



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

California Regional Water Quality Control Board, San Diego Region

Certified Mail – Return Receipt Requested

Article Number: 7010 1060 0000 4952 9048

November 15, 2012

Melody Rocco
City of Poway
13325 Civic Center Drive
Poway, CA 92064

In reply refer to:

762043: amonji

Subject: Action on Request for Clean Water Act Section 401 Water Quality Certification No. 11C-008, the Ephemeral Tributary to Rattlesnake Creek Streambed Stabilization Project

Ms. Rocco:

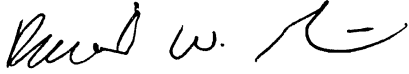
Enclosed find Clean Water Act Section 401 Water Quality Certification No. 11C-008 (Certification) for discharge to Waters of the United States and acknowledgment of enrollment under State Water Resources Control Board Order No. 2003-017-DWQ for the **Ephemeral Tributary to Rattlesnake Creek Streambed Stabilization Project** (Project). A description of the Project and Project location can be found in the Project information sheet, location map, and site maps which are included as attachments to the Certification.

Any petition for reconsideration of this Certification must be filed with the State Water Resources Control Board within 30 days of certification action (23 CCR § 3867). If no petition is received, it will be assumed that the City of Poway has accepted and will comply with all the conditions of this Certification.

Failure to comply with all conditions of this Certification may subject you to enforcement actions by the California Regional Water Quality Control Board, San Diego Region, including administrative enforcement orders requiring you to cease and desist from violations, or to clean up waste and abate existing or threatened conditions of pollution or nuisance; administrative civil liability in amounts of up to \$10,000 per day per violation; referral to the State Attorney General for injunctive relief; and, referral to the District Attorney for criminal prosecution.

In the subject line of any response, please include the reference number 762043:amonji. For questions or comments, please contact Alan Monji by phone at (858) 637-7140, or by email at amonji@waterboards.ca.gov.

Respectfully,



David W. Gibson,
Executive Officer
San Diego Regional Water Quality Control Board

DWG:js:db:kkd:atm

Enclosure:

Clean Water Act Section 401 Water Quality Certification No. **11C-008** for the **Rattlesnake Creek Streambed Stabilization** project, with **4** attachments

cc: Refer to Attachment 2 of Certification **11C-008** for Distribution List.

Tech Staff Info & Use	
File No.	11C-008
WDID	9000002221
Reg. Measure ID	377366
Place ID	762043
Party ID	525683



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

California Regional Water Quality Control Board, San Diego Region

Action on Request for Clean Water Act Section 401 Water Quality Certification and Waste Discharge Requirements for Discharge of Dredged and/or Fill Materials

PROJECT: Ephemeral Tributary to Rattlesnake Creek Streambed Stabilization, Certification Number 11C-008, WDID: 900002221

APPLICANT: City of Poway
13325 Civic Center Drive
Poway, CA 92064

CIWQS
Reg. Meas. ID: 377366
Place ID: 762043
Party ID: 525683

ACTION:

<input checked="" type="checkbox"/> Order for Low Impact Certification	<input type="checkbox"/> Order for Denial of Certification
<input type="checkbox"/> Order for Technically-conditioned Certification	<input type="checkbox"/> Waiver of Waste Discharge Requirements
<input checked="" type="checkbox"/> Enrollment in SWRCB GWDR Order No. 2003-017 DWQ	<input type="checkbox"/> Enrollment in Isolated Waters Order No. 2004-004 DWQ

PROJECT DESCRIPTION

The Ephemeral Tributary to the Rattlesnake Creek Streambed Stabilization Project (Project) is located in a tributary to Rattlesnake Creek in the City of Poway (Applicant) at the intersection of Kentfield Drive and Midland Road within the Poway Hydrologic Area. In the winters of 2009 and 2010, temporary emergency action and emergency permits were granted to temporarily stabilize erosion areas of the proposed Project area. Erosion damage has since occurred throughout the Rattlesnake Creek area and permanent stabilization is necessary.

The Applicant has proposed to implement streambed and bank reinforcements and enhancements along a tributary to Rattlesnake Creek to reduce erosive velocities, increase soil strength, and eliminate the potential for erosion damage during future storm events. Proposed measures include installation of Turf Reinforced Mats (TRMs) planted with native vegetation. Rip rap and filter fabric will be installed at the toe of the slope to keyed-in with the TRMs. The Applicant will also widen the channel bottom with minor grading in a portion of the stream bottom and contour the banks to a 2:1 slope where allowed by easement boundaries. After Project construction, the Project area will be revegetated with native riparian species. If

possible, grading work will be done under the canopy of native trees and will not involve the removal of those trees.

During construction, the Applicant will apply four temporary Best Management Practices (BMPs):

- TRMs and Erosion Control Blankets (ECBs) to stabilize side slopes;
- Sediment control BMPs (such as weighted fiber rolls) along the toe-of-slope;
- A temporary diversion system, as needed, to convey nuisance water within the channel upstream of work areas to the downstream end of work areas; and
- A concrete washout (for construction of the headwall).

Permanent BMPs includes:

- TRM;
- Rock Slope Protection; and
- Vegetation along the full reach of the TRM that includes hydroseeding, container plants, and trees.

Approximately 410 cubic yards of material will be removed from the site. Approximately 1,200 square yards of slope reinforcement mat and 72 cubic yards of rock slope protection will be installed downstream of the existing triple box culvert. Approximately 70 cubic yards of riprap toe protection will be provided at the toe of the slope.

The Project will temporarily impact 0.034 acres (195 linear feet) of waters of the United States and/or State and permanently impact 0.007 acres (44 linear feet) waters of the United States and/or State.

The Project provides permanent bank stabilization and erosion control in the Project area. The Project will avoid impacts to existing native riparian trees and the Project site will be revegetated with native riparian plant species. No mitigation is required for this Project because the permanent impacts are minimal, the Project provides permanent bank stabilization and erosion control, and the native vegetation plantings are expected to enhance the riparian habitat.

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I. STANDARD CONDITIONS

The following three standard conditions apply to all Certification actions, except as noted under Condition 3 for denials (Action 3).

- A. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the California Water Code and section 3867 of Title 23 of the California Code of Regulations (23 CCR).
- B. This Certification action is not intended and must not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
- C. The validity of any non-denial Certification action (Actions 1 and 2) must be conditioned upon total payment of the full fee required under 23 CCR section 3833, unless otherwise stated in writing by the certifying agency.

II. ADDITIONAL CONDITIONS: GENERAL

- A. This Clean Water Act Section 401 Water Quality Certification No. 11C-008 (Certification) is only valid if the Project begins no later than 5 (five) years from the date of issuance. If the Project has not begun within 5 years from the date of issuance, then this Certification shall expire 5 years from the date of issuance.
- B. If applicable, the Applicant must comply with the requirements of State Water Resources Control Board Water Quality Order No. 2003-0017-DWQ, *Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification*. These General Waste Discharge Requirements are accessible at:
http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/gowdr401regulated_projects.pdf.
- C. The Applicant must, at all times fully comply with the engineering plans, specifications, and technical reports submitted to the San Diego Water Board to support this Certification and all subsequent submittals required as part of this Certification and as described in Attachment 1. The conditions within this Certification must supersede conflicting provisions within such plans submitted prior to the Certification action. Any modifications thereto, would require notification to the San Diego Water Board and

reevaluation for individual Waste Discharge Requirements and/or Certification amendment.

- D. During construction, the Applicant must maintain a copy of this Certification at the Project site so as to be available at all times to site personnel and agencies.
- E. Upon presentation of credentials, the Applicant must permit the San Diego Water Board or its authorized representative(s) to:
 - 1. Enter onto Project premises, including all areas on which wetland fill or wetland mitigation is located or in which records are kept.
 - 2. Access and/or copy any records required to be kept under the terms and conditions of this Certification.
 - 3. Inspect any treatment equipment, monitoring equipment, or monitoring method required by this Certification.
 - 4. Sample any discharge or surface water covered by this Order.
- F. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation must be subject to any remedies, penalties, process or sanctions as provided for under State law. For purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.
- G. In response to a suspected violation of any condition of this Certification, the San Diego Water Board may require the holder of any permit or license subject to this Certification to furnish, under penalty of perjury, any technical or monitoring reports the San Diego Water Board deems appropriate, provided that the burden, including costs, of the reports must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
- H. In response to any violation of the conditions of this Certification, the San Diego Water Board may add to or modify the conditions of this Certification as appropriate to ensure compliance.

III. ADDITIONAL CONDITIONS: CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. Prior to the start of the Project, and annually thereafter, the Applicant must educate all personnel on the requirements in this Certification, pollution prevention measures, spill response, and Best Management Practices (BMPs) implementation and maintenance.

- B. The Applicant must, at all times, maintain appropriate types and sufficient quantities of materials on-site to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State.
- C. If applicable, the Applicant must enroll in and comply with the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, NPDES No. CAS000002, *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*, and any subsequent reissuance as applicable.
- D. If applicable, the Applicant must enroll in and comply with the requirements of San Diego Water Board Order No. 2008-0002, *General Waste Discharge Requirements and NPDES Permit for Discharges from Groundwater Extraction waste to Surface waters within the San Diego Region except for San Diego Bay*, and any subsequent reissuance as applicable.
- E. The treatment, storage, and disposal of wastewater during the life of the Project must be done in accordance with waste discharge requirements established by the San Diego Water Board pursuant to CWC § 13260.
- F. Discharges of concentrated flow during construction or after completion must not cause downstream erosion or damage to properties or stream habitat.
- G. Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the United States and/or the State or placed in locations that may be subjected to storm flows. Pollutants discharged to areas within a stream diversion area must be removed at the end of each work day or sooner if rain is predicted.
- H. All surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity that may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary cofferdam or other artificial obstruction constructed must only be built from materials such as steel or fiberglass sheet pile which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location. If storm discharges through the Project area threaten to exceed the capacity of flow bypass systems to effectively manage the flow rate, the Applicant shall direct the removal of equipment, construction materials, and all suspendable debris from within the dewatered construction cofferdam area and stabilization of areas within and downstream of the cofferdam by laying a temporary geosynthetic discharge apron to avoid spillway scour of sediments. The Project is to be constructed in the dry season to avoid high flow

conditions; however, the Applicant shall prepare and maintain a contingency plan to address high flow conditions should they occur during construction.

- I. All areas that will be left in a rough graded state must be stabilized no later than seven days after completion of grading. The Applicant, and subsequent owners, are responsible for implementing and maintaining BMPs to prevent erosion of the rough graded areas to prevent flow from this area from causing negative impacts to beneficial uses. After completion of grading, all areas must be revegetated with native species appropriate for the area. The revegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory, which can be found online at <http://www.cal-ipc.org/ip/inventory/weedlist.php>.
- J. Where riprap is replaced at the channel crest to stabilize areas around the abutments, care shall be taken not to discharge rip rap down the channel slopes to the channel floor.
- K. Substances hazardous to aquatic life including, but not limited to, petroleum products, raw cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the United States and/or State. BMPs must be implemented to prevent such discharges during each project activity involving hazardous materials.
- L. Removal of vegetation must occur by hand, mechanically, or using United States Environmental Protection Agency approved herbicides deployed using applicable BMPs to prevent impacts to beneficial uses of waters of the United States and/or State. Use of aquatic pesticides must be done in accordance with State Water Resources Control Board Water Quality Order No. 2004-0009-DWQ, and any subsequent reissuance as applicable.

IV. ADDITIONAL CONDITIONS: POST-CONSTRUCTION CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. The Applicant is prohibited from allowing post-construction discharges to cause onsite or offsite erosion, damage to properties or damage to habitats in receiving waters that will receive post-construction discharges from the Project site.
- B. Any storm drain inlet structures within the Project boundaries must be stamped and/or stenciled (or equivalent) with appropriate language prohibiting non-storm water discharges.
- C. Post-construction BMPs must be installed and functional prior to occupancy and/or planned use of development areas.
- D. The applicant must comply with the current (as of the issuance date of this Certification) requirements in *California Regional Water Quality Control Board, San Diego Region*

Order No. R9-2007-0001, NPDES No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego.

1. Volume

Volume-based BMPs must be designed to mitigate (infiltrate, filter, or treat) either:

- a. The volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the local historical rainfall record; or
- b. The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event; or

2. Flow

Flow-based BMPs must be designed to mitigate (infiltrate, filter, or treat) either:

- a. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or
- b. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or
- c. The maximum flow rate of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

E. All post-construction treatment BMPs and storm water discharge points must:

1. Be regularly inspected and maintained for the life of the Project per manufactures' specifications and industry standards;
2. Have all preventive and corrective maintenance performed;
3. Be inspected no less than one time per year, immediately prior to the commencement of the rainy season (October 1) and after every storm event exceeding 0.5 inches of precipitation; and
4. BMP inspection, maintenance, and corrective measures implemented must be recorded and logged.

V. ADDITIONAL CONDITIONS: REVEGATION PLAN

- A. The Applicant must restore all areas of temporary impacts and all other areas of temporary disturbance which could result in a discharge or a threatened discharge to waters of the United States and/or State. Restoration must include grading of disturbed areas to pre-project contours and revegetation with native species. The Applicant must

implement all necessary BMPs to control erosion and runoff from areas associated with the Project.

- B. If feasible, the Applicant must salvage leaf litter, coarse woody debris, and upper soil horizons from impacted jurisdictional water sites that are relatively free of invasive exotic species for use in on-site restoration areas. If available, large cuttings from appropriate native tree species at the impact site should be used as pole plantings for the restoration of temporary impacts.
- C. If at any time during the mitigation implementation, a catastrophic natural event (e.g., fire, flood) occurs and impacts the restoration area, the Applicant is responsible for repair and replanting of the damaged area(s).
- D. The Applicant must monitor the Project area to ensure that the Project meets requirements detailed in the revised *Streambank Stabilization and Revegetation Monitoring Plan for Ephemeral Tributary to Rattlesnake Creek Streambank Stabilization Project* (November 2, 2011) and any subsequent version submitted to the San Diego Water Board.
- E. For purposes of this Certification, establishment is defined as the creation of vegetated or unvegetated waters of the United States and/or State where the resource has never previously existed (e.g. conversion of nonnative grassland to a freshwater marsh). Restoration is divided into two activities, re-establishment and rehabilitation. Re-establishment is defined as the return of natural/historic functions to a site where vegetated or unvegetated waters of the United States and/or State previously existed (e.g., removal of fill material to restore a drainage). Rehabilitation is defined as the improvement of the general suite of functions of degraded vegetated or unvegetated waters of the United States and/or State (e.g., removal of a heavy infestation or monoculture of exotic plant species from jurisdictional areas and replacing with native species). Enhancement is defined as the improvement to one or two functions of existing vegetated or unvegetated waters of the United States and/or State (e.g., removal of small patches of exotic plant species from an area containing predominantly natural plant species). Preservation is defined as the acquisition and legal protection from future impacts in perpetuity of existing vegetated or unvegetated waters of the United States and/or State (e.g., conservation easement).

VI. NOTIFICATION REQUIREMENTS

- A. The Applicant must report to the San Diego Water Board any noncompliance that may endanger human health or the environment. Any information shall be provided orally within 24 hours from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a written description of the incident and its cause, the period of the noncompliance including

exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The San Diego Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours.

- B. The Applicant must notify the San Diego Water Board in writing **at least 5 days prior to** the actual commencement of dredge, fill, and discharge activities.
- C. The Applicant must submit an Annual Monitoring Report within **60 days** of completion of the Project. The Annual Monitoring Report must include:
 - 1. Stream photo documentation in accordance with:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/StreamPhotoDocSOP.pdf
 - 2. GIS shapefiles of the project site.
- D. Annual monitoring reports, summarizing the results of monitoring and maintenance efforts, shall be submitted to the San Diego Water Board by May 31 of each monitoring year for a minimum of three years. If success criteria are not met within three years, monitoring and reporting will continue on a yearly basis until success criteria is achieved.
- E. This Certification is not transferable in its entirety or in part to any person or organization except after notice to the California Regional Water Quality Control Board – San Diego Region (San Diego Water Board) in accordance with the following terms.
 - a. **Transfer of Property Ownership:** the Applicant must notify the San Diego Water Board of any change in ownership of the Project area. Notification of change in ownership must include, but not be limited to, a statement that the Applicant has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the San Diego Water Board within **10 days** of the transfer of ownership.
 - b. **Transfer of Post-Construction BMP Maintenance Responsibility:** The Applicant assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred, the Applicant must submit to the San Diego Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer

specifications. The Applicant must provide such notification to the San Diego Water Board within **10 days** of the transfer of BMP maintenance responsibility.

Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Certification and references in this Certification to the Applicant will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not necessarily relieve the Applicant of this Certification in the event that a transferee fails to comply.

VII. REPORTING REQUIREMENTS

- A. The submittal of information under this Certification is required pursuant to California Water Code (CWC) sections 13267. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit required information pursuant to CWC section 13268.
- B. All reports and information submitted to the San Diego Water Board must be submitted in both hardcopy and electronic format. The preferred electronic format for each report submission is one file in PDF format that is also Optical Character Recognition (OCR) capable.
- C. All applications, reports, or information submitted to the San Diego Water Board must be signed and certified as follows:
 1. For a corporation, by a responsible corporate officer of at least the level of vice president.
 2. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
 3. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
 4. A duly authorized representative may sign applications, reports, or information if:
 - a. The authorization is made in writing by a person described above.
 - b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
 - c. The written authorization is submitted to the San Diego Water Board Executive Officer.

- D. All applications, reports, or information submitted to the San Diego Water Board must be signed and certified as follows:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

- E. The Applicant must submit reports required under this Certification, or other information required by the San Diego Water Board, to:

Executive Officer
California Regional Water Quality Control Board
San Diego Region
Attn: 401 Certification No. 11C-008,
Place ID No. 762043
9174 Sky Park Court, Suite 100
San Diego, California 92123

VIII. CEQA FINDINGS:

- A. City of Poway is the lead agency under the California Environmental Quality Act (Public Resources Code section 21000, et seq., (CEQA)), and filed a Notice of Determination on July 19, 2011. The City of Poway has determined the project will not have a significant effect on the environment.
- B. The San Diego Water Board has reviewed the lead agency's Notice of Determination and also finds that the Project as proposed will not have a significant effect on the environment and issuance of this Certification is consistent with the Notice of Determination.

IX. PUBLIC NOTIFICATION OF PROJECT APPLICATION:

On January 28, 2011, receipt of the Project application was posted on the San Diego Water Board web site to serve as appropriate notification to the public. No public comments were received.

X. WATER QUALITY CERTIFICATION:

I hereby certify that the proposed discharge from the Rattlesnake Creek Streambed Stabilization Project (Project No. 11C-008) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)," which requires compliance with all conditions of this Water Quality Certification. Please note that enrollment under Order No. 2003-017-DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue individual waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicants' project description and/or on the attached Project Information Sheet, and (b) on compliance with all applicable requirements of the Water Quality Control Plan for the San Diego Basin Region (9) (Basin Plan).

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Certification No. 11C-008 issued on November 15, 2012.



DAVID W. GIBSON
Executive Officer
Regional Water Quality Control Board

11-15-2012
Date

Attachments:

1. Project information
2. Project location
3. Project plans
4. Distribution list

Tech Staff Info & Use	
File No.	11C-008
WDID	9 00002221
Reg. Measure ID	377366
Place ID	762043
Party ID	525683
Person ID	525684

**ATTACHMENT 1
PROJECT INFORMATION**

Applicant:	City of Poway Attention: Melody Rocco 13325 Civic Center Drive, Poway, CA 92064 Telephone: 858-668-4668 Email: mrocco@poway.org
Applicant Representatives:	ECORP Consulting, Inc Attention: Margaret Bornyasz 3914 Murphy Canyon Road, San Diego, CA, 92123 Telephone: 858-279-4040 Email: mbornyasz@ecorpconsulting.com
Project Name:	Ephemeral Tributary to Rattlesnake Creek Streambed Stabilization
Project Location:	Project is within the boundaries of the City of Poway, San Diego County, CA, on Kentfield Drive and Midland Street. Latitude: 32.975992° N Longitude: -117.037150° W
Type of Project:	Stabilization of a streambed and bank.
Need for Project:	Permanent streambed and bank stabilization.
Project Description:	<p>The Ephemeral Tributary to Rattlesnake Creek Streambed Stabilization project (Project) is located in a tributary to Rattlesnake Creek in the City of Poway (Applicant) at the intersection of Kentfield Drive and Midland Road within the Poway Hydrologic Area. In the winters of 2009 and 2010, temporary emergency action and emergency permits were granted to temporarily stabilize erosion areas of the proposed Project area. Erosion damage has since occurred throughout the Rattlesnake Creek area and permanent stabilization is necessary.</p> <p>The Applicant has proposed to implement streambed and bank reinforcements and enhancements along the tributary to Rattlesnake Creek to reduce erosive velocities, increase soil strength, and eliminate the potential for erosion damage during future storm events. Proposed measures include installation of Turf Reinforced Mats (TRMs) planted with native vegetation. Rip rap and filter fabric will be installed at</p>

	<p>the toe of the slope to keyed-in with the TRMs. The Applicant will also widen the channel bottom with minor grading in a portion of the stream bottom and contour the banks to a 2:1 slope where allowed by easement boundaries. After Project construction, the Project area will be revegetated with native riparian species. If possible, grading work will be done under the canopy of native trees and will not involve the removal of those trees.</p> <p>Approximately 410 cubic yards of material will be removed from the site. Approximately 1,200 square yards of slope reinforcement mat and 72 cubic yards of rock slope protection will be installed downstream of the existing triple box culvert. Approximately 70 cubic yards of riprap toe protection will be provided at the toe of the slope.</p> <p>The Project will temporarily impact 0.034 acres (195 linear feet) of waters of the United States and/or State and permanently impact 0.007 acres (44 linear feet) waters of the United States and/or State.</p>
Federal Agency/Permit:	U.S. Army Corps of Engineers Individual 404 Permit, Lanika Cervantes
Other Required Regulatory Approvals:	California Department of Fish and Game Streambed Alteration Agreement, Kelly Fisher
California Environmental Quality Act (CEQA) Compliance:	Ephemeral Tributary to Rattlesnake Creek Streambed Stabilization, Notice of Determination July 19, 2011, City of Poway.
Receiving Water:	Poway HA, 906.20
Affected Waters of the United States/State:	<p>Temporary: Streambed; 0.034 acre, 195 linear feet</p> <p>Permanent: Streambed; 0.007 acres, 44 linear feet</p>
Dredge Volume:	None

Related Projects Implemented/to be Implemented by the Applicant(s):	NA
Compensatory Mitigation:	The project is considered a stream bank restoration and stabilization project with minimal permanent impacts. No mitigation is required.
Best Management Practices (BMPs):	<p>During construction, the City will apply four temporary Best Management Practices (BMPs):</p> <ul style="list-style-type: none"> • TRMs and Erosion Control Blankets (ECBs) to stabilize side slopes. • Sediment control BMPs (such as weighted fiber rolls) along the toe-of-slope. • A temporary diversion system, as needed, to convey nuisance water within the channel upstream of work areas to the downstream end of work areas. • A concrete washout (for construction of the headwall). <p>Permanent BMPs include:</p> <ul style="list-style-type: none"> • TRM; • Rock Slope Protection; • Vegetation along the full reach of the TRM that includes hydroseeding, container plants, and trees.
Public Notice:	On January 28, 2011, receipt of the project application was posted on the San Diego Water Board web site to serve as appropriate notification to the public. No public comments were received.
Inspection:	NA
Fees:	Total Due:\$0 Total Paid:\$1,888.00 (check no. 226966, 00196651)
CIWQS:	Regulatory Measure ID: 377366 Place ID: 762043 Party ID: 525683

**ATTACHMENT 2
DISTRIBUTION LIST**

Lanika L Cervantes
U.S. Army Corps of Engineers, Regulatory Branch
Lanika L Cervantes@usace.army.mil

Kelly Fisher
California Department of Fish and Game
Kfisher@dfg.ca.gov

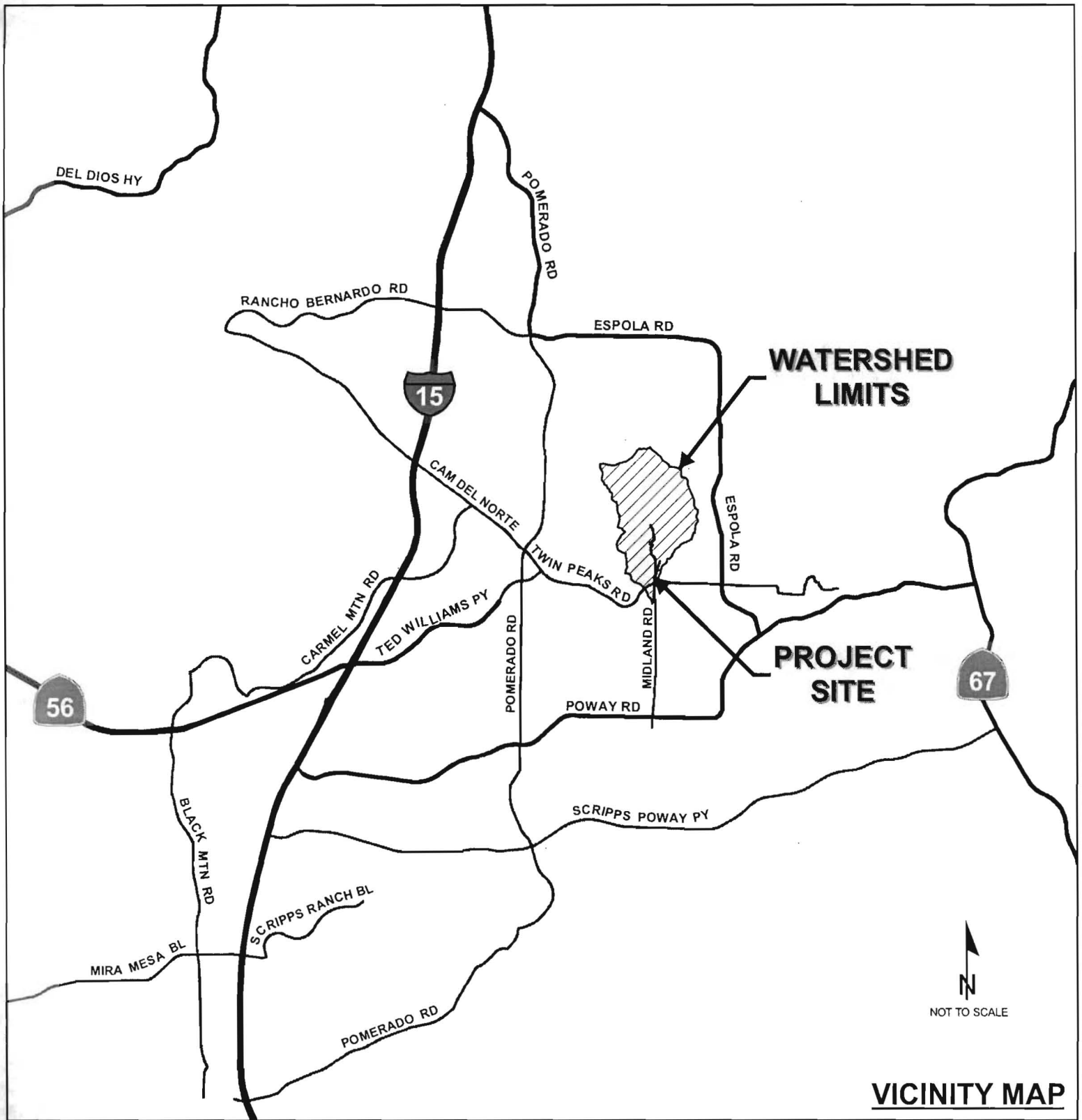
U.S. Department of the Interior
Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92011

U.S. EPA, OWOW, Region 9
75 Hawthorne St.,
San Francisco, CA 94105
R9-WTR8-Mailbox@epa.gov

State Water Resources Control Board, Division of Water Quality
401 Water Quality Certification and Wetlands Unit
P.O. Box 100
Sacramento, CA 95812-0100
Stateboard401@waterboards.ca.gov

Margaret Bornyasz
ECORP Consulting
mbornyasz@ecorpconsulting.com

ATTACHMENT 3
LOCATION MAPS

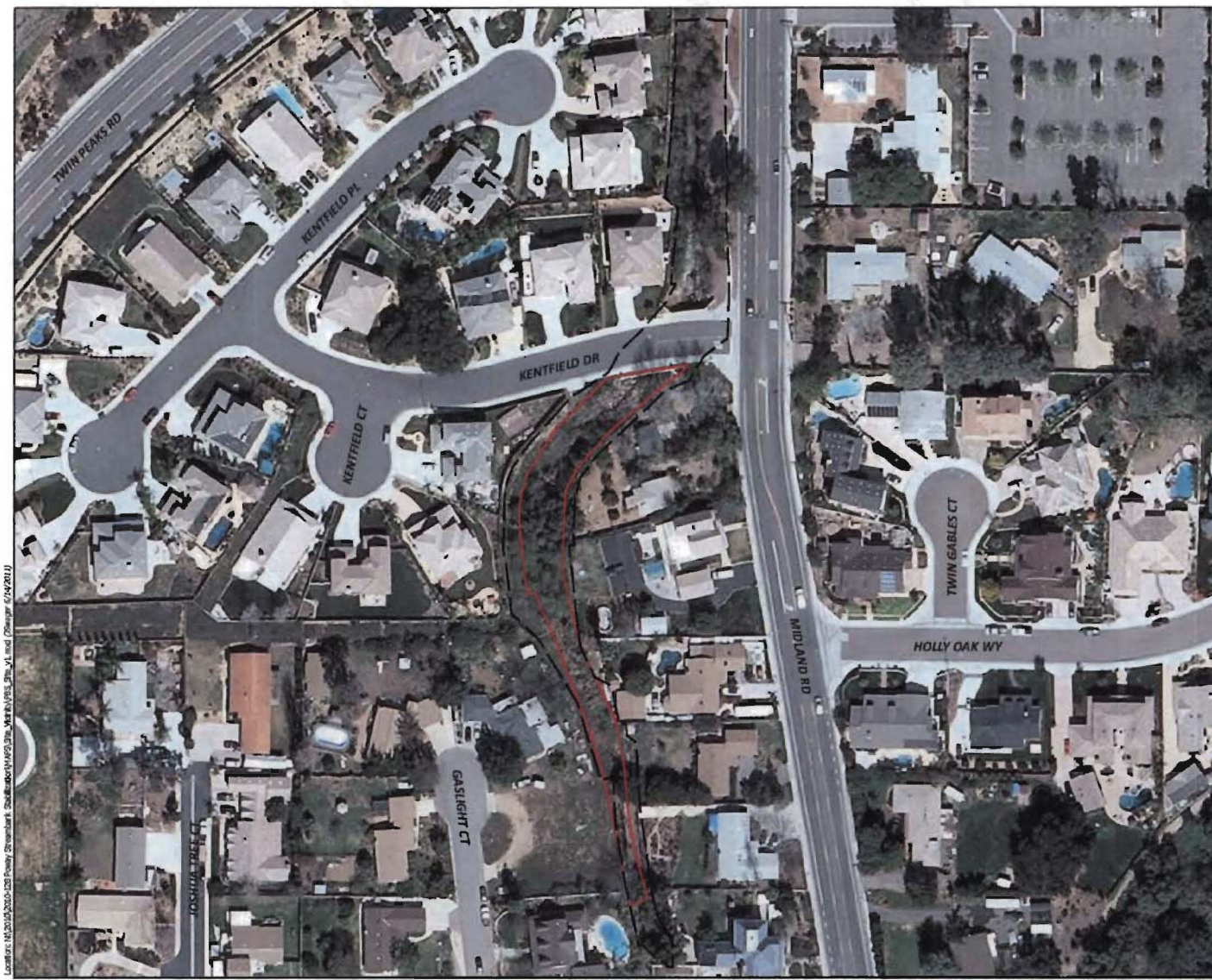


**WATERSHED
LIMITS**


**PROJECT
SITE**



VICINITY MAP



**Figure 2.
Project Site Map**

- Map Features**
-  Survey Area
 -  Project Area

Source: Risk Engineering; ESRI (2008)



Location: N:\2010\2010-128 Poway Streambank Stabilization\Map\Map\Map_V1.mxd (2/14/2011)

2010-128 Poway Streambank Stabilization

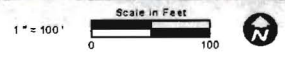


Photo: i-cubed - Aerials Express 2009

 **ECORP Consulting, Inc.**
ENVIRONMENTAL CONSULTANTS

Map Date: 6/14/2011



Legend

- Watershed Boundary
- Project Extents
- 2005_Contours_SA

Ephemeral Tributary to Rattlesnake Creek - Watershed Limits

W:\18377\GIS\18377_WatershedLimits.mxd
 Exhibit Date: 11.16.2010
 REC JN: 18377

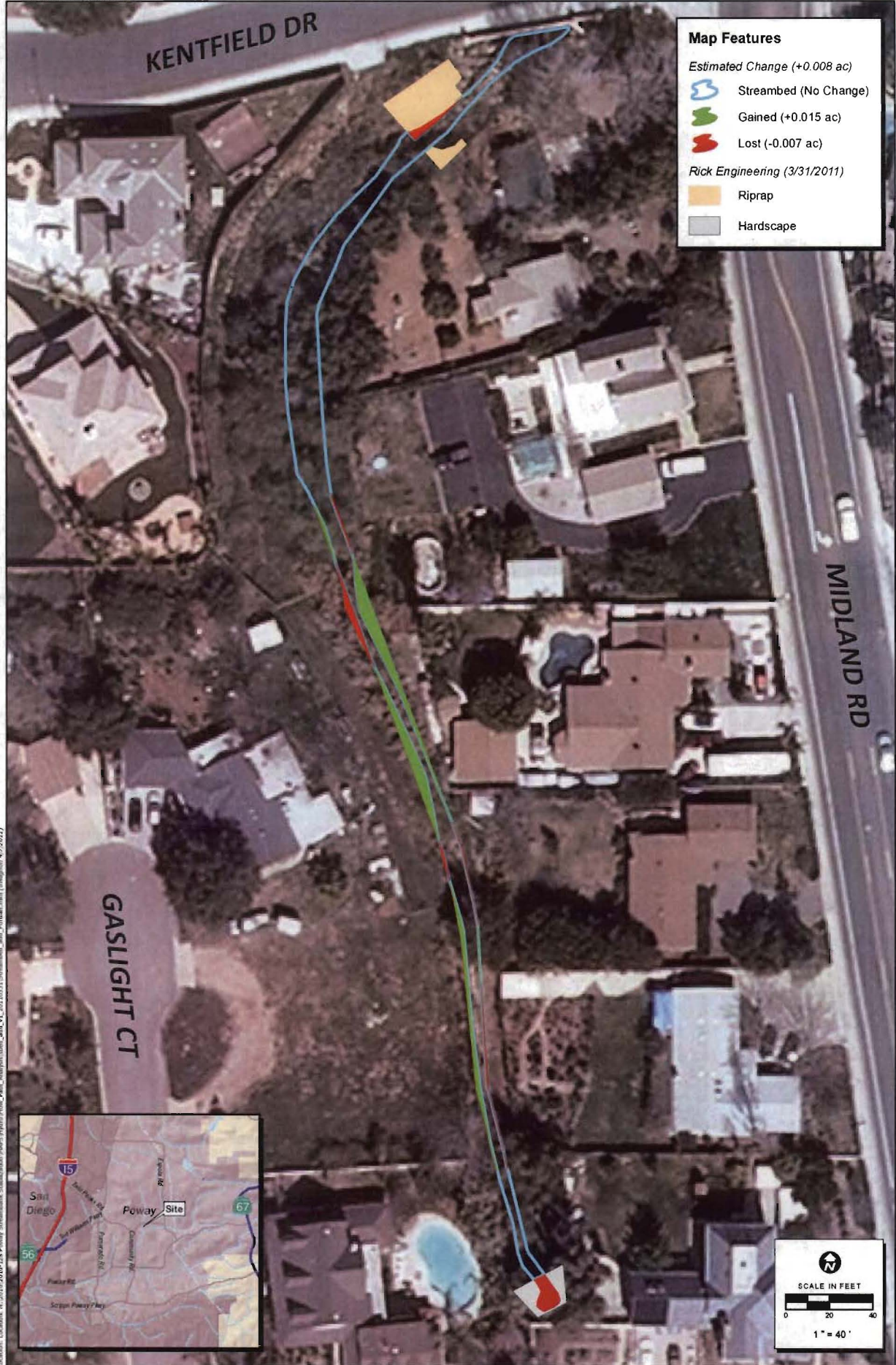


Data Sources
 SanGIS Road - October 2010
 Eagle Aerial Photo: March 2009



ATTACHMENT 4

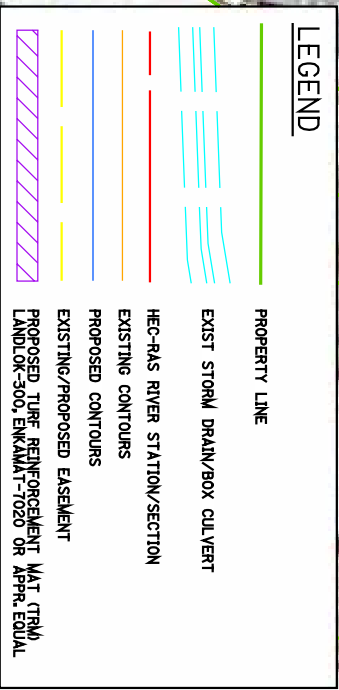
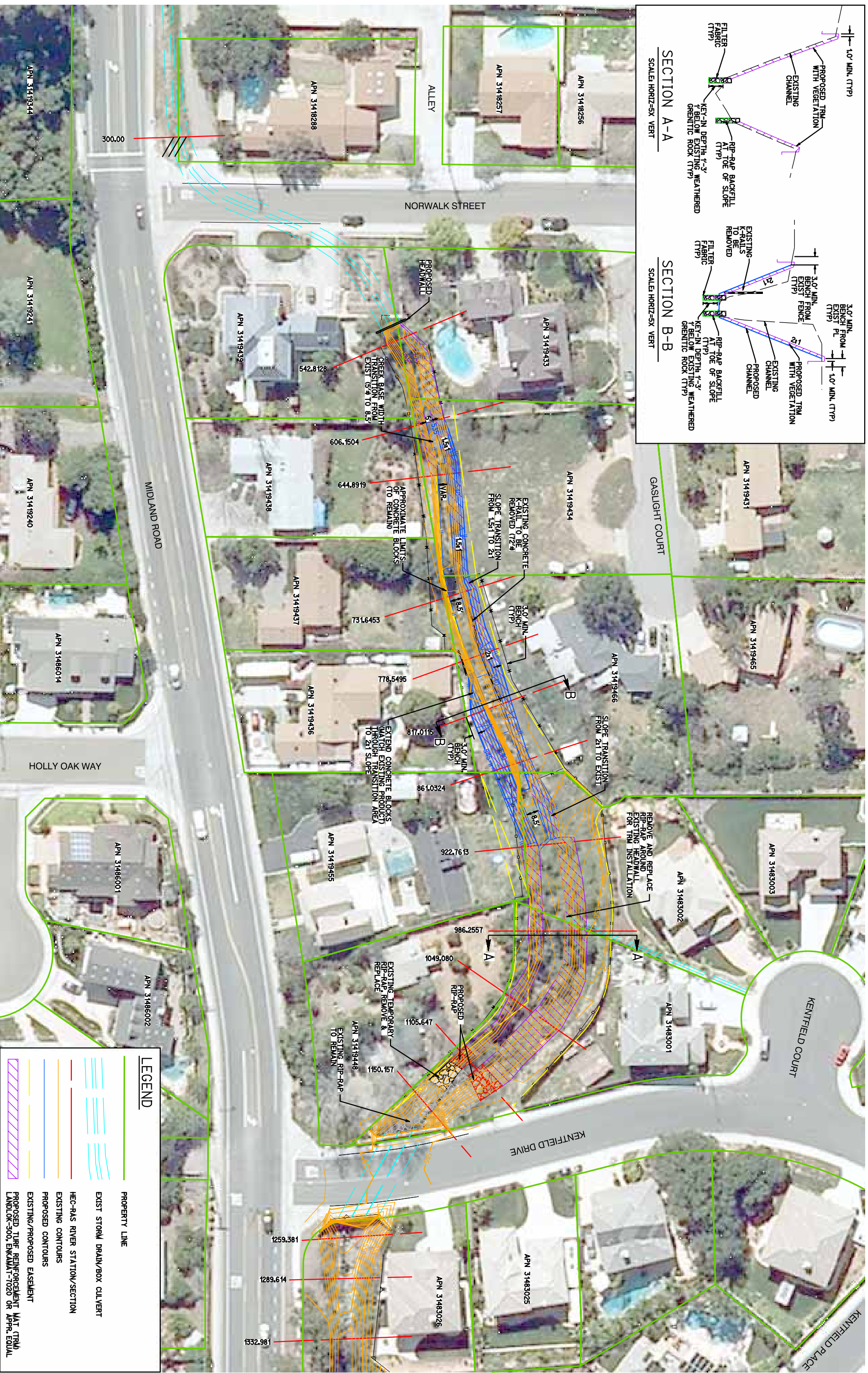
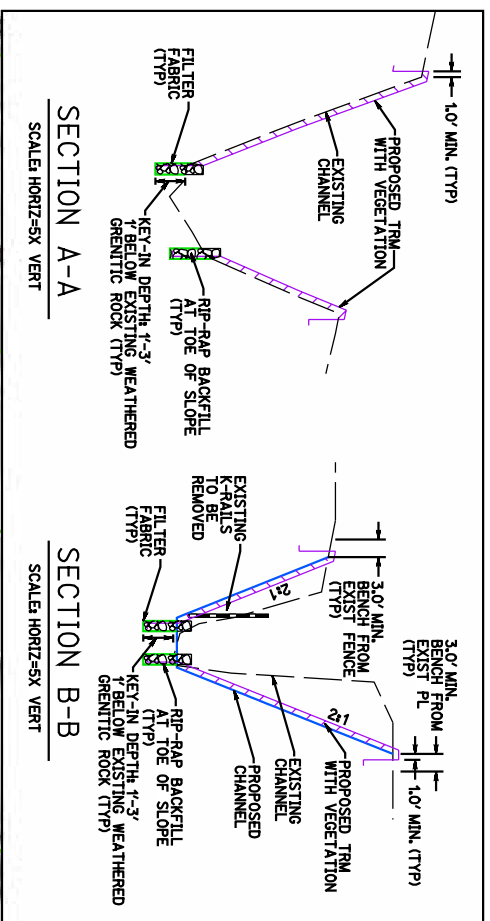
SITE PLANS



