSINESS HOURS AT (808) 684-3165 AT LEAST 24 HOURS BEFORE START AND FINISH OF WORK. WHEN CALLING FOR AN INSPECTION, REFER TO THE COMPUTER GENERATED TRAFFIC PERMIT NUMBER AND THE JOB SITE ADDRESS OF YOUR SITE. IN MOST CASES, CONSTRUCTION INSPECTION REQUIRES ONE (1) WORKING DAY NOTICE FOR INSPECTIONS. WE MAY NOT BE ABLE TO PROVIDE NEXT DAY INSPECTIONS IN SOME OF THE MORE REMOTE AREAS OF THE COUNTY OF SAN DIEGO. PLEASE VERIFY WITH THE PERSON TAKING THE INSPECTION REQUEST WHAT DAY THE INSPECTOR WILL BE OUT TO THE SITE.

- QUANTITIES**
- 1. PAVEMENT SECTION: 1,833 SF
 - 2. CONSTRUCTION ENTRANCE: 874 SF
 - 3. SAR OUT: 174 LF
- EARTHWORK QUANTITIES**
- CUT: 38 CY
 - FILL: 0 CY
 - NET: 38 CY
- DISTURBED AREA**
- ROAD: 2,188 SF
 - LENGTH OF ACCESS ROAD: 31 LF

- CONSTRUCTION NOTE**
1. CONSTRUCT 4" ASPHALT CONCRETE OVER 6" CLASS 6 AGGREGATE BASE. REQUIRES COUNTY OF SD LAB APPROVAL AND K-VALUE TESTING WITH REPORT TO COUNTY OF SD LAB PRIOR TO CONSTRUCTION.
 2. CONSTRUCT STABILIZED CONSTRUCTION APPROACH ENTRANCE PER D-1.
 3. SAKOUT AND JOIN EXISTING PAVEMENT.
 4. PROVIDE CONSTRUCTION TRAFFIC CONTROL TO TWO LANE OPERATION AT NIGHT WITH TA-1, TA-3 OR TA-6 AT NIGHT AS APPROPRIATE PER DETAIL ON SHEET D0-2.

- NOTE**
1. THE PAVEMENT STRUCTURAL SECTION SUBGRADE SHALL BE PREPARED AS FOLLOWS: 12 INCHES OF SUBGRADE SHALL BE SCARIFIED AND RECOMPACTED TO 95% RELATIVE COMPACTION PER ASTM D1557. IN ADDITION THE SUBGRADE SHOULD BE PROOF ROLLED TO ELIMINATE PUMPING OF SUBGRADE.
 2. STABILIZED ROCK SHALL BE CRUSHED AGGREGATE GREATER THAN 1" BUT SMALLER THAN 8" COMPACT TO FILL VOID SPACES TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
 3. ANGLE OF DEPARTURE BETWEEN OLD HIGHWAY 80 AND SIOGAE MAINTENANCE PAD ACCESS ROAD IS 9.5% WHICH IS LESS THAN THE MAXIMUM ANGLE OF DEPARTURE OF 7.0% PER SECTION 6.7% OF THE COUNTY OF SAN DIEGO PUBLIC STANDARDS (2012).
 4. 10-1 PER STORM WATER BMP HAND BOOK. ROCK SHALL BE COMPACTED PER NOTE ABOVE.
 5. EXISTING DRAINAGE FACILITIES (DITCHES, COLLECTORS, SWALES, TRENCHES, ETC.) IN THE ROAD RIGHT-OF-WAY TO BE PROTECTED IN PLACE OR RESTORED IN KIND.

HUNSAKER & ASSOCIATES
 1110 11th St. Suite 100
 San Diego, CA 92101
 (619) 594-8888



LEGAL DESCRIPTION	ENGINEER OF WORK	COUNTY APPROVED CHANGES
ASSESSORS PARCEL NO. _____	NAME: A.S.A. S. JALINDE PHONE NO: 619-594-8888 ADDRESS: 1110 11th Street San Diego, CA 92101	NO. _____ DESCRIPTION _____ APPROVED BY _____ DATE _____
RECORD PLAN		
NAME: _____		
R.E.L.: _____		
DATE: _____		

BENCH MARK	
NAME: 2118	LOCATION: N. 182881.802 E. 8420218.281
DESCRIPTION: 102M	ELEVATION: 2842.830' DATE: 3/6/02
NAME: 2507 SPRINGS	LOCATION: N. 1824477.890 E. 8382619.808
DESCRIPTION: 102M	ELEVATION: 2289.822' DATE: 3/6/02
NAME: 2027510	LOCATION: N. 1828813.08 E. 8420028.852
DESCRIPTION: 102M	ELEVATION: 573.828' DATE: 3/6/02

PRIVATE CONTRACT	
SHEET: _____	BOOK: _____
DEPARTMENT OF PUBLIC WORKS	
IMPROVEMENT PLAN FOR:	
SIOGAE MAINTENANCE ROAD	
CARRIZO GORGE ENTRANCE	
TRANSITION PAVING	
APPROVED FOR CONTRACT:	DATE: _____
APPROVED BY:	DATE: _____
APPROVED FOR PLAN AND SPECIFICATIONS:	DATE: _____
APPROVED FOR:	DATE: _____
CG	

PROJECT: SAN DIEGO COUNTY, CALIFORNIA
 HUNSAKER & ASSOCIATES, INC.
 1110 11th Street, Suite 100
 San Diego, CA 92101
 (619) 594-8888

ATTACHMENT E: DRAFT JEWEL VALLEY CURB-GRADE PLAN

EAST COUNTY SUBSTATION PROJECT

IMPROVEMENTS ALONG JEWEL VALLEY ROAD

PRIVATE DRIVEWAY PLANS

GENERAL NOTES

- A PERMIT SHALL BE OBTAINED FROM THE SAN DIEGO COUNTY DEPARTMENT OF PUBLIC WORKS FOR ANY WORK WITHIN THE COUNTY PUBLIC STREET RIGHT-OF-WAY.
- THE STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH SAN DIEGO COUNTY STANDARDS AND AS APPROVED BY THE COUNTY'S MATERIALS LABORATORY.
- APPROVAL OF THESE IMPROVEMENT PLANS AS SHOWN DOES NOT CONSTITUTE APPROVAL OF ANY CONSTRUCTION OUTSIDE THE PROJECT BOUNDARY.
- IMPORT MATERIAL SHALL BE OBTAINED FROM A LEGAL SITE.
- ALL SLOPES OVER THREE FEET IN HEIGHT WILL BE PLANTED IN ACCORDANCE WITH SAN DIEGO COUNTY SPECIFICATIONS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY AGENCIES, ADVISE THEM OF THE PROPOSED IMPROVEMENTS AND OBTAIN THE COST OF RELAYING, IF NEEDED.
- THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK. NOTICE OF PROPOSED WORK SHALL BE GIVEN TO THE FOLLOWING AGENCIES: SAN DIEGO GAS & ELECTRIC, PACIFIC BELL, CABLE TV, WATER DISTRICT, AND SANITATION DISTRICT.
- A SOILS REPORT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
- LOCATION AND ELEVATION OF IMPROVEMENTS TO BE MET BY WORK TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR WILL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS, IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
- ALL MAJOR SLOPES SHALL BE ROUNDED INTO EXISTING TERRAIN TO PRODUCE A CONTINUED TRANSITION FROM CUT OR FILL FACES TO NATURAL GROUND AND ABUTTING CUT OR FILL SURFACES.
- NOTWITHSTANDING THE MINIMUM STANDARDS SET FORTH IN THE GRADING ORDINANCE AND NOTWITHSTANDING THE APPROVAL OF THESE GRADING PLANS, THE PERMITTEE IS RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY. NO PERSON SHALL EXCAVATE ON LAND SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJACENT PUBLIC STREET, SIDEWALK, ALLEY, FUNCTION OF ANY SEWAGE DISPOSAL SYSTEM, OR ANY OTHER PUBLIC OR PRIVATE PROPERTY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM SETTLEMENT, CRACKING, EROSION, SILTING, SCOUR OR OTHER DAMAGE WHICH MIGHT RESULT FROM THE GRADING DESCRIBED ON THIS PLAN. THE COUNTY WILL HOLD THE PERMITTEE RESPONSIBLE FOR CORRECTION OF NON-SPECIFIED IMPROVEMENTS WHICH DAMAGE ADJACENT PROPERTY.
- POWER SOURCES AND RAIN SERVING STREET LIGHTS SHALL BE SHOWN ON THE "AS-BUILT" IMPROVEMENT DRAWINGS. ALL SOURCES SHALL BE LOCATED WITHIN THE DEDICATED RIGHT-OF-WAY, OR WITHIN EASEMENTS DEDICATED TO THE COUNTY OF SAN DIEGO.
- SPECIAL CONDITIONS IF ANY ARCHEOLOGICAL RESOURCES ARE DISCOVERED ON THE SITE OF THIS GRADING DURING GRADING OPERATIONS, SUCH OPERATIONS WILL CEASE IMMEDIATELY, AND THE PERMITTEE WILL NOTIFY THE DIRECTOR OF PUBLIC WORKS OF THE DISCOVERY. GRADING OPERATIONS WILL NOT RECOMMENCE UNTIL THE PERMITTEE HAS RECEIVED WRITTEN AUTHORITY FROM THE DIRECTOR OF PUBLIC WORKS.
- PRIVATE ROAD IMPROVEMENTS SHOWN HEREON ARE FOR INFORMATION ONLY. COUNTY OFFICIALS SIGNATURE HEREON DOES NOT CONSTITUTE APPROVAL OR RESPONSIBILITY OF ANY KIND FOR THE DESIGN OR CONSTRUCTION OF THESE PRIVATE IMPROVEMENTS, IF APPLICABLE.
- FINISHED GRADING SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER AND INSPECTED BY THE COUNTY ENGINEER FOR DRAINAGE CLEARANCE.
- CONTRACTOR TO PROVIDE 6-INCH TEST RESULTS.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 8703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATION BY THE COUNTY OF SAN DIEGO IS CONFINED TO REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

BY: _____ DATE: _____
ALISA S. VIALPANO

REG. NO. 47945 EXPIRES: _____

CONTRACTOR'S NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONSULTING DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD COUNTY OF SAN DIEGO HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF COUNTY OF SAN DIEGO PROFESSIONALS.