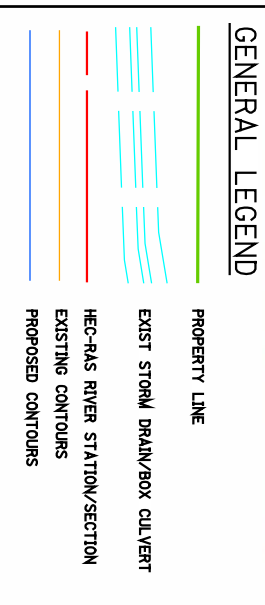
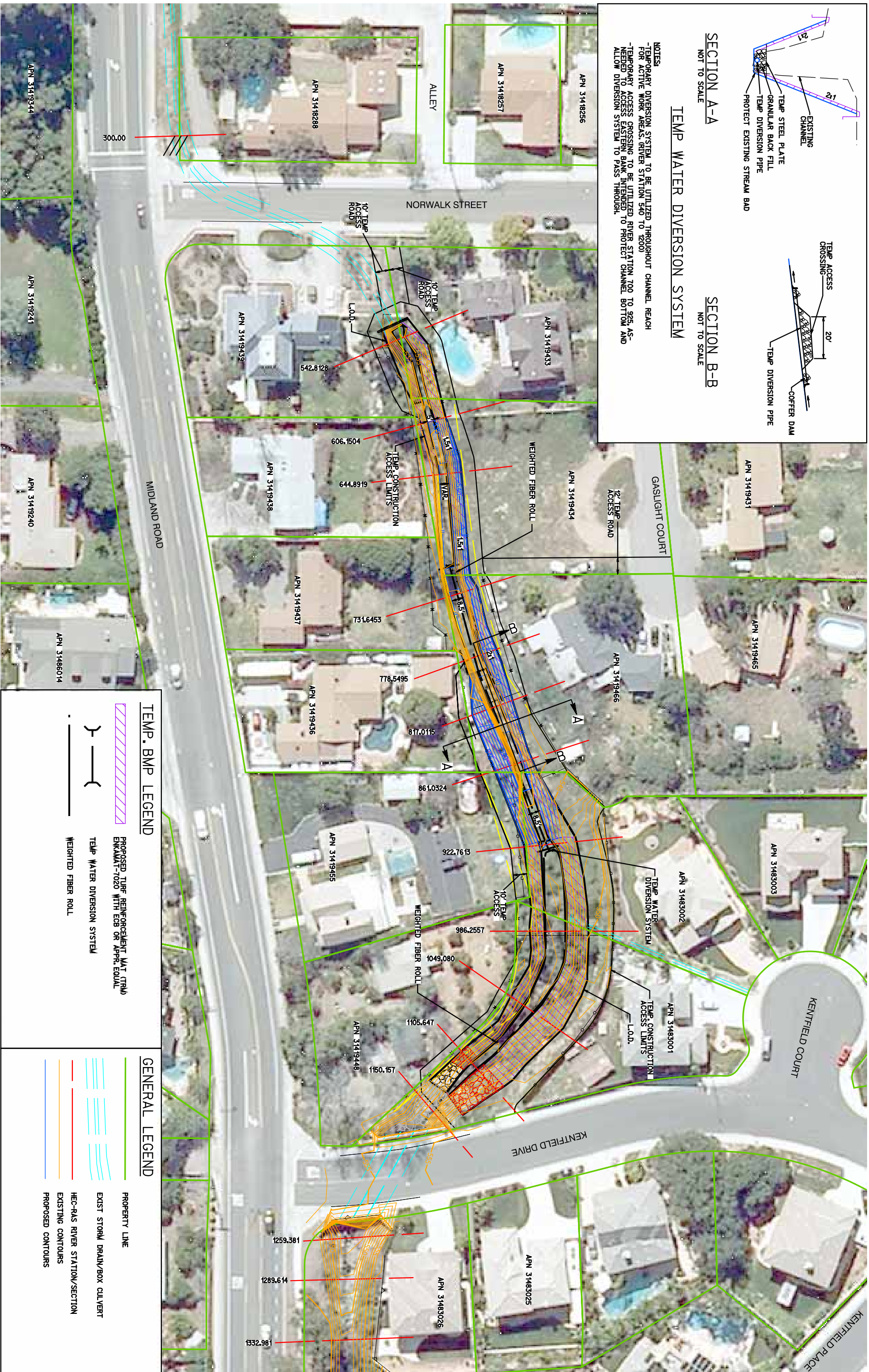
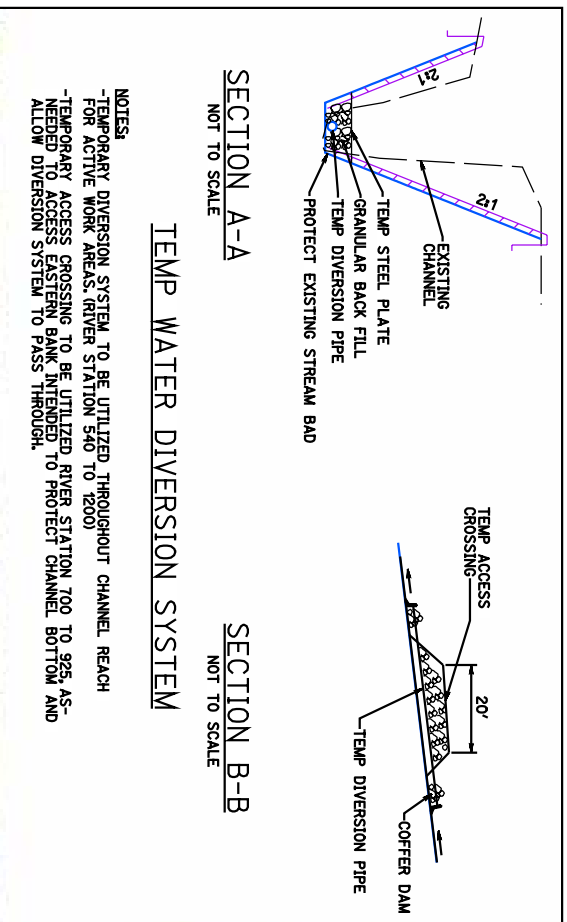
Location: Latitude: 32.931575 Longitude: -117.218855

Figure 2. Estimated Change in Streambed
2010-128 Poway Streambank Stabilization

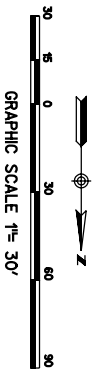
STREAMBANK STABILIZATION PROJECT
FOR THE EPHEMERAL TRIBUTARY TO RATTLERSNAKE CREEK



STREAMBANK STABILIZATION PROJECT
FOR THE EPHEMERAL TRIBUTARY TO RATTLERSNAKE CREEK



RICK
ENGINEERING CONSULTANTS
5620 TRINIS ROAD
SAN ANTONIO, TX 78245
619.291.0707 FAX 619.291.4165
www.rick-engineering.com



CONCEPTUAL WATER POLLUTION CONTROL PLAN

CONTRACTOR'S NOTES

- 1. 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.
2. NOTWITHSTANDING THE MINIMUM STANDARDS SET FORTH IN THE MUNICIPAL CODE AND NOTWITHSTANDING THE APPROVAL OF THESE GRADING PLANS, THE CONTRACTOR IS RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY.
3. IF ANY ARCHAEOLOGICAL RESOURCES ARE DISCOVERED ON THE SITE DURING GRADING OPERATIONS, SUCH OPERATIONS WILL CEASE IMMEDIATELY, AND THE CONTRACTOR WILL NOTIFY THE CITY ENGINEER OF THE DISCOVERY.
4. THE CONTRACTOR AGREES TO INDEMNIFY AND HOLD THE CITY AND ITS AGENTS AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES OR INJURIES TO ANY PERSON, OR PROPERTY, CAUSED BY THE CONTRACTOR'S ACTIONS.
5. CUT SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL UNLESS SPECIFIED IN THE APPROVED SOILS REPORT PRIOR TO CONSTRUCTION.
6. ANY SLOPE AND/OR PAD DEVIATION GREATER THAN 0.4 FOOT FROM THAT SHOWN ON THESE PLANS SHALL BE REPORTED TO THE CITY ENGINEER FOR APPROVAL BEFORE CONTINUATION OF THE GRADING OPERATIONS.
7. CUT AND FILL SLOPES SHALL BE TRIMMED TO THE FINISH GRADE (ROUNDED INTO EXISTING TERRAIN) TO PRODUCE A SMOOTH AND UNIFORM SURFACE.
8. ALL CUT SLOPES SHALL BE INSPECTED BOTH DURING AND AFTER GRADING BY A GEOTECHNICAL ENGINEERING TO DETERMINE IF ANY SLOPE STABILITY PROBLEM EXISTS.
9. WHEN IMPORT OR EXPORT OF EARTH MATERIALS ARE REQUIRED, HAUL ROUTES TO AND FROM THE SITE AND THE DISPOSAL SITE SHALL BE APPROVED BY THE CITY ENGINEER.
10. IMPORT MATERIAL SHALL BE OBTAINED FROM A LEGAL SITE (NOTE: A SEPARATE VALID GRADING PERMIT MUST EXIST FOR EITHER STOCKPILE, FILL, OR IMPORT AREAS WITHIN THE CITY.)
11. NO BRUSHING OR CLEARING SHALL BE PERFORMED IN ANY AREA NOT SHOWN TO BE GRADED ON THE PLAN.
12. DUST CREATED BY THE GRADING OPERATION, AND/OR IMPORT/EXPORT TRUCKING SHALL BE CONTROLLED BY WATERING SOIL, MUD, ROCKS OR OTHER DEBRIS TRACKED ONTO ADJACENT ROADS SHALL BE IMMEDIATELY REMOVED.
13. SANITARY FACILITIES SHALL BE MAINTAINED ON SITE.
14. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AN EXCAVATION PERMIT AND COMPLY WITH ALL PERMIT CONDITIONS FROM THE DIVISION OF INDUSTRIAL SAFETY AND TO ADHERE TO ALL PROVISIONS OF THE STATE CONSTRUCTION SAFETY ORDERS PRIOR TO COMMENCING EXCAVATION.
15. THE CONTRACTOR SHALL KEEP A COPY OF ALL AGENCY PERMITS ON-SITE AT ALL TIMES AND PROVIDE THEM WHEN REQUESTED.
16. CONTRACTOR TO SHALL KEEP A COPY OF ALL AGENCY PERMITS ON SITE AT ALL TIMES AND PROVIDE THEM WHEN REQUIRED

EXISTING UTILITIES

INFORMATION ON THE DRAWINGS RELATING TO EXISTING UTILITY LINES AND SERVICES IS FROM THE BEST SOURCES PRESENTLY AVAILABLE. ALL SUCH INFORMATION IS FURNISHED ONLY FOR INFORMATION AND IS NOT GUARANTEED. THE CONTRACTOR SHALL EXCAVATE TEST PITS AS REQUIRED TO DETERMINE EXACT LOCATIONS OF EXISTING UTILITIES.

THE CONTRACTOR IS ADVISED OF THE EXISTENCE OF THE UTILITY NOTIFICATION SERVICE PROVIDED BY UNDERGROUND SERVICE ALERT (USA). USA MEMBER UTILITIES WILL PROVIDE THE CONTRACTOR WITH THE PRECISE LOCATIONS OF THEIR SUBSTRUCTURES IN THE CONSTRUCTION AREA WHEN THE CONTRACTOR GIVES AT LEAST 48 HOURS NOTICE TO UNDERGROUND SERVICE ALERT BY CALLING 1 (800) 422-4133.

THE CONTRACTOR SHALL COORDINATE ALL UTILITY ADJUSTMENTS, RELOCATIONS, AND REMOVALS WITH THE UTILITY COMPANIES.

LOW IMPACT DESIGN REQUIREMENTS

I CERTIFY THAT THESE PLANS HAVE BEEN ADDRESSED AND/OR IMPLEMENTED LOW IMPACT DESIGN IN ACCORDANCE WITH THE CITY OF POWAY MUNICIPAL CODE SECTION 13.09.150.

ENGINEER:

JOHN D. GODDARD, JR. RCE No. 33037 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 THE CITY OF POWAY IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

JOHN D. GODDARD, JR. RCE No. 33037 DATE

**CITY OF POWAY
PLANS FOR CONSTRUCTION OF
EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK
STREAM BANK STABILIZATION**

GRADING NOTES

- 1. GRADING AND DRAINAGE IMPROVEMENTS SHALL BE COMPLETED IN ACCORDANCE WITH CITY OF POWAY MUNICIPAL CODE, TITLE 16, DIVISION III (GRADING ORDINANCE), THE "GREENBOOK" STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, THE MOST CURRENT EDITION, WITH THE SAN DIEGO SUPPLEMENTS; THE MOST CURRENT SAN DIEGO AREA REGIONAL STANDARD DRAWINGS WITH SUPPLEMENTS; AND THE CITY OF POWAY AMENDMENTS TO EACH, SPECIAL REQUIREMENTS OF THE PERMIT AND ANY EARTHWORK SPECIFICATIONS AS OUTLINE IN THE APPROVED SOILS REPORTS.
2. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEERING DIVISION INSPECTOR WHEN THE GRADING OPERATION IS READY FOR EACH OF THE FOLLOWING INSPECTIONS:
A. INITIAL INSPECTION - AFTER THE GRADING/BRUSHING LIMITS HAVE BEEN STAKED, AND BEFORE GRADING/BRUSHING STARTS, CALL CITY OF POWAY (858) 668-4688 TO ARRANGE FOR INSPECTION.
B. KEYWAY INSPECTION - AFTER THE NATURAL GROUND OR BEDROCK IS EXPOSED AND PREPARED TO RECEIVE FILL, BUT BEFORE FILL IS PLACED.
C. EXCAVATION INSPECTION - AFTER THE EXCAVATION IS STARTED, BUT BEFORE THE VERTICAL DEPTH OF THE EXCAVATION EXCEEDS 10 FEET.
D. FILL INSPECTION - AFTER THE FILL PLACEMENT IS STARTED, BUT BEFORE THE VERTICAL HEIGHT OF THE FILL EXCEEDS 10 FEET.
E. RETAINING WALLS - AFTER EXCAVATION, FORMING, AND STEEL PLACEMENT AND PRIOR TO CONCRETE PLACEMENT.
F. DRAINAGE DEVICE INSPECTION - AFTER FORMING OF TERRACE DRAINS, DOWNDRAIN, OR AFTER PLACEMENT OF PIPE IN SUBDRAINS, BUT BEFORE ANY CONCRETE OR FILTER MATERIAL IS PLACED.
G. ROUGH GRADING - WHEN ALL ROUGH GRADING HAS BEEN COMPLETED. CERTIFICATION OF LINE AND GRADE AND SUBMITTAL OF ALL COMPACTION REPORTS ARE REQUIRED PRIOR TO GRANTING ROUGH GRADE APPROVAL. ALL BROW DITCHES AND SWALES MUST BE EXCAVATED AND RETAINING WALL FOOTINGS EXCAVATED AND FORMED PRIOR TO ROUGH GRADE APPROVAL.
H. FINE GRADING - WHEN ALL WORK, INCLUDING INSTALLATION OF ALL DRAINAGE STRUCTURES AND OTHER PROTECTIVE DEVICES HAVE BEEN COMPLETED, THE RECORD PLAN APPROVED, AND THE REQUIRED REPORTS HAVE BEEN SUBMITTED AND APPROVED.
3. FILLS SHALL BE COMPACTED THROUGHOUT TO 90% RELATIVE COMPACTION AS DETERMINED BY THE FOLLOWING COMBINATION OF ASTM STANDARDS: D1557, D1556, AND D2922. AREAS TO RECEIVE FILL SHALL BE PROPERLY PREPARED AND APPROVED BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER PRIOR TO THE PLACING OF FILL. FILL SHALL BE BENCHED INTO COMPETENT MATERIAL IN ACCORDANCE WITH THE APPROVED SOILS REPORT AND THE CITY OF POWAY GRADING ORDINANCE. ALL EXISTING FILLS SHALL BE APPROVED BY THE CITY ENGINEER OR REMOVED BEFORE ANY ADDITIONAL FILLS ARE ADDED.
4. THE FINAL COMPACTION REPORT AND APPROVAL FROM THE SOILS ENGINEER SHALL CONTAIN THE TYPE OF FIELD TESTING PERFORMED, EACH TEST SHALL BE IDENTIFIED WITH THE METHOD OF OBTAINING THE IN-PLACE DENSITY, WHETHER SAND CONE OR DRIVE-RING OR OTHER METHOD, AND SHALL BE SO NOTED FOR EACH TEST. SUFFICIENT MAXIMUM DENSITY DETERMINATIONS SHALL BE PERFORMED TO VERIFY THE ACCURACY OF THE MAXIMUM DENSITY CURVES USED BY THE FIELD TECHNICIAN. EXPANSION TESTS SHALL BE PERFORMED ON FINISH GRADE MATERIALS.
5. A REPRESENTATIVE FOR THE CITY MAY ISSUE A STOP/CORRECT WORK NOTICE IF WORK IS NOT PROCEEDING IN ACCORDANCE WITH THE PLANS OR IF ANY VIOLATION OF POWAY MUNICIPAL CODE IS NOTED. CONTINUATION OF GRADING WORK AFTER A STOP NOTICE HAS BEEN ISSUED IS A VIOLATION OF TITLE 16 (GRADING ORDINANCE) OF THE POWAY MUNICIPAL CODE.
6. ALL GRADING AND CLEARING IS TO BE PERFORMED ONLY WITHIN THE AREAS SHOWN ON THE APPROVED GRADING PLAN. GRADING OR CLEARING OUTSIDE OF THOSE AREAS AND TO OPEN SPACE AREAS IS A VIOLATION OF THE POWAY MUNICIPAL CODE, TITLE 16.40 (GRADING ORDINANCE.)

GENERAL NOTES

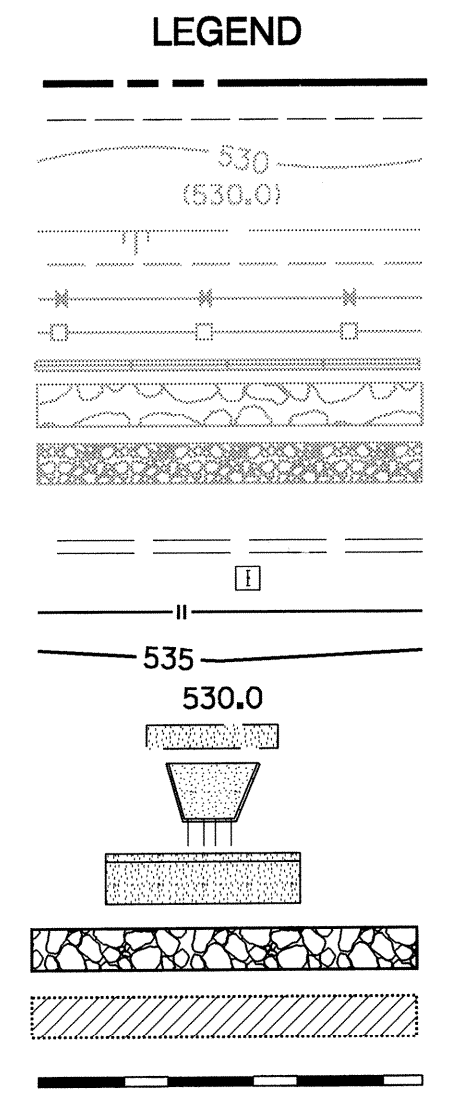
- 1. ALL WORK TO CONFORM TO THE RECENTLY ADOPTED EDITION "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," 2009 EDITION WITH SUPPLEMENTS (A.P.W.A. SPECIFICATIONS), THE SAN DIEGO AREA REGIONAL STANDARD DRAWINGS, AND THE CITY OF POWAY AMENDMENTS TO EACH.
2. ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF TRUCKS, EARTHMOVING EQUIPMENT, CONSTRUCTION EQUIPMENT, AND ANY OTHER ASSOCIATION EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 7:00 AM AND 4:30 PM MONDAY THROUGH THURSDAY AND 4:00 PM ON ALTERNATING FRIDAYS, EXCLUDING HOLIDAYS. THERE SHALL BE NO WORK ON THE ALTERNATING FRIDAY ON WHICH CITY HALL IS CLOSED. LANE CLOSURES WILL ONLY BE ALLOWED PER APPROVED TRAFFIC CONTROL PLAN. NO GRADING AND EARTHMOVING SHALL BE CONDUCTED ON THE PREMISES ON CLOSED FRIDAYS, SATURDAYS, SUNDAYS, OR CITY OF POWAY HOLIDAYS WITHOUT PRIOR APPROVAL BY THE CITY ENGINEER, EXCEPT FOR EMERGENCIES INVOLVING IMMEDIATE HAZARD TO PERSONS OR PROPERTY. IN THE EVENT OF EITHER A REQUESTED OR EMERGENCY DEVIATION, INSPECTION SERVICE FEES WILL BE CHARGED AGAINST THE CONTRACTOR. THE SERVICE FEES WILL BE CALCULATED AT OVERTIME RATES INCLUDING BENEFITS, OVERHEAD AND TRAVEL TIME. THE SERVICE FEES WILL BE DEDUCTED FROM ANY AMOUNTS DUE TO THE CONTRACTOR.
3. THE CONTRACTOR SHALL NOTIFY THE CITY OF POWAY DEVELOPMENT SERVICES DEPARTMENT 48 HOURS PRIOR TO STARTING WORK SO THAT INSPECTION SERVICES MAY BE PROVIDED. INSPECTION REQUESTS CAN BE MADE BY CALLING (858) 668-4668.
4. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT EXISTING IMPROVEMENTS AND THE CITY WILL ENFORCE SECTION 7-9 OF THE STANDARD SPECIFICATIONS.
5. ALL EXISTING IMPROVEMENTS INCLUDING A.C. BERM, A.C. OR P.C.C. PAVING, WHICH ARE BEING JOINED OR MATCHED IN A MANNER SATISFACTORY TO THE CITY ENGINEER, INCLUDING NECESSARY SAWCUTTING, REMOVAL, REPLACEMENT AND CAPPING.
6. ALL WORK SHALL BE ACCOMPLISHED IN CONFORMANCE WITH APPLICABLE CITY OF POWAY ORDINANCES.
7. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT BEFORE START OF CONSTRUCTION 1 (800) 422-4133.
8. THE CONTRACTOR IS RESPONSIBLE FOR POTHOLING ALL UTILITIES PER SECTION 5-1 OF THE STANDARD SPECIFICATIONS, PRIOR TO START OF CONSTRUCTION TO VERIFY ALL ELEVATIONS OF UNDERGROUND UTILITIES.
9. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN A CONSTRUCTION WATER METER FROM THE CITY OF POWAY AND SHALL ALSO BE REQUIRED TO PAY FOR ALL WATER USED.
10. THE CONTRACTOR SHALL GIVE THE CITY INSPECTOR 48 HOUR ADVANCE NOTICE WHEN SOIL/MATERIAL TESTING IS NEEDED.

EROSION CONTROL NOTES

- 1. EROSION CONTROL DEVICES SHALL BE INSTALLED AS SHOWN ON THE APPROVED EROSION CONTROL PLAN.
2. THE RESPONSIBLE PERSON TO CONTACT FOR EROSION CONTROL IS: PHONE:
3. FAILURE TO HAVE EROSION CONTROL MEASURES INSTALLED AT THE REQUIRED TIMES WILL RESULT IN A STOP WORK ORDER AND MAY RESULT IN THE CITY INSTALLING APPROPRIATE EROSION CONTROL, ALL FEES WILL BE BACKCHARGED TO THE CONTRACTOR
4. ALL MATERIALS FOR EROSION CONTROL INSTALLATION SHALL BE ON THE JOB SITE AT ALL TIMES. EROSION CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHENEVER THERE IS A 50% CHANCE OF RAIN WITHIN 48 HOURS. EROSION PROTECTION SHALL INCLUDE EFFECTIVE PLANTING OR COVERAGE OF ALL DISTURBED AREAS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. EROSION PROTECTION SHALL INCLUDE EFFECTIVE PLANTING OF ALL SLOPES UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. PLANTING OF THE SLOPES SHALL BE DONE AS SOON AS PRACTICABLE, AND PRIOR TO ROUGH GRADE APPROVAL. PLANTING SHALL BE INSTALLED, FULLY GERMINATED, AND EFFECTIVELY COVER THE REQUIRED SLOPES PRIOR TO FINISHED GRADE APPROVAL. AFTER ROUGH GRADE APPROVAL, THE SLOPE SHALL BE TREATED WITH PUNCHED CEREAL STRAW, BROADCAST ON THE SOIL SURFACE AT FOUR THOUSAND POUNDS PER ACRE AND HELD WITH A TACKIFIER, FIBER OR NET, OR AN EQUAL SYSTEM APPROVED BY THE CITY ENGINEER OR CITY LANDSCAPE ARCHITECT.
6. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS THE WORK PROGRESSES, WITH PRIOR APPROVAL FROM THE CITY ENGINEER.
7. ALL LOOSE SOIL AND DEBRIS GENERATED AS A RESULT OF ANY WORK ON THE PROJECT SHALL BE REMOVED FROM THE STREET AREAS DAILY.
8. STAND-BY CREWS SHALL BE ALERTED BY THE PERMITTEE OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
9. GRAVEL BAG SILT BASINS OR TRAPS SHALL BE INSTALLED AT EVERY STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. IN THE EVENT SILT DOES ENTER THE EXISTING STORM DRAIN SYSTEM, REMOVAL OF THE SILT FROM THE SYSTEM WILL BE AT THE PERMITTEE'S EXPENSE.
10. ANY PROPOSED CHANGES AND ALTERNATE EROSION CONTROL MEASURES MUST BE APPROVED IN ADVANCE BY THE CITY ENGINEER.
11. EROSION CONTROL DEVICES ARE TO BE MAINTAINED AND REPAIRED DAILY.
12. SILTATION RETENTION DEVICES ARE TO BE CLEANED OF SILT AFTER EACH RAIN EVENT AND/OR WHEN RETAINED SILT HEIGHT IS 75% OF TOTAL AVAILABLE CAPACITY OF THE RETENTION DEVICE.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINES ASSESSED BY ANY OUTSIDE AGENCIES.

LEGEND

Table with 2 columns: DESCRIPTION and LEGEND. Includes symbols for PROPERTY BOUNDARY, EXISTING EASEMENT, EXISTING CONTOUR, EXISTING ELEVATION, EXISTING TOP OF SLOPE, EXISTING TOE OF SLOPE, EXISTING CHAINLINK FENCE, EXISTING WOOD FENCE, EXISTING K-RAIL, EXISTING RIP RAP, EXISTING TEMPORARY RIP RAP, EXISTING STORM DRAIN, EXISTING IRRIGATION VALVES, DAYLIGHT LINE, CONTOUR, PROPOSED ELEVATION, MODULAR RETAINING WALL-SEE DETAIL SHT.2, MOD. HEADWALL, MOD. WARPED WINGWALL, RIP RAP, TRM & ECB, PROP. GRAVITY RETAINING-SEE DETAIL SHT.3 WALL/WOOD FENCE.



LEGAL DESCRIPTION:

PORTIONS OF PARCELS 1 THROUGH 3 OF PARCEL MAP 12206 AND A PORTION OF THE NW 1/4 OF THE NE 1/4 OF SECTION 12, T 14 S, R 2 W, S 6M, IN THE CITY OF POWAY, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

SOILS ENGINEER'S CERTIFICATE:

WE HEREBY CERTIFY THAT WE HAVE PROVIDED PROFESSIONAL TESTING AND APPROVAL CONCERNING THE PREPARATION OF GROUND TO RECEIVE FILLS, DESIGN OF BUTTRISS FILLS WHERE REQUIRED, THE ADEQUACY OF THE NATURAL GROUND FOR RECEIVING FILL, THE STABILITY OF CUT SLOPES WITH RESPECT TO GEOLOGICAL MATTERS AND THE NEED FOR SUBDRAINS AND OTHER GROUNDWATER DRAINAGE DEVICES, AND THAT THESE GRADING PLANS ACCURATELY REFLECT ALL CONDITIONS AND CONSTRUCTION RECOMMENDATIONS PREPARED FOR THIS PROJECT AS DATED:

SOILS ENGINEER OF RECORD:

GECCON INCORPORATED

JOSHEPH J. VETTEL DATE

ENGINEERING GEOLOGIST OF RECORD:

GECCON INCORPORATED

ALI SADR DATE

SITE ADDRESS:

EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK BETWEEN KENTFIELD DRIVE AND NORWALK STREET.

EARTHWORK:

CUT: 420 CY
FILL: 10 CY
EXPORT: 410 CY
DISTURBED AREA: 4.47 AC

SHEET INDEX

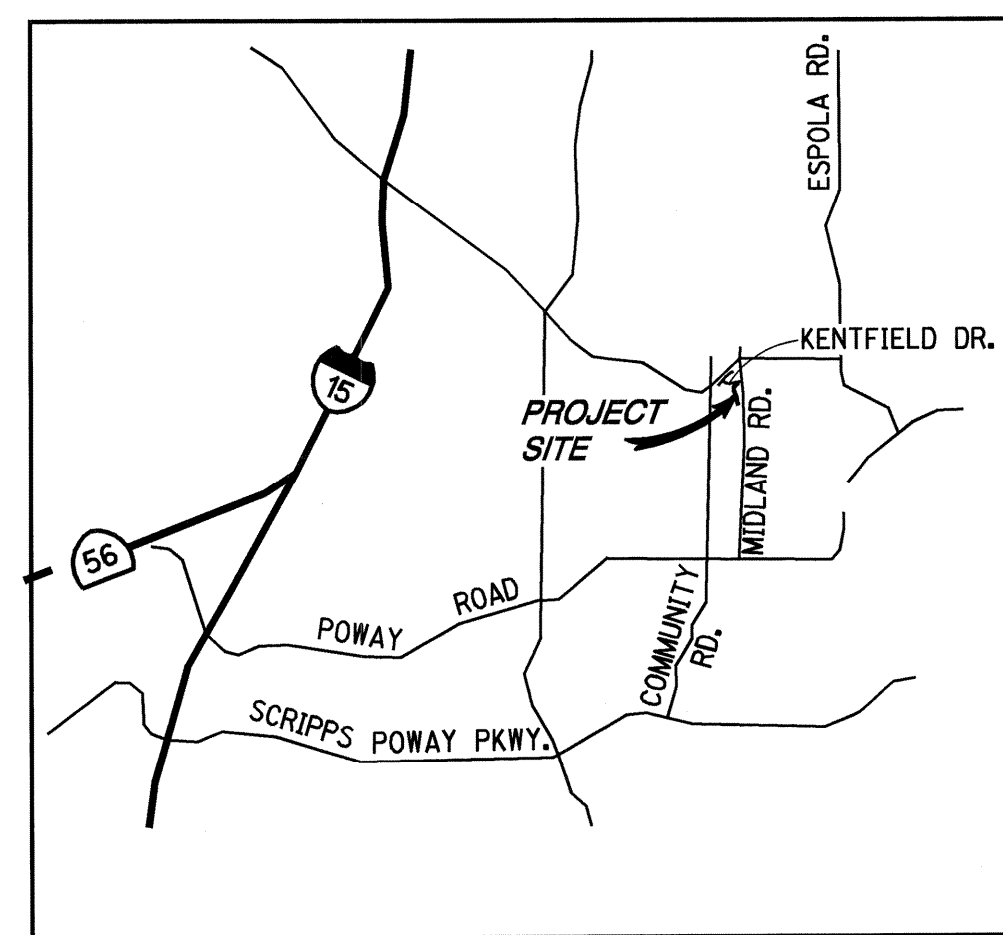
Table with 2 columns: SHEET and TITLE/NOTES. Lists sheets 1 through 15 and their corresponding titles such as NOTES, DETAILS, CHANNEL CROSS-SECTIONS, ABBREVIATIONS, CHANNEL PLAN & PROFILE, WATER POLLUTION CONTROL PLAN, NOTES AND DETAILS, CONSTRUCTION PHASING PLAN, DETAILS SHEET, IRRIGATION PLANS, PLANTING PLANS.

CIP NUMBER:

Table with 3 columns: Sheet 1, CITY OF POWAY Department of Development Services, 15 Sheets.

**TITLE/NOTES SHEET FOR:
EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK
STREAMBANK STABILIZATION**

Table with 2 columns: APPROVED BY: (DATE), CITY ENGINEER: STEVE CROSBY R.C.E. 41975, ENGINEER OF WORK: (DATE), JOHN D. GODDARD JR. R.C.E. # 33037.



Professional Engineer Seal for John D. Goddard, Jr., No. 33037, Exp. 6/30/12. Logo for Rick Engineering Company, 3620 Friars Road, San Diego, CA 92110, 619.291.0707, (FAX) 619.291.4165.

Table with columns: REFERENCES, CITY OF POWAY B.M. #, GITY APPROVED CHANGES (No., Description, Approved By, Date), BENCH MARK (DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL. LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CUR RETURN OF COMMUNITY ROAD & AUBREY STREET. RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK. ELEVATION: 521.704 DATUM: NONE LISTED).

Table with columns: CITY OF POWAY PROJECT MANAGER: MELODY ROCCO, DESIGNED, DRAWN, CHECKED, DATE.

ENGINEER'S SPECIAL NOTES

THE ENGINEER OF WORK PROVIDES THE FOLLOWING NOTES TO GIVE DIRECTIONS TO THE CONTRACTOR. THE CONTRACTOR SHALL ENFORCE ALL SAFETY MEASURES.

1. CONTRACTOR IS RESPONSIBLE TO NOTIFY THE CITY WHENEVER CLARIFICATION OF THESE PLANS ARE REQUIRED. THIS NOTIFICATION SHALL BE MADE ADVANCE OF CONSTRUCTION TO ALLOW THE ENGINEER OF WORK ADEQUATE TIME TO RESPOND.

2. THE GEOTECHNICAL REPORT TITLED, "EPHERMAL TRIBUTARY TO RATTLESNAKE CREEK POWAY, CALIFORNIA", PREPARED BY GEOCON INCORPORATED DATED DECEMBER 22, 2010, AND ALL SUPPLEMENTS/ADDENDA ARE AVAILABLE FOR REVIEW AND SHALL BE USED FOR INFORMATIONAL PURPOSES ONLY.

3. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION 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.

4. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT ALL SLOPES, STREETS, UTILITIES AND STORM DRAINS ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE IS ANY QUESTION REGARDING THESE PLANS OR FIELD STAKES, THE CONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK FROM THE CITY. THE CONTRACTOR SHALL ALSO TAKE THE NECESSARY STEPS TO PROTECT THE PROJECT AND ADJACENT PROPERTY FROM ANY EROSION AND SILTATION THAT RESULT FROM THIS OPERATIONS BY APPROPRIATE MEANS (GRAVEL BAGS, FIBER ROLLS, TEMPORARY DESILTING BASINS, DIKES, SHORING, ETC.) UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY THE CITY.

5. CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT EXISTING UTILITY LINES

6. ALL GRADING SHALL BE DONE UNDER THE OBSERVATION OF A QUALIFIED SOILS ENGINEER. ALL AREAS TO BE FILLED SHALL BE PREPARED TO BE FILLED AND ALL FILL SHALL BE PLACED IN ACCORDANCE WITH THE RECOMMENDED GRADING SPECIFICATIONS, SPECIAL PROVISIONS AND THE CITY ORDINANCE ATTACHED TO THE SOILS INVESTIGATION FOR THIS PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE, SPREAD, WATER AND COMPACT THE FILL IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS.

7. OBSERVATIONS AND COMPACT TESTS SHALL BE MADE BY THE SOILS ENGINEER DURING THE FILLING AND COMPACTING OPERATIONS SO THAT IT CAN BE VERIFIED THAT THE FILL WAS CONSTRUCTED IN ACCORDANCE WITH THE CITY ORDINANCE.

8. DURING CONSTRUCTION THE CONTRACTOR SHALL PROPERLY GRADE ALL EXCAVATED SURFACES TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING OF WATER. HE SHALL CONTROL SURFACE WATER TO AVOID DAMAGE TO ADJOINING PROPERTIES OR TO FINISHED WORK ON THE SITE. THE CONTRACTOR SHALL TAKE REMEDIAL MEASURES TO PREVENT EROSION OF FRESHLY GRADED AREAS AND UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

AFTER COMPLETION: AFTER GRADING IS COMPLETED AND THE SOILS ENGINEER HAS FINISHED HIS OBSERVATIONS OF THE WORK, NO FURTHER EXCAVATION OR FILLING SHALL BE DONE EXCEPT UNDER THE OBSERVATION OF THE SOILS ENGINEER.

9. CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS REQUIRED TO PROTECT THE ADJACENT PROPERTIES DURING THE GRADING OPERATIONS.

10. CUT AND FILL SLOPES SHALL BE TRIMMED TO THE FINISH GRADE TO PRODUCE A SMOOTH SURFACE AND UNIFORM CROSS-SECTION. THE SLOPE OF THE EXCAVATIONS OR EMBANKMENTS SHALL BE SHAPED AND TRIMMED AS SHOWN ON THE PLANS AND LEFT IN A NEAT AND ORDERLY CONDITION. ALL STONES, ROOTS, OR OTHER WASTE MATTER EXPOSED ON EXCAVATION OR EMBANKMENT SLOPES SHALL BE REMOVED AND DISPOSED OF OFF-SITE IN A LEGAL MANNER BY THE CONTRACTOR.

11. THE CONTRACTOR SHALL MINIMIZE EXPOSURE TIME OF DISTURBED SOIL AREAS THROUGH SCHEDULING OF DISTURBANCE ACTIVITIES AND STORMWATER PROTECTION ACTIVITIES TO THE SATISFACTION OF THE CITY ENGINEER.

12. THE CONTRACTOR SHALL REPLACE ALL DESTROYED OR DAMAGED SURFACE IMPROVEMENTS WITH IMPROVEMENTS EQUAL OR SUPERIOR, TO THE SATISFACTION OF THE CITY ENGINEER.

13. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL PROPOSED CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS AND THE CITY OF POWAY.

14. THESE PLANS SHOW IMPROVEMENTS REQUIRED BY THE PUBLIC AGENCY DURING THE PROJECT APPROVAL PROCESS. FIELD CONDITIONS MAY REQUIRE ADDITIONAL IMPROVEMENTS.

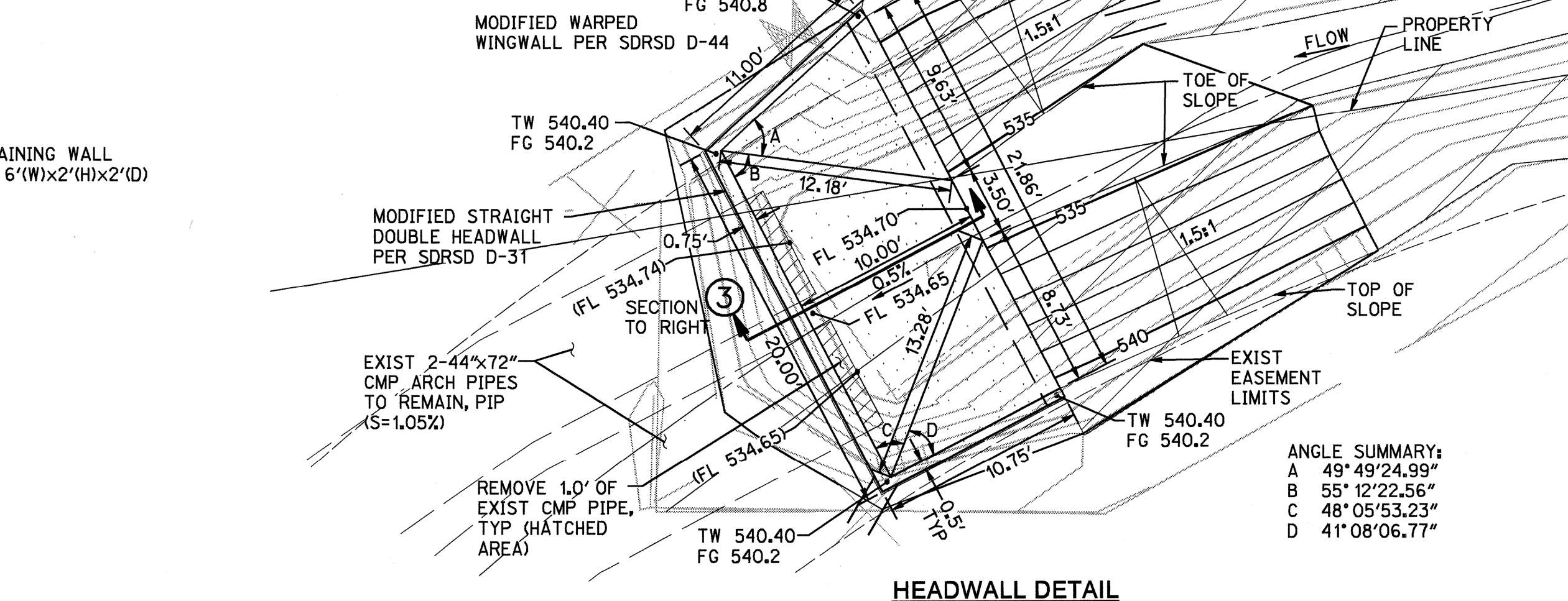
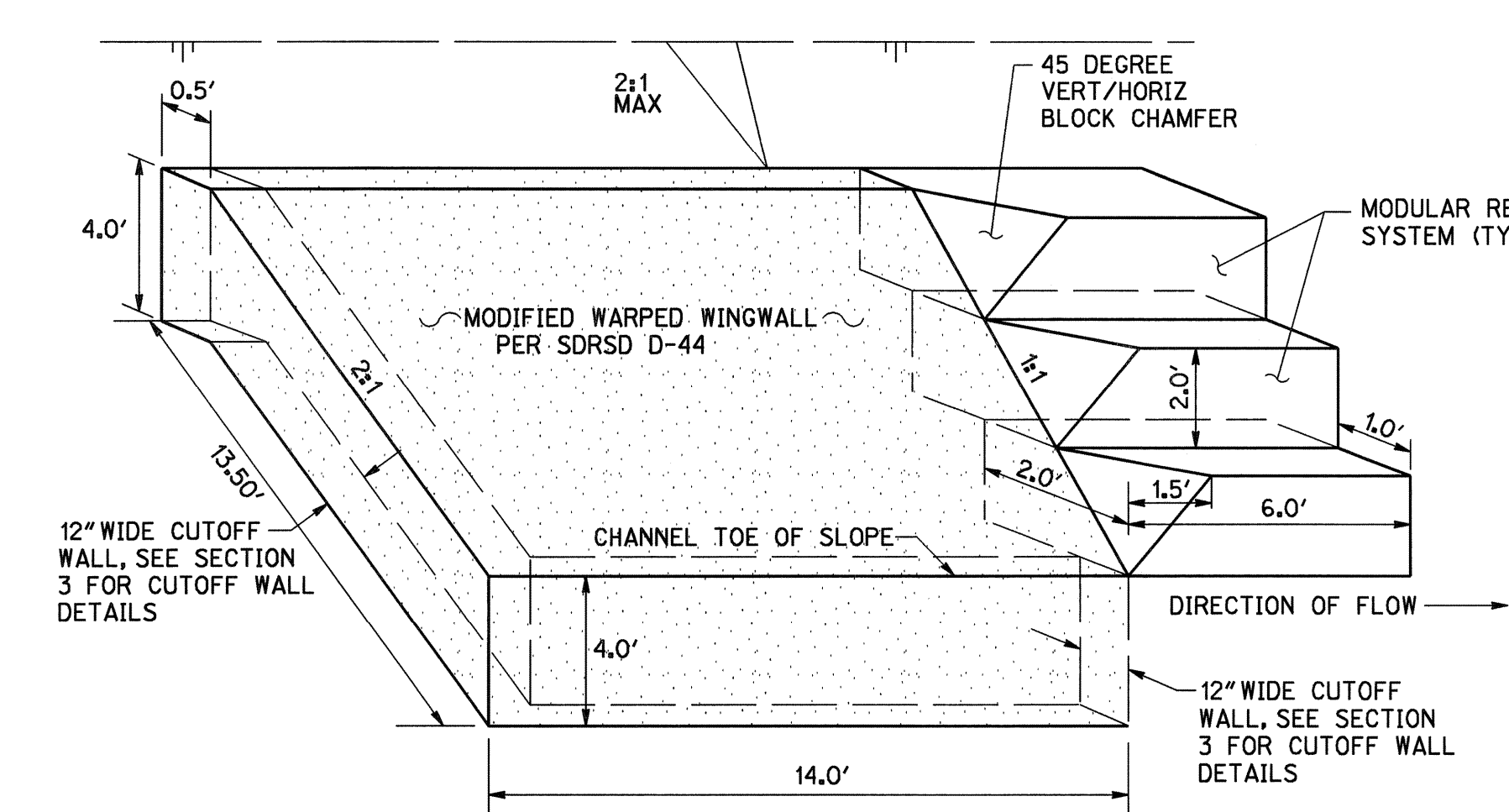
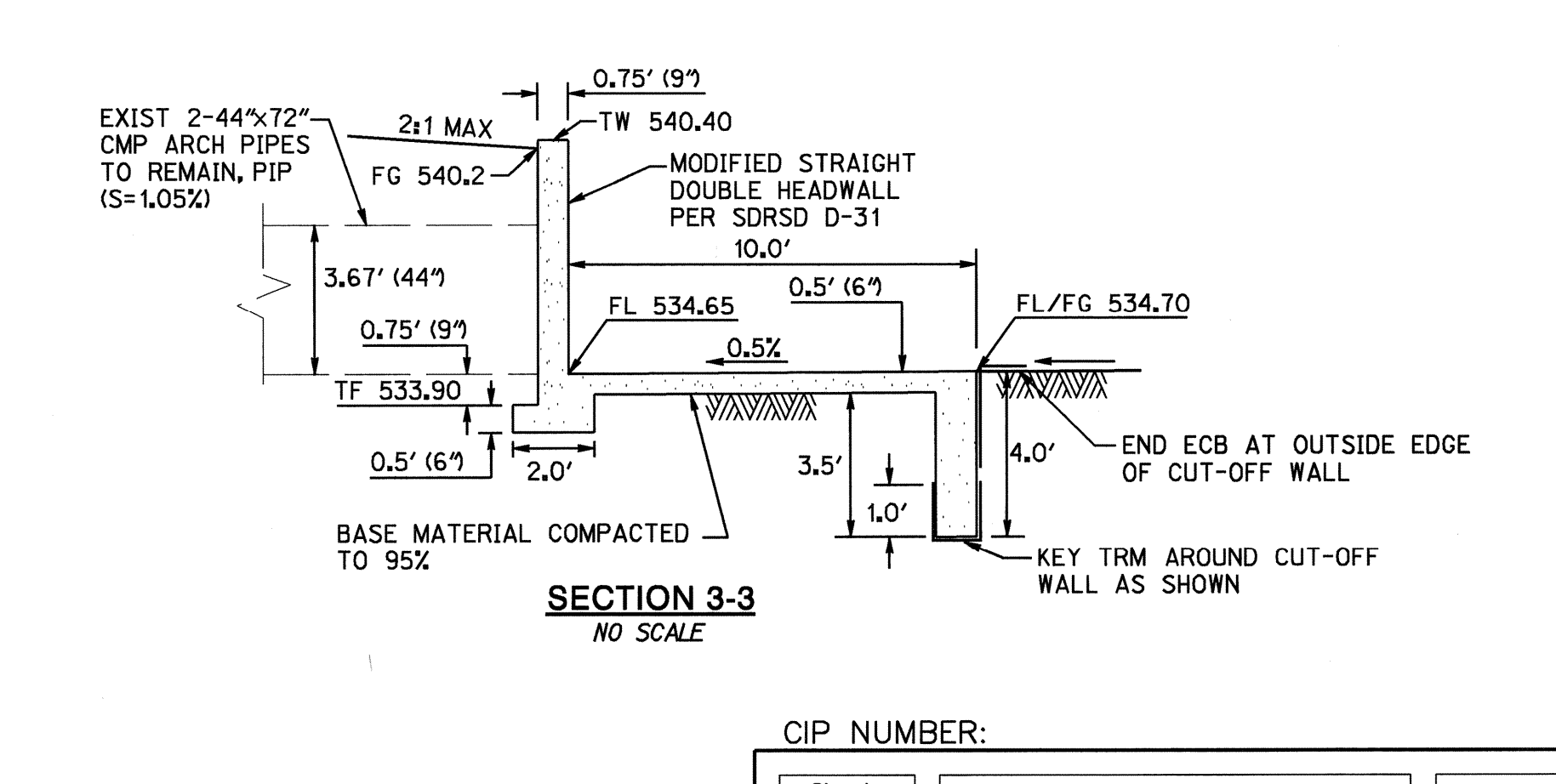
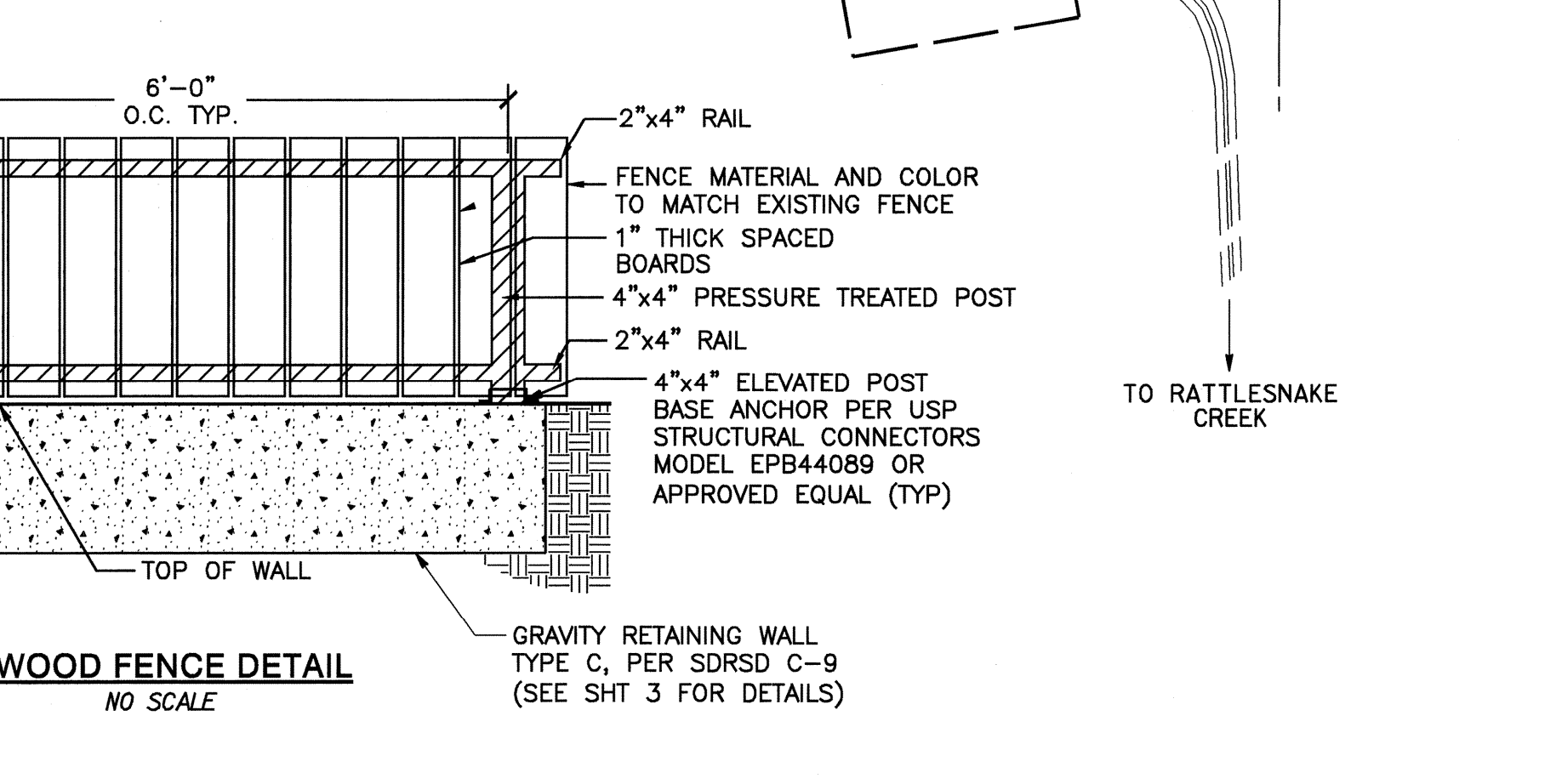
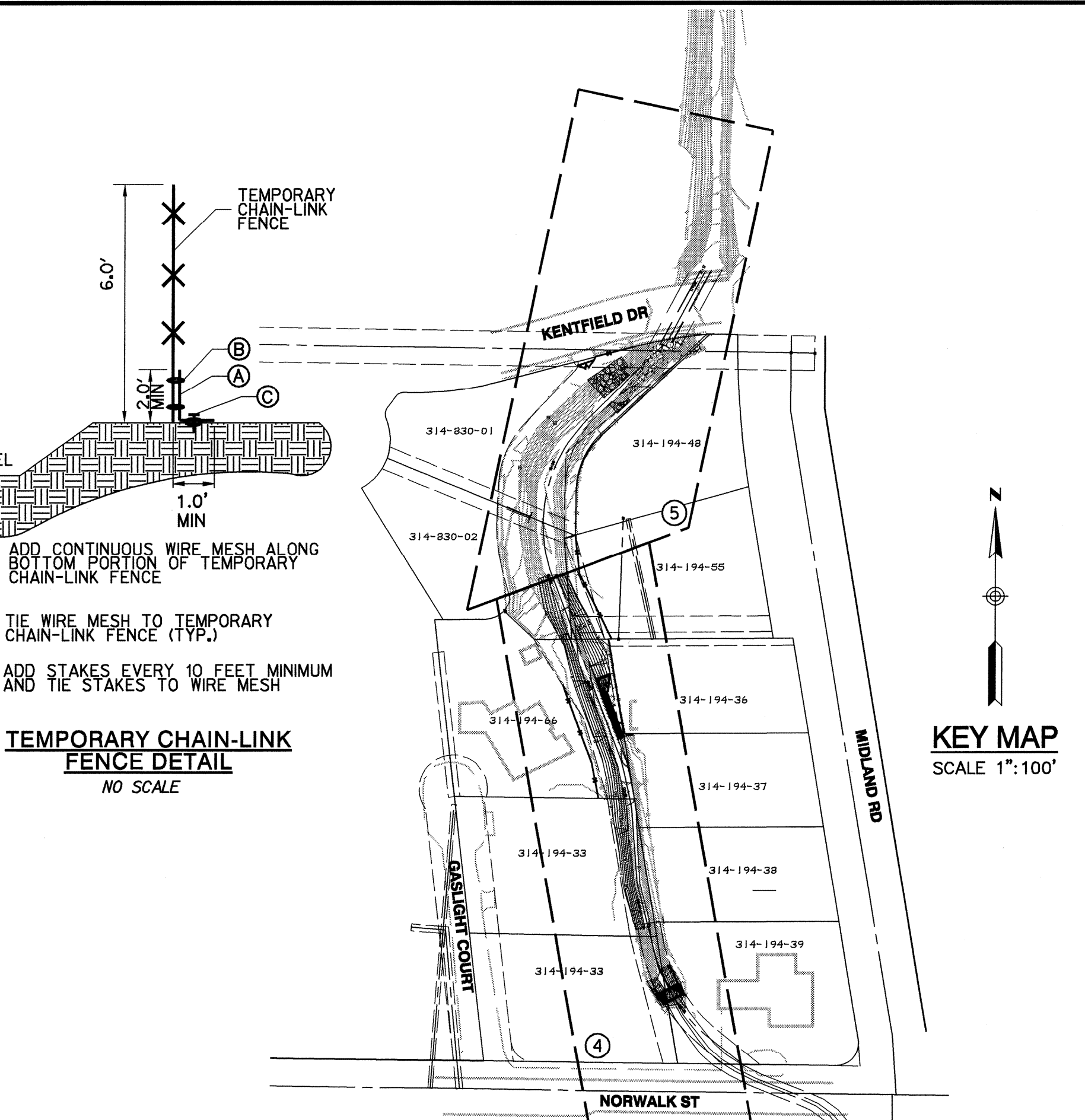
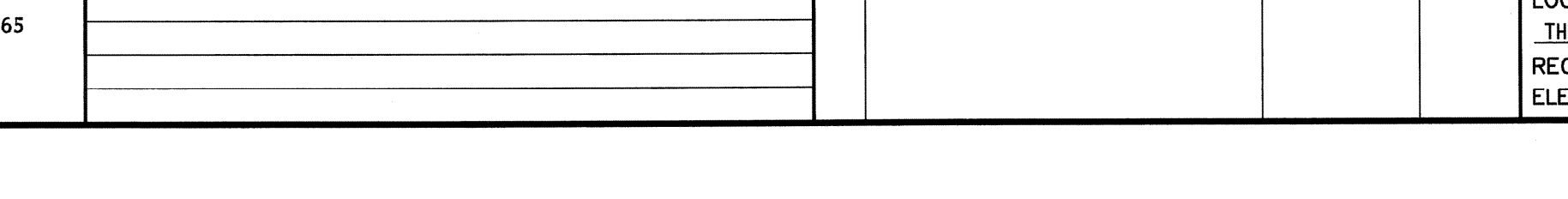
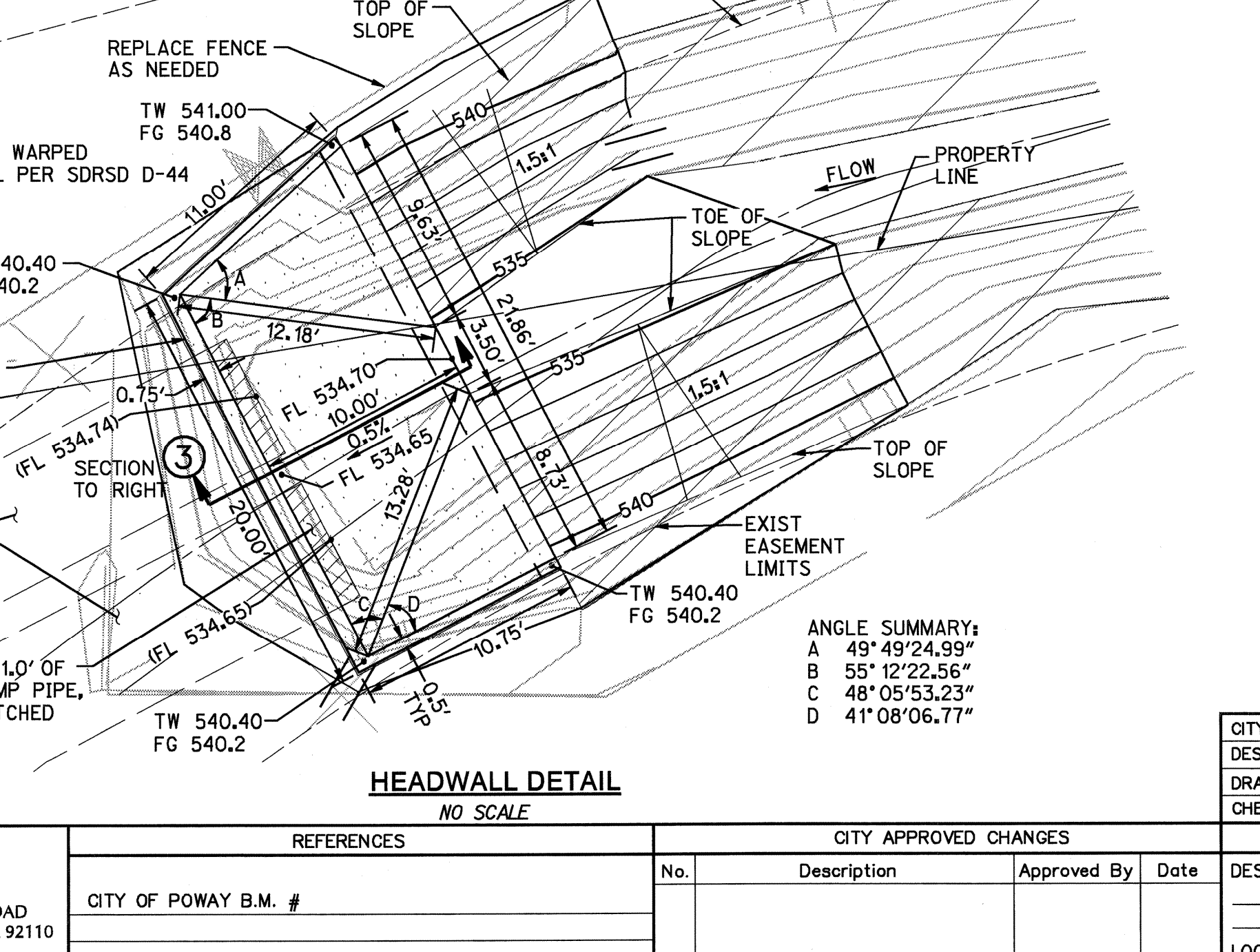
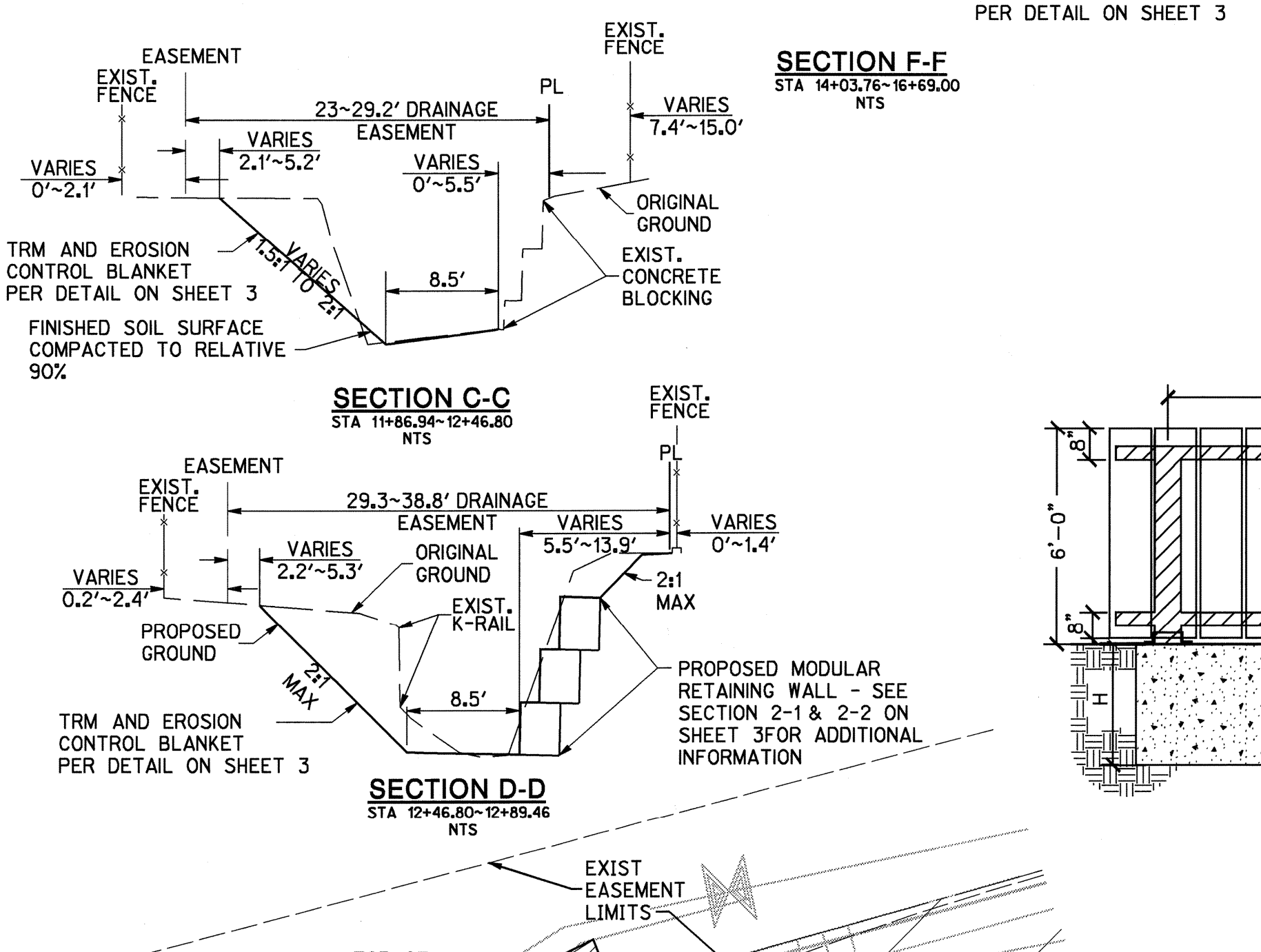
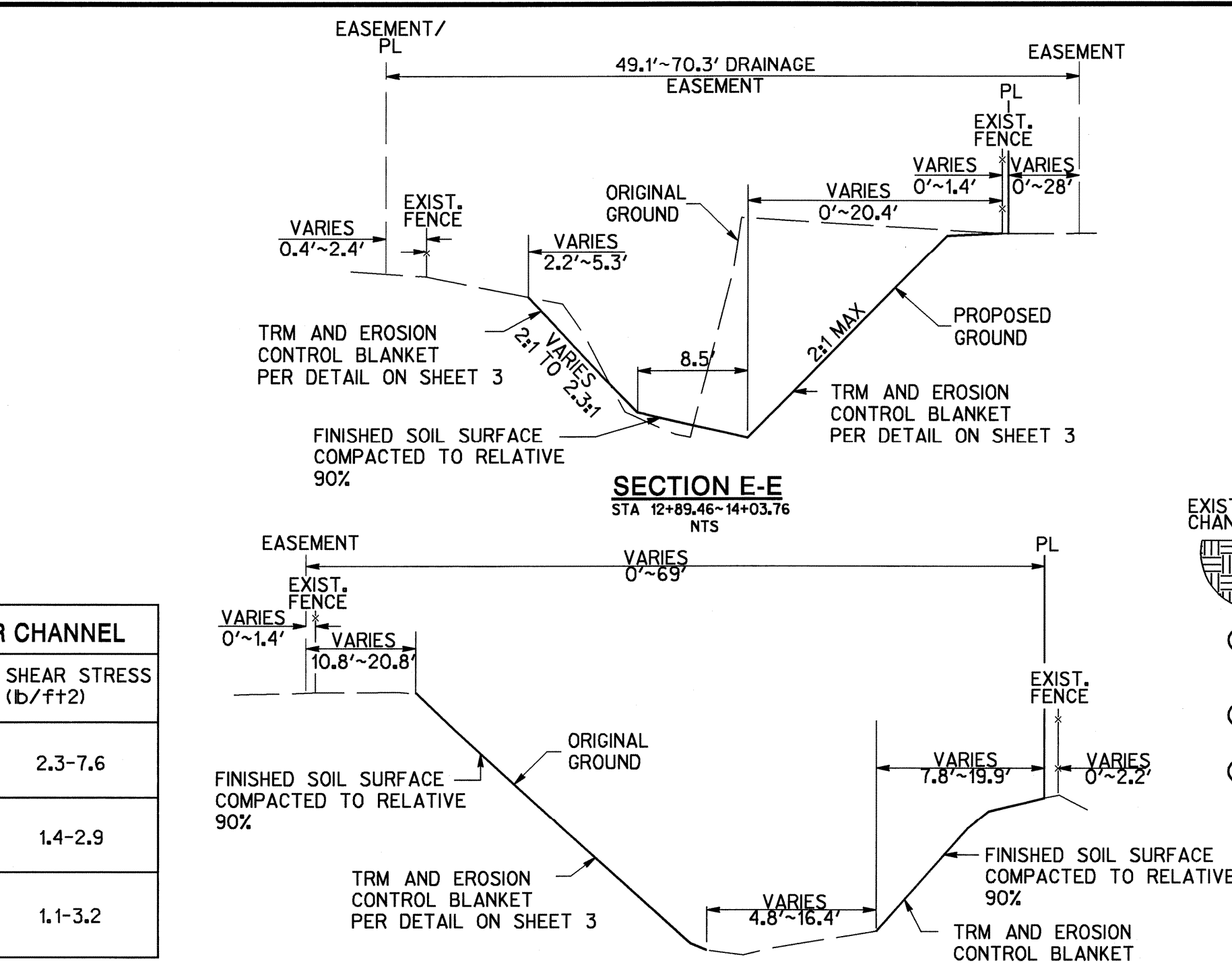
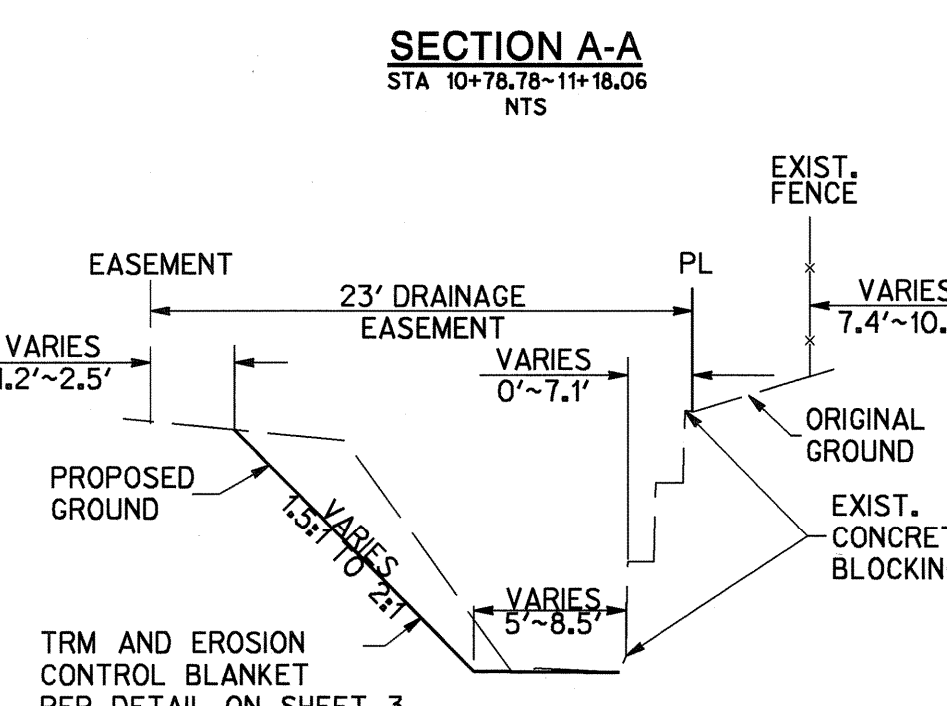
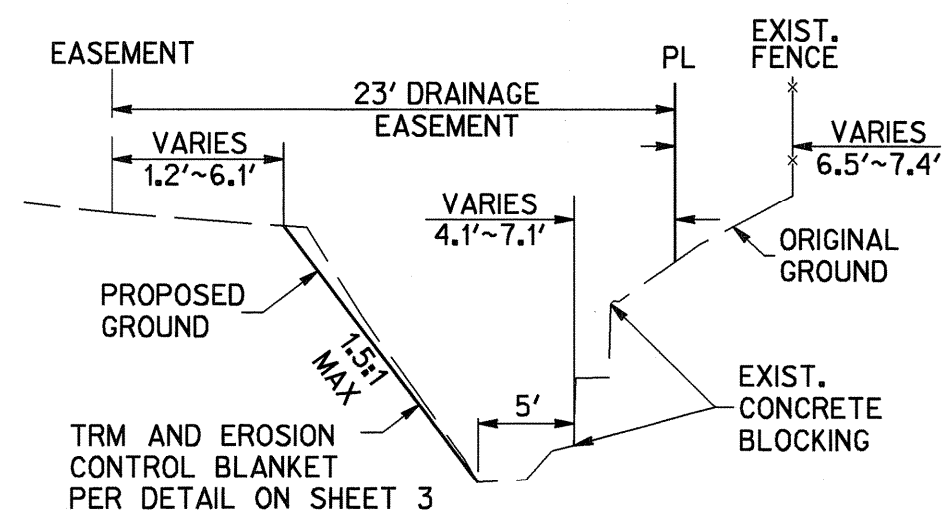
15. CONTRACTOR IS RESPONSIBLE FOR HAVING TRAFFIC CONTROL PLANS APPROVED BY THE CITY ENGINEER IF REQUIRED.