ENGINEER'S NOTE

UNAUTHORIZED CHANGES & USES: THE ENGINEER OF WORK PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR VIOLATIONS OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

BASIS OF COORDINATES

THE COORDINATES ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 AND ARE EXPRESSED IN TERMS OF THE CALIFORNIA COORDINATE SYSTEM 1983, ZONE 11, AT EPOCH 1985.25 AND ARE BASED ON MONUMENT "SAN DIEGO GPS 31 1980" LOCATED 2.5 MILES NORTHEAST OF JACUMBA, ON THE SOUTH SIDE OF INTERSTATE HIGHWAY 8 AT POST MILE 34.9 400 FEET WEST OF TELEPHONE CALL BOX B-700 SET AT THE TOP OF A 35' HIGH ROCK OUT.

TOPOGRAPHY

SITE TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY INLAND AERIAL SURVEYS, INC. (PROJECT NO. 08-77231) FOR NOLTE & ASSOCIATES DATED FEBRUARY 28, 2008 AND JANUARY 12, 2012.

LEGAL DESCRIPTION

THAT PORTION OF THE EASTERLY 200.00 FEET OF THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 17 SOUTH, RANGE 7 EAST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA ACCORDING TO OFFICIAL PLAT THEREOF LYING NORTHERLY OF THE NORTHERLY LINE OF COUNTY ROAD SURVEY NO. 182 (KNOWN AS JEWEL VALLEY ROAD) ACCORDING TO PLAT THEREOF ON FILE IN THE OFFICE OF THE COUNTY ENGINEER OF SAN DIEGO COUNTY, EXCEPTING THEREFROM THE NORTHERLY 430.00 FEET. THIS DEED IS ENCLOSED, DELIVERED AND ACCEPTED IN CORRECTION OF THE AMBIGUITY EVIDENCED BY DOCUMENTS RECORDED IN SAN DIEGO COUNTY AS DOCUMENTS 93-0715434 AND 2008-0524248.

THE SOUTHERLY 440.00 FEET OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 17 SOUTH, RANGE 7 EAST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO UNITED STATES GOVERNMENT SURVEY APPROVED SEPTEMBER 8, 1980, ALSO EXCEPTING THEREFROM THE EASTERLY 600.00 FEET THEREOF.



IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS, THE CURRENT SAN DIEGO COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR IMPROVEMENTS OF SUBURBAN STREETS AND STANDARD REFERENCE DRAWINGS. WATER FACILITIES WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND DRAWINGS OF THE WATER DISTRICT.

AC	ASPHALT CONCRETE PAVING		PROPOSED ASPHALT
BP	BEGINNING POINT		PROPOSED P.C.C.
CL	CENTERLINE		RIGHT-OF-WAY LINE
(EC)	EXISTING GRADE		CENTERLINE
EP	EDGE OF PAVEMENT		TRAFFIC SIGN
FC	FINISHED GRADE		EXISTING CONTOURS
FL	FLOW LINE		
GB	GRADE BREAK		
ED	EDGE OF PAVEMENT		
RO	ROAD		
CA	CADH		
RP	RADIUS POINT		
ROW	RIGHT OF WAY		
GB	GRADE BREAK		
ETR	EDGE OF TRAVEL WAY		
EX	EXISTING		
RC	RELATIVE COMPACTION		
TB	TOP OF BELL		
PCR	POINT OF CURVE RETURN		
BVC	BEGIN VERTICAL CURVE		
EVC	END VERTICAL CURVE		

SHEET INDEX

- TITLE SHEET
- TRAFFIC CONTROL DETAILS
- TRANSITION PAVING PLANS

DESCRIPTION/TYPE	SHEET	MAINTENANCE CATEGORY	REVISIONS
N/A			

BMPs TO BE INSTALLED PER PROJECT BMPs AND WQI NO. _____

UNDERGROUND SERVICES ALERT

CALL/TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE 3:00 P.M.

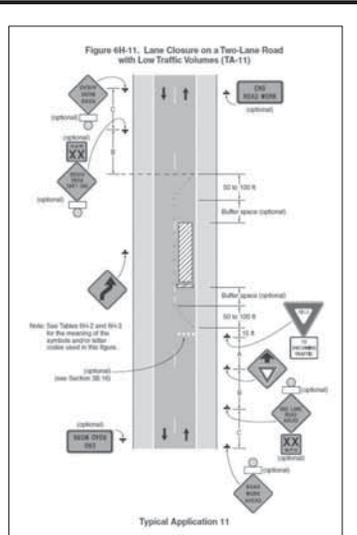
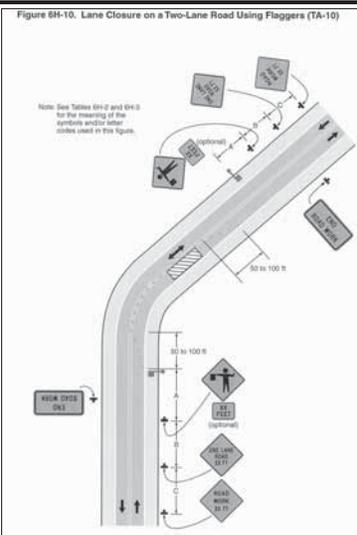
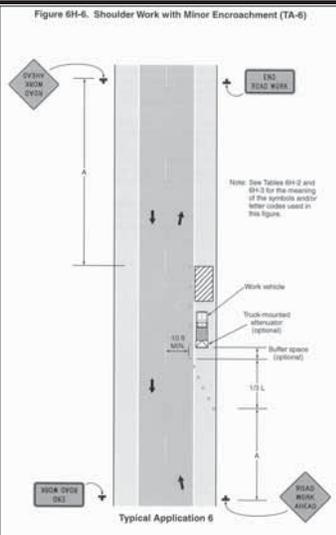
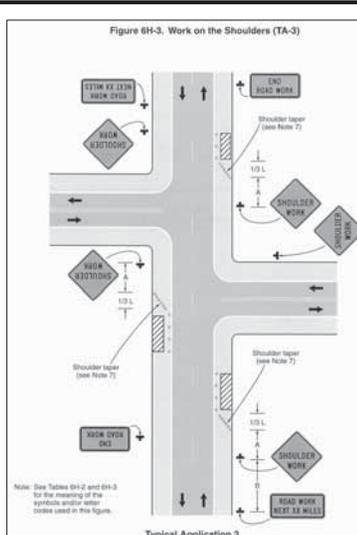
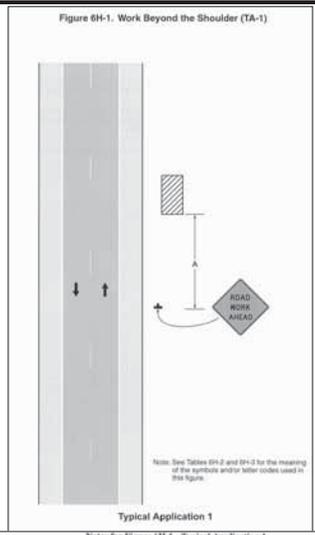
"CAUTION"
REMEMBER THAT THE USE CENTER NOTICES
ONLY THOSE UTILITIES BELONGING TO
THE CENTER THERE. ALL OTHER UTILITIES
PRESENT AT THE WORK SITE. THE CENTER WILL
INFORM YOU OF WORK THEY WILL NOTIFY.