ABBREVIATIONS

BW	BOTTOM OF WALL
CMP	CORRUGATED METAL PIPE
ECB	EROSION CONTROL BLANKET
EX	EXISTING
FL	FLOW LINE
FG	FINISHED GRADE
FS	FINISHED SURFACE
HW	HEADWALL
I	IRRIGATION ON CENTER
PL	PROPERTY LINE
SD	STORM DRAIN
SDRSD	SAN DIEGO REGIONAL STANDARD DRAWINGS
TRM	TURF REINFORCEMENT MATTING
TW	TOP OF WALL

TABLE X - HYDROLOGIC & HYDRAULIC CHARACTERISTICS FOR CHANNEL

CHANNEL LOCATION	PEAK FLOW (cfs)	VELOCITY (fps)	SHEAR STRESS (lb/ft ²)
UPSTREAM REACH (STA 1400 TO 1625)	940	7.2-11.0	2.3-7.6
CENTRAL REACH (STA 1180 TO 1400)	930-940	5.2-9.1	1.4-2.9
DOWNSTREAM REACH (STA 1000 TO 1180)	930	5.2-8.7	1.1-3.2



CONCRETE BLOCK AND WARPED WINGWALL TRANSITION
NO SCALE

HEADWALL DETAIL
NO SCALE

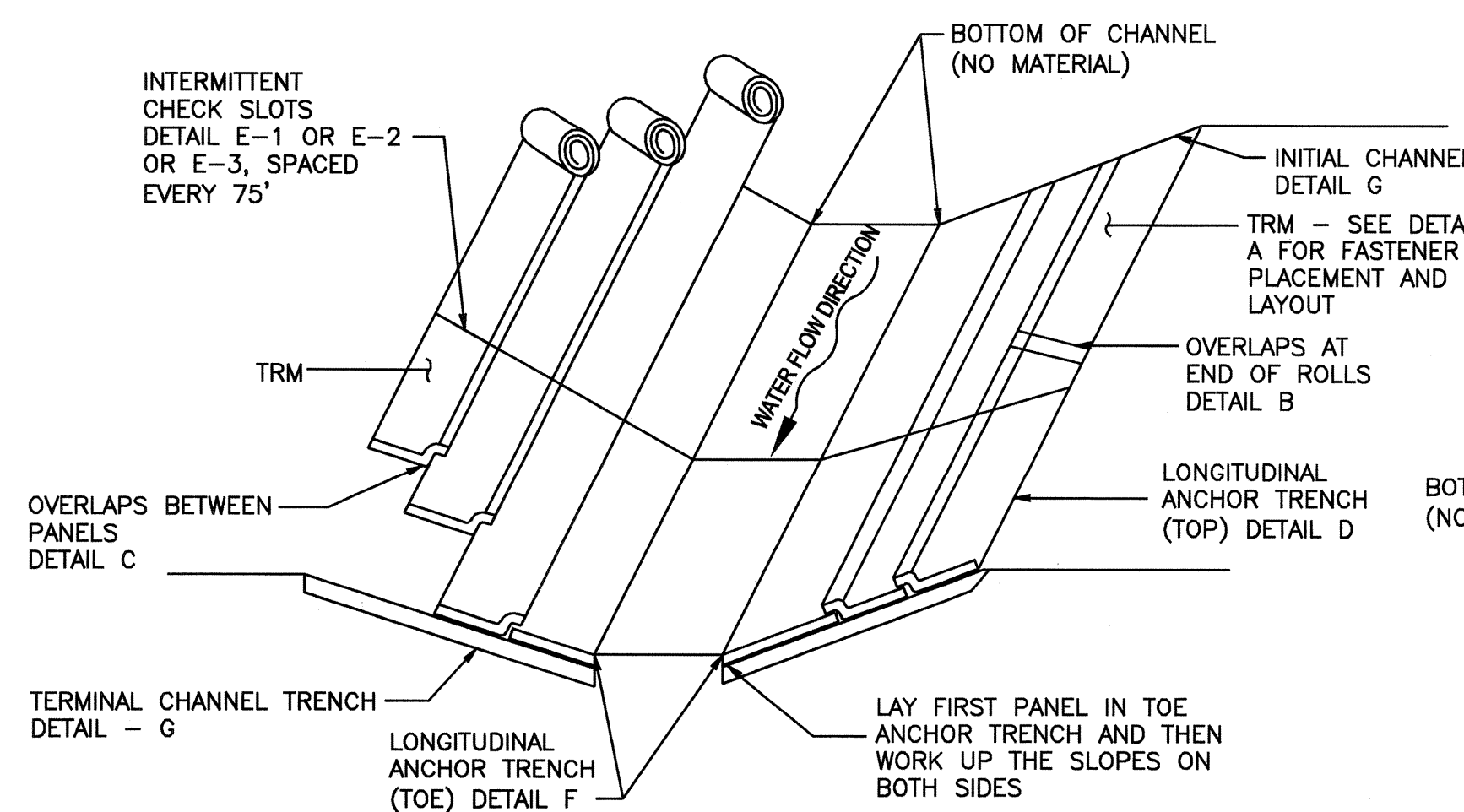
ANGLE SUMMARY:
A 49° 49' 24.99"
B 55° 12' 22.56"
C 48° 05' 53.23"
D 41° 08' 06.77"

CIP NUMBER:
Sheet 2 CITY OF POWAY Department of Development Services 15 Sheets

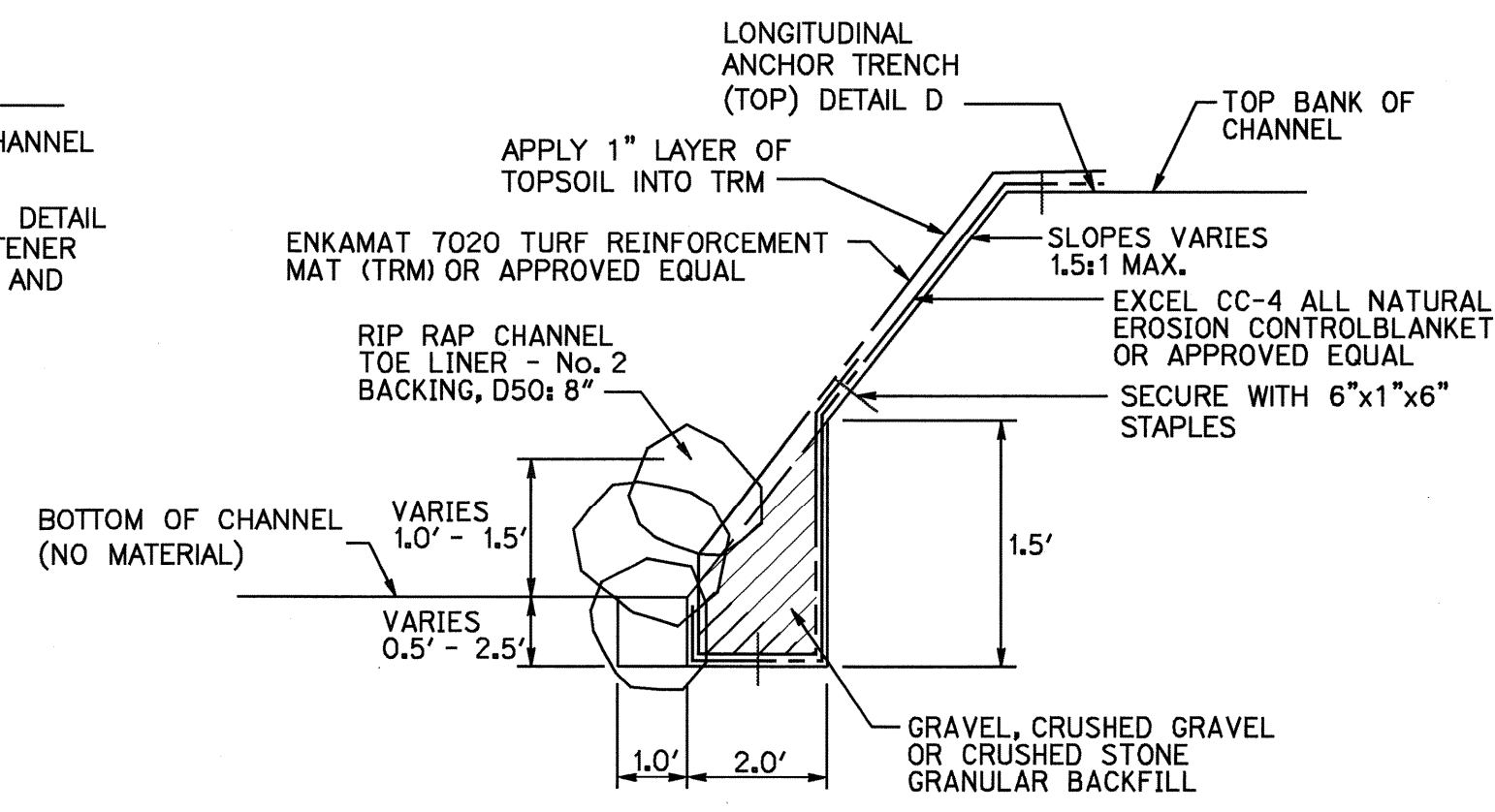
NOTES AND DETAILS, SHEET INDEX, CHANNEL CROSS-SECTIONS, ABBREVIATIONS FOR:
EPHERMAL TRIBUTARY TO RATTLESNAKE CREEK
STREAMBANK STABILIZATION

California Coordinate Index:
APPROVED BY: DATE
CITY ENGINEER: STEVE CROSBY R.C.E. 41975
ENGINEER OF WORK: DATE
JOHN D. GODDARD JR. R.C.E. # 33037

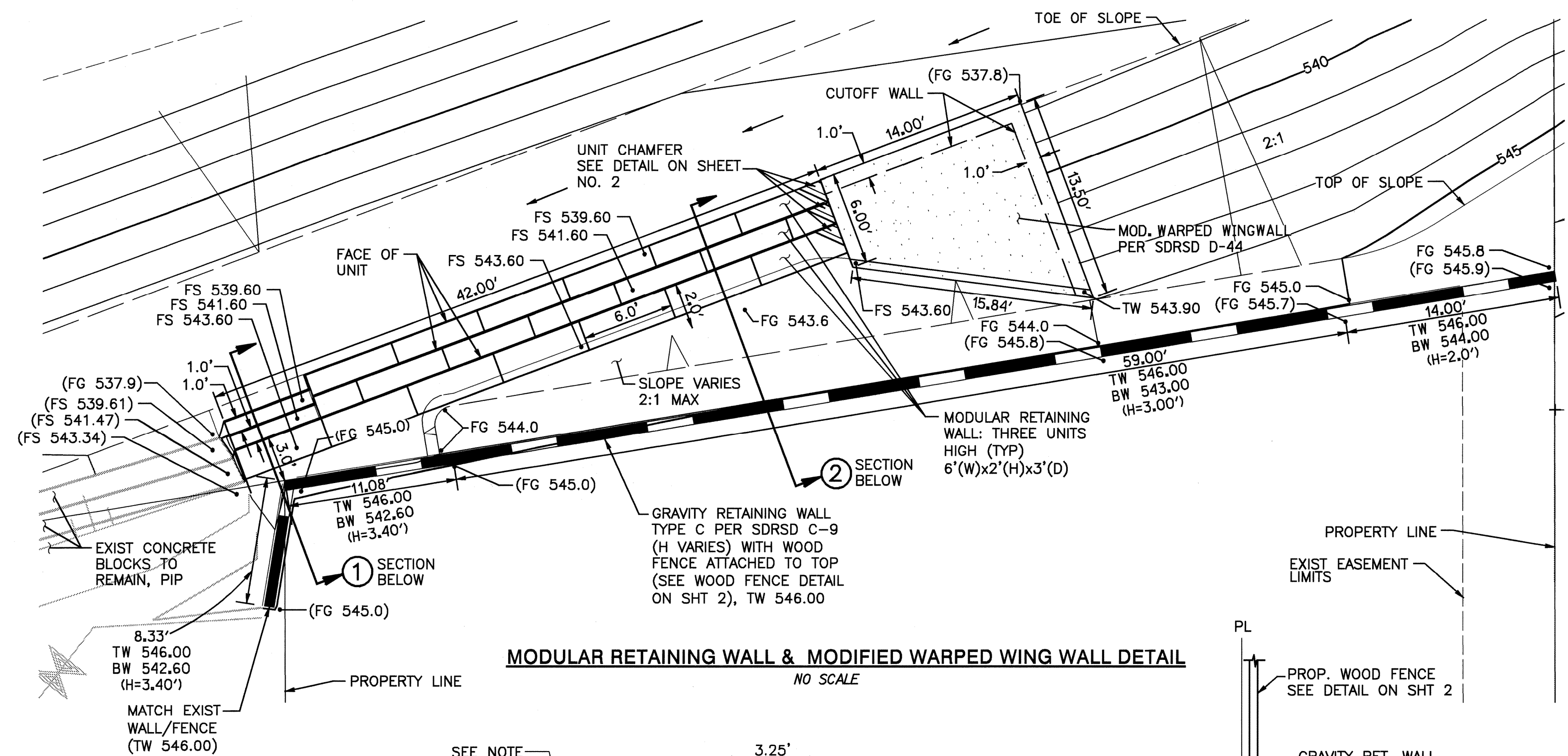
DESIGNED	CHECKED	DATE
CITY OF POWAY PROJECT MANAGER: MELODY ROCCO		
DESCRIPTION: 2" BRASS DISK STAMPED POWAY A-45" PER POWAY VERT. CONTROL.		
LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CUR RETURN OF COMMUNITY ROAD & AUBREY STREET.		
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK		
ELEVATION: 521.704 DATUM: NONE LISTED		



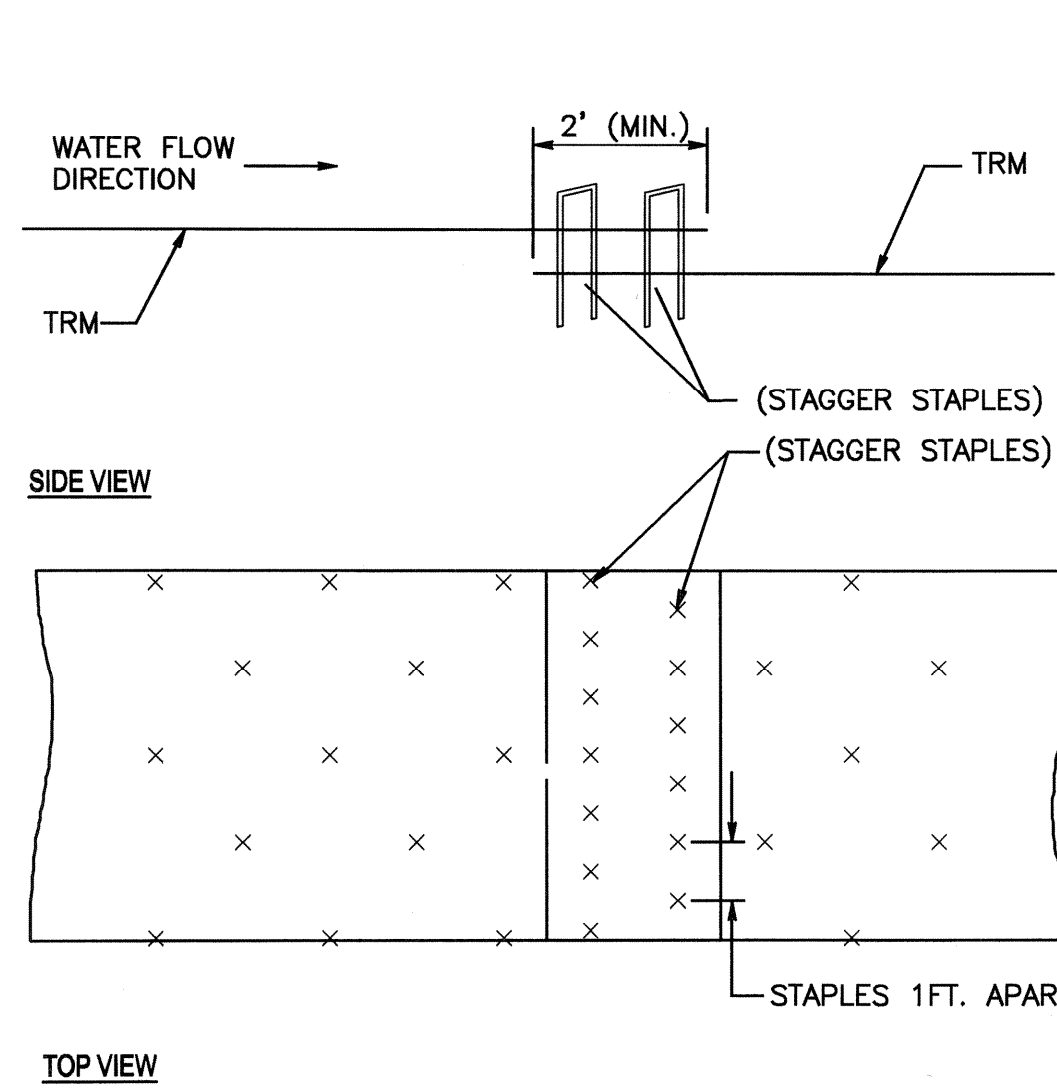
GENERAL TURF REINFORCEMENT MAT (TRM) - GENERAL LAYOUT
NO SCALE



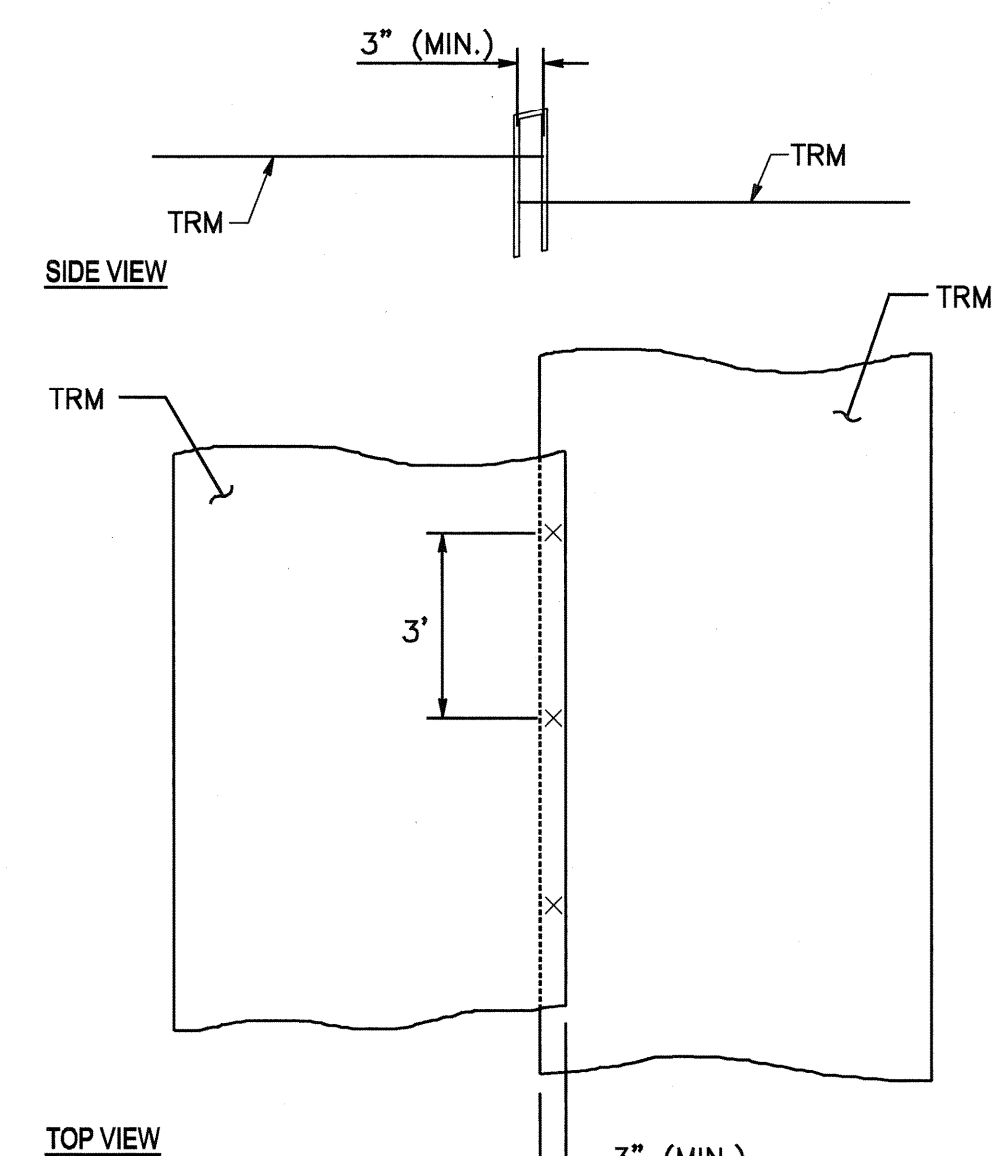
LONGITUDINAL ANCHOR TRENCH (TOE) - DETAIL F
NO SCALE



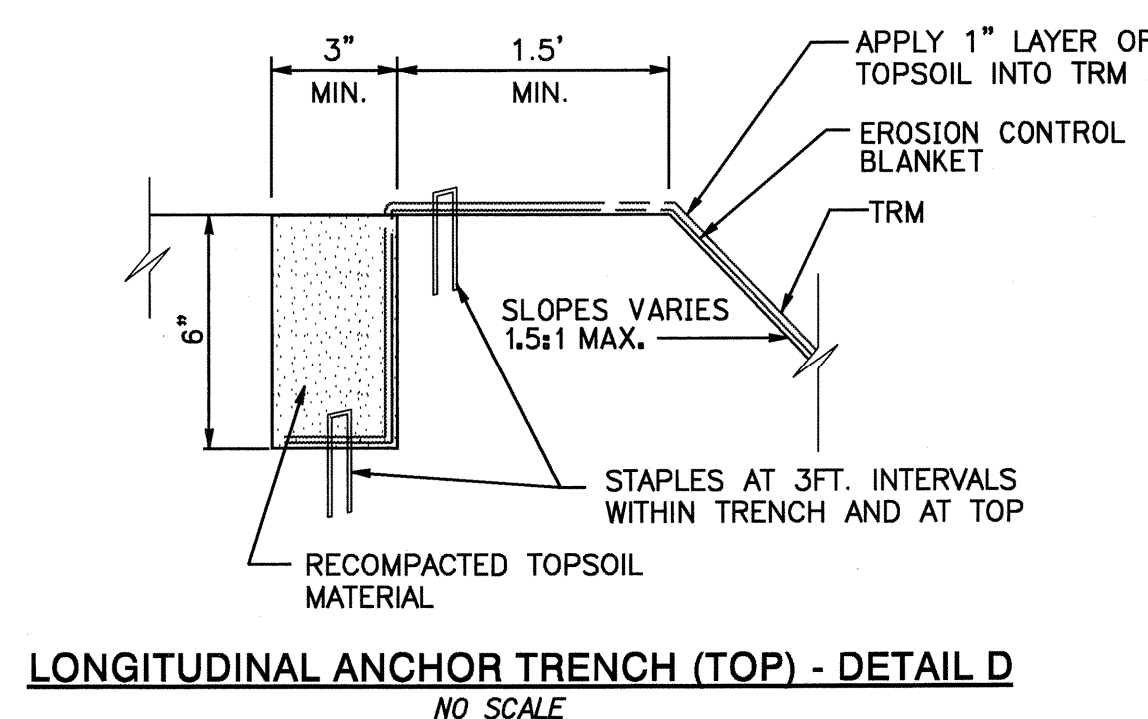
MODULAR RETAINING WALL & MODIFIED WARPED WING WALL DETAIL
NO SCALE



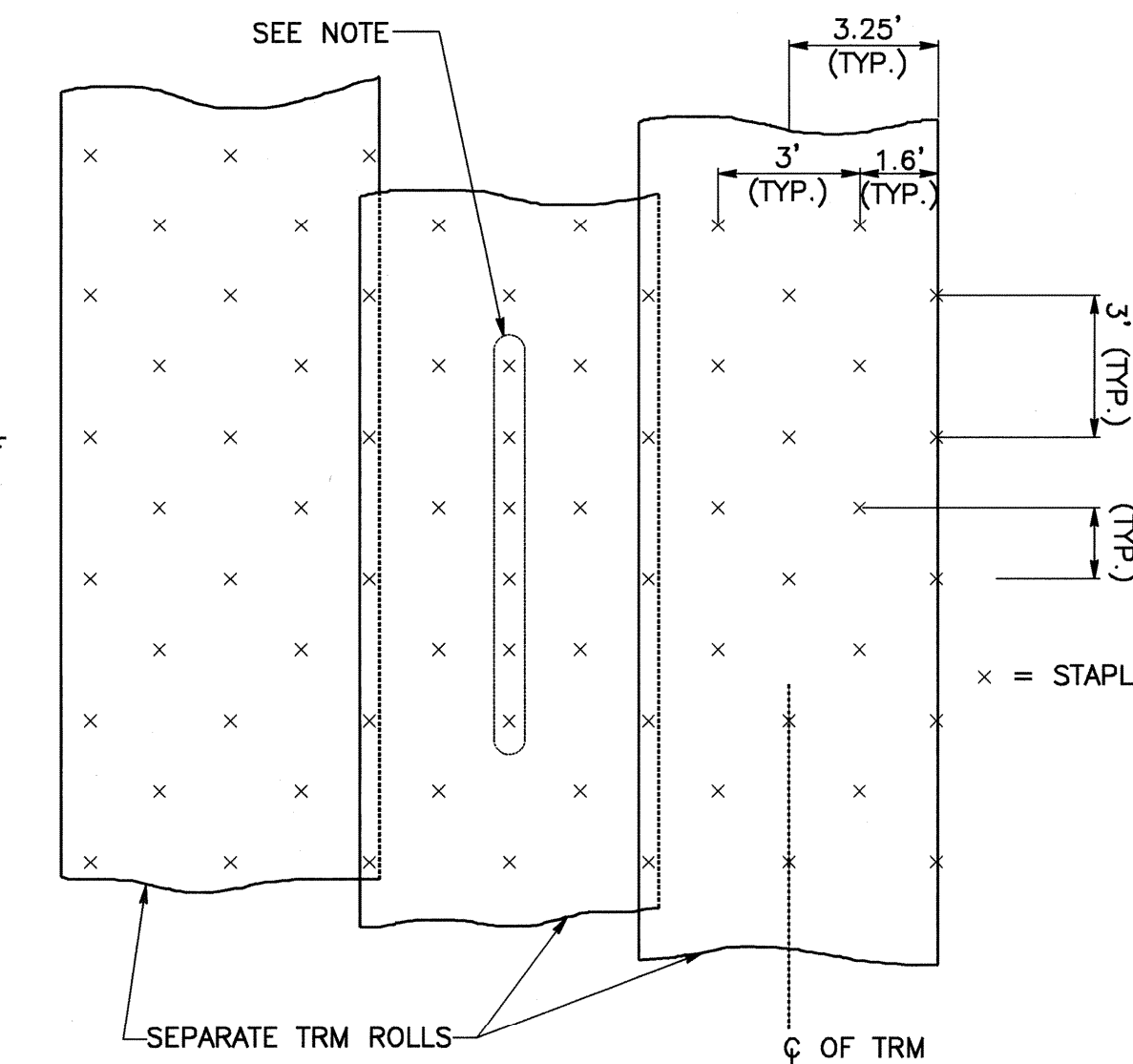
OVERLAP AT END OF ROLLS - DETAIL B
NO SCALE



OVERLAP BETWEEN PANELS - DETAIL C
NO SCALE

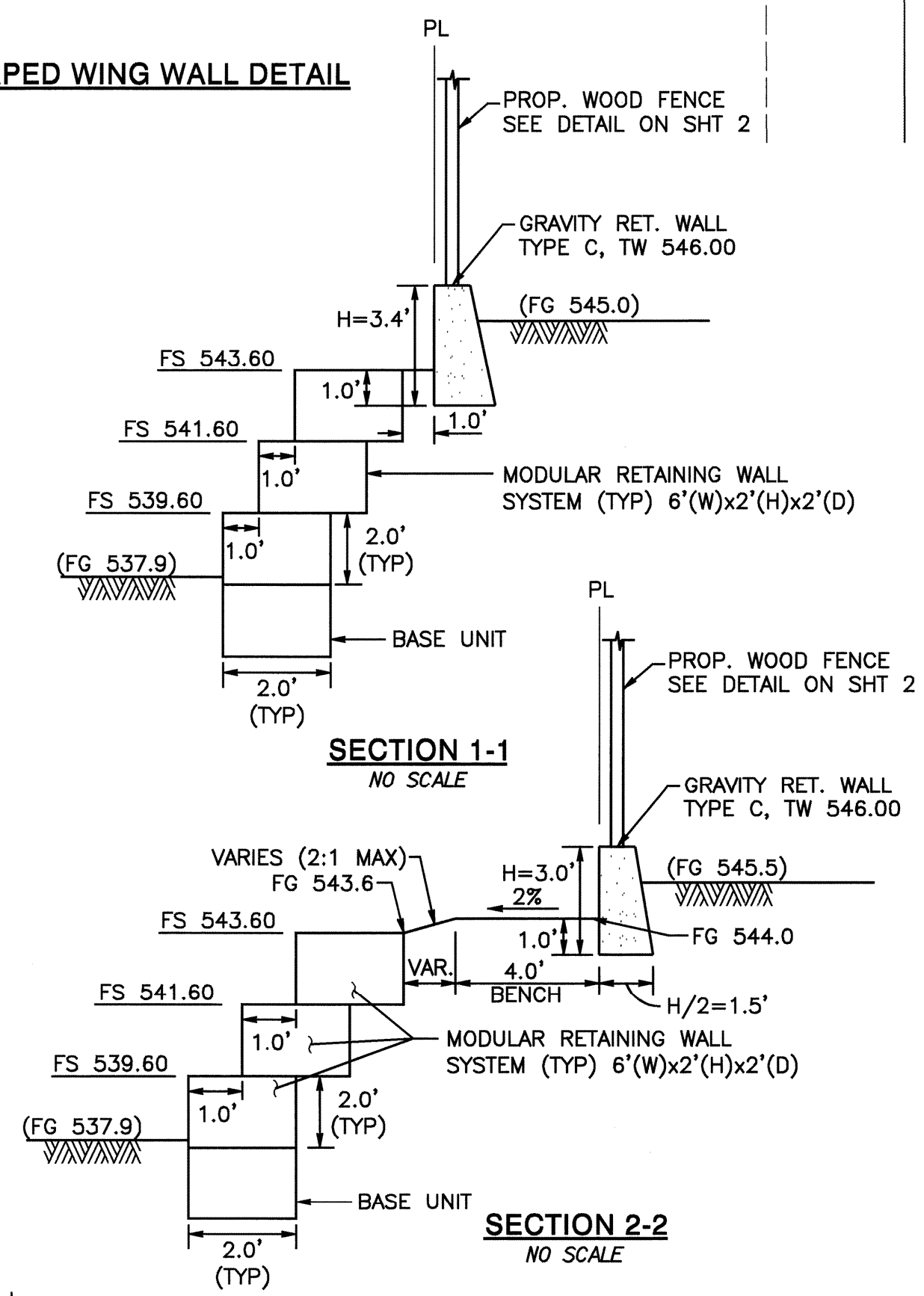


LONGITUDINAL ANCHOR TRENCH (TOP) - DETAIL D
NO SCALE



FASTENER PLACEMENT AND TRM LAYOUT - DETAIL A
NO SCALE

NOTE:
ADDITIONAL STAPLES MIGHT BE REQUIRED AT IRREGULARITY ELEVATION CHANGES OF THE GROUND SURFACE. ALWAYS SPACE STAPLES AT 1.5 FT. INTERVALS AT TOE OF (TRAPEZOID - SHAPE) CHANNEL. ENSURE ALL FASTENERS ARE INSTALLED TO MAKE DIRECT CONTACT WITH TRM AND SOIL.



CIP NUMBER:

Sheet 3	CITY OF POWAY Department of Development Services	15 Sheets
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DETAILS FOR:
**EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK
STREAMBANK STABILIZATION**

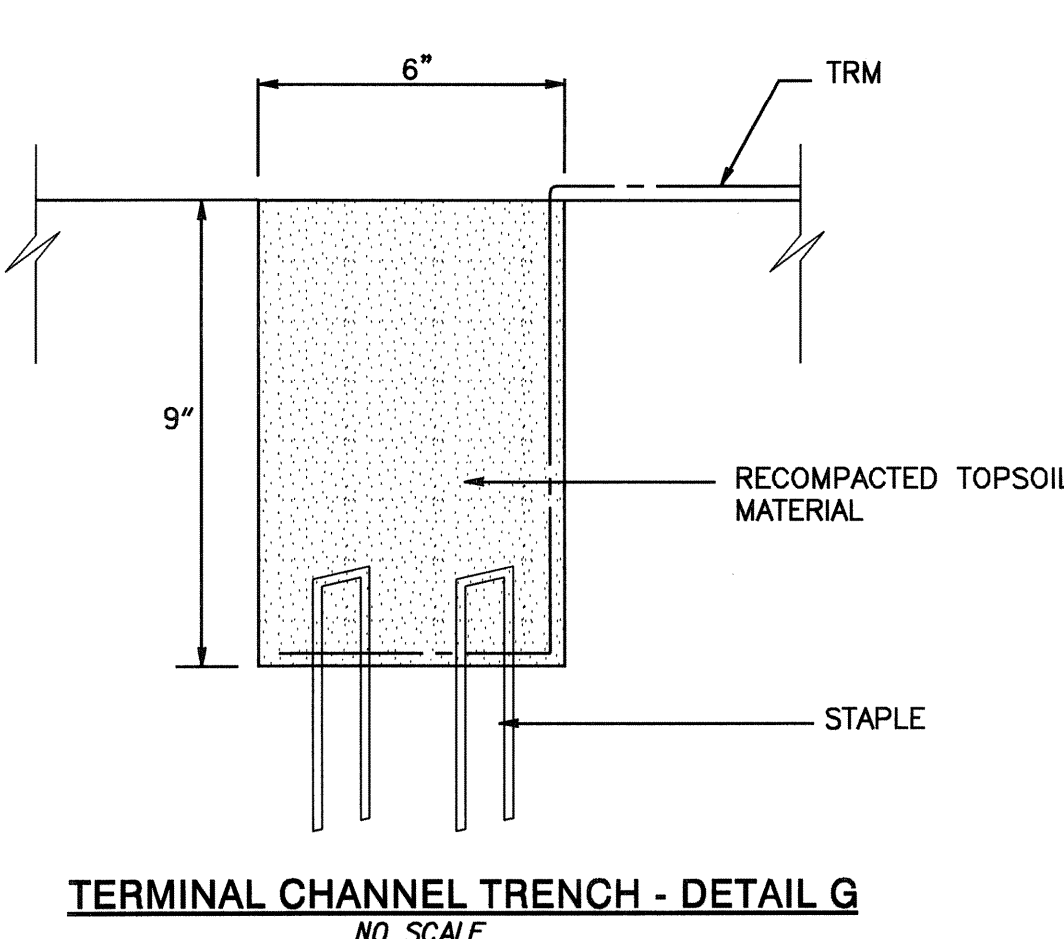
California Coordinate Index:

APPROVED BY: _____ DATE _____

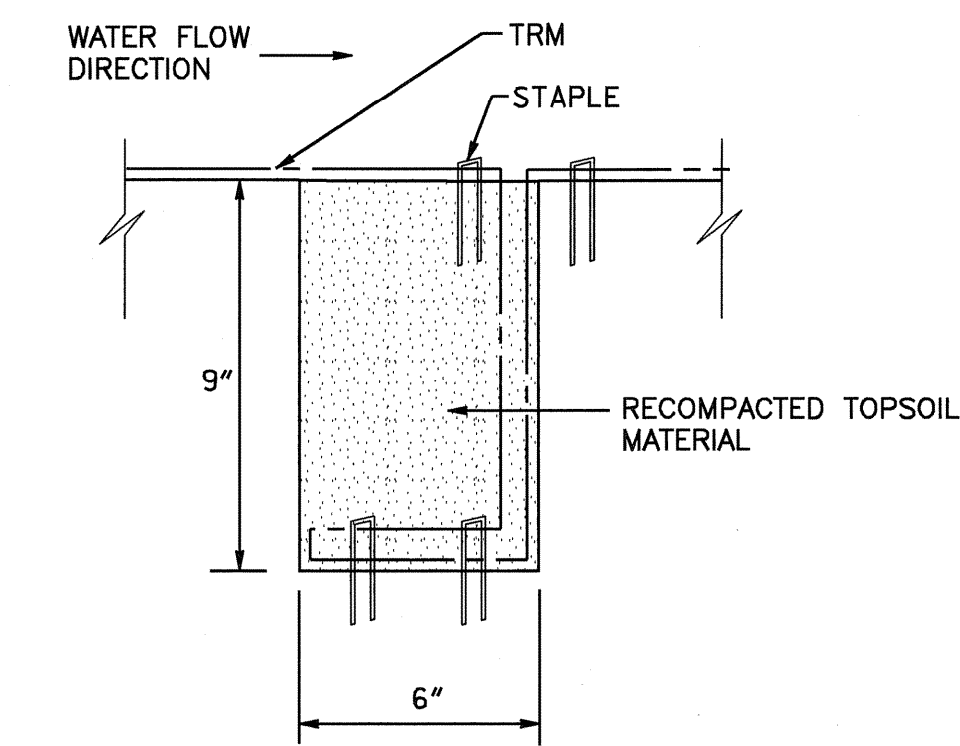
CITY ENGINEER: STEVE CROSBY R.C.E. 41975

ENGINEER OF WORK: _____ DATE _____

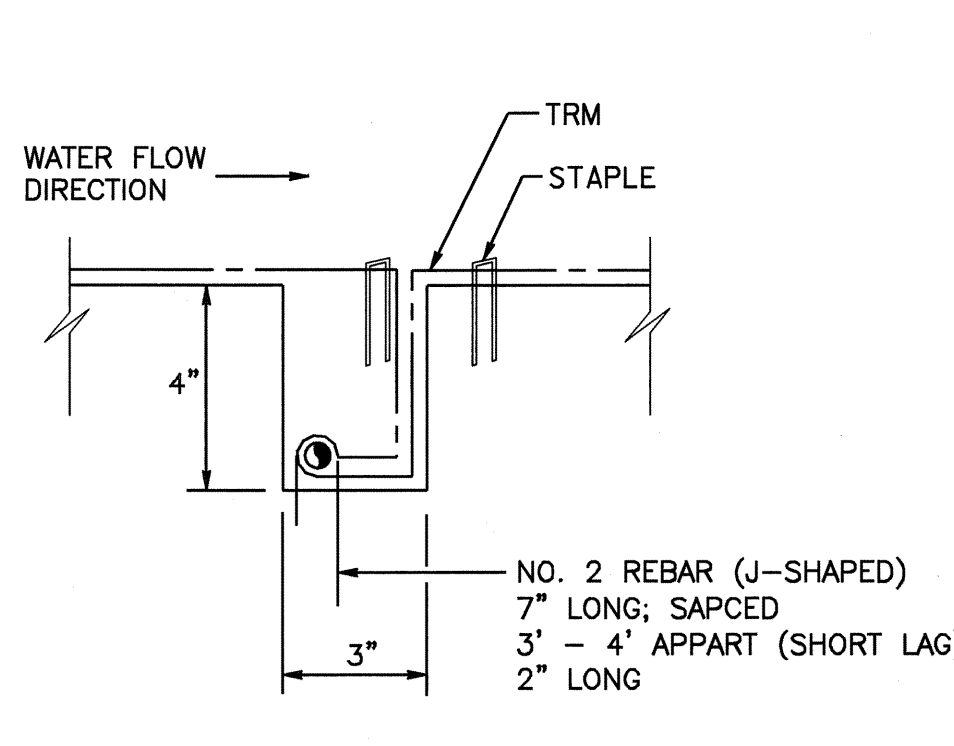
JOHN D. GODDARD JR. R.C.E. # 33037



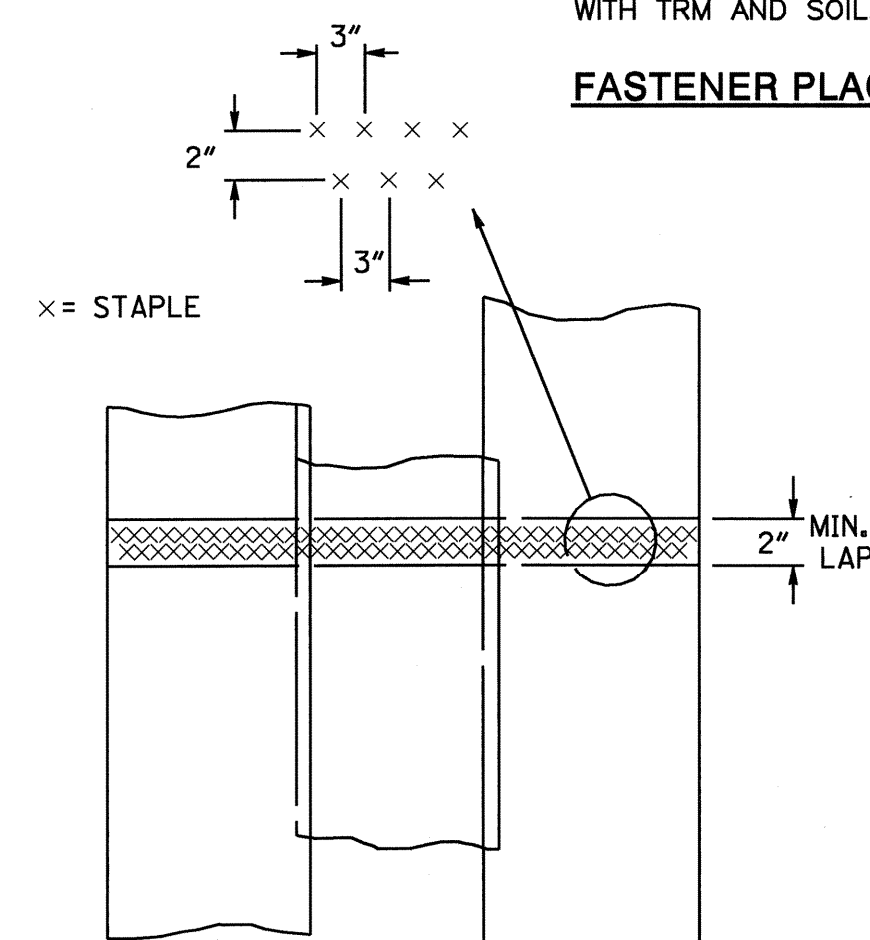
TERMINAL CHANNEL TRENCH - DETAIL G
NO SCALE



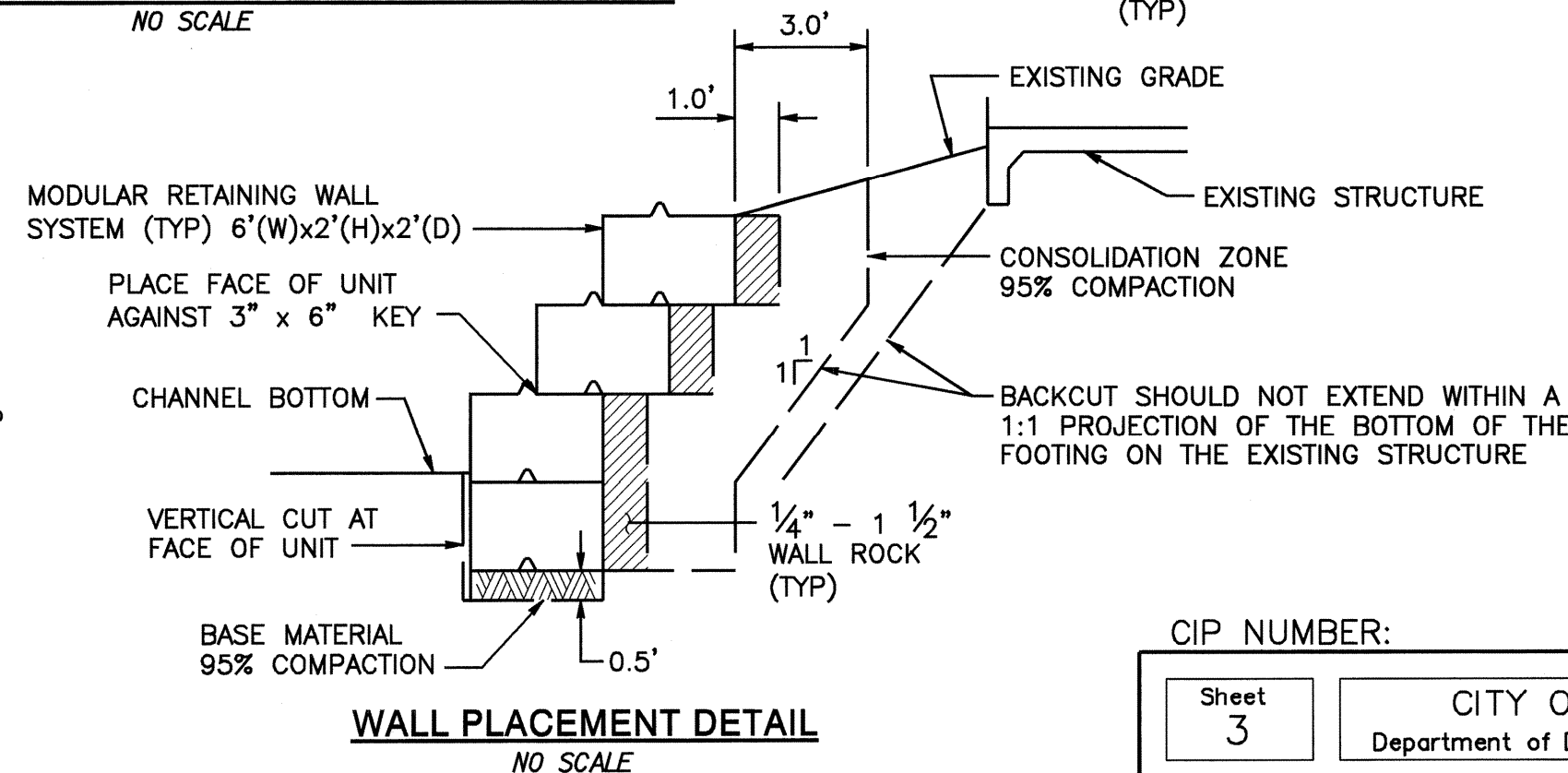
**INTERMITTENT CHECK SLOTS - DETAIL E-1
ALTERNATIVE A - NO SCALE**



**INTERMITTENT CHECK SLOTS - DETAIL E-2
ALTERNATIVE B - NO SCALE**



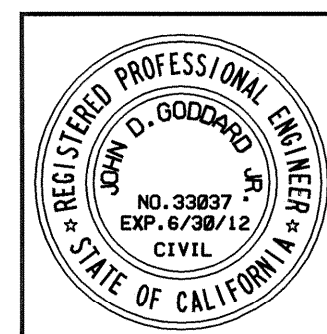
**INTERMITTENT CHECK SLOTS - DETAIL E-3
ALTERNATIVE C - NO SCALE**



WALL PLACEMENT DETAIL
NO SCALE

CITY OF POWAY PROJECT MANAGER: MELODY ROCCO	DESIGNED	DATE
DRAWN	CHECKED	DATE
BENCH MARK		
DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL.		
LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CUR RETURN OF COMMUNITY ROAD & AUBREY STREET.		
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK		
ELEVATION: 521.704 DATUM: NONE LISTED.		

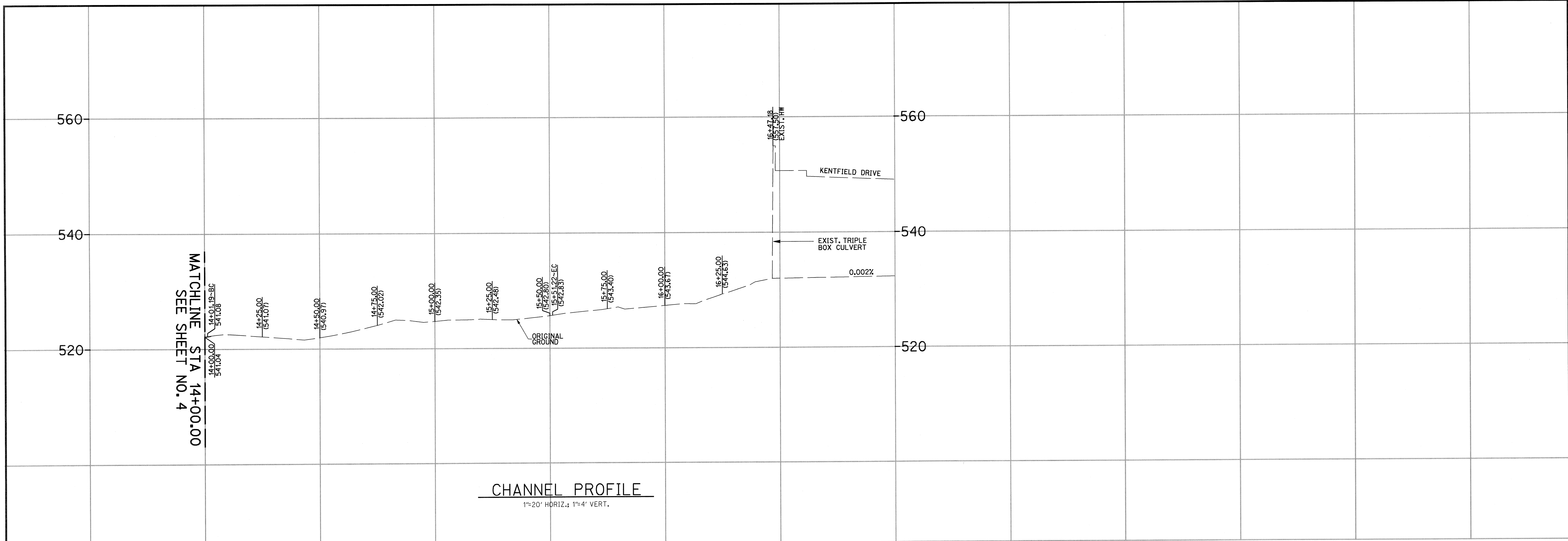
NOTE:
SEE HEADWALL DETAIL ON SHEET 2 FOR TERMINAL CHANNEL AT CUT-OF-WALL



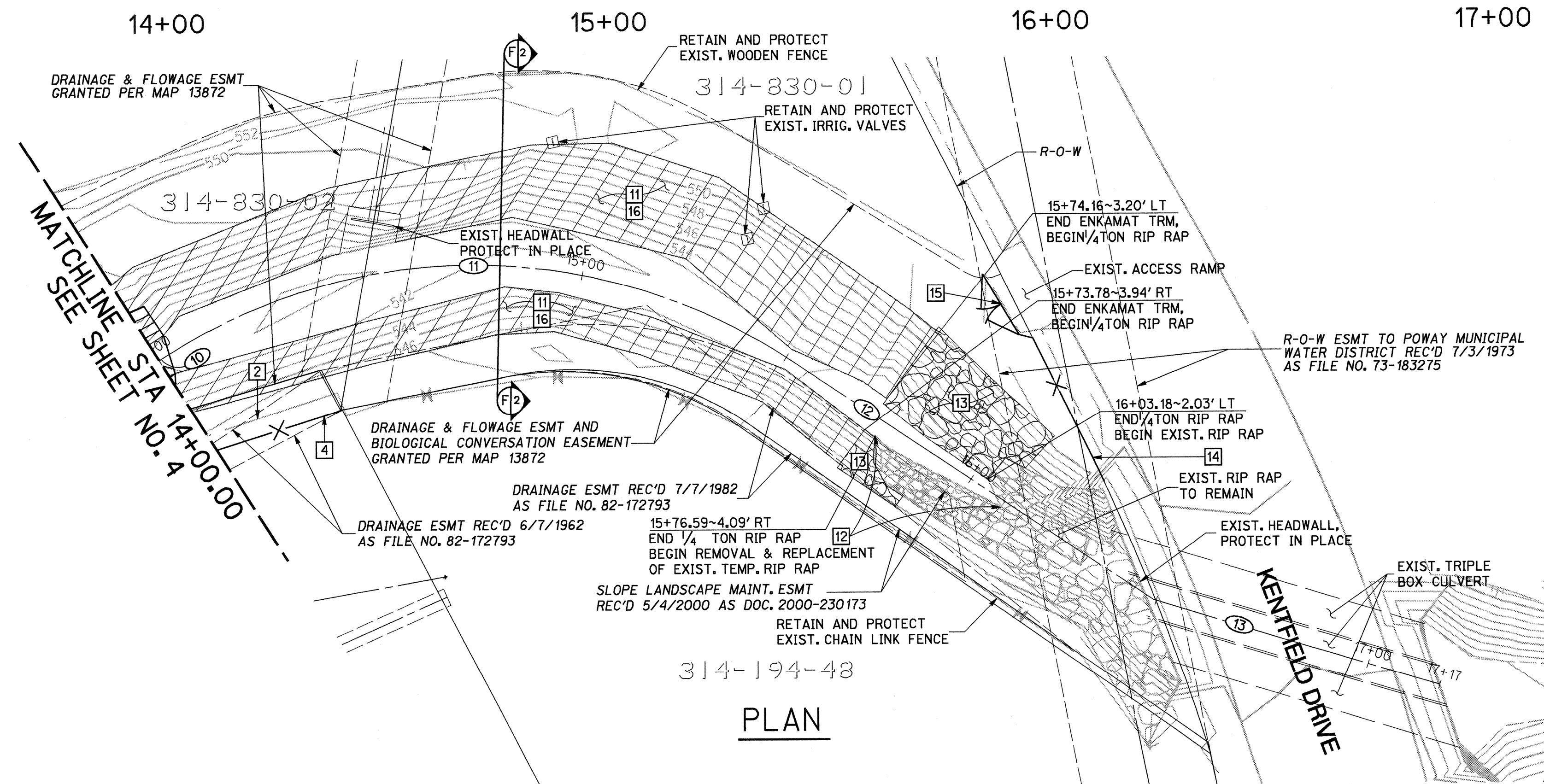
RICK
ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX) 619.291.4165

REFERENCES		CITY APPROVED CHANGES	
CITY OF POWAY B.M. #		No.	Description
		Approved By	Date

RECORD DRAWING NUMBER _____



CHANNEL PROFILE
1"=20' HORIZ.; 1"=4' VERT.

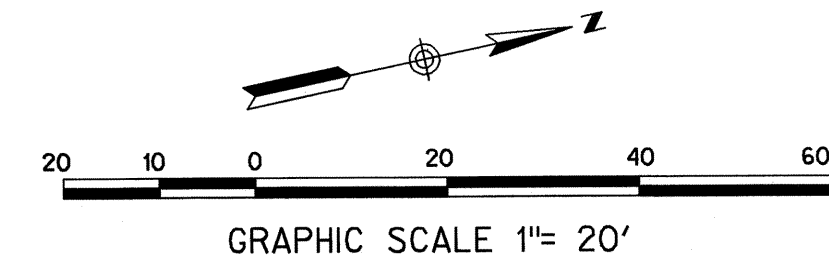


PLAN

CONSTRUCTION NOTES

- 2 REMOVE, SALVAGE AND REPLACE EXIST. WOOD FENCE
- 4 INSTALL TEMPORARY CHAIN LINK FENCING, SEE DETAIL SHEET 3
- 11 ENKAMAT 7020, TURF REINFORCEMENT MAT, SEE DETAILS SHEET 3
- 12 REMOVE, SALVAGE AND REPLACE EXIST. TEMPORARY RIP RAP
- 13 INSTALL 1/4 TON RIP RAP W/ FILTER FABRIC PER GEOTECHNICAL ENGINEER RECOMMENDATIONS, PER SDRSD D-40
- 14 INSTALL 5' HIGH, BLACK POWDER COATED CHAIN LINK FENCE, PER SDRSD M-6
- 15 INSTALL DOUBLE SWING GATE, TOTAL WIDTH = 16', PER SDRSD M-20
- 16 EXCEL CC-4 ALL NATURAL, EROSION CONTROL BLANKET SEE DETAILS SHEET 8

CENTERLINE DATA				
NO.	DELTA OR BRG.	RADIUS	LENGTH	REMARKS
10	N20° 30' 58"W		90.17'	
11	Δ=66° 07' 38"	130.00'	150.04'	
12	N45° 36' 40"E		98.11'	
13	N28° 57' 03"E		67.57'	



RICK ENGINEERING COMPANY
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REFERENCES	
CITY OF POWAY B.M. #	

CITY APPROVED CHANGES			
No.	Description	Approved By	Date

BENCH MARK	
DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL	DATE
LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CUR RETURN OF COMMUNITY ROAD & AUBREY STREET.	
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK	
ELEVATION: 521.704 DATUM: NONE LISTED	

CIP NUMBER: _____

Sheet 5	CITY OF POWAY Department of Development Services	15 Sheets
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PLAN & PROFILE: CHANNEL STATIONS 14+00 TO 17+17
**EPHEMERAL TRIBUTARY TO RATLESNAKE CREEK
STREAMBANK STABILIZATION**

California Coordinate Index: _____

APPROVED BY:	DATE
CITY ENGINEER: STEVE CROSBY R.C.E. 41975	
ENGINEER OF WORK:	DATE
JOHN D. GODDARD JR. R.C.E. # 33037	

RECORD DRAWING NUMBER _____

BEST MANAGEMENT PRACTICES

THE FOLLOWING BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL ARE SHOWN ON THE PLAN. SOME ARE FOR SHORT TERM MITIGATION DURING THE CONSTRUCTION PROCESS AND OTHERS ARE FOR LONG TERM MITIGATION AFTER THE CONSTRUCTION IS COMPLETED. ALL BMP'S MUST COMPLY WITH CITY OF POWAY'S MOST RECENTLY ADOPTED JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM.

TRAINING

SITE DEVELOPMENT MANAGEMENT AND PROJECT ENGINEERING PERSONNEL SHALL ENSURE THAT ALL PERSONNEL INVOLVED IN INSPECTIONS, MAINTENANCE AND REPAIR OF BMP'S, UNDERSTAND AND ARE QUALIFIED TO PERFORM SUCH TASKS. MEETINGS SHALL BE HELD PERIODICALLY BETWEEN THE VARIOUS CONTRACTORS AND THE ON-SITE CONSTRUCTION SUPERINTENDENT TO DISCUSS POTENTIAL PROBLEMS OR EXISTING PRACTICES THAT CAN BE IMPROVED IN ORDER TO PREVENT POLLUTION DURING FUELING, CLEANING OR MAINTENANCE OPERATIONS.

EROSION AND SEDIMENT CONTROL

LISTED BELOW ARE BEST MANAGEMENT PRACTICES TO BE USED FOR SOIL STABILIZATION PURPOSES. THEY ARE SHOWN IN DETAIL ON THIS SHEET. THESE BMP'S HAVE BEEN SELECTED FROM PROVEN METHODS USED FOR CONTROLLING EROSION WITHIN THE GENERAL PROJECT AREA.

SHORT TERM-CONSTRUCTION BMP'S:
GRAVEL BAGS
SILT FENCES
FIBER ROLLS

CONTROL PRACTICES TO REDUCE THE TRACKING OF SEDIMENT ONTO PUBLIC AND PRIVATE ROADS

TRACKING OF SEDIMENT ONTO PUBLIC AND PRIVATE ROADS SHALL BE MITIGATED BY THE CONSTRUCTION OF A TEMPORARY GRAVEL ENTRANCE/EXIT OFF KENTFIELD DRIVE & GASLIGHT COURT. THE GRAVEL ENTRANCE/EXIT SHALL BE 12' WIDE AND 50' LONG, AND SHALL CONSIST OF 3"-6" COURSE AGGREGATE WITH MIN THICKNESS OF 12".

CONTROL PRACTICES TO REDUCE WIND EROSION:

GRADING OPERATIONS WILL COMPLY WITH CITY ORDINANCES RELATING TO DUST CONTROL. ADDITIONALLY, ALL FILL MATERIAL WILL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND LANDSCAPED AS SHOWN ON THE LANDSCAPE PLANS, SHTS. 13-15

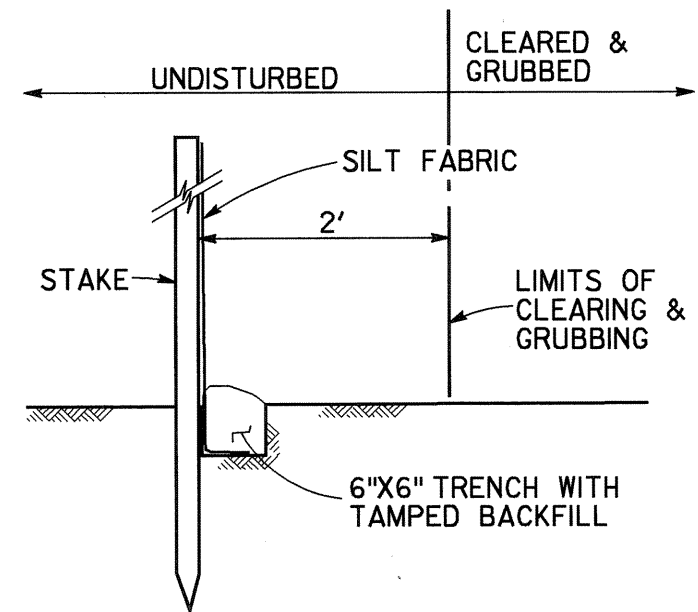
POST CONSTRUCTION STORM WATER MANAGEMENT

PERMANENT BMP'S TO MITIGATE POLLUTANTS AFTER ALL CONSTRUCTION PHASES HAVE BEEN COMPLETED AT THE SITE ARE LISTED BELOW.

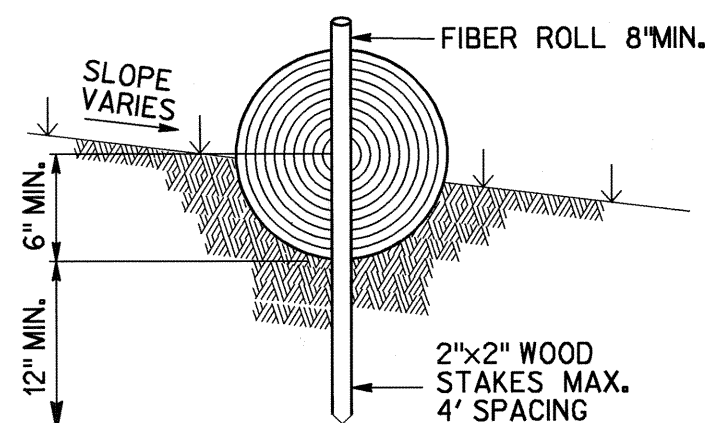
LONG TERM- POST CONSTRUCTION BMP'S
PERMANENT VEGETATION AND IRRIGATION PRACTICES

SITE MAINTENANCE, INSPECTION, AND REPAIR

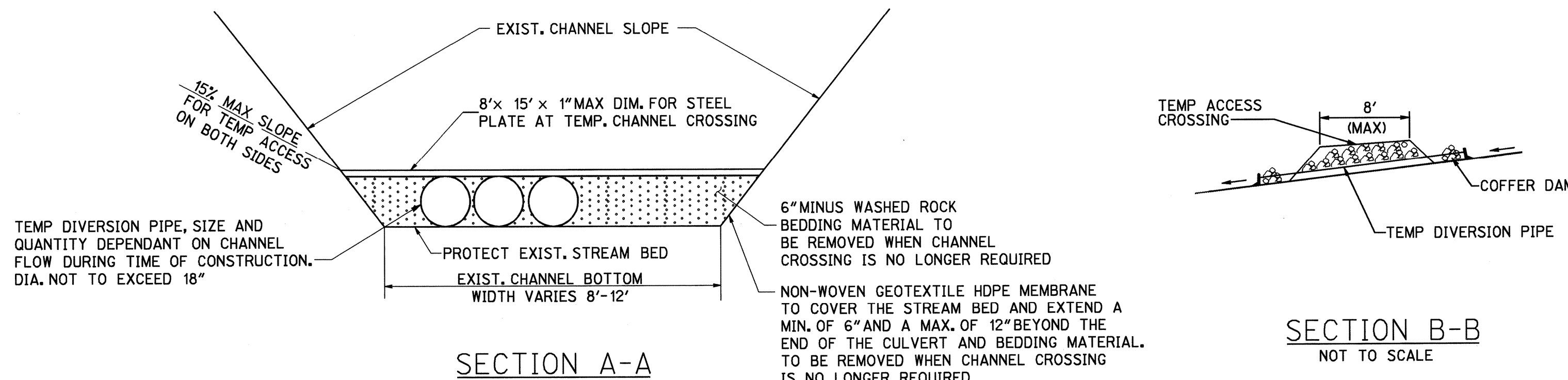
INSPECTIONS OF THE CONSTRUCTION SITE SHALL BE CONDUCTED PRIOR TO ANTICIPATED STORM EVENTS AND AFTER ACTUAL STORM EVENTS TO IDENTIFY AREAS CONTRIBUTING TO A STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY AND TO EVALUATE WHETHER MEASURES TO REDUCE POLLUTANT LOADING IDENTIFIED IN THE SWPPP ARE ADEQUATE AND PROPERLY IMPLEMENTED IN ACCORDANCE WITH THE TERMS OF THE PERMIT OF WHETHER ADDITIONAL CONTROL MEASURES ARE NEEDED. A RECORD OF THE INSPECTIONS MUST INCLUDE THE DATE OF THE INSPECTION, THE INDIVIDUAL(S) WHO PERFORMED THE INSPECTION AND THE OBSERVATIONS. THE PERSONS PERFORMING THE SITE INSPECTIONS WILL DECIDE THE APPROPRIATENESS OF IMPLEMENTING THE BMP'S SHOWN ON THIS PLAN AT ANY PARTICULAR CONSTRUCTION PHASE. ADDITIONALLY, THEY WILL DETERMINE IF THE APPROPRIATE BMP'S ARE WORKING OR NEED TO BE PREPARED, ENHANCED OR REPLACED.



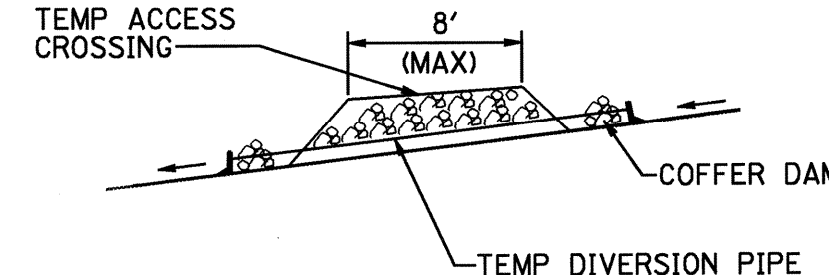
TYPICAL SECTION FOR SILT FENCE
NO SCALE



SC-5: TYPICAL SECTION FOR FIBER ROLL
NO SCALE



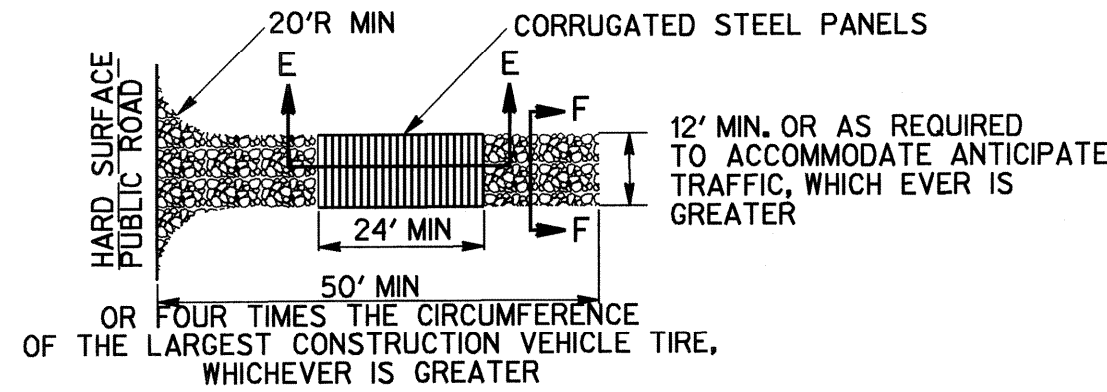
SECTION A-A



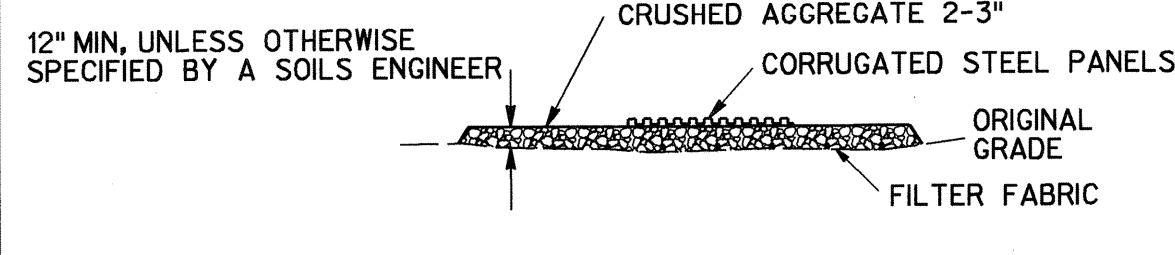
SECTION B-B
NOT TO SCALE

NOTES:
TEMPORARY STREAM CROSSING TO BE UTILIZED THROUGHOUT CHANNEL REACH AS NEEDED FOR ACTIVE WORK AREAS. (RIVER STATION 11+90 TO 14+05). NO MORE THAN ONE CROSSING AT ANY TIME WILL BE ALLOWED IN THE CHANNEL REACH DURING CONSTRUCTION.

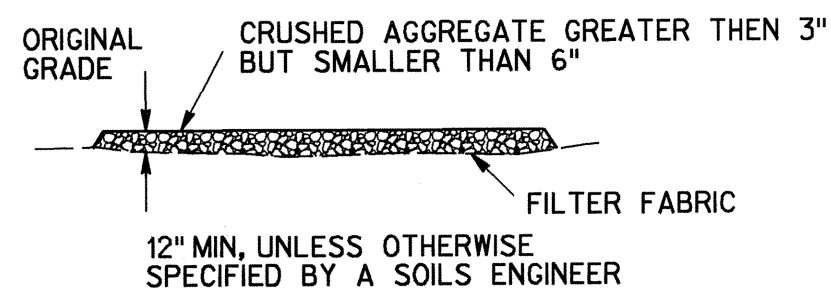
TEMPORARY STREAM CROSSING



TC-1: STABILIZED CONSTRUCTION ENTRANCE/EXIT
NO SCALE

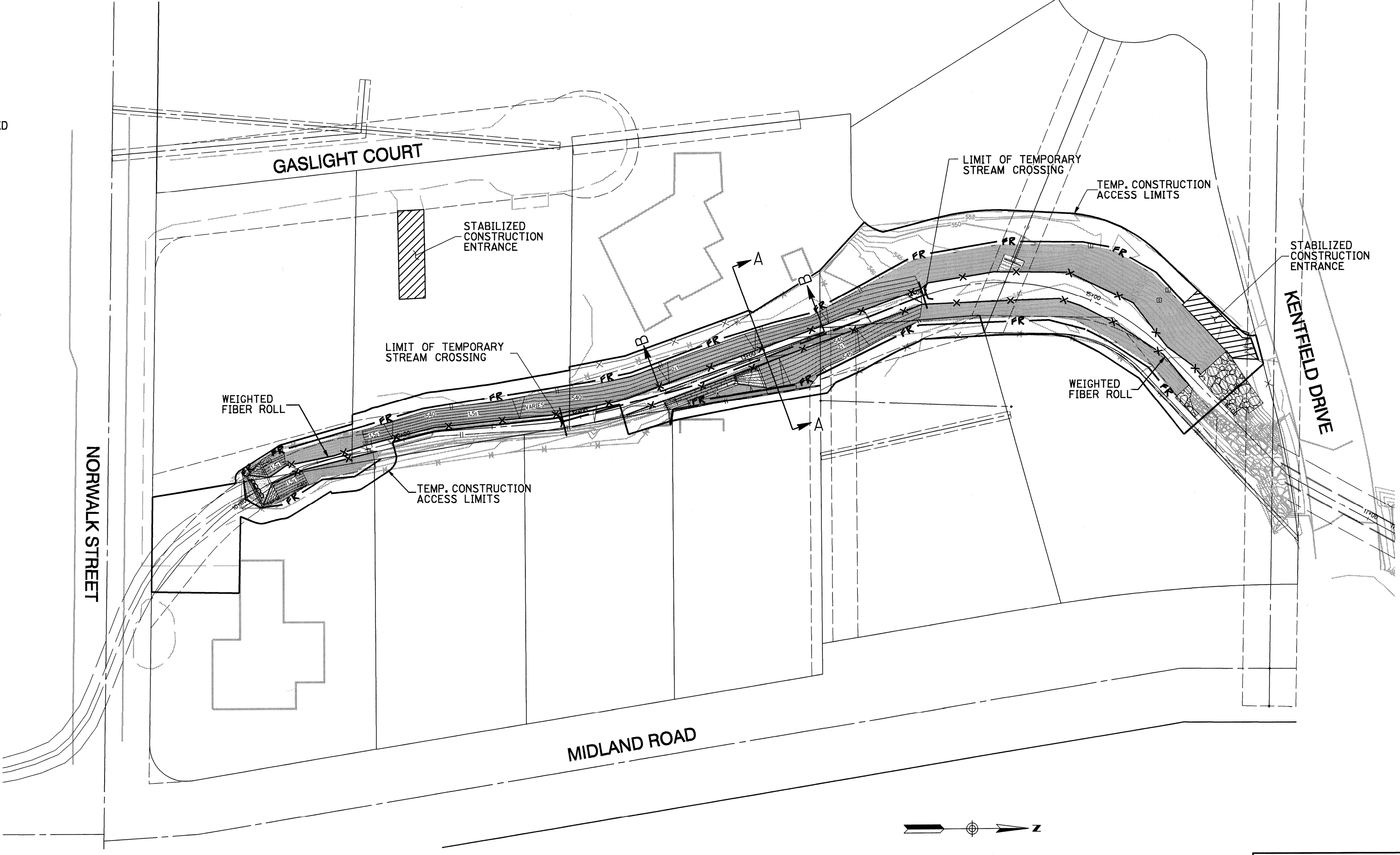


SECTION E-E
NO SCALE



SECTION F-F
NO SCALE

- LEGEND**
- GRAVEL BAGS (CHECK DAMS) ○○○○○○○○○○○○
 - WEIGHTED FIBER ROLL PR — PR —
 - SILT FENCE — x — x — x —
 - STABILIZED CONSTRUCTION ENTRANCE [Hatched Box]
 - PROPOSED TURF REINFORCEMENT MAT (TRM) ENKAMAT-7020 WITH ECB OR APPR. EQUAL [Solid Grey Box]
 - TEMP. CONSTRUCTION ACCESS LIMITS [Dashed Line]
 - TEMP WATER DIVERSION SYSTEM [Line with Arrows]



CIP NUMBER:		
Sheet 6	CITY OF POWAY Department of Development Services	15 Sheets
WATER POLLUTION CONTROL PLAN, NOTES & DETAILS EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK STREAMBANK STABILIZATION		
California Coordinate Index:		
APPROVED BY:		DATE
CITY ENGINEER: STEVE CROSBY R.C.E. 41975		
ENGINEER OF WORK:		DATE
JOHN D. GODDARD JR. R.C.E. # 33037		

CITY OF POWAY PROJECT MANAGER: MELODY ROCCO	
DESIGNED	
DRAWN	
CHECKED	
BENCH MARK	
DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL.	
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RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK	
ELEVATION: 521.704 DATUM: NONE LISTED	

REFERENCES	CITY APPROVED CHANGES			
CITY OF POWAY B.M. #	No.	Description	Approved By	Date

REGISTERED PROFESSIONAL ENGINEER
JOHN D. GODDARD JR.
NO. 33837
EXP. 6/30/12
CIVIL
STATE OF CALIFORNIA

RICK
ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX) 619.291.4165

EROSION CONTROL BLANKET NOTES

STEP 1 - SITE PREPARATION

PREPARE SITE TO DESIGN PROFILE AND GRADE. REMOVE DEBRIS, ROCKS, CLODS, ETC.. GROUND SURFACE SHOULD BE SMOOTH PRIOR TO INSTALLATION TO ENSURE BLANKET REMAINS IN CONTACT WITH SLOPE.