HUNSAKER & ASSOCIATES
1000 B STREET, SUITE 100
SAN DIEGO, CA 92101
TEL: 619-594-1100
FAX: 619-594-1101
WWW.HUNSAKER.COM

LEGAL DESCRIPTION	ENGINEER OF WORK	COUNTY APPROVED CHANGES
ASSESSOR'S PARCEL NO. _____	NAME: ALISA S. VIALPANO PHONE NO. 619-594-1100 ADDRESS: 1000 B STREET, SUITE 100, SAN DIEGO, CA 92101	NO. DESCRIPTION APPROVED BY DATE
RECORD PLAN	REG. NO. 47945 EXPIRES 12/31/14	
NAME: _____		
R.C.C. _____		
DATE: _____		

BENCH MARK	
NAME: B-812	
DESCRIPTION: UTM	
ELEVATION: 2203.21'	DATUM: MGS 88
LOCATION:	
ELEVATION IS REFERENCED TO MARKS AS DETERMINED LOCALLY BY VERTICAL BENCHMARK "B-412" WITH THE PUBLISHED ELEVATION OF 2203.2207' (NAD83 DATUM) LOCATED 12.85 MILES EAST ALONG THE EASTBOUND LANES OF INTERSTATE HIGHWAY 8 FROM THE BISHOPWOOD ROAD OVERPASS AT BOLLINGER, 104' E OF THE CENTERLINE OF THE EASTBOUND HIGHWAY LANES, IN THE TOP OF THE SOUTHWEST END OF THE SOUTHWEST CONCRETE HEADWALL OF CONCRETE BOX CULVERT 8021-201-05-150-00 OF US HIGHWAY 80.5' NORTHEAST OF THE SOUTHWEST HEADWALL.	

PRIVATE CONTRACT			
SHEET 1	COUNTY OF SAN DIEGO	4	
	DEPARTMENT OF PUBLIC WORKS		
IMPROVEMENT PLAN FOR			
JEWEL VALLEY ROAD IMPROVEMENTS			
TITLE SHEET			
APPROVED BY THE ENGINEER	APPROVED BY	APPROVED BY	APPROVED BY
NAME: ALISA S. VIALPANO	NAME: _____	NAME: _____	NAME: _____
DATE: _____	DATE: _____	DATE: _____	DATE: _____
SCALE: _____	SCALE: _____	SCALE: _____	SCALE: _____
			CG



**Notes for Figure 6H-1—Typical Application 1
Work Beyond the Shoulder**

- If the work space is in the median of a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.
- The ROAD WORK AHEAD sign may be replaced with other appropriate signs such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.
- The ROAD WORK AHEAD sign may be omitted when the work space is behind a barrier, more than 24 inches behind the curb, or 15 feet or more from the edge of any roadway.
- For short-term, short duration or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
- Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.
- Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

**Notes for Figure 6H-3—Typical Application 3
Work on the Shoulders**

- A SHOULDER WORK sign should be placed on the left side of the roadway for a divided or one-way street only if the left shoulder is affected.
- The Worked symbol signs may be used instead of SHOULDER WORK signs.
- The SHOULDER WORK AHEAD sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
- For short duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated high intensity rotating, flashing, oscillating, or strobe lights is used.
- Vehicle hazard warning signals may be used to supplement high intensity rotating, flashing, oscillating, or strobe lights.

**Notes for Figure 6H-6—Typical Application 6
Shoulder Work with Minor Encroachment**

- All lanes should be a minimum of 10 feet in width as measured to the near face of the channelizing devices.
- The treatment shown should be used on a minor road having low speeds. For high-speed traffic conditions, a lane closure should be used.
- For short-term use on low-volume, low-speed roadways with vehicular traffic that does not include larger and wider heavy commercial vehicles, a minimum lane width of 9 feet may be used.
- Where the opposite shoulder is suitable for carrying vehicular traffic and of adequate width, lanes may be shifted by use of closely-spaced channelizing devices, provided that the minimum lane width of 10 feet is maintained.
- Additional advance warning may be appropriate, such as a ROAD NARROW sign.
- Temporary traffic barriers may be used along the work space.
- The shadow vehicle may be omitted if a sign and channelizing devices are used.
- A truck-mounted attenuator may be used on the shadow vehicle.
- For short-duration work, the type and channelizing devices may be omitted if a shadow vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
- Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

**Notes for Figure 6H-10—Typical Application 10
Lane Closure on a Two-Lane Road Using Flaggers**

- For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).
- The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short-duration operations.
- Flashing warning lights and/or flags may be used to call attention to the advance warning signs. A BE PREPARED TO STOP sign may be added to the sign series.
- The buffer space should be extended so that the two-way traffic taper is placed before a horizontal (or even vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.

**Notes for Figure 6H-11—Typical Application 11
Lane Closure on a Two-Lane Road with Low Traffic Volumes**

- This TTC cone application may be used as an alternate to the TTC application shown in Figure 6H-10 (using flaggers) when the following conditions exist:
 - Vehicle traffic volume is such that sufficient gaps exist for vehicular traffic that must yield.
 - Road users from both directions are able to see approaching vehicular traffic through and beyond the work zone and have sufficient visibility of approaching vehicles.
- The Type B flashing warning lights may be placed on the ROAD WORK AHEAD and the ONE-LANE ROAD AHEAD sign whenever a single lane closure is necessary.

Table 6H-2: Meaning of Symbols on Typical Application Diagrams

Arrow board	Shadow vehicle
Arrow board support or trailer (shown facing down)	Sign (shown facing left)
Changeable message sign or support trailer	Surveyor
Channelizing device	Temporary barrier
Crest condition	Temporary barrier with warning light
Direction of temporary traffic detour	Traffic or pedestrian signal
Direction of traffic	Truck-mounted attenuator
Flagger	Type B barricade
High-intensity warning device (Flag line)	Warning light
Longitudinal channelizing device	Work space
Luminaires	Work vehicle
Placement markings that should be removed by a long-term project	

Table 6H-3: Meaning of Letter Codes on Typical Application Diagrams

Road Type	Distance Between Signs*		
	A	B	C
Urban (low speed)†	125 feet	100 feet	100 feet
Urban (high speed)†	150 feet	100 feet	200 feet
Rural	200 feet	100 feet	200 feet
Expressway - Freeway	1,000 feet	1,500 feet	2,000 feet

* Based on sign type to be determined by highway agency.
 † The distance between signs is 400 feet for the distance between signs in Figures 6H-1 through 6H-6. This A distance is the distance from the location or point of installation to the first sign. The B distance is the distance between the first and second signs. The C distance is the distance between the second and third signs. The "TTC sign" is the sign that is placed upstream from the TTC zone. The "TTC sign" is the sign that is placed upstream from the TTC zone.

Table 6H-4: Formulas for Determining Taper Length

Speed (S)	Taper Length (L) in feet
40 mph or less	L = 500
45 mph or less	L = 600
50 mph or less	L = 700

Where: L = taper length in feet
 S = speed in miles per hour
 † A posted speed limit or off-post 85% advisory speed limit is used when determining the taper length.

HUNSAKER & ASSOCIATES
 REGISTERED PROFESSIONAL ENGINEER
 SAN DIEGO, CALIFORNIA
 No. 4796
 Exp. 12/31/13

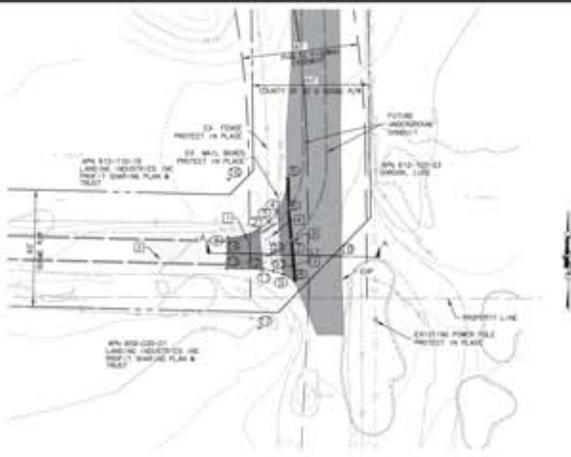
LEGAL DESCRIPTION
 ENGINEER OF WORK
 COUNTY APPROVED CHANGES
 RECORD PLAN
 NAME: _____
 R.C.E. _____
 DATE: _____

ASSESSORS PARCEL NO. _____
 NAME: ALISA S. WALPANDO
 PHONE NO. 858-558-4500
 ADDRESS: 9707 MAPLE STREET
 SAN DIEGO, CA 92121

NO. _____ DESCRIPTION _____ APPROVED BY _____ DATE _____

BENCH MARK
 NAME: W-612
 DESCRIPTION: USBM
 ELEVATION: 3203.32
 DATUM: NAVD 88
 LOCATION:
 ELEVATION ARE REFERENCED TO NAVD83 AS DETERMINED LOCALLY BY VERTICAL BENCHMARK "W-612", WITH THE PUBLISHED ELEVATION OF 3203.325FT (NAV83 DATUM) LOCATED 10.95 MILES EAST ALONG THE EASTBOUND LANES OF INTERSTATE HIGHWAY 8 FROM THE RIBBONWOOD ROAD OVERPASS AT BOULEVARD, 104.5' SOUTHEAST OF THE CENTERLINE OF THE EASTBOUND HIGHWAY LANES, IN THE SOUTHWEST END OF THE SOUTHEAST CONCRETE HEADWALL OF CONCRETE BOX CULVERT 857-201-6-755-00 OF US HIGHWAY 80, 9.5' NORTHEAST OF THE SOUTHEAST HEADWALL.