STEP 2 - SEEDING

SEE LANDSCAPE PLANS FOR SEEDING INFORMATION

STEP 3 - STAPLE SELECTION

AT A MINIMUM, 6" LONG BY 1" CROWN, 11 GAUGE STAPLES ARE TO BE USED TO SECURE THE BLANKET TO THE GROUND SURFACE. INSTALLATION IN ROCKY, SANDY OR OTHER LOOSE SOIL MAY REQUIRE LONGER STAPLES.

STEP 4 - EXCAVATE ANCHOR TRENCH AND SECURE BLANKET

EXCAVATE A TRENCH ALONG THE TOP AND BOTTOM OF THE CHANNEL SIDE SLOPES AND THE UPSTREAM TERMINAL END OF THE CHANNEL TO SECURE THE EDGES OF THE BLANKET. THE TRENCH SHOULD RUN ALONG THE LENGTH AND WIDTH OF THE INSTALLATION. STAPLE BLANKET ALONG BOTTOM OF TRENCH, FILL WITH COMPACTED SOIL, OVERLAP BLANKET TOWARDS TOE OF SLOPE AND SECURE WITH ROW OF STAPLES (SHOWN IN FIGURES A, E AND F).

STEP 5 - SECURE BODY OF BLANKET

ROLL BLANKET DOWN SLOPE FROM ANCHOR TRENCH. STAPLE BODY OF BLANKET FOLLOWING THE PATTERN SHOWN IN FIGURE D. LEAVE END OF BLANKET UNSTAPLED TO ALLOW FOR OVERLAP SHOWN IN FIGURE B. PLACE DOWNSTREAM BLANKET UNDERNEATH UPSTREAM BLANKET TO FORM SHINGLE PATTERN. STAPLE SEAM AS SHOWN IN FIGURE E. SECURE DOWNSTREAM BLANKET WITH STAPLING PATTERN SHOWN IN FIGURE D. STAPLING PATTERN SHOWN IN FIGURE D REFLECTS MINIMUM STAPLES TO BE USED. MORE STAPLES MAY BE REQUIRED TO ENSURE BLANKET IS SUFFICIENTLY SECURED TO RESIST MOWERS AND FOOT TRAFFIC AND TO ENSURE BLANKET IS IN CONTACT WITH SOIL SURFACE OVER THE ENTIRE AREA OF BLANKET. FURTHER, CRITICAL POINTS REQUIRE ADDITIONAL STAPLES. CRITICAL POINTS ARE IDENTIFIED IN FIGURE G.

STEP 6 - CONTINUE ALONG SLOPE - COMPLETE INSTALLATION

OVERLAP ADJACENT BLANKETS AS SHOWN IN FIGURE C AND REPEAT STEP 5. SECURE TOE OF SLOPE USING STAPLING PATTERN SHOWN IN FIGURE E. SECURE EDGES OF INSTALLATION BY STAPLING AT 1.5' INTERVALS ALONG THE TERMINAL EDGE.

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURE SPECIFICATIONS.

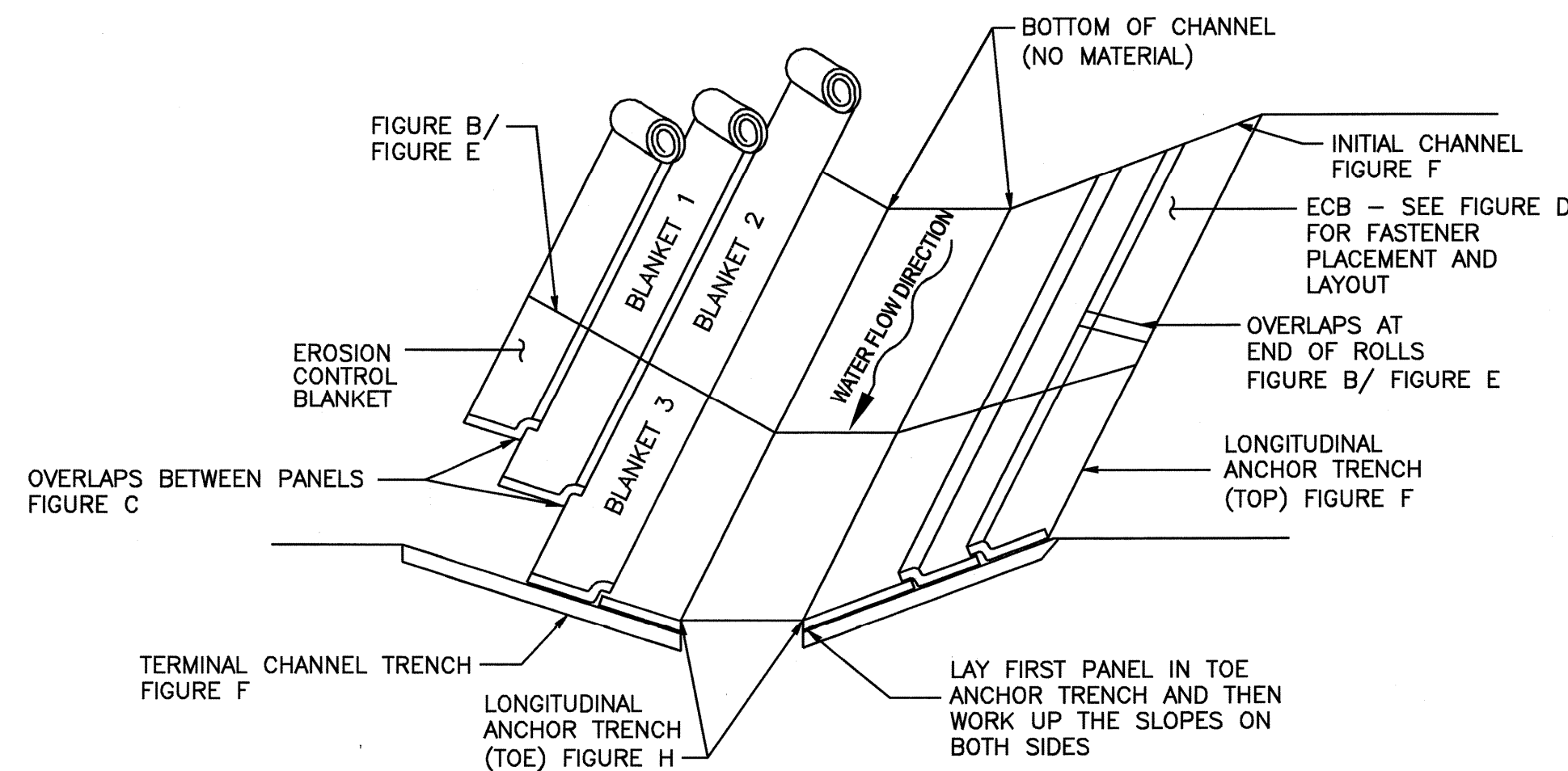


FIGURE A - EROSION CONTROL BLANKET (ECB) - GENERAL LAYOUT
NO SCALE

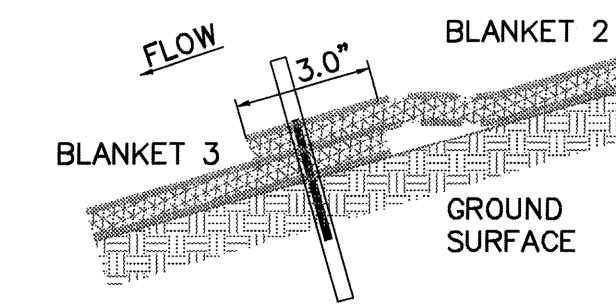


FIGURE B - ECB PROFILE VIEW - DOWNSTREAM OVERLAPS
NO SCALE

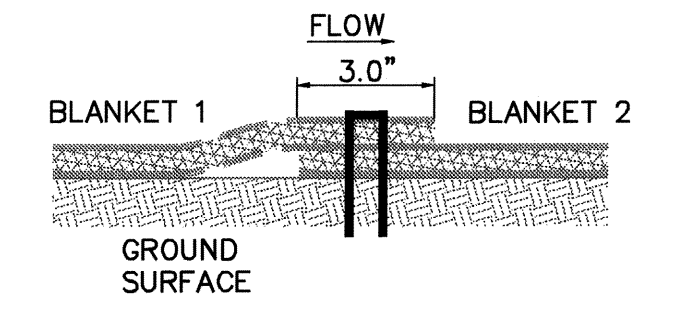


FIGURE C - ECB CROSS SECTION - PANEL OVERLAPS
NO SCALE

NOTE:
INSURE ECB OVERLAP PANELS AND TRM OVERLAP PANELS HAVE A MINIMUM DISTANCE OF 2' BETWEEN THEM

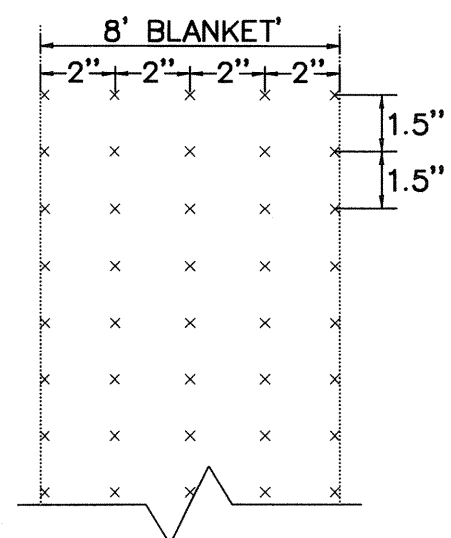


FIGURE D - ECB PLAN VIEW - FASTENER PLACEMENT
NO SCALE

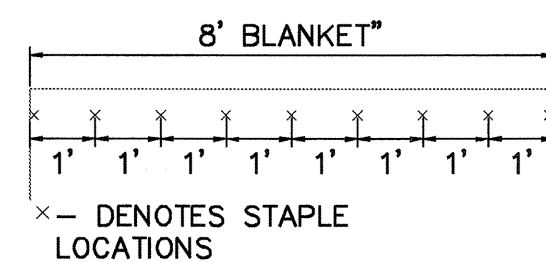


FIGURE E - PLAN VIEW
NO SCALE

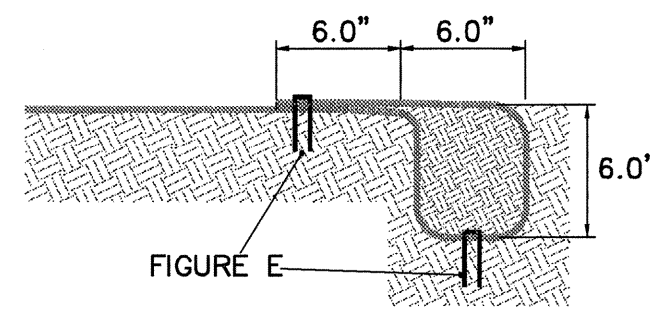


FIGURE F - ECB PROFILE VIEW - ANCHOR TRENCH (TOP)
NO SCALE

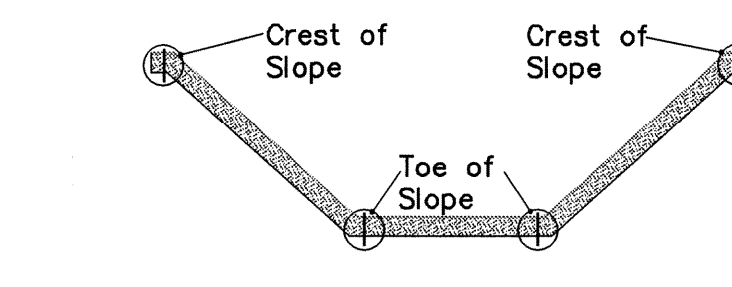


FIGURE G - ECB CRITICAL POINT SECURING
NO SCALE

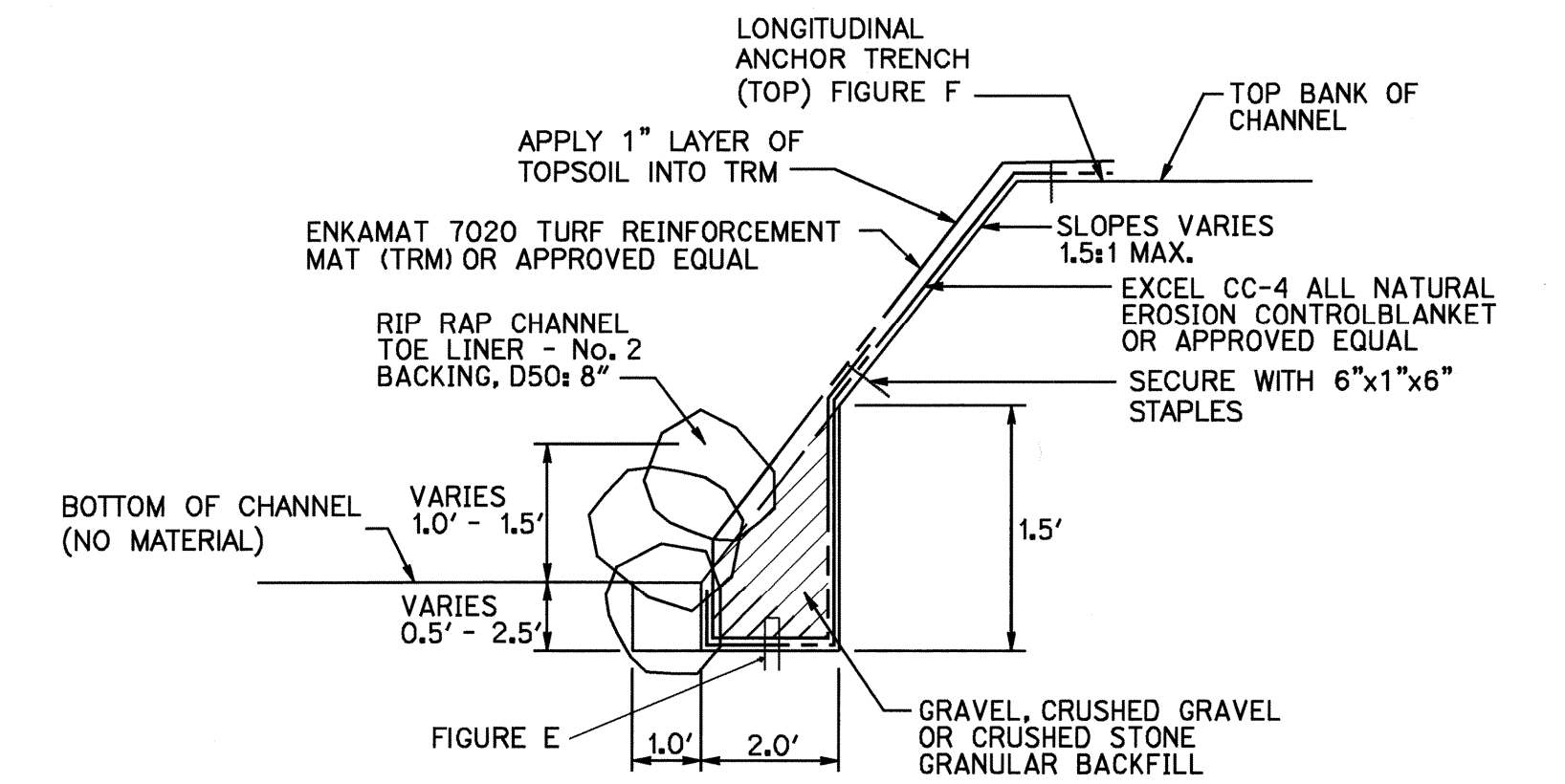
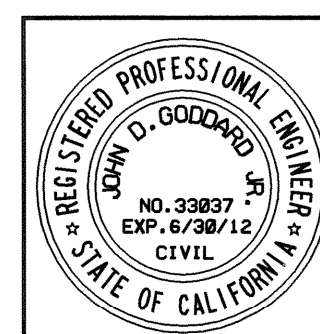


FIGURE H - ECB ANCHOR TRENCH (TOE)
NO SCALE

x - DENOTES STAPLE LOCATIONS



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REFERENCES	CITY APPROVED CHANGES			
CITY OF POWAY B.M. #	No.	Description	Approved By	Date

BENCH MARK	
Description	DATE

CITY OF POWAY PROJECT MANAGER: MELODY ROCCO	
DESIGNED	
DRAWN	
CHECKED	
	DATE
DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL	
LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CUR RETURN OF COMMUNITY ROAD & AUBREY STREET.	
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK	
ELEVATION: 521.704 DATUM: NONE LISTED	

CIP NUMBER:		
Sheet 8	CITY OF POWAY Department of Development Services	15 Sheets
DETAILS FOR: EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK STREAMBANK STABILIZATION		
California Coordinate Index:		
APPROVED BY:		DATE
CITY ENGINEER: STEVE CROSBY R.C.E. 41975		
ENGINEER OF WORK:		DATE
JOHN D. GODDARD JR. R.C.E. # 33037		

RECORD DRAWING NUMBER _____

IRRIGATION NOTES:

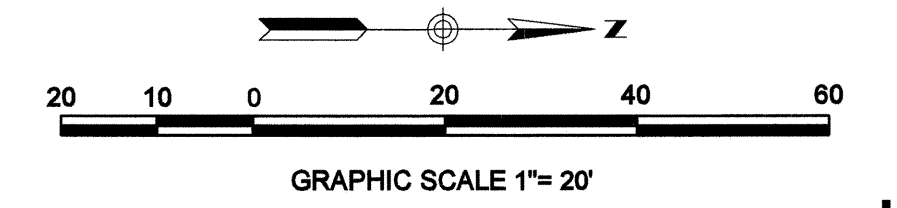
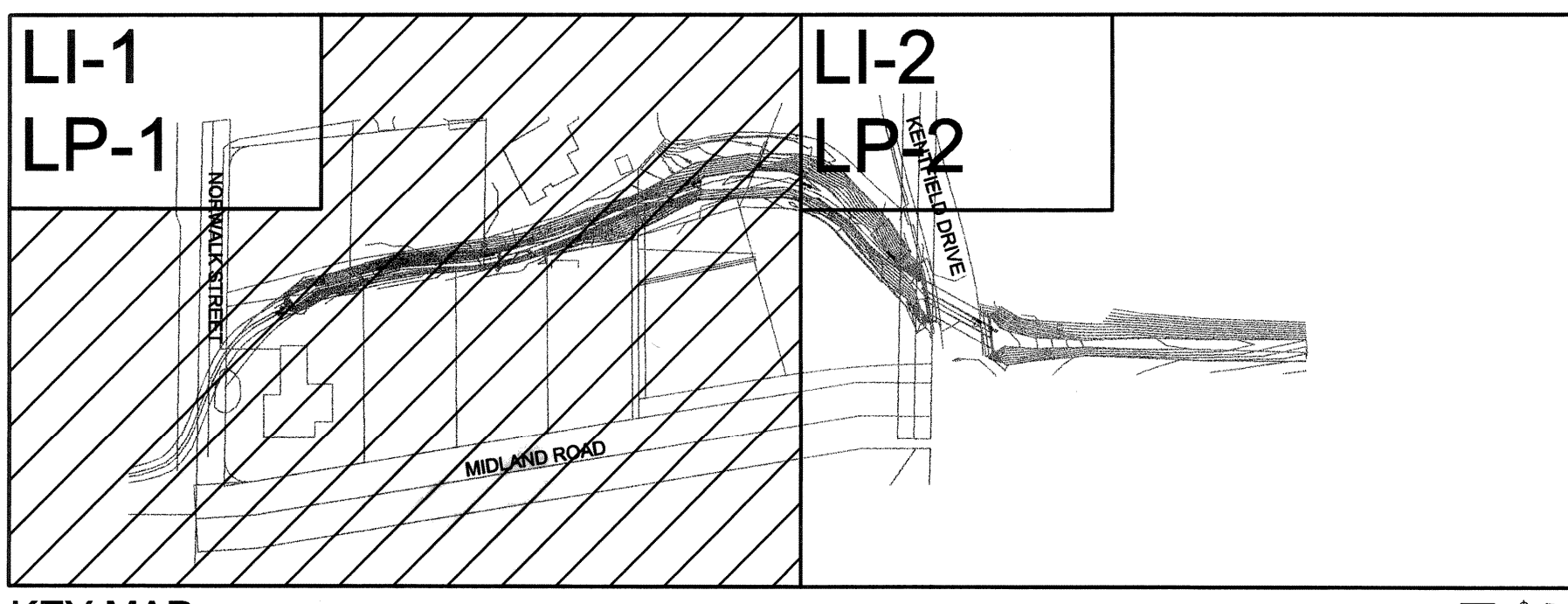
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- ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVER SPRAY ONTO WALLS, FENCES AND HARDSCAPE. ALL ADJUSTMENTS SHALL ASSURE ADEQUATE SYSTEM COVERAGE AND DISTRIBUTION EFFICIENCY WHILE KEEPING WATER WITHIN THE LANDSCAPED PLANTED AREAS. SOME ADDITIONAL HEADS MAY BE REQUIRED TO ACHIEVE OPTIMUM HEAD-TO-HEAD COVERAGE BY CONTRACTOR AS REQUIRED.
- CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR AS REQUIRED.
- ALL GALVAIZED MAINLINE PIPE ROUTING SHALL BE CONFIRMED WITH CITY INSPECTOR, PRIOR TO INSTALLATION.
- VALVE MANIFOLDS SHOWN WITHIN PRIVATE LOTS ARE FOR GRAPHIC CLARITY ONLY. VALVE MANIFOLDS SHALL BE LOCATED WITHIN CITY EASEMENT / PROJECT LIMITS. VERIFY ACTUAL LOCATIONS IN FIELD WITH CITY INSPECTOR PRIOR TO COMMENCING WORK.
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- THE CONTRACTOR SHALL VERIFY THE AVAILABLE WATER PRESSURE AT THE P.O.C. AND PROVIDE THE LANDSCAPE ARCHITECT AND CITY INSPECTOR WITH TESTING RESULTS, IN WRITING, PRIOR TO THE INITIATION OF ANY LANDSCAPE WORK.
- SEE SHTS. LI-1 & LI-2 FOR IRRIGATION LEGEND & DETAILS.
- SEE SHTS. LPD-1 FOR TREE PRESERVATION / REMOVAL PLAN.
- SEE SHTS. LP-1 & LP-2 FOR PLANTING PLAN.

IRRIGATION MATERIAL LEGEND (HEADS)

SYMBOL	MANUFACT.	MODEL NO. / DESCRIPTION	GPM	PRECIP	PSI	RADIUS	DETAIL
☉	HUNTER	PRS40-MP1000-ROTOR HEAD	.19, .37	.45	40	14 FT	F
☉	HUNTER	PRS40-MP2000-ROTOR HEAD	.40, .74	.44	40	20 FT	F
☉	HUNTER	PRS40-MP3000-ROTOR HEAD	.86, 1.82	.43	40	30 FT	F
▼	RAINBIRD	RWS-B-1402	1.0 EA (2.0 per symbol)				N



SPECIAL IRRIGATION NOTES:
 PRIOR TO CONSTRUCTION, LANDSCAPE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING IRRIGATION SYSTEM COMPONENTS WITHIN LIMIT-OF-WORK AND ADJACENT PROPERTY(S) TO DETERMINE WHAT IF ANY SYSTEM COMPONENTS ARE REQUIRED TO BE PROTECTED-IN-PLACE IN ORDER TO MAINTAIN THEM IN CURRENT WORKING ORDER DURING CONSTRUCTION AND/OR TO RESTORE THEM TO ORIGINAL CONDITION UPON THE COMPLETION OF WORK.
 DURING WORK (DEMOLITION AND CONSTRUCTION), CONTRACTOR SHALL PROTECT-IN-PLACE AND/OR MAINTAIN ANY REQUIRED SYSTEMS FOUND DURING PRE-CONSTRUCTION WALK-THROUGH THAT ARE CRITICAL TO REMAIN IN PLACE DURING AND AFTER THE PROJECT SCOPE HAS BEEN COMPLETED. CONTRACTOR SHALL INSTALL NEW IRRIGATION HEADS AND/OR ADJUST EXISTING HEADS TO ACCOMMODATE NEW DESIGN SCOPE AS REQUIRED, AS PART OF WORK.
 UPON COMPLETION OF THE PROJECT, A POST-PROJECT WALK-THROUGH SHALL BE SCHEDULED WITH CITY INSPECTOR TO CONFIRM ALL WORK WITHIN LIMIT-OF-WORK AND ADJACENT AREA'S TO THE PROJECT SITE HAVE BEEN MAINTAINED AND/OR RESTORED TO PRE-CONSTRUCTION CONDITION AND SHALL BE ACCEPTED BY CITY INSPECTOR.



100%
PRELIMINARY
NOT FOR CONSTRUCTION

CIP NUMBER: LI-1		
Sheet 9	CITY OF POWAY Department of Development Services	15 Sheets
LANDSCAPE IRRIGATION PLANS FOR: EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK STREAMBANK STABILIZATION		
APPROVED BY: 41	DATE	
CITY ENGINEER: STEVE CROSBY R.C.E. 41975	DATE	
ENGINEER OF WORK:	DATE	
JOHN D. GODDARD JR. R.C.E. # 33037	DATE	

CITY OF POWAY PROJECT MANAGER: MELODY ROCCO	
DESIGNED	
DRAWN	
CHECKED	DATE
BENCH MARK	
DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL	
LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CUR RETURN OF COMMUNITY ROAD & AUBREY STREET.	
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK	
ELEVATION: 521.704 DATUM: NONE LISTED	

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SAN DIEGO, CA 92110
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(FAX) 619.291.4165

REFERENCES	CITY APPROVED CHANGES			
CITY OF POWAY B.M. #	No.	Description	Approved By	Date

5/18/2015 10:00 AM
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15553.dwg
John D. Goddard Jr.

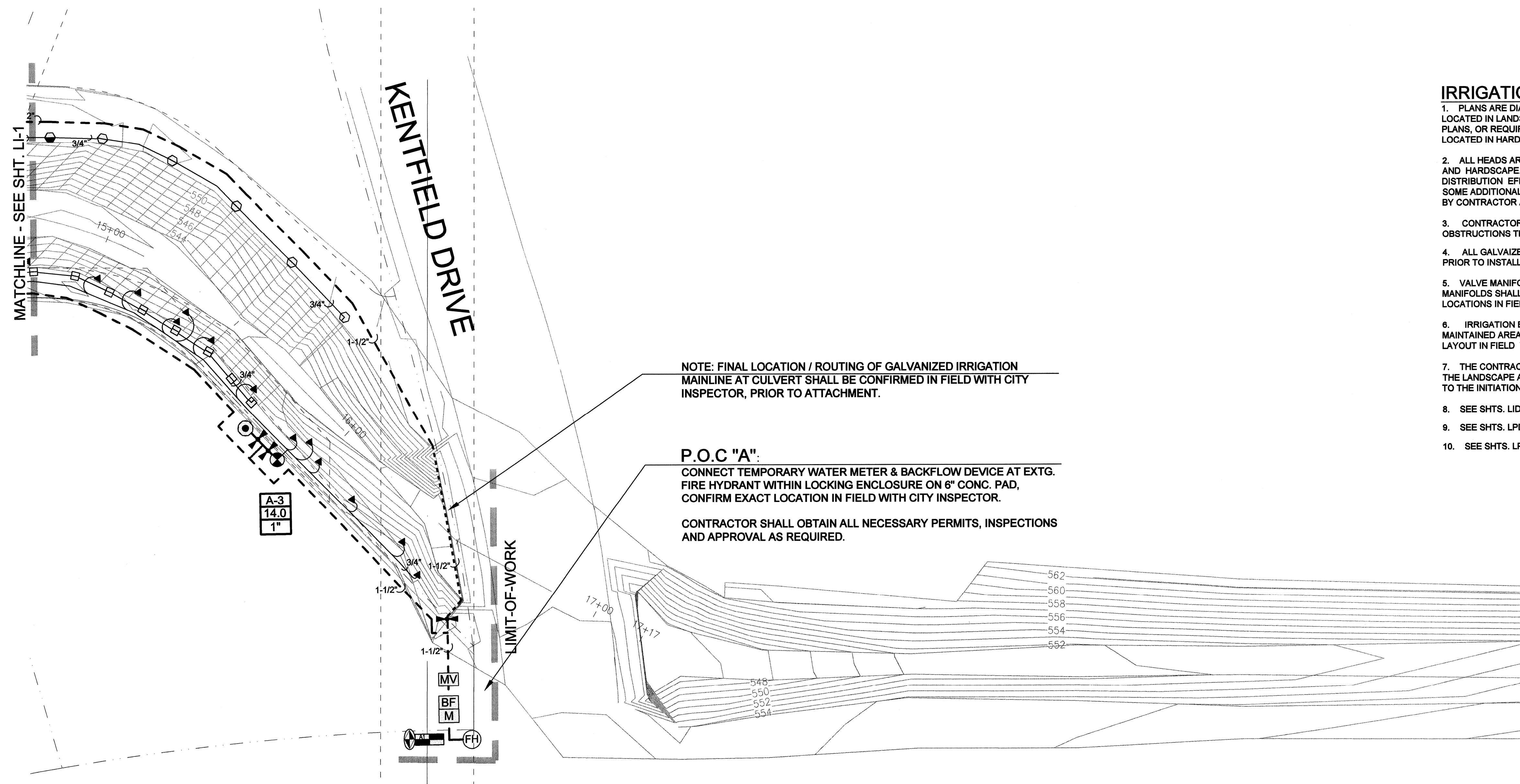
RECORD DRAWING NUMBER:

IRRIGATION MATERIAL LEGEND (HEADS)

SYMBOL	MANUFACT.	MODEL NO. / DESCRIPTION	GPM	PRECIP	PSI	RADIUS	DETAIL
Q H							
☐	HUNTER	PRS40-MP1000-ROTOR HEAD	.19, .37	.45	40	14 FT	F
⊙	HUNTER	PRS40-MP2000-ROTOR HEAD	.40, .74	.44	40	20 FT	F
⊙	HUNTER	PRS40-MP3000-ROTOR HEAD	.86, 1.82	.43	40	30 FT	F
▼	RAINBIRD	RWS-B-1402	1.0 EA (2.0 per symbol)				N

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- SEE SHTS. LID-1 & LID-2 FOR IRRIGATION LEGEND & DETAILS.
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- SEE SHTS. LP-1 & LP-2 FOR PLANTING PLAN.



NOTE: FINAL LOCATION / ROUTING OF GALVANIZED IRRIGATION MAINLINE AT CULVERT SHALL BE CONFIRMED IN FIELD WITH CITY INSPECTOR, PRIOR TO ATTACHMENT.

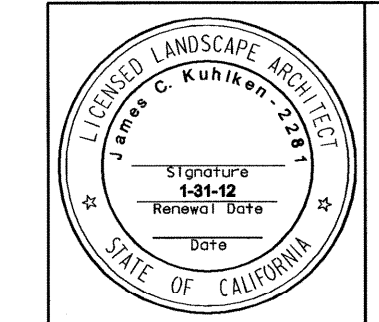
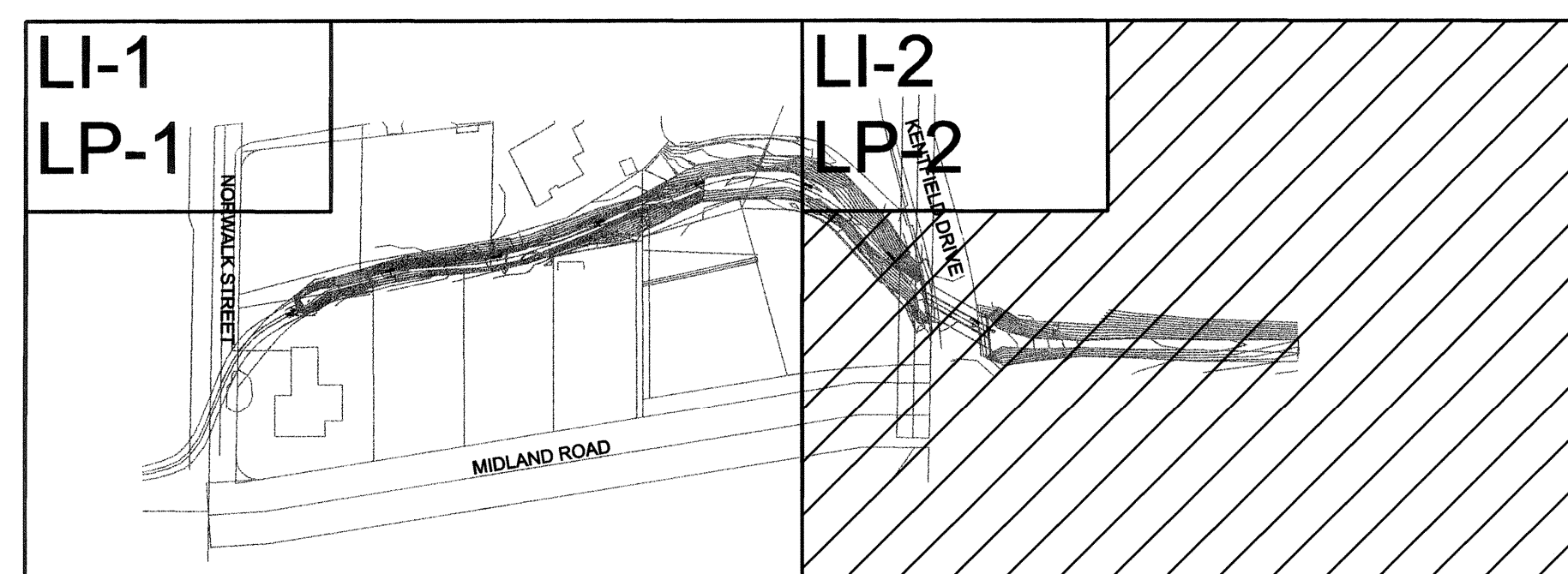
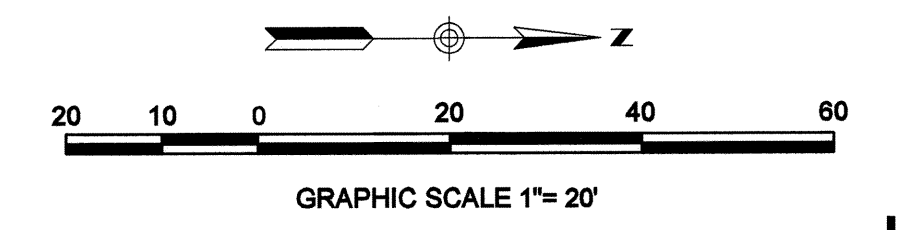
P.O.C "A":
CONNECT TEMPORARY WATER METER & BACKFLOW DEVICE AT EXTG. FIRE HYDRANT WITHIN LOCKING ENCLOSURE ON 6" CONC. PAD, CONFIRM EXACT LOCATION IN FIELD WITH CITY INSPECTOR.

CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS AND APPROVAL AS REQUIRED.

NOTE: FINAL LOCATION / ROUTING OF IRRIGATION MAINLINE SHALL BE LOCATED AND APPROVED BY CITY INSPECTOR AND COORDINATED WITH ON-SITE LANDOWNER.

ALL EXTG. LANDSCAPE AND IRRIGATION SHALL BE PROTECTED IN PLACE (PIP), DURING INSTALLATION OF TEMPORARY IRRIGATION SYSTEM.

SPECIAL IRRIGATION NOTES:
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REFERENCES	CITY APPROVED CHANGES			BENCH MARK	
CITY OF POWAY B.M. #	No.	Description	Approved By	Date	DESCRIPTION: 2" BRASS DISK STAMPED " POWAY A-45" PER POWAY VERT. CONTR.

CITY OF POWAY PROJECT MANAGER: MELODY ROCCO	
DESIGNED	
DRAWN	
CHECKED	
	DATE
LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CUR RETURN OF COMMUNITY ROAD & AUBREY STREET.	
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK	
ELEVATION: 521.704 DATUM: NONE LISTED	

CIP NUMBER: **LI-2**

Sheet 10	CITY OF POWAY Department of Development Services	15 Sheets
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LANDSCAPE IRRIGATION PLANS FOR:
EPHEMERAL TRIBUTARY TO RATLESNAKE CREEK
STREAMBANK STABILIZATION
California Coordinate Index:

APPROVED BY: 41	DATE
CITY ENGINEER: STEVE CROSBY R.C.E. 41975	
ENGINEER OF WORK:	DATE
JOHN D. GODDARD JR. R.C.E. # 33037	

100% PRELIMINARY NOT FOR CONSTRUCTION

RECORD DRAWING NUMBER:

GENERAL IRRIGATION NOTES

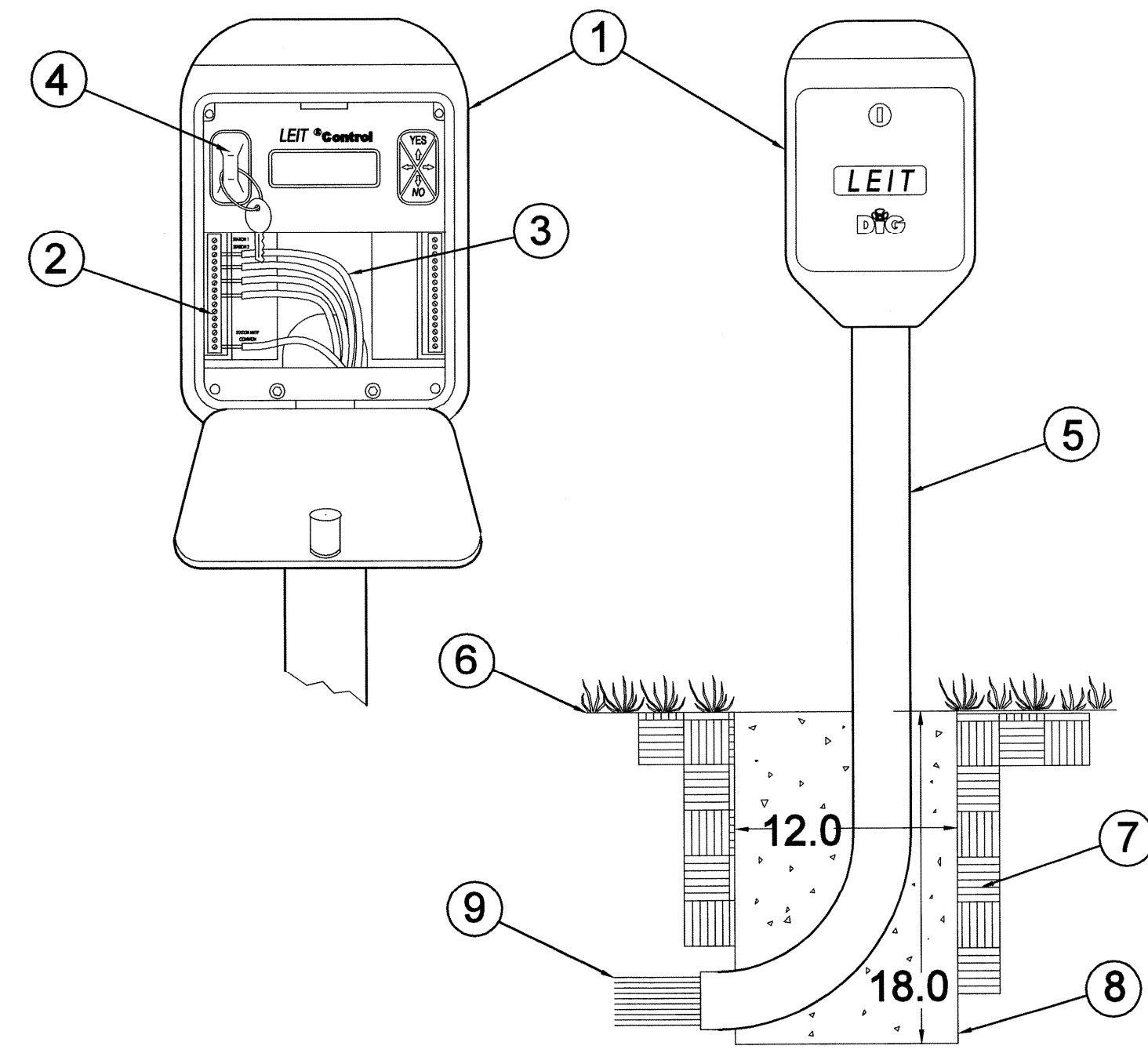
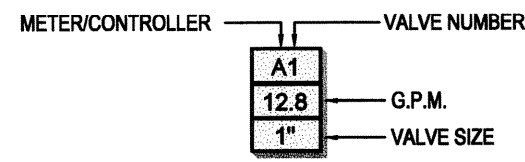
1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE RESIDENT ENGINEER.
3. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
5. THE MAINLINE AND SLEEVING IS DIAGRAMMATIC. ALL PIPING IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED WITHIN LIMIT OF WORK BOUNDARIES AND IN SHRUB PLANTING AREAS WHERE POSSIBLE. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
6. IRRIGATION EQUIPMENT AS SHOWN IS DIAGRAMMATIC. INSTALL ALL THE IRRIGATION REMOTE CONTROL VALVES, QUICK COUPLERS, MASTER VALVES, BACKFLOWS, AIR/VACUUM DEVICES, AND BALL VALVES, IN SHRUB PLANTING AREAS APPROVED BY CITY INSPECTOR.
7. DO NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE CITY INSPECTOR.
8. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL LOCAL COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
9. ACTUAL LOCATION FOR THE INSTALLATION OF THE MAINLINE, BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.
10. CONTRACTOR IS TO PROVIDE THREE (3) ADDITIONAL PILOT WIRES AND ONE (1) COMMON WIRE TO THE END OF THE MAINLINE RUN IN TWO DIRECTIONS FROM THE CONTROLLER. THE ADDITIONAL WIRE SHALL BE EXTENDED 10', MAKING A COIL TO FIT INSIDE A RECTANGULAR PULL BOX. LABEL THE LID OF THE PULL BOX 'SW'.
11. ALL PIPE UNDER PAVED AREAS, HARDSCAPE, OR AS DIRECTED BY RESIDENT ENGINEER TO BE INSTALLED IN SLEEVING, TWICE THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED. ALL 2" AND 3" SLEEVING SHALL BE PVC1220 SCH. 40, TYPE 1, GRADE 2 MATERIAL CONFORMING TO ASTM STANDARD D-1785-4. ALL 4" AND LARGER SLEEVING SHALL BE PVC1220 CLASS 200 SDR21, TYPE 1, GRADE 2 MATERIAL CONFORMING TO ASTM STANDARD D-2241. SLEEVES UNDER BROW DITCHES SHALL BE ENCASED IN CONCRETE A MINIMUM OF 6" THICK ON ALL SIDES OF PIPE. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF PAVING.
12. ALL QUICK COUPLER VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS.
13. ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO WALLS, FENCES AND HARDSCAPE ETC. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS. WHEN VERTICAL OBSTRUCTIONS INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS PREVENTING PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING AN ADJUSTABLE QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE CITY.
14. THE IRRIGATION CONTRACTOR SHALL ADJUST THE PRESSURE REGULATOR (AS) ON EACH ELECTRIC CONTROL VALVE SO THAT THE SPRINKLER HEAD FARTHEST AND HIGHEST IN ELEVATION FROM ITS RESPECTIVE CONTROL VALVE OPERATES WITHIN THE OPERATING PRESSURE SHOWN ON THE IRRIGATION LEGEND. NOT TO EXCEED FIVE (5) PSI ABOVE THE GIVEN OPERATING PRESSURE FROM THE SPECIFIED PRESSURE LOCATED ON THE IRRIGATION LEGEND.
15. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT EACH POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE LANDSCAPE ARCHITECT AND CITY INSPECTOR. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS, AND COSTS ASSOCIATED WITH SAID REVISIONS.
16. SHOULD FIELD CONDITIONS REQUIRE PIPE INSTALLATION OTHER THAN THAT SHOWN ON PLANS, THE CONTRACTOR SHALL LIMIT EXCESS FLOW AND SIZE ALL PIPE NOT TO EXCEED A VELOCITY OF 5 FEET PER SECOND (FPS) IN PVC PIPE. FLOW THROUGH ANCILLARY EQUIPMENT, COPPER PIPE SHALL NOT EXCEED A VELOCITY OF 7 1/2 FPS. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE CITY.
17. UPON COMPLETION OF THE RESTORATION PROJECT, THE CONTRACTOR SHALL RETURN ALL EQUIPMENT FROM THE TEMPORARY POC TO THE CITY AS REQUIRED. ALL UNDERGROUND IRRIGATION SHALL BE ABANDONED IN PLACE AND ALL ABOVE GRADE PIPE AND HEADS SHALL BE REMOVED FROM SITE AS REQUIRED. CONTRACTOR SHALL SCHEDULE COORDINATE WITH A CITY INSPECTOR AT COMPLETION.

IRRIGATION MATERIAL LEGEND (POTABLE WATER)

SYMBOL	MANUFACT.	MODEL NO. / DESCRIPTION	DETAIL
(FH)	-	EXISTING CITY FIRE HYDRANT - POINT OF CONNECTION.	-
(M)	-	TEMPORARY 1" POTABLE WATER METER. CONTRACTOR TO VERIFY LOCATION AND STATIC WATER PRESSURE AT EXIST. FIRE HYDRANT, AND NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY IF BELOW 80 PSI. INSTALL W/ BACKFLOW PREVENTER ENCLOSURE.	NA
(BF)	FEBCO	1" 825-YA SERIES, BACKFLOW PREVENTION ASSEMBLY W/ MODEL 650 WYE STRAINER AND WILKINS #600HP PRESSURE REDUCING VALVE. ALL PIPING BETWEEN METER AND BACKFLOW DEVICE SHALL BE 1/2" COPPER OR RED BRASS. "VANDAL BUSTER", V8 SERIER BACKFLOW ENCLOSURE, SIZE AS REQUIRED, WITH INTER-LOCK HINGE PLATE, AND INTER-LOCK LOCK BOX. STAINLESS STEEL. INSTALL ON 6" THK. CONC. PAD.	SHOP DWG.
(MV)	Superior	1" - 3200 BRASS MASTER CONTROL VALVE (NORMALLY CLOSED) SHALL BE INSTALLED IN A "JUMBO" SIZED VALVE BOX WITH LOCKING GREEN COVER AND "MCV" HEAT BRANDED ON COVER. PROVIDE LEMA 1600HE SOLENOID W/ 30-922 ADAPTER TYP.	C
(S)	SPEARS	LINE SIZE, MODEL NUMBER TU-2000, TRUE UNION PVC BALL VALVE, 2" AND SMALLER USE 3622 EPDM SEALED NON-THREADED SOCKET ENDS, 2 1/2" AND LARGER USE 1821 EPDM SEALED SR-THREADED ENDS.	J
(RB)	RAIN BIRD	4LRQ QUICK COUPLER VALVE, INSTALL WITHIN 1-1/2" MANIFOLD	E
(H)	HUNTER	ICV-xxTG-AS-ADJ-FS SERIES PLASTIC PRESSURE REGULATING CONTROL VALVE, SIZE AS SHOWN, INSTALL ONE VALVE PER STD. RECT. VALVE BOX WITH LOCKING GREEN COVER AND "RCV" HEAT BRANDED ON COVER. VALVES SHALL BE INSTALLED IN MANIFOLDS ISOLATED FROM THE MAINLINE BY A BALL VALVE, SIZE BALL VALVE PER THE LARGEST RCV IN THE MANIFOLD. PROVIDE LEMA 1600HE SOLENOID W/ 30-922 ADAPTER TYP.	D
(L)	DIG / LEIT	LEIT "AMBIENT LIGHT" IRRIGATION CONTROLLER CONT. "A": LEIT 4004-X. INSTALL PER MANF. DETAILS AND RECOMMENDATIONS. ALSO USE THE LEIT STAINLESS STEEL LOCKING ENCLOSURE LEMA 1600HE SOLENOIDS & ADAPTER FOR REMOTE CONTROL VALVES AND THE LEIT, SKIT 8821-4 ADAPTOR RAIN SENSOR KIT 8821-4 AND MOUNTING COLUMN MCCLXN IN CONJUNCTION WITH THE CONT. MANIF. SPEC.	A
(H)	HUNTER	SOLAR-SYNC (MOUNT IN SS ENCLOSURE), CONNECT TO CONTROLLER AS REQUIRED PER MANF. SPEC.	N/A
NO SYMBOL	AS APPROVED	PULL BOXES FOR WIRE SPLICES SHALL BE LOCATED APPROXIMATELY 600' O.C. AND AT THE ENDS OF ALL SLEEVES UNDER PAVING. PULL BOXES SHALL BE 12" RECTANGULAR WITH LOCKING LID.	H
(M)	AS APPROVED	MAINLINE (WHERE EXPOSED) - GALVANIZED STEEL PIPE MAINLINES, & FITTINGS PER PLAN. ALL PIPES SHALL BE ATTACHED TO CONCRETE (WHERE REQUIRED) W/ GALVANIZED STEEL STRAP (GRINNELL FIG. 262, OR APPROVED EQUAL), 2 - 3/8" TITEN CONC. BOLT, MIN. INBED 3" @ 6'-0" O.C. TYP. STRAPS SHOULD BE ALSO LOCATED ADJACENT TO ANY CHANGE IN DIRECTION (BOTH SIDE OF FITTING) AS REQUIRED. COORDINATE LOCATION WITH RESIDENT CITY INSPECTOR.	M
(K)	AS APPROVED	MAINLINE - PVC PIPE, 1-1/2" BELOW SHALL BE SOLVENT WELD SCH.40 WITH SCH.40 SOLVENT WELD FITTINGS, 2'-2 1/2" SHALL BE SOLVENT WELD CL. 315 WITH SCH.80 SOLVENT WELD FITTINGS.	K
(F)	AS APPROVED	LATERAL LINE BROWLINE UVC, REFER TO SPECIFICATIONS. ALL PIPES SHALL BE STAPLED TO GRADE W/ #3 REBAR "J-HOOK", 18" EMBEDDMENT @ 5'-0" O.C. TYP.	F
(L)	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING, TWICE THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED PLACE BELOW ALL PAVING, HARDSCAPE, ETC., AND AS DIRECTED BY OWNERS AUTHORIZED REPRESENTATIVE.	L

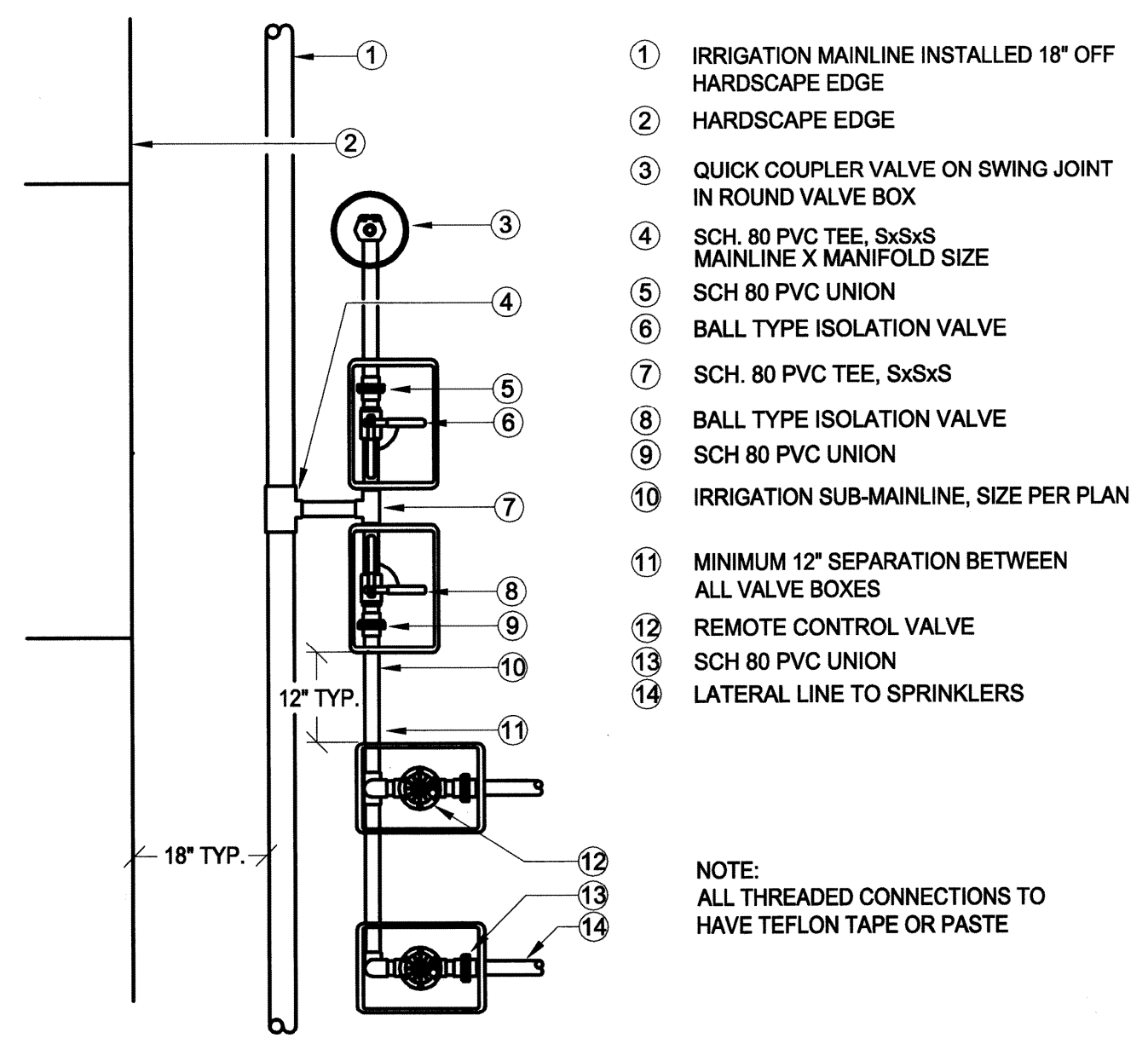
IRRIGATION MATERIAL LEGEND (HEADS)

SYMBOL	MANUFACT.	MODEL NO. / DESCRIPTION	GPM	PRECIP	PSI	RADIUS	DETAIL
(H)	HUNTER	PRS40-MP1000-ROTOR HEAD	.19, .37	.45	40	14 FT	F
(H)	HUNTER	PRS40-MP2000-ROTOR HEAD	.40, .74	.44	40	20 FT	F
(H)	HUNTER	PRS40-MP3000-ROTOR HEAD	.86, 1.82	.43	40	30 FT	F
(N)	RAINBIRD	RWS-B-1402	1.0 EA	(2.0 per symbol)			N



1. AMBIENT LIGHT POWERED IRRIGATION CONTROLLER. SERIES X, XR, AND XRC. MODEL X 10 TO 28 STATIONS. MODEL XR (WITH OPTIONAL RADIO) 4 TO 28 STATIONS. MODEL XRC WITH RADIO REMOTE 4 TO 28 STATIONS.
2. TERMINAL STRIP.
3. 12 OR 14 GAUGE WIRE.
4. PROGRAMMING KEY. MODEL NUMBER: LEIT KEY
5. 35" STEEL MOUNTING COLUMN. MODEL NUMBER: MCCLXS (SHORT) OR 50" STEEL MOUNTING COLUMN. MODEL NUMBER: MCCLXL (LONG)
6. FINISH GRADE.
7. 6-1/2" OF BACKFILL SOIL.
8. POURED CONCRETE BASE- 1-1/2 CU.FT. INSTALL PER MANUFACTURER'S INSTALLATION GUIDE.
9. DIRECT BURIAL CONTROL WIRES TO CONTROL VALVES.

A LIGHT ENERGIZED IRRIGATION CONTROLLER LEIT CONTROL X, XR AND XRC

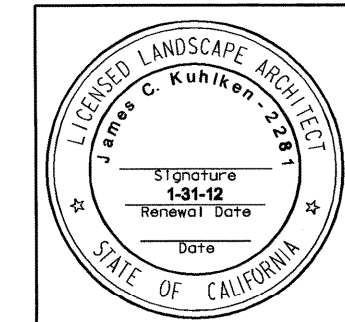


1. IRRIGATION MAINLINE INSTALLED 18" OFF HARDSCAPE EDGE
 2. HARDSCAPE EDGE
 3. QUICK COUPLER VALVE ON SWING JOINT IN ROUND VALVE BOX
 4. SCH. 80 PVC TEE, SxSxS MAINLINE X MANIFOLD SIZE
 5. SCH 80 PVC UNION
 6. BALL TYPE ISOLATION VALVE
 7. SCH. 80 PVC TEE, SxSxS
 8. BALL TYPE ISOLATION VALVE
 9. SCH 80 PVC UNION
 10. IRRIGATION SUB-MAINLINE, SIZE PER PLAN
 11. MINIMUM 12" SEPARATION BETWEEN ALL VALVE BOXES
 12. REMOTE CONTROL VALVE
 13. SCH 80 PVC UNION
 14. LATERAL LINE TO SPRINKLERS
- NOTE: ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE

B MANIFOLD INSTALLATION SCALE: N.T.S.

100% PRELIMINARY NOT FOR CONSTRUCTION

LID-1



RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX) 619.291.4165

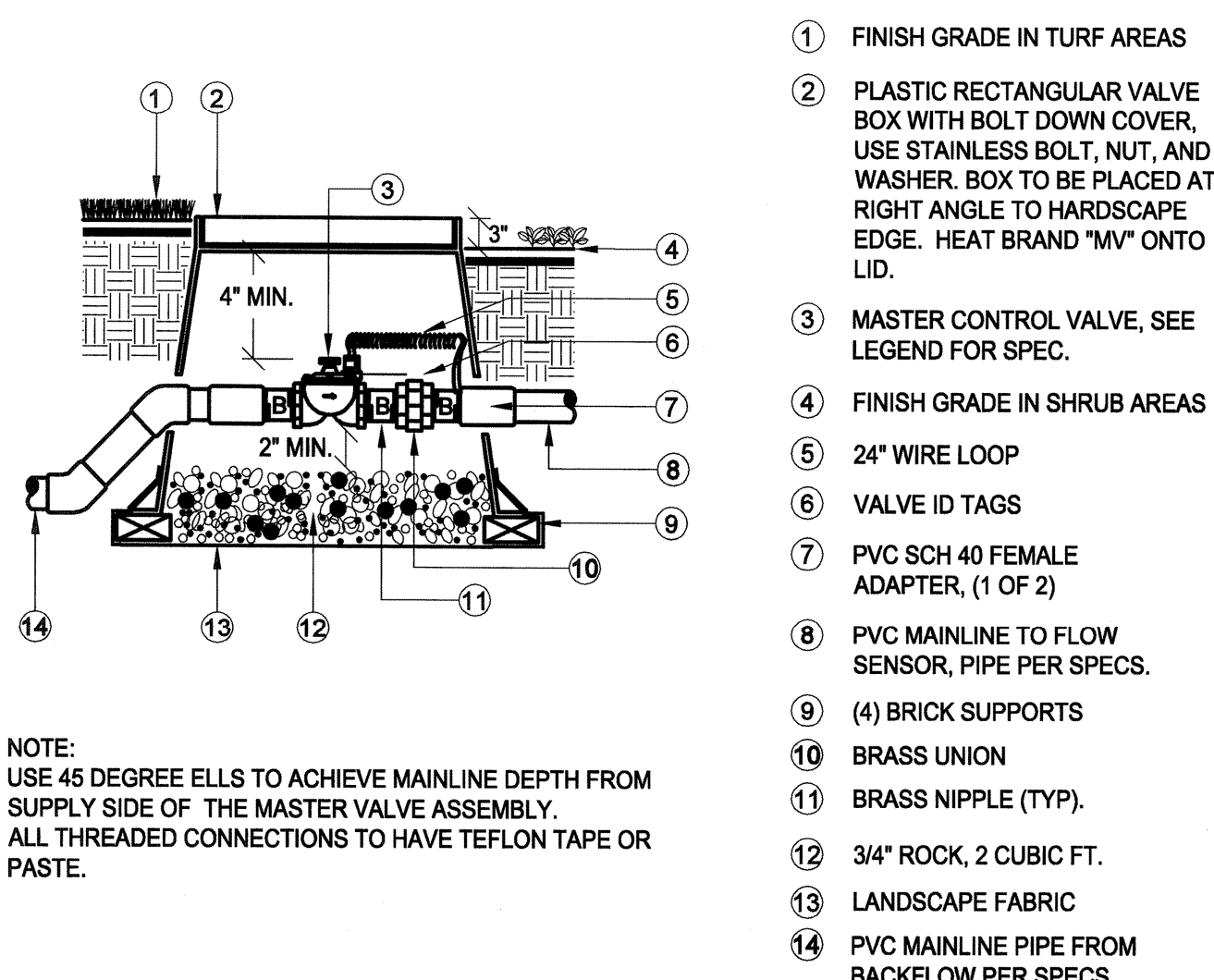
REFERENCES	CITY APPROVED CHANGES			
CITY OF POWAY B.M. #	No.	Description	Approved By	Date

CITY OF POWAY PROJECT MANAGER: MELODY ROCCO	
DESIGNED	
DRAWN	
CHECKED	
BENCH MARK	
DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL BOOK	
LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CURB RETURN OF COMMUNITY ROAD & AUBREY STREET.	
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK	
ELEVATION: 521.704	DATUM: NONE LISTED

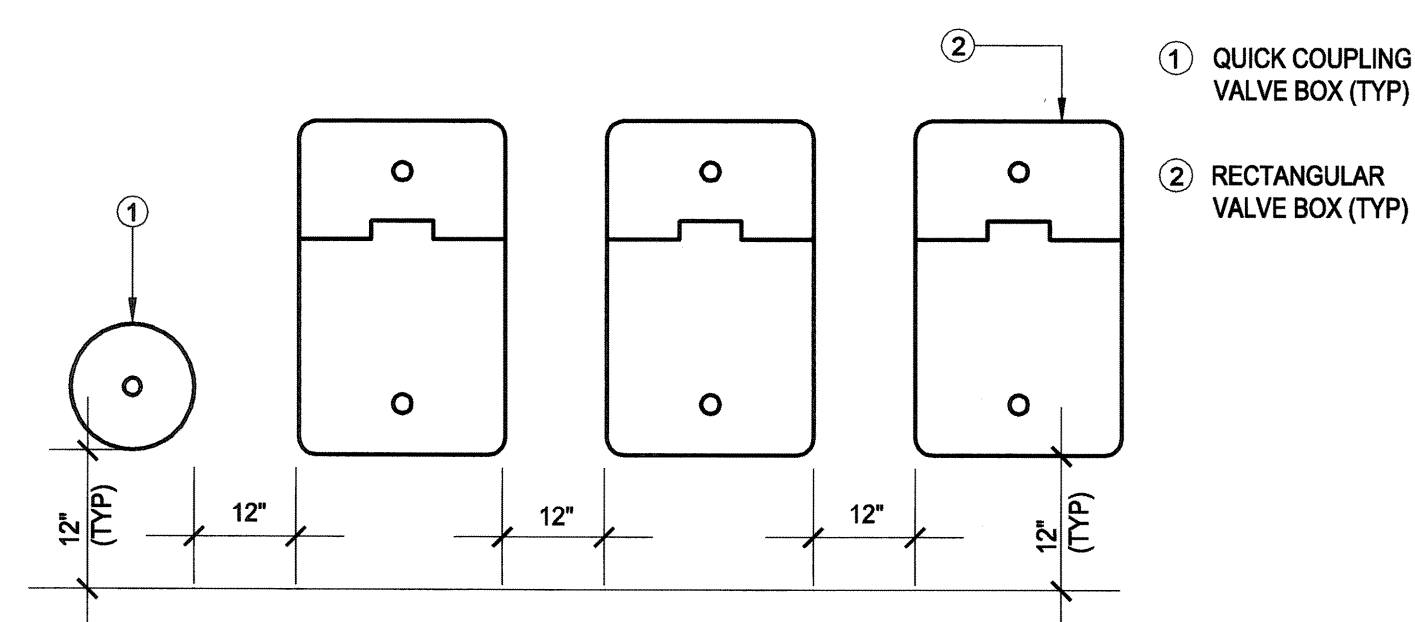
CIP NUMBER:		
Sheet 11	CITY OF POWAY Department of Development Services	15 Sheets
LANDSCAPE IRRI. LEGEND, NOTES, & DTLS. FOR: EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK STREAMBANK STABILIZATION California Coordinate Index:		
APPROVED BY: 47		DATE
CITY ENGINEER: STEVE CROSBY R.C.E. 41975		
ENGINEER OF WORK:		DATE
JOHN D. GODDARD JR. R.C.E. # 33037		

RECORD DRAWING NUMBER:

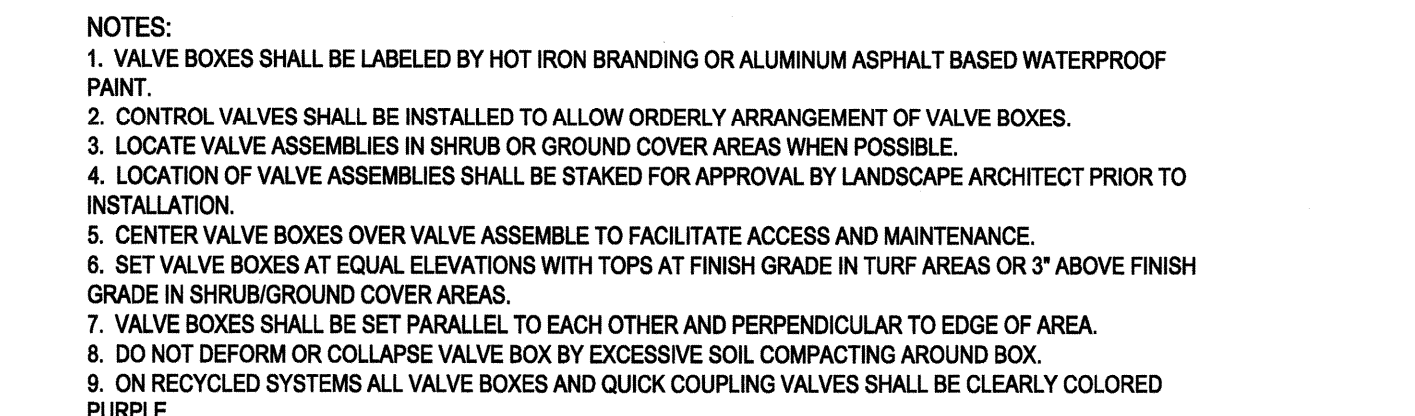
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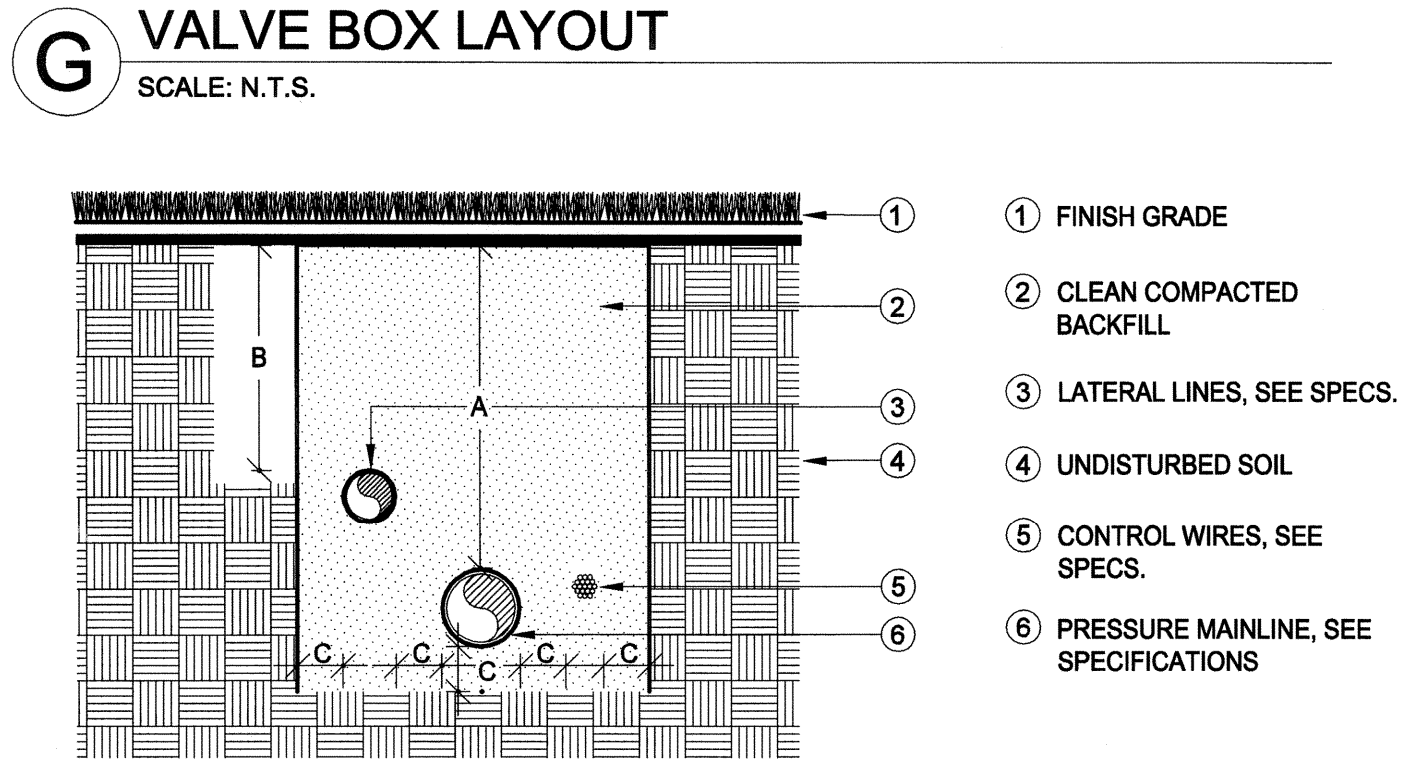
C MASTER VALVE
SCALE: N.T.S.



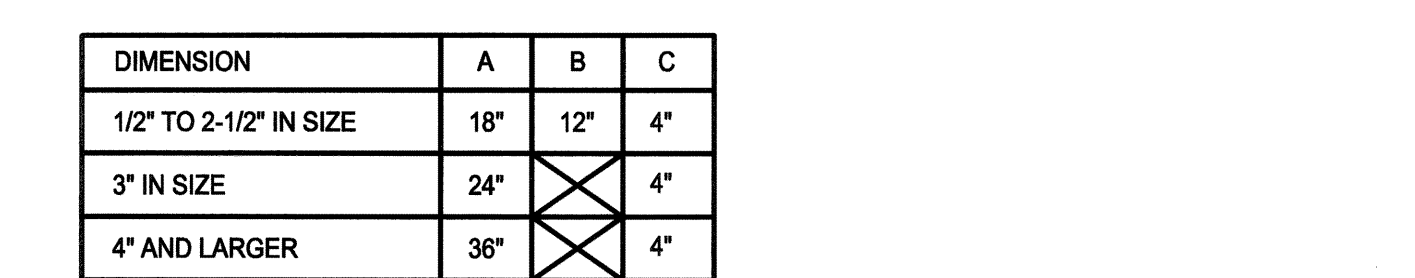
D REMOTE CONTROL VALVE
SCALE: N.T.S.



E QUICK COUPLER VALVE
SCALE: N.T.S.

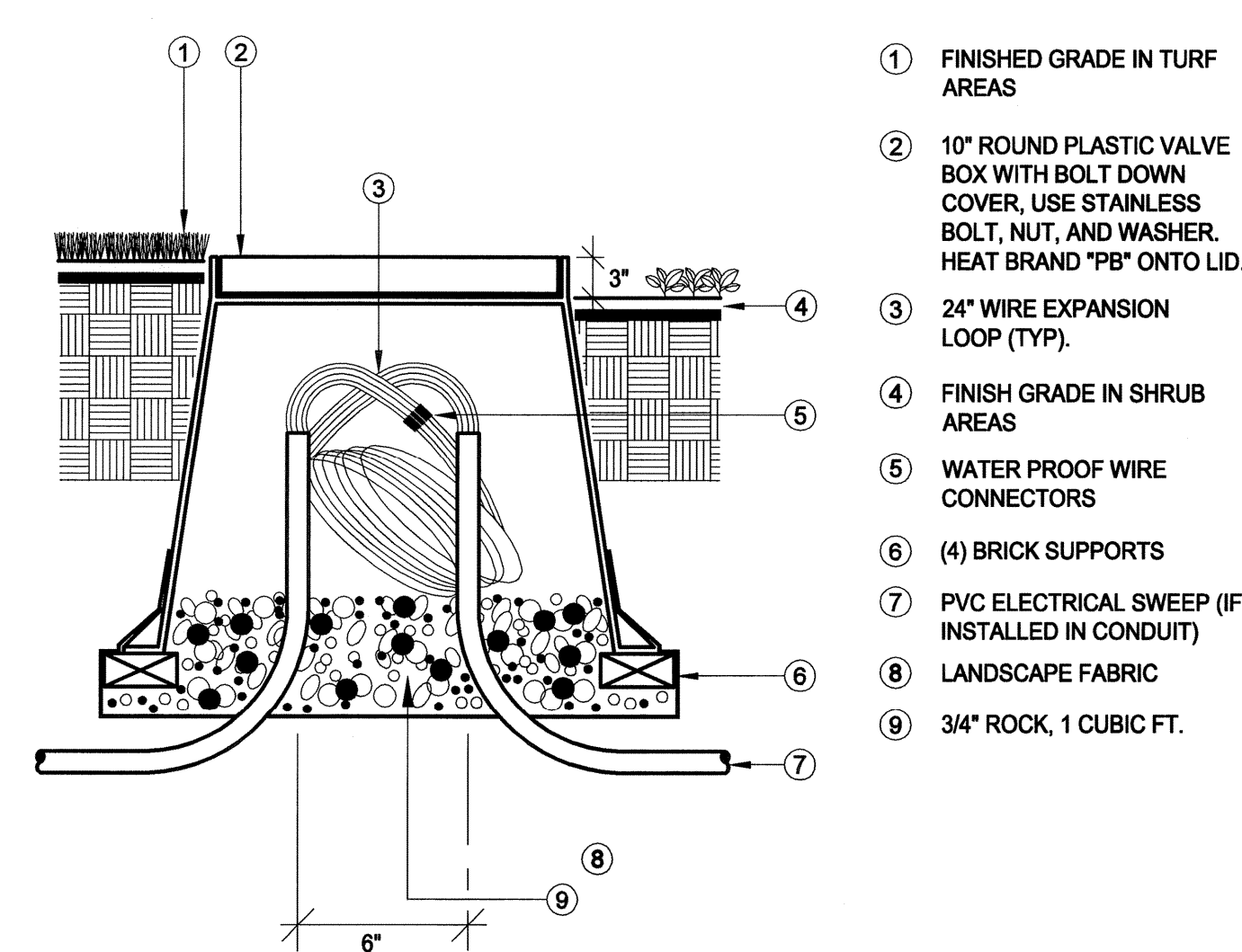


F ABOVE GROUND HEAD ON RISER
SCALE: N.T.S.

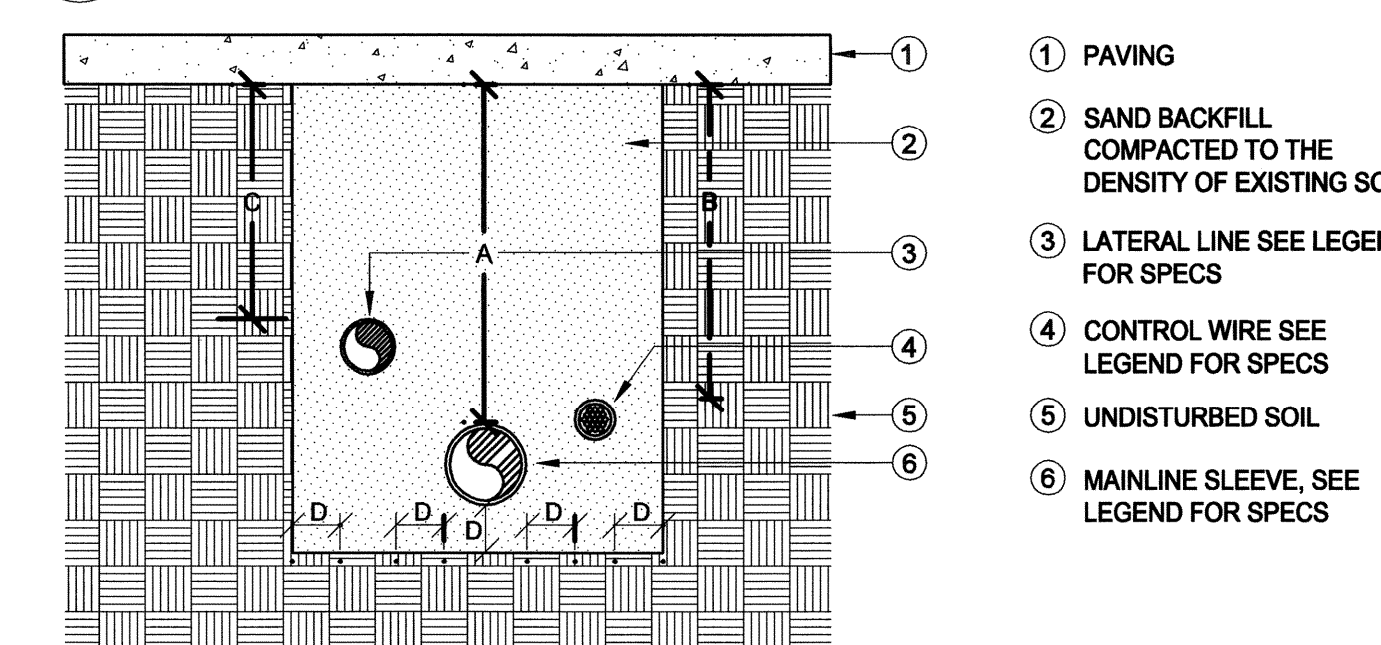


G VALVE BOX LAYOUT
SCALE: N.T.S.