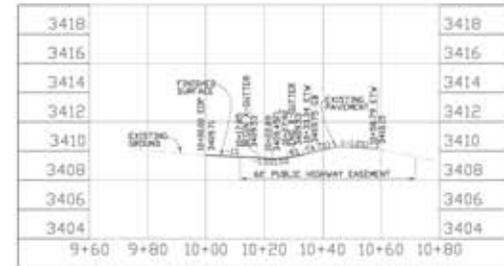
PRIVATE CONTRACT
 SHEET 2 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 4 SHEETS
 IMPROVEMENT PLAN FOR:
JEWEL VALLEY ROAD IMPROVEMENTS TRAFFIC CONTROL DETAILS
 RECOMMENDED FOR APPROVAL: _____ APPROVED: _____
 ENGINEER OF WORK: ALISA S. WALPANDO CHECKED BY: _____ IMPROVEMENT PLAN NO.: _____
 DATE: 12/28/13 DATE: 12/21/2013 APPROVAL DATE: _____ CG



ACCESS TO JEWEL VALLEY ROAD
SCALE 1" = 30'

POINT DATA TABLE				
NUMBER	STATE PLANE NORTHING	STATE PLANE EASTING	ELEVATION	DESCRIPTION
1	1812438.47	6554618.41	3409.87	FG, BC
2	1812443.89	6554632.83	3409.78	FG
3	1812447.44	6554637.51	3409.70	FL X-GUTTER
4	1812452.71	6554642.02	3409.78	FG
5	1812470.08	6554647.13	3410.47	FG, EC
6	1812452.33	6554647.50	3410.13	FG
7	1812430.67	6554649.56	3409.75	FG
8	1812417.04	6554650.84	3409.51	FG, EC
9	1812420.41	6554645.14	3409.40	FG
10	1812422.20	6554639.94	3409.32	FL X-GUTTER
11	1812422.99	6554634.84	3409.40	FG
12	1812423.05	6554633.53	3409.41	FG, BC
13	1812423.48	6554618.03	3409.55	FG
14	1812431.48	6554618.22	3409.71	FG
15	1812430.82	6554639.10	3409.40	FL X-GUTTER
16	1812409.46	6554617.14	3409.40	RADIUS PT. R=30'
17	1812303.06	6554632.81	3410.15	RADIUS PT. R=30'
18	1812430.05	6554674.99	3410.15	CS

HORIZONTAL CENTERLINE DATA				
SEGMENT	START STATION	END STATION	BEARING/Delta	RADIUS/DISTANCE
01	0+00.00	0+08.75	0.881° 30' 50" E	88.75'



ENTRY PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 4'

QUANTITIES	
1 PAVEMENT SECTION	528 SF
2 CONSTRUCTION ENTRANCE	812 SF
3 SANDLOT	33 LF
4 CROSS GUTTER PER 0-10	258 SF

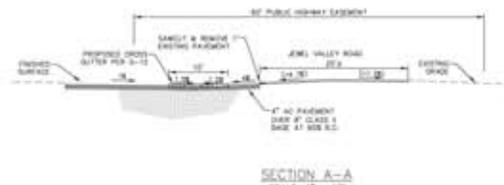
EARTHWORK QUANTITIES		DISTURBED AREA	
CUT:	30 CY	ROAD:	837 SF
FILL:	0 CY	LENGTH OF ACCESS ROAD:	33 LF
NET:	34 CY		

CONSTRUCTION NOTE:

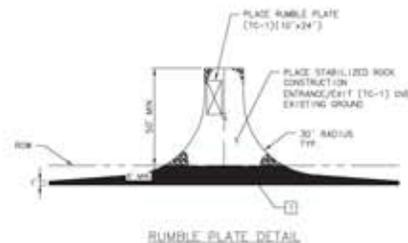
- CONSTRUCT 4" ASPHALT CONCRETE OVER 8" CLASS # AGGREGATE BASE. REQUIRES COUNTY OF SD LAB APPROVAL AND R-WALLS TESTING WITH REPORT TO COUNTY OF SD LAB PRIOR TO CONSTRUCTION.
- CONSTRUCT STABILIZED CONSTRUCTION APPROACH ENTRANCE PER 10-1.
- SANDLOT AND JOIN EXISTING PAVEMENT.
- PROVIDE CONSTRUCTION TRAFFIC CONTROL TO TWO LANE OPERATION AT NIGHT WITH 1A-1, 1A-5 OR 1A-6 AT NIGHT AS APPROPRIATE PER DETAIL ON SHEET CD-2.

NOTE:

- THE PAVEMENT STRUCTURAL SECTION SUBGRADE SHALL BE PREPARED AS FOLLOWS: 12 INCHES OF SUBGRADE SHALL BE SCARIFIED AND RECOMPACTED TO 98% RELATIVE COMPACTION PER ASTM D1557. IN ADDITION THE SUBGRADE SHOULD BE PROOF ROLLED TO ELIMINATE PUMPING OF SUBGRADE.
- STABILIZED ROCK SHALL BE CRUSHED AGGREGATE GREATER THAN 1" BUT SMALLER THAN 6" COMPACT TO FILL VOID SPACES TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
- ANGLE OF DEPARTURE BETWEEN JEWEL VALLEY ROAD AND SD&E MAINTENANCE ROAD ACCESS ROAD IS 48 WHICH IS LESS THAN THE MAXIMUM ANGLE OF DEPARTURE OF 7.0% FOR SECTION 6.7% OF THE COUNTY OF SAN DIEGO PUBLIC STANDARDS (2012).
- 30-1 PER STORM WATER BMP HAND BOOK. ROCK SHALL BE COMPACTED PER NOTE ABOVE.
- EXISTING DRAINAGE FACILITIES (DITCHES, CULVERTS, SWALES, TRENCHES, ETC.) IN THE ROAD RIGHT-OF-WAY TO BE PROTECTED IN PLACE OR RESTORED IN KIND.



SECTION A-A
SCALE: 1" = 10'



RUMBLE PLATE DETAIL

INSPECTIONS
TO REQUEST AN INSPECTION, CALL PRIVATE DEVELOPMENT CONSTRUCTION INSPECTION DURING NORMAL BUSINESS HOURS AT (858) 594-3182 AT LEAST 24 HOURS BEFORE START AND FINISH OF WORK. WHEN CALLING FOR AN INSPECTION, REFER TO THE COMPUTER GENERATED TRAFFIC POINT NUMBER AND THE JOB SITE ADDRESS OF YOUR SITE. IN MOST CASES, CONSTRUCTION INSPECTION REQUIRES ONE (1) WORKING DAY NOTICE FOR INSPECTIONS. WE MAY NOT BE ABLE TO PROVIDE NEXT DAY INSPECTIONS IN SOME OF THE MORE REMOTE AREAS OF THE COUNTY OF SAN DIEGO. PLEASE VERIFY WITH THE PERSON MAKING THE INSPECTION REQUEST WHAT DAY THE INSPECTION WILL BE OUT TO THE SITE.

LEGAL DESCRIPTION	ENGINEER OF WORK	COUNTY APPROVED CHANGES
ASSESSORS PARCEL NO. _____ RECORD PLAN _____ NAME _____ R.C.E. _____ DATE _____	 NAME: ALEX S. HUNSAKER PHONE NO.: 858-538-4500 ADDRESS: 8700 MARLBOROUGH BLVD., SUITE 200, SAN DIEGO, CA 92121	NO. _____ DESCRIPTION _____ APPROVED BY _____ DATE _____

BENCH MARK	
NAME: 3018	
LOCATION: R. JENSEN BLVD. & SANCTUARY	
DESCRIPTION: UBM	
ELEVATION: 255.450	DATA: 2602.88

PRIVATE CONTRACT	
SHEET _____	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS
IMPROVEMENT PLAN FOR:	
JEWEL VALLEY ROAD TRANSITION PAVING TO SD&E MAINTENANCE ROAD	
DESIGNED BY: HUNSAKER & ASSOCIATES	APPROVED: _____
DATE: _____	CG

ATTACHMENT F: DRAFT OLD HIGHWAY 80 OVERHEAD CROSSING

CONSTRUCTION SIGNS:



TABLE 1

RECOMMENDED SIGN SPACING FOR ADVANCE WARNING SIGN SERIES

APPROACH SPEED (MPH)	MINIMUM DISTANCE IN FEET BETWEEN SIGNS AND FROM LAST SIGN TO TAPER	MAXIMUM DEVICE SPACING IN FEET	MINIMUM TAPER LENGTHS FOR LANE WIDTHS		
			10 FT	11 FT	12 FT
25	150-200	25	105	115	125
30	200-300	30	150	165	180
35	250-400	35	205	225	245
40	350-500	40	265	295	320
45	500-750	45	450	495	540
50	500-1000	50	500	550	600
55+	500-1500	50	550	605	660

*L=WS²/60 FOR S OF 40 MPH OR LESS; L=WS FOR S OF 45 MPH OR MORE. TAPER LENGTHS SHOWN ARE ROUNDED TO NEAREST 5 FEET.

TABLE 2

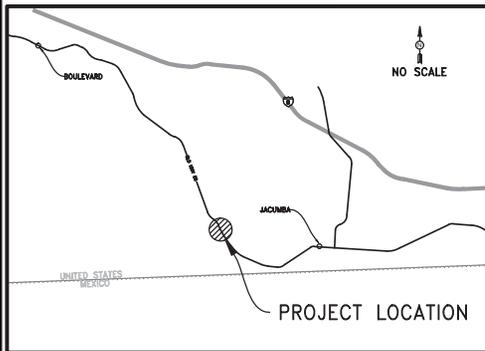
RECOMMENDED TAPER LENGTH AND DEVICE SPACING FOR CHANNELIZING TAPERS

APPROACH SPEED (MPH)	TAPER LENGTH (L) *	SPACING OF CONES ALONG TAPER (FEET)±
25	125	25
30	180	30
35	245	35
40	320	40
45	540	45
50	600	50
50+	1000	50

NOTES:
 TAPER FORMULA
 $L = S \times W$ FOR SPEEDS > 40 MPH.
 $L = \frac{W \times S^2}{60}$ FOR SPEEDS < 40 MPH.
 WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF APPROACH SPEED PRIOR TO WORK (MPH)
 W = WIDTH OF OFFSET (FEET)

VICINITY MAP

(*) BASED ON 12-FOOT WIDE LANE. THIS COLUMN IS ALSO APPROPRIATE FOR LANE WIDTHS LESS THAN 12 FEET



COUNTY OF SAN DIEGO TRAFFIC CONTROL GENERAL NOTES:

- CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT FIVE (5) DAYS TO STARTING WORK, IF WORK WILL AFFECT AN EXISTING TRAFFIC SIGNAL.
- STANDARD - THIS TRAFFIC CONTROL PLAN SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF EACH OF THE FOLLOWING MANUALS: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND CALIFORNIA SUPPLEMENT; STANDARD SPECIFICATIONS FOR PUBLIC WORK, CONSTRUCTION, AND CITY AMENDMENTS.
- NOTIFICATIONS - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO ANY EXCAVATION, CONSTRUCTION, OR TRAFFIC CONTROL AFFECTING THE AGENCIES LISTED:
 - FIRE DEPARTMENT DISPATCH (STREET OR ALLEY CLOSURE)
 - POLICE DEPARTMENT DISPATCH (STREET OR ALLEY CLOSURE)
 - WASTE MANAGEMENT (REFUSE COLLECTION)
 - COMMUNICATIONS AND ELECTRICAL (TRAFFIC SIGNALS)
 - CITY TRANSIT (BUS STOPS)
 - UNDERGROUND SERVICE ALERT (ANY EXCAVATION)
- POSTING PARKING RESTRICTIONS - THE CONTRACTOR SHALL POST TOW-AWAY PARKING SIGNS TWENTY-FOUR (24) HOURS IN ADVANCE OF PARKING REMOVAL. SIGNS SHALL INDICATE SPECIFIC DAYS AND DATES AND TIMES OF RESTRICTIONS. PARKING METERS SHALL BE BAGGED WHERE APPLICABLE.
- EXCAVATIONS - EXCEPT WHERE OTHERWISE SHOWN ON THE PLANS, ALL TRENCHES SHALL BE BACKFILLED OR TRENCH PLATED AT THE END OF EACH WORK DAY. AN ASPHALT RAMP SHALL BE PLACED AROUND EACH TRENCH PLATE TO PREVENT THE PLATE FROM BEING DISLODGED. CONTRACTOR SHALL MONITOR TRENCH PLATES DURING NON-WORKING HOURS TO ENSURE THAT THEY DO NOT BECOME DISLODGED. UPON COMPLETION OF EXCAVATION BACKFILL, THE CONTRACTORS SHALL PROVIDE A SATISFACTORY SURFACE FOR TRAFFIC. WHEN CONSTRUCTION OPERATIONS ARE NOT ACTIVELY IN PROGRESS, THE CONTRACTOR SHALL MAINTAIN ALL TRAVEL LANES, BIKE LANES, AND PEDESTRIAN WALKWAYS IN THE RIGHT-OF-WAY EXCEPT WHEN OTHERWISE SHOWN ON THE PLAN.
- RESTORATION OF ROADWAY - THE CONTRACTOR SHALL REPAIR OR REPLACE ALL EXISTING IMPROVEMENTS WITHIN THE RIGHT-OF-WAY WHICH ARE NOT DESIGNATED FOR PERMANENT REMOVAL (TRAFFIC SIGNS, STRIPING, PAVEMENT MARKERS, PAVEMENT MARKINGS, LEGENDS, CURB MARKINGS, LOOP DETECTORS, TRAFFIC SIGNAL EQUIPMENT, ETC.) WHICH ARE REMOVED OR DAMAGED AS A RESULT OF OPERATION, REPAIRS, AND REPLACEMENTS; AND SHALL BE AT LEAST EQUAL TO EXISTING IMPROVEMENTS.
- CHANGES IN WORK - THE ENGINEER RESERVES THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN OPERATION AND TO MAKE ANY CHANGES AS FIELD CONDITIONS WARRANT, AND CHANGES SHALL SUPERCEDE THESE PLANS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON A CITY STREET TO SUPPLY, INSTALL, AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED, TO ENSURE THE SAFE MOVEMENT OF TRAFFIC, PEDESTRIANS, AND BICYCLISTS THROUGH OR AROUND THE WORK AREA, AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
- ALL ADVANCE WARNING SIGNS INSTALLATION SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES.
- THE CONTRACTORS SHALL BE RESPONSIBLE FOR MAINTAINING ALL SAFETY DEVICES SUCH AS BARRICADES, DELINEATORS, AND SIGNS. SAFETY DEVICES MUST BE IN GOOD CONDITION AND PROPERLY PLACED AS REQUIRED BY THE TRAFFIC CONTROL PLAN.

TRAFFIC CONTROL PLANS

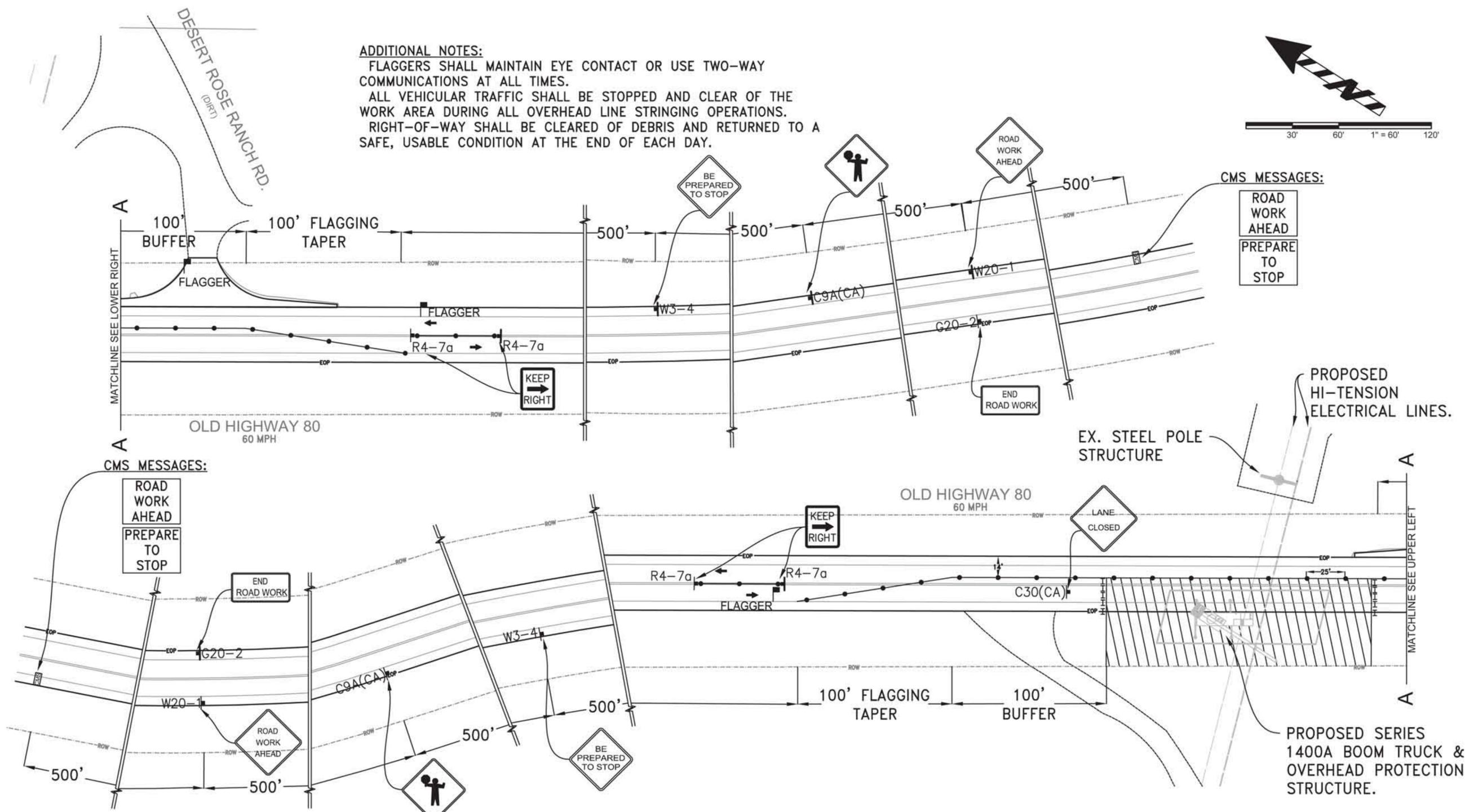
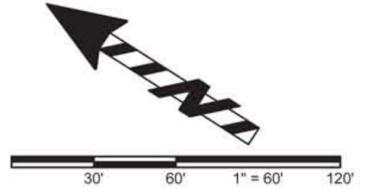


1221 S. 26th ST.
 SAN DIEGO, CA 92113
 OFFICE: (619) 239-8200
 FAX: (858) 259-0357

MAILING ADDRESS:
 P.O. BOX 13459
 SAN DIEGO, CA 92170

**TL 13844 SECTION 2 OVERHEAD CROSSING
 ON OLD HIGHWAY 80 NEAR MILE MARKER 32**

ADDITIONAL NOTES:
 FLAGGERS SHALL MAINTAIN EYE CONTACT OR USE TWO-WAY COMMUNICATIONS AT ALL TIMES.
 ALL VEHICULAR TRAFFIC SHALL BE STOPPED AND CLEAR OF THE WORK AREA DURING ALL OVERHEAD LINE STRINGING OPERATIONS.
 RIGHT-OF-WAY SHALL BE CLEARED OF DEBRIS AND RETURNED TO A SAFE, USABLE CONDITION AT THE END OF EACH DAY.



1221 S. 26th ST.
 SAN DIEGO, CA 92113
 OFFICE: (619) 239-8200
 FAX: (858) 259-0357

- LEGEND:**
- ⚡ FLASHING BEACON
 - DIRECTION OF TRAVEL
 - CONE/DELINEATOR
 - ⊥ BARRICADE
 - ⚑ FLAGGER
 - ↑ SIGN
 - +++ RAILROAD TRACKS
 - ⬆️ FLASHING ARROW SIGN
 - Ⓜ️ CHANGEABLE MESSAGE SIGN
 - ▨ WORK AREA
 - Ⓣ SIGNALIZED INTERSECTION

BRIAN VAHALIK
 DRAWN BY:
 TL 13844
 PROJECT NUMBER:
 5/13/13
 DATE:

OLD HIGHWAY 80 OVERHEAD CROSSING
 NEAR MILE MARKER 32 EAST OF BOULEVARD
 PROJECT NAME
BETA ENGINEERING
 COMPANY
ANDREW BRUNTON
 PROJECT CONTACT

TRAFFIC CONTROL PLANS
FLAGGING OPERATION ON OLD HWY 80
FOR OVERHEAD ELECTRICAL LINE
INSTALLATION
 1321 D4 SHEET 1 OF 1

ATTACHMENT G: GENERAL TRAFFIC CONTROL PLAN



Beta Engineering
4725 Highway 28 East
Pineville, LA 71360
phone 318.487.9599
fax 318.442.1741
betaengineering.com

June 11, 2013

San Diego Gas & Electric
1010 Tavern Road, Building 1
Alpine, CA 91901

Attn: Jennifer Kaminsky

Subject: SDG&E East County Substation Project – TL13844
Traffic Control Plan for Offloading Equipment
Beta Project No. B567
Beta Ref. No. B567-L038

To whom it may concern,

Beta Engineering is submitting the standard Traffic Control Plan for offloading equipment for the above referenced project. Equipment will be unloaded within the project Right-of-Way whenever available. However, equipment may need to be unloaded on public roadways adjacent to the project Right-of-Way for initial access to the project components. These equipment unloading locations include: Jewel Valley Road, Old Hwy 80 and Carrizo Gorge Road. These equipment unloading locations will be used minimally until fully accessible travel ways have been established on the project Right-of-Way to prevent impacts to traffic on these public roadways.

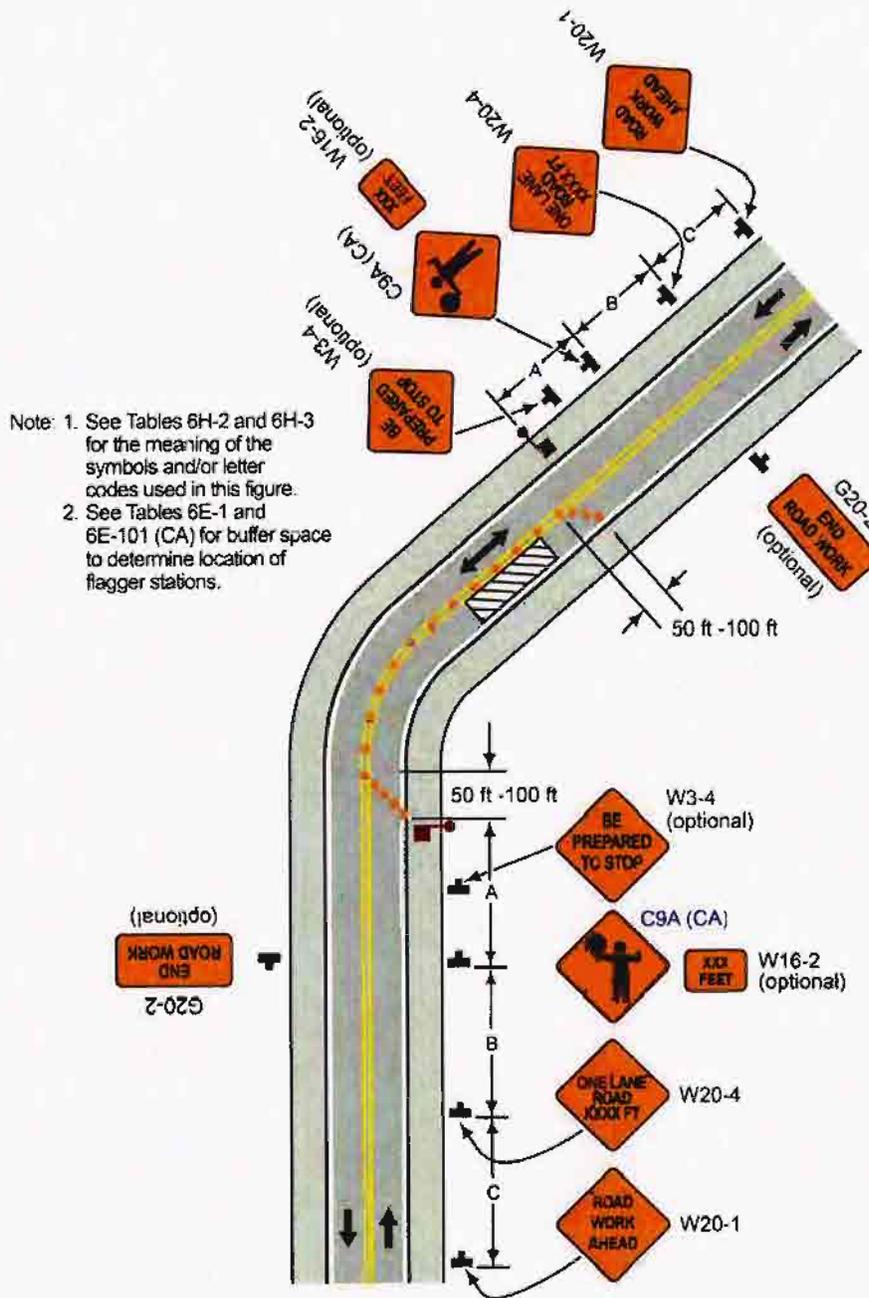
Traffic control work for offloading equipment will follow the standards from the 2012 Edition of the California Manual on Uniform Traffic Control Devices (MUTCD, 2012 ed.). Traffic control work will specifically follow the plans outlined in Figure 6H-10 (CA), "Lane Closures on a Two-Lane Road Using Flaggers" and Table 6E-101 (CA), "Longitudinal Buffer Space or Flagger Station Spacing on Downgrades". These documents are attached for your reference.

Sincerely,

BETA ENGINEERING CALIFORNIA LP

Dane Anderson
Assistant Project Manager

Figure 6H-10 (CA). Lane Closure on Two-Lane Road Using Flaggers (TA-10)



Typical Application 10

Table 6E-1. Stopping Sight Distance as a Function of Speed

Speed*	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

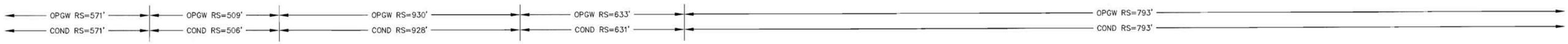
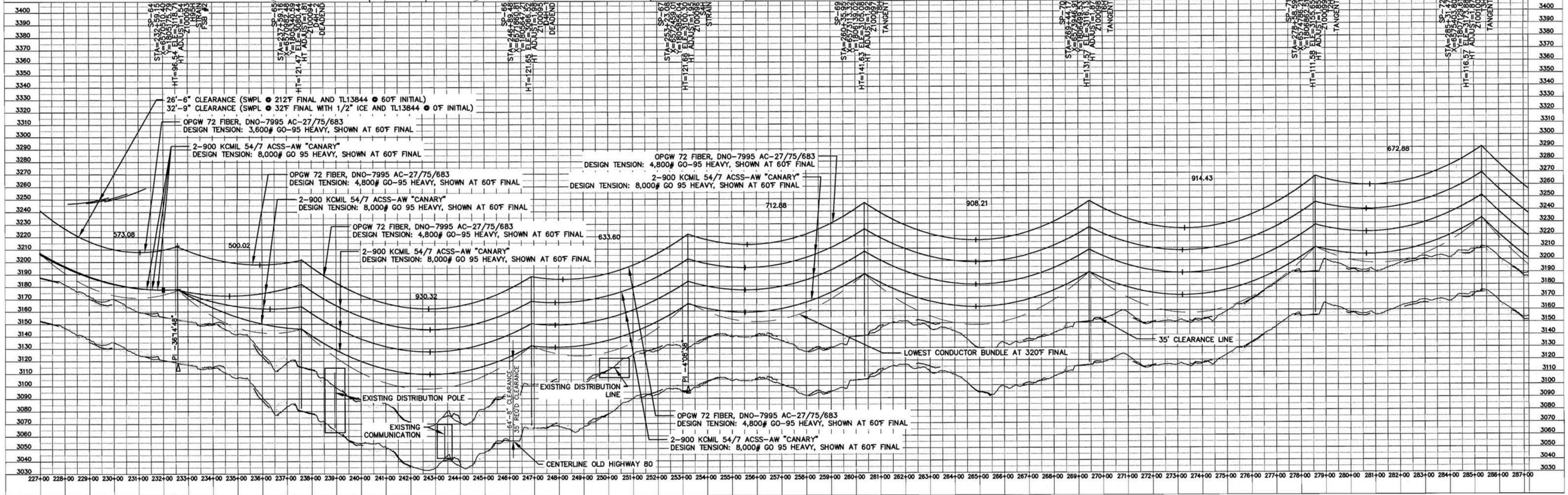
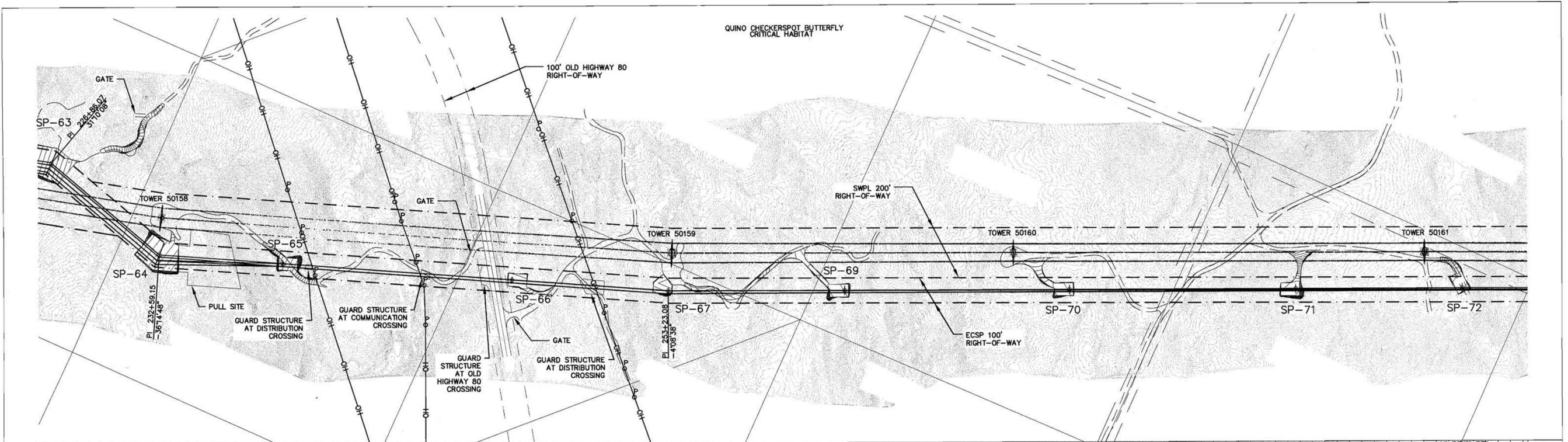
* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed.
 Can also be used as Stopping Sight Distance as suggested buffer space length or location for flagger station.

Table 6E-101(CA). Longitudinal Buffer Space or Flagger Station Spacing on Downgrades

Speed (mph)	% Downgrade (Buffer Space)		
	-3% (feet)	-6% (feet)	-9% (feet)
20	116	120	126
25	158	165	173
30	205	215	227
35	257	271	287
40	315	333	354
45	378	400	427
50	446	474	507
55	520	553	593
60	598	638	686
65	682	728	785
70	771	825	891

* Exhibit 3-2. A Policy on Geometric Design of Highways and Streets, AASHTO, 2001, p.115.

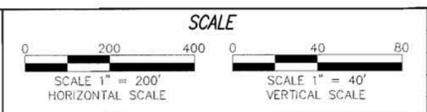
ATTACHMENT H: OLD HIGHWAY 80 OVERHEAD PLAN & PROFILE



NOTES
1. SEE DRAWING 20H-ST-KEY1 FOR NOTES AND LEGEND.

LAND SERVICES	
REVISIONS:	

PROFILE KEY	
CENTERLINE PROFILE	—————
20' LEFT PROFILE
20' RIGHT PROFILE
ROW EDGE



REV	BUDGET	CONSTR	ORDER	CHANGE	DATE
C				REVISED AND REISSUED FOR APPROVAL	NKA JAT 4/12/13
B				REVISED PER SDG&E COMMENTS	NKA RAT JAT 12/21/12
A				ISSUED FOR APPROVAL	NKA RAT JAT 10/31/12

BETA SAN DIEGO GAS & ELECTRIC
TRANSMISSION ENGINEERING
EAST COUNTY SUBSTATION PROJECT
TL13844
SCALE AS NOTED SHEET 4 OF 7

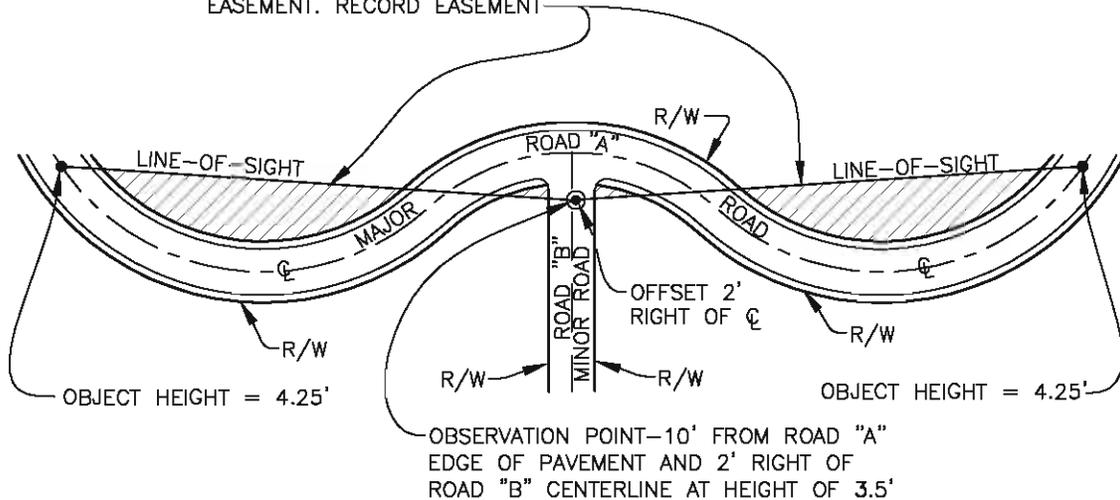
138kV TRANSMISSION LINE
BOULEVARD TO EAST COUNTY
227+00.00 TO 287+00.00
DRAWING NUMBER
20H-ST-PP4

ATTACHMENT I: SAN DIEGO COUNTY SITE DISTANCE STANDARDS

REFERENCE: COUNTY OF SAN DIEGO PUBLIC ROAD STANDARDS (TABLE # 5, PAGE 34)	
DESIGN SPEED MPH	MINIMUM CORNER INTERSECTION SIGHT DISTANCE (FEET)*
60	600
50	500
40	400
30	300
20	200

*CORNER SIGHT DISTANCE IS MEASURED FROM AN OBSERVATION POINT 2 FEET RIGHT OF ROAD "B" CENTERLINE AND 10 FEET BACK FROM ROAD "A" EDGE OF PAVEMENT MEASURED FROM A HEIGHT OF 3.5' TO AN OBJECT HEIGHT OF 4.25 FEET

CLEAR SPACE EASEMENTS—NO TREES OR OTHER SIGHT OBSTRUCTIONS WITHIN CLEAR SPACE, LOW GROWING GROUND COVER ONLY. LABEL ON PLANS AS "CLEAR SPACE EASEMENT. NO SIGHT OBSTRUCTIONS WITHIN THIS SPACE." SHOW TURNING POINT AND BEARING OF EASEMENT. RECORD EASEMENT



INTERSECTION SIGHT DISTANCE
NO SCALE

NOTE: THE REQUIRED SIGHT DISTANCE APPLIES TO BOTH HORIZONTAL AND VERTICAL OBSTRUCTIONS

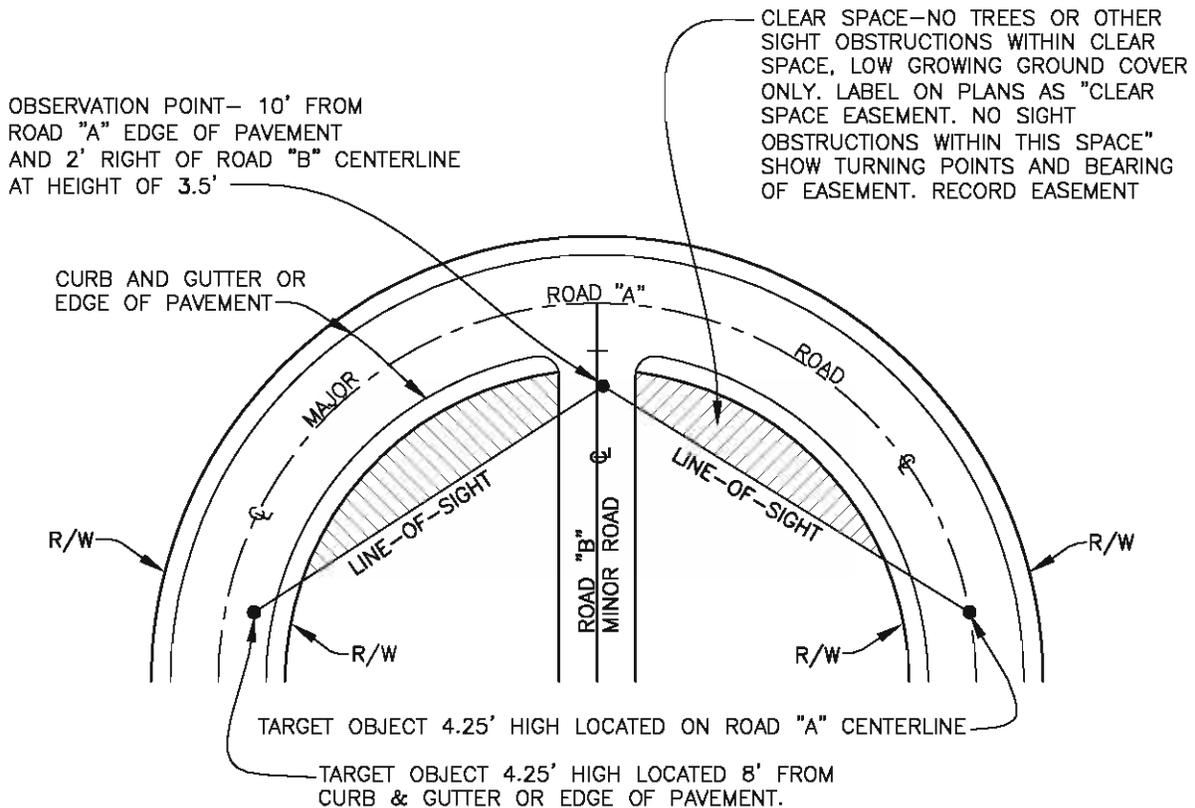
DRAWN BY: <u>SS</u>	CHECKED BY: <u>LMC</u>	SAN DIEGO COUNTY DESIGN STANDARD	REVISION	APPROVED	DATE
RECOMMENDED BY: <u>JEFF S. MOODY</u>					
APPROVED BY: <u>[Signature]</u>		CLEAR SPACE EASEMENT TYPE B			
DOUGLAS M. ISBELL, COUNTY ENGINEER					
RCE# <u>18634</u> EXP. <u>06/2007</u>			DRAWING NUMBER DS-20B		

SIGHT DISTANCE REQUIREMENTS AT ALL INTERSECTIONS SHALL CONFORM TO THE INTERSECTIONAL SIGHT DISTANCE CRITERIA AS PROVIDED BELOW

REQUIRED SIGHT DISTANCE (FT) = ROAD "A" DESIGN SPEED (MPH) X 10FT/MPH

REFERENCE: COUNTY OF SAN DIEGO PUBLIC ROAD STANDARDS (TABLE # 5, PAGE 34)	
DESIGN SPEED MPH	MINIMUM CORNER INTERSECTION SIGHT DISTANCE (FEET)*
60	600
50	500
40	400
30	300
20	200

*CORNER SIGHT DISTANCE IS MEASURED FROM AN OBSERVATION POINT 2 FEET RIGHT OF ROAD "B" CENTERLINE AND 10 FEET BACK FROM ROAD "A" EDGE OF PAVEMENT MEASURED FROM A HEIGHT OF 3.5 FEET TO AN OBJECT HEIGHT OF 4.25 FEET



INTERSECTION SIGHT DISTANCE

NO SCALE

NOTE: THE REQUIRED SIGHT DISTANCE APPLIES TO BOTH HORIZONTAL AND VERTICAL OBSTRUCTIONS.

DRAWN BY: <u>SS</u>	CHECKED BY: <u>LMC</u>	SAN DIEGO COUNTY DESIGN STANDARD	REVISION	APPROVED	DATE
RECOMMENDED BY: <u>JEFF S. MOODY</u>					
APPROVED BY: <u>[Signature]</u>		CLEAR SPACE EASEMENT TYPE A			
DOUGLAS M. ISBELL, COUNTY ENGINEER			DRAWING NUMBER DS-20A		
RCE# <u>18634</u>	EXP. <u>06/2007</u>				

ATTACHMENT J: AGENCY BRIEFING SUMMARY

East County (ECO) Substation Project
Agency Briefing Summary
Last Updated June 20, 2013

California Highway Patrol (CHP)

On January 8, 2013, San Diego Gas & Electric Company (SDG&E) held a briefing with the CHP Rural Operations Sergeant Amata Macias, to discuss the Project's impact to freeways and the construction schedule. SDG&E also provided the CHP a copy of the ECO Substation Project Overview Map for their reference. SDG&E will continue to work with CHP of the schedule and any updates regarding work activities throughout construction.

Carrizo Gorge Railway Police

A briefing was held with the Carrizo Gorge Railway Police Chief of Police Marc Langlais on December 12, 2012, after which railway fire and security teams accompanied SDG&E on a tour of the right-of-way.

County of San Diego, Department of Public Works (DPW)

SDG&E initially met with Ken Brazell, Project Manager for DPW in the Land Development Division on May 6, 2011, to review the underground alternative and the access road from the substation to Old Highway 80. On May 31, 2012, SDG&E met with Mr. Brazell and other individuals from DPW to conduct an overall Project review. On September 13, 2012, SDG&E met with Mr. Brazell and provided copies of grading plans for DPW's review. On November 9 and 19, 2012, SDG&E met with Mr. Brazell to review DPW's comments to the grading plans and drainage study. In addition, since the September 2012, meeting with DPW, SDG&E has been in regular communication (approximately 2-4 times per month) with Mr. Brazell via email and telephone regarding various issues, including construction plans, schedule and associated impacts to traffic.

San Diego County Sheriff

SDG&E initially contacted San Diego County Sheriff Rural Division Supervisor, Sergeant Mike Clough, and resident deputies on November 2, 2012, to discuss Project impacts to the area and possible threats to the Project. SDG&E also provided a copy of the ECO Substation Project Overview Map for their reference.

SDG&E routinely contacts resident deputies on a bi-weekly basis to discuss developments in the right-of-way area as well as the construction schedule.

Fire Agencies: San Diego Rural Fire Protection District (SDRFPD), San Diego County Fire Authority (SDCFA), California Fire (CAL FIRE), and Bureau of Land Management (BLM)

SDG&E has coordinated with all of the agencies listed above as part of the development of the Project fire plans. Additionally, on January 9, 2013, SDG&E held a pre-construction review of the ECO

Substation Project Construction Fire Prevention Plan with Chief David Nissen, SDRFPD, and Captain Cal Hendrie, CAL FIRE. Impacts to traffic and emergency services were also discussed during that meeting. SDG&E will continue to meet with and maintain communications with these individuals, as well as, Clay Howe, BLM, and Fire Marshal James Pine, SDCFA, prior to and during construction. SDG&E's construction contractor will provide the ECO Substation Project Fire Marshal with a 30-day look-ahead for work activities, and the Fire Marshal will provide this information to local fire agencies along with any anticipated activities that could impact the use of roads in the Project area throughout construction.

U.S. Customs and Border Patrol (CBP)

On October 19, 2012, SDG&E held a formal briefing with Boulevard Station, San Diego Sector, Field Operations Supervisor Douglas Cook and Community Liaison Agent Jason Bush to discuss issues associated with upcoming Project construction activities. SDG&E will continue to apprise the agents of changes to the schedule and any updates regarding work activities throughout construction.