DIMENSION	A	B	C
1/2" TO 2-1/2" IN SIZE	18"	12"	4"
3" IN SIZE	24"		4"
4" AND LARGER	36"		4"



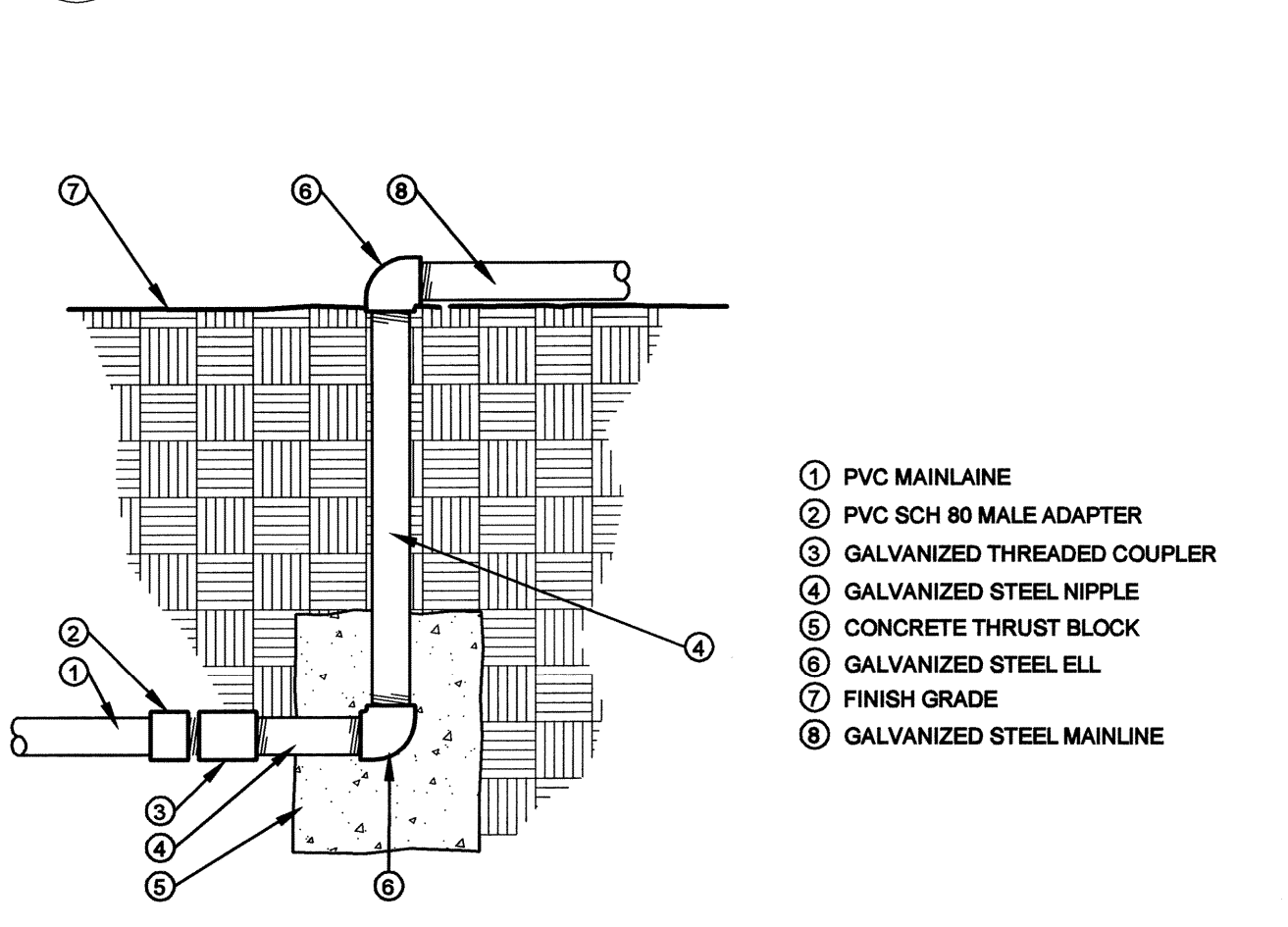
H ROUND PULL BOX
SCALE: N.T.S.



I WIRE CONNECTIONS
SCALE: N.T.S.

DIMENSION- PEDESTRIAN	A	B	C	D
2" TO 12" SIZE	30"	24"	12"	4"
DIMENSION- VEHICLE	A	B	C	D
2" TO 12" SIZE	36"	30"	24"	4"

PVC SLEEVES TO BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED.



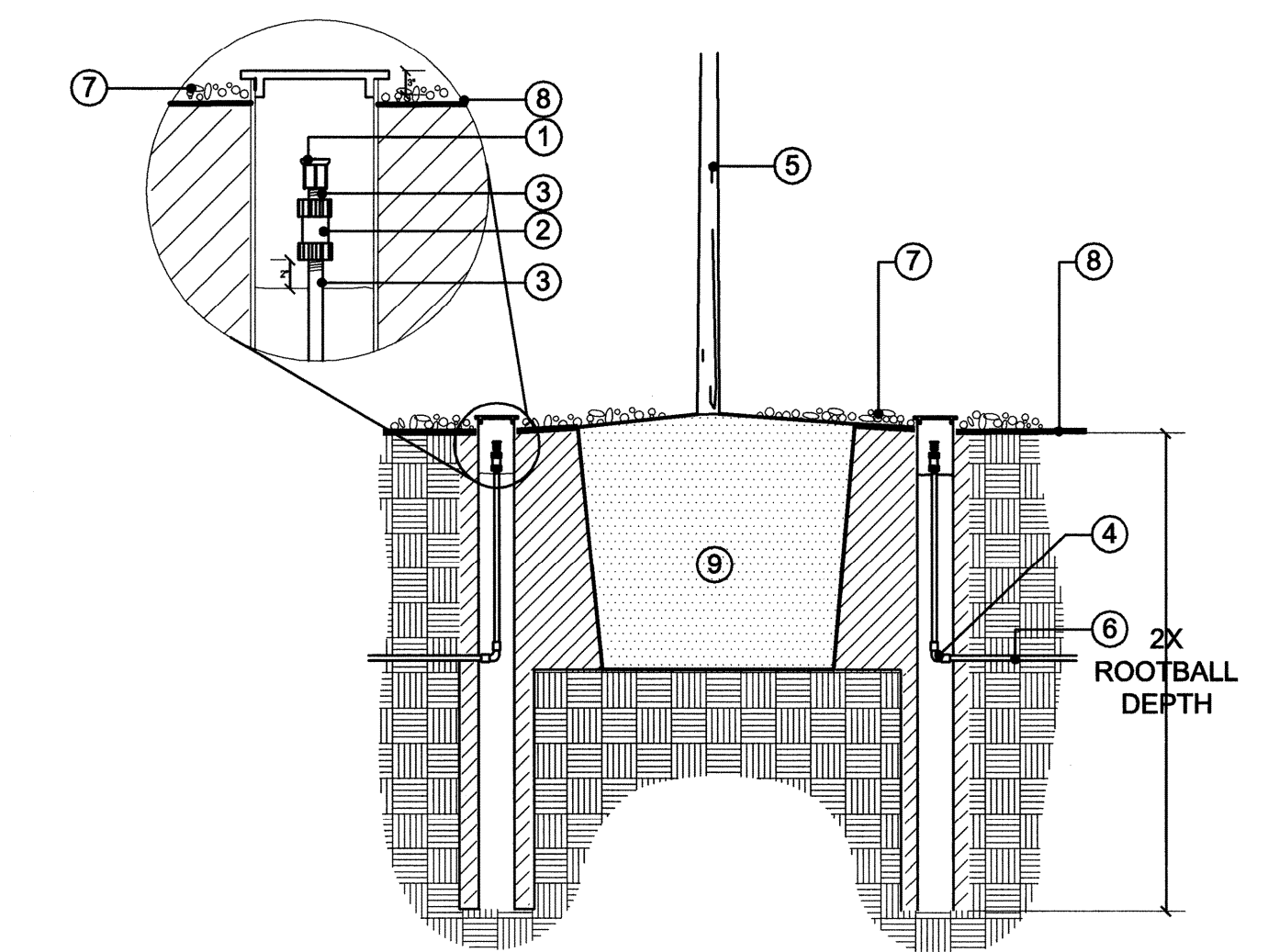
J BALL VALVE, TRU-UNION
SCALE: N.T.S.



K GALVAIZED STEEL PIPE
SCALE: N.T.S.



L SLEEVE INSTALLATION
SCALE: N.T.S.



M GALVAIZED STEEL PIPE
SCALE: N.T.S.



N BUBBLER AT TREES
SCALE: N.T.S.



O PIPE INSTALLATION
SCALE: N.T.S.



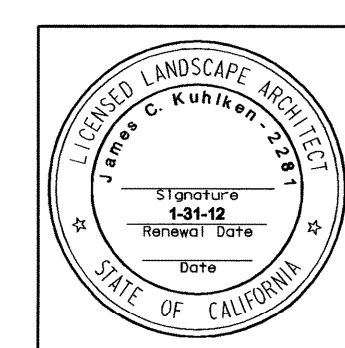
P SLEEVE INSTALLATION
SCALE: N.T.S.

DESIGNED	CHECKED	DATE

CIP NUMBER:		
Sheet 12	CITY OF POWAY Department of Development Services	15 Sheets
LANDSCAPE IRRIGATION DETAILS. FOR: EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK STREAMBANK STABILIZATION		
APPROVED BY: 48	DATE	
CITY ENGINEER: STEVE CROSBY R.C.E. 41975		
ENGINEER OF WORK:	DATE	
JOHN D. GODDARD JR. R.C.E. # 33037		

DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL BOOK
LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CUR RETURN OF COMMUNITY ROAD & AUBREY STREET.
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK
ELEVATION: 521.704 DATUM: NONE LISTED

RECORD DRAWING NUMBER:



RICK
ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX) 619.291.4165

REFERENCES	CITY APPROVED CHANGES			
CITY OF POWAY B.M. #	No.	Description	Approved By	Date

100% PRELIMINARY NOT FOR CONSTRUCTION

LID-2

NORWALK STREET

KENTFIELD DRIVE

LIMIT-OF-WORK

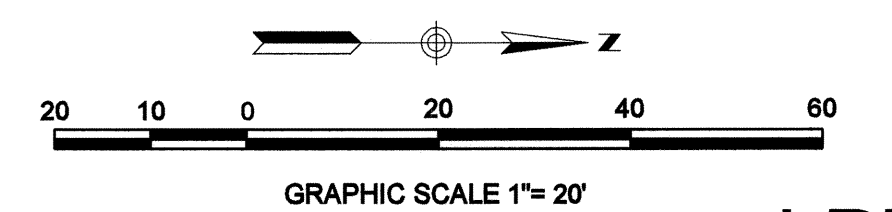
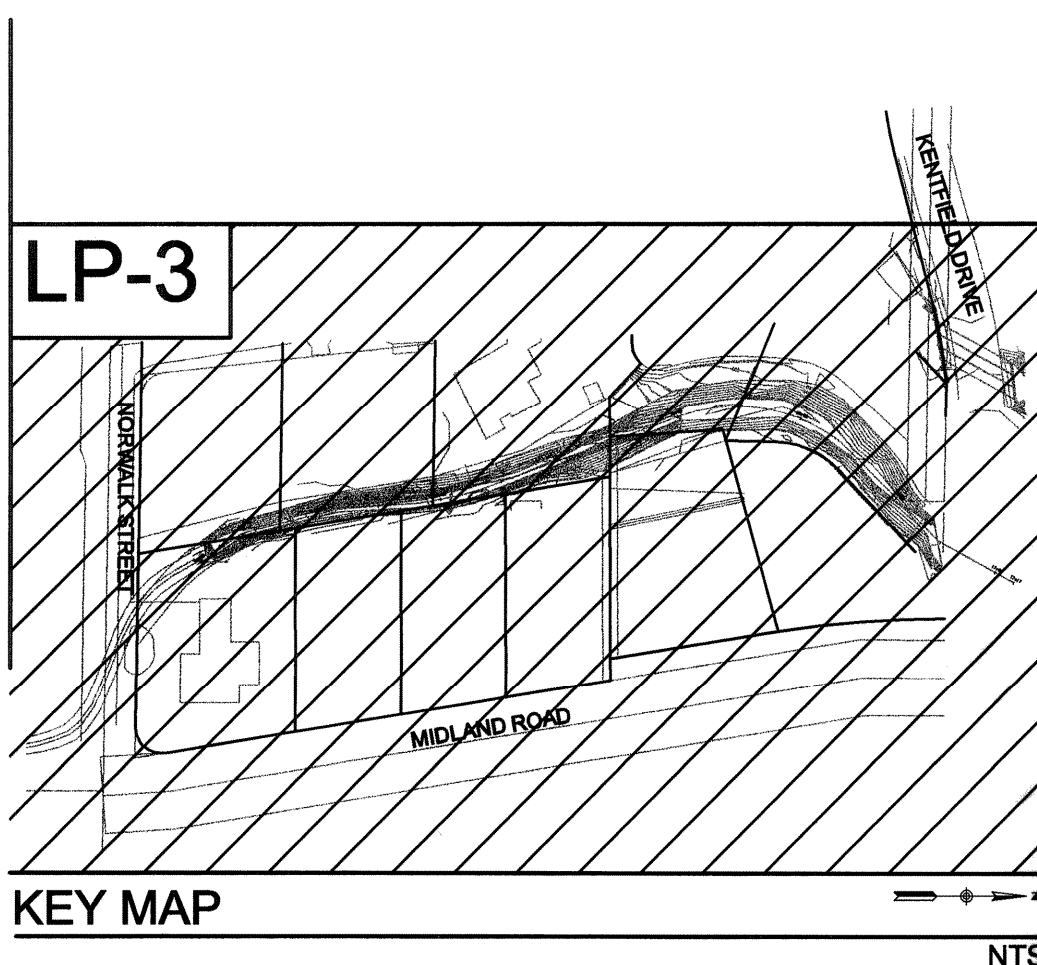
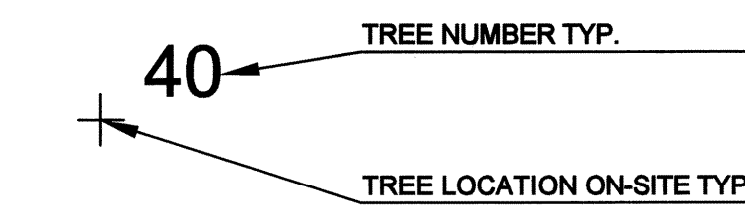
TREE PRESERVATION / REMOVAL MATRIX:

Tree Number	Common Name	Scientific Name	DBH (Inches)	Height (feet)	Dripline Dia. (feet)	Native / Non Native	Notes	Longitude	Latitude	Tree Number
1	Coast Live Oak	<i>Quercus agrifolia</i>	1.5	10.8	12.5	Native	Protect-in-Place	117° 2' 12.95" W	32° 58' 35.58" N	1
2	Fremont's Cottonwood	<i>Populus fremontii</i>	6.5	19.4	15.4	Native	Protect-in-Place	117° 2' 13.18" W	32° 58' 35.33" N	2
3	California Sycamore	<i>Platanus racemosa</i>	4	23	16.3	Native	Protect-in-Place	117° 2' 13.40" W	32° 58' 35.43" N	3
4	Fremont's Cottonwood	<i>Populus fremontii</i>	4	24.2	13.8	Native	Protect-in-Place	117° 2' 13.38" W	32° 58' 35.28" N	4
5	Black Willow	<i>Salix gooddingii</i>	3	25.8	5	Native	Protect-in-Place	117° 2' 13.84" W	32° 58' 34.47" N	5
6	Black Willow	<i>Salix gooddingii</i>	8	40	20	Native	Protect-in-Place	117° 2' 13.83" W	32° 58' 34.43" N	6
7	Arroyo Willow	<i>Salix lasiolepis</i>	5	20	12	Native	Protect-in-Place	117° 2' 13.87" W	32° 58' 34.38" N	7
8	Arroyo Willow	<i>Salix lasiolepis</i>	3.8	25.8	14.2	Native	Protect-in-Place	117° 2' 14.00" W	32° 58' 34.28" N	8
9	Arroyo Willow	<i>Salix lasiolepis</i>	5.5	30	15	Native	Protect-in-Place	117° 2' 14.00" W	32° 58' 34.20" N	9
10	Ngaio Tree	<i>Myoporum laetum</i>	3	12.8	16	Non-Native	Remove	117° 2' 14.16" W	32° 58' 34.30" N	10
11	Arroyo Willow	<i>Salix lasiolepis</i>	7.5	40	30	Native	Protect-in-Place	117° 2' 14.06" W	32° 58' 34.09" N	11
12	Arroyo Willow	<i>Salix lasiolepis</i>	8	40	18	Native	Protect-in-Place	117° 2' 13.94" W	32° 58' 33.94" N	12
13	Arroyo Willow	<i>Salix lasiolepis</i>	5	25	12	Native	Protect-in-Place	117° 2' 13.94" W	32° 58' 33.79" N	13
14	Arroyo Willow	<i>Salix lasiolepis</i>	4	28	12	Native	Protect-in-Place	117° 2' 13.93" W	32° 58' 33.80" N	14
15	Arroyo Willow	<i>Salix lasiolepis</i>	8.5	28	18	Native	Protect-in-Place	117° 2' 13.93" W	32° 58' 33.70" N	15
16	Arroyo Willow	<i>Salix lasiolepis</i>	5	23	10	Native	Protect-in-Place	117° 2' 13.90" W	32° 58' 33.61" N	16
17	Red Willow	<i>Salix laevigata</i>	5.5	35	19.2	Native	Protect-in-Place	117° 2' 13.94" W	32° 58' 33.53" N	17
18	Red Willow	<i>Salix laevigata</i>	8.5	35	27.5	Native	Protect-in-Place	117° 2' 13.76" W	32° 58' 33.31" N	18
19	Tobacco Tree	<i>Nicotiana glauca</i>	3.5	23	18	Non-Native	Remove	117° 2' 13.15" W	32° 58' 32.28" N	19
20	Arroyo Willow	<i>Salix lasiolepis</i>	4	16	17	Native	Protect-in-Place	117° 2' 13.09" W	32° 58' 32.09" N	20
21	Coast Live Oak	<i>Quercus agrifolia</i>	15	30	45	Native	Protect-in-Place	117° 2' 12.89" W	32° 58' 31.52" N	21
22	Pecan	<i>Carya illinoensis</i>	15	40	30	Non-Native	Remove	117° 2' 12.83" W	32° 58' 30.58" N	22
23	Coast Live Oak	<i>Quercus agrifolia</i>	8	36	20.3	Native	Protect-in-Place	117° 2' 12.78" W	32° 58' 30.31" N	23
24	Red Willow	<i>Salix laevigata</i>	3.5	20	6	Native	Protect-in-Place	117° 2' 13.76" W	32° 58' 33.52" N	24
25	Arroyo Willow	<i>Salix lasiolepis</i>	4	20	15	Native	Protect-in-Place	117° 2' 13.83" W	32° 58' 33.56" N	25
26	Arroyo Willow	<i>Salix lasiolepis</i>	4.5	12	25	Native	Protect-in-Place	117° 2' 13.76" W	32° 58' 33.78" N	26
27	Arroyo Willow	<i>Salix lasiolepis</i>	6	25	15	Native	Protect-in-Place	117° 2' 13.80" W	32° 58' 33.83" N	27
28	Arroyo Willow	<i>Salix lasiolepis</i>	5	8	16	Native	Protect-in-Place	117° 2' 13.80" W	32° 58' 33.84" N	28
29	Arroyo Willow	<i>Salix lasiolepis</i>	6	13.5	20	Native	Protect-in-Place	117° 2' 13.74" W	32° 58' 34.12" N	29
30	Peruvian Pepper Tree	<i>Schinus molle</i>	54	38	65	Non-Native	Remove	117° 2' 13.65" W	32° 58' 34.12" N	30
31	Peruvian Pepper Tree	<i>Schinus molle</i>	7	25	20	Non-Native	Remove	117° 2' 13.60" W	32° 58' 34.28" N	31
32	Peruvian Pepper Tree	<i>Schinus molle</i>	4.5	25	15	Non-Native	Remove	117° 2' 13.59" W	32° 58' 34.38" N	32
33	Peruvian Pepper Tree	<i>Schinus molle</i>	4.5	15	15	Non-Native	Remove	117° 2' 13.56" W	32° 58' 34.47" N	33
34	Peruvian Pepper Tree	<i>Schinus molle</i>	5	20	19	Non-Native	Remove	117° 2' 13.50" W	32° 58' 34.74" N	34
35	Peruvian Pepper Tree	<i>Schinus molle</i>	2.5	7	10	Non-Native	Remove	117° 2' 13.50" W	32° 58' 34.67" N	35
36	Black Locust	<i>Robinia pseudoacacia</i>	2.3	15	16	Non-Native	Remove	117° 2' 13.51" W	32° 58' 34.70" N	36
37	Peruvian Pepper Tree	<i>Schinus molle</i>	3.5	12	13	Non-Native	Remove	117° 2' 13.37" W	32° 58' 34.86" N	37
38	Black Locust	<i>Robinia pseudoacacia</i>	3	22	20	Non-Native	Spray / Remove to stump	117° 2' 13.36" W	32° 58' 35.02" N	38
39	Peruvian Pepper Tree	<i>Schinus molle</i>	4.5	20	16	Non-Native	Remove	117° 2' 13.25" W	32° 58' 34.94" N	39
40	Peruvian Pepper Tree	<i>Schinus molle</i>	4.5	16	12	Non-Native	Remove	117° 2' 13.14" W	32° 58' 34.98" N	40
41	Peruvian Pepper Tree	<i>Schinus molle</i>	3	9.5	14	Non-Native	Remove	117° 2' 13.03" W	32° 58' 35.19" N	41
42	Black Locust	<i>Robinia pseudoacacia</i>	8	46	33	Non-Native	Remove	117° 2' 12.98" W	32° 58' 35.14" N	42
43	Black Locust	<i>Robinia pseudoacacia</i>	9.5	53	17	Non-Native	Remove	117° 2' 12.81" W	32° 58' 35.24" N	43
44	Fremont's Cottonwood	<i>Populus fremontii</i>	7	46	28	Native	Min. Impacts Trim Only	117° 2' 12.86" W	32° 58' 35.35" N	44
45	Fremont's Cottonwood	<i>Populus fremontii</i>	5.5	47	15	Native	Protect-in-Place	117° 2' 12.36" W	32° 58' 35.53" N	45
46	Peruvian Pepper Tree	<i>Schinus molle</i>	10"	30'	30'	Non-Native	Over hanging into project footprint. Not rooted in project footprint, Trim Only	117° 2' 12.70" W	32° 58' 30.52" N	46

PLANTING NOTES:

- PRIOR TO THE THE START OF WORK, CONTRACTOR SHALL SCHEDULE A SITE WALK-THROUGH WITH THE RESTORATION SPECIALIST TO IDENTIFY AND TAG ALL TREE'S SHOWN IN THE MATRIX BELOW. CONTACT MARGARET BORNYSZ WITH EOCORP AT 858.2794040.
- ALL SHOOTS AND SPOUTS OF INVASIVE SPECIES THAT ARE SMALLER THAN 2.5", WHICH DO NOT APPEAR ON THIS PLAN SHALL BE TREATED IN PLACE WITH A HERBICIDE AND SUBSEQUENTLY REMOVED AS REQUIRED, PRIOR TO PLANTING.
- AT NO TIME SHALL ANY MECHANIZED EQUIPMENT TRAVEL ON AND/OR DISTURB CHANNEL BOTTOM.
- UPON COMPLETION OF THE NON-NATIVE PLANT SPECIES ABATEMENT, CONTRACTOR SHALL CONDUCT A SITE WALK THROUGH WITH RESTORATION SPECIALIST TO CONFIRM SUCCESS OF NON-INVASIVE SPECIES ABATEMENT PROGRAM, PRIOR TO PLANTING.

TREE ID LEGEND TYP.



100% PRELIMINARY NOT FOR CONSTRUCTION

CIP NUMBER: LPD-1

Sheet 13 CITY OF POWAY Department of Development Services 15 Sheets

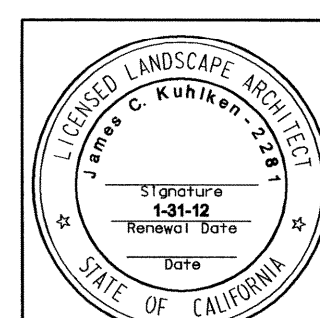
TREE PRESERVATION / REMOVAL PLAN FOR:
EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK
STREAMBANK STABILIZATION

APPROVED BY: 41 DATE
CITY ENGINEER: STEVE CROSBY R.C.E 41975
ENGINEER OF WORK: JOHN D. GODDARD JR. R.C.E. # 33037 DATE

CITY OF POWAY PROJECT MANAGER: MELODY ROCCO
DESIGNED: _____
DRAWN: _____
CHECKED: _____ DATE

BENCH MARK DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL BOOK
LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CORNER RETURN OF COMMUNITY ROAD & AUBREY STREET.
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK
ELEVATION: 521.704 DATUM: NONE LISTED

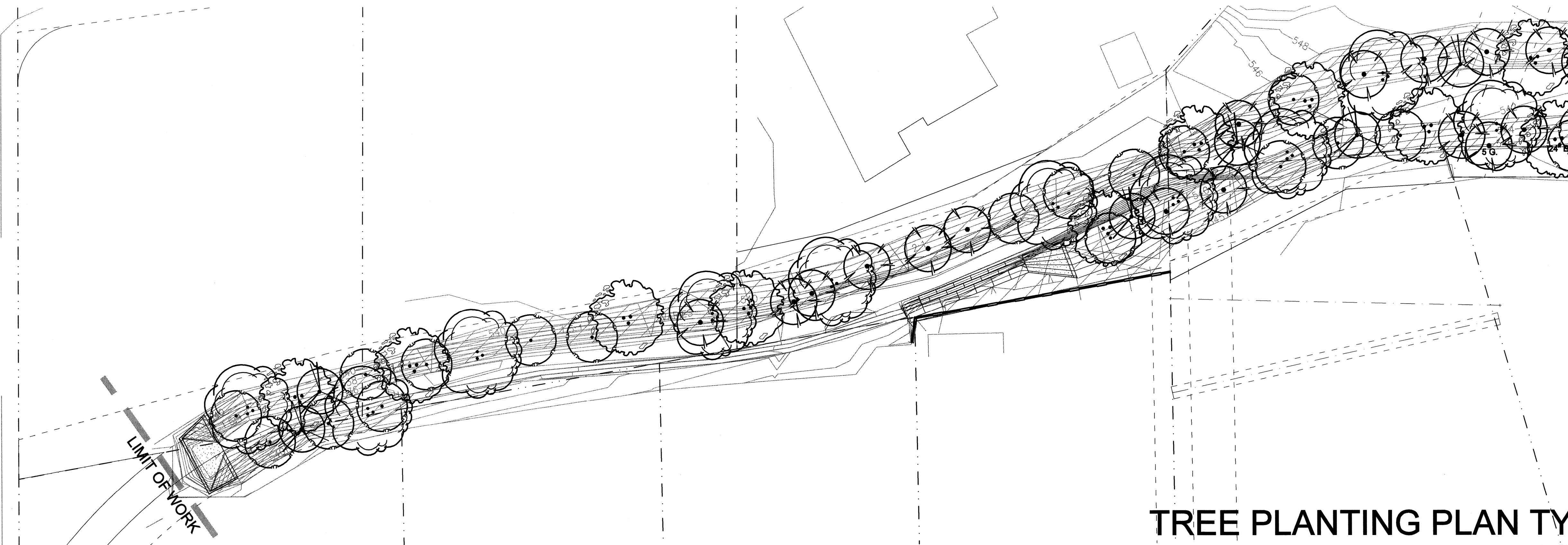
REFERENCES	CITY APPROVED CHANGES			
CITY OF POWAY B.M. #	No.	Description	Approved By	Date



RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX) 619.291.4165

RECORD DRAWING NUMBER:

NORWALK STREET

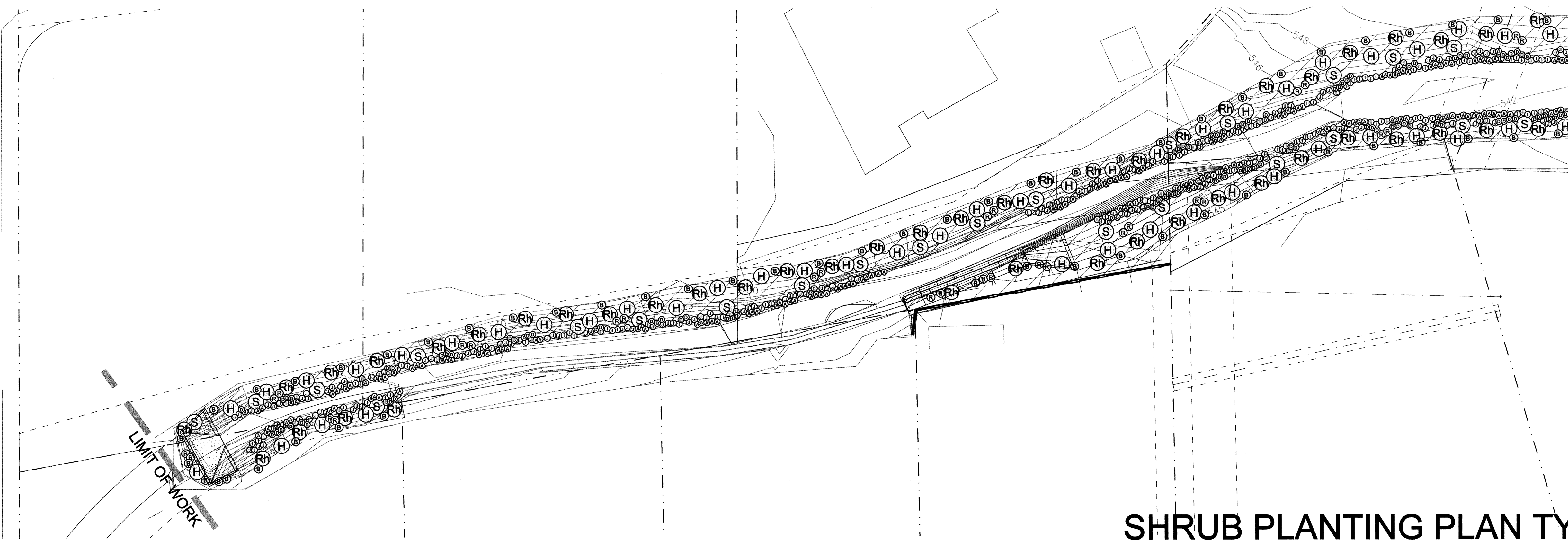


TREE PLANTING PLAN TYP.

PLANTING NOTES:

1. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE APPROVED BY THE RESTORATION SPECIALIST.
2. THE PLANTING PLAN IS DIAGRAMMATIC. ALL HYDROSEED LOCATIONS ARE INDICATED IN PLANT LEGEND. FINAL LIMITS SHALL BE DETERMINED IN FIELD BY RESTORATION SPECIALIST, PRIOR TO HYDROSEEDING.
3. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF DISCREPANCIES BETWEEN QUANTITIES AND SYMBOLS SHOWN.
4. PRIOR TO PLANTING, IRRIGATION SYSTEM SHALL BE FULLY OPERATIONAL AND ALL PLANTING AREAS SHALL BE THOROUGHLY SOAKED.
5. SEE SHT. LP-2 FOR PLANT LEGEND AND DETAILS TYP.
6. SEE SHEET LI-1 THRU LI-2 FOR IRRIGATION PLANS.

NORWALK STREET



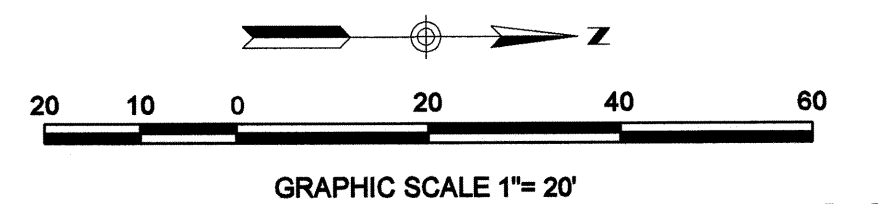
SHRUB PLANTING PLAN TYP.

SPECIAL LANDSCAPE NOTES:

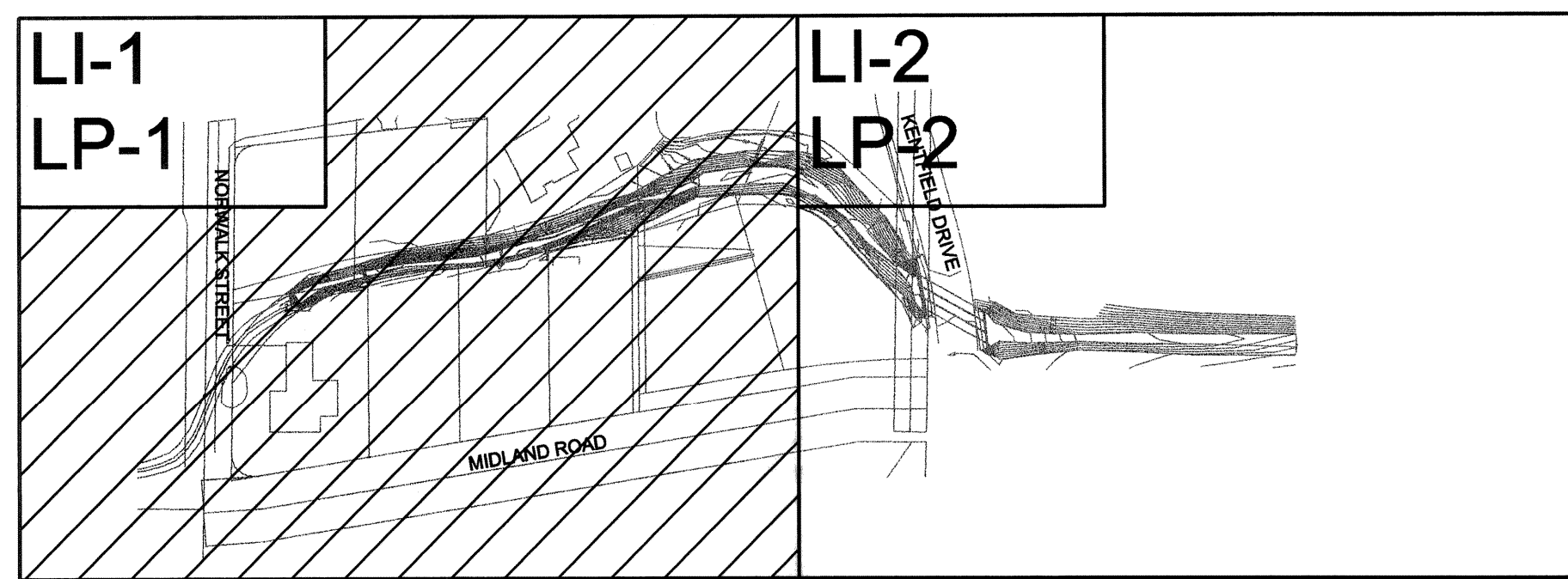
PRIOR TO CONSTRUCTION, LANDSCAPE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING LANDSCAPE / PLANT MATERIAL WITHIN LIMIT-OF-WORK AND ADJACENT PROPERTY(S) TO DETERMINE WHAT IF ANY ELEMENTS ARE REQUIRED TO BE PROTECTED-IN-PLACE IN ORDER TO MAINTAIN THEM IN CURRENT GROWING CONDITION DURING CONSTRUCTION AND/OR TO RESTORE THEM TO ORIGINAL CONDITION UPON THE COMPLETION OF WORK.

DURING WORK (DEMOLITION AND CONSTRUCTION), CONTRACTOR SHALL PROTECT-IN-PLACE AND/OR MAINTAIN ANY EXISTING PLANT MATERIAL FOUND DURING PRE-CONSTRUCTION WALK-THROUGH THAT ARE CRITICAL TO REMAIN IN PLACE DURING AND AFTER THE PROJECT SCOPE HAS BEEN COMPLETED. CONTRACTOR SHALL PROVIDE STANDARD CARE AS REQUIRED TO MAINTAIN VITALITY.

UPON COMPLETION OF THE PROJECT, A POST-PROJECT WALK-THROUGH SHALL BE SCHEDULED WITH CITY INSPECTOR TO CONFIRM ALL LANDSCAPE WITHIN LIMIT-OF-WORK AND ADJACENT AREA'S TO THE PROJECT SITE HAVE BEEN MAINTAINED AND/OR RESTORED TO PRE-CONSTRUCTION CONDITION AND SHALL BE ACCEPTED BY CITY INSPECTOR.

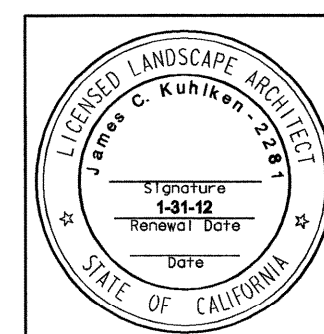


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KEY MAP

11/15/2017 10:00 AM



RICK
ENGINEERING COMPANY
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REFERENCES		CITY APPROVED CHANGES			
CITY OF POWAY B.M. #	No.	Description	Approved By	Date	

BENCH MARK	
DESCRIPTION	DATE
DESCRIPTION: 2" BRASS DISK STAMPED "POWAY A-45" PER POWAY VERT. CONTROL	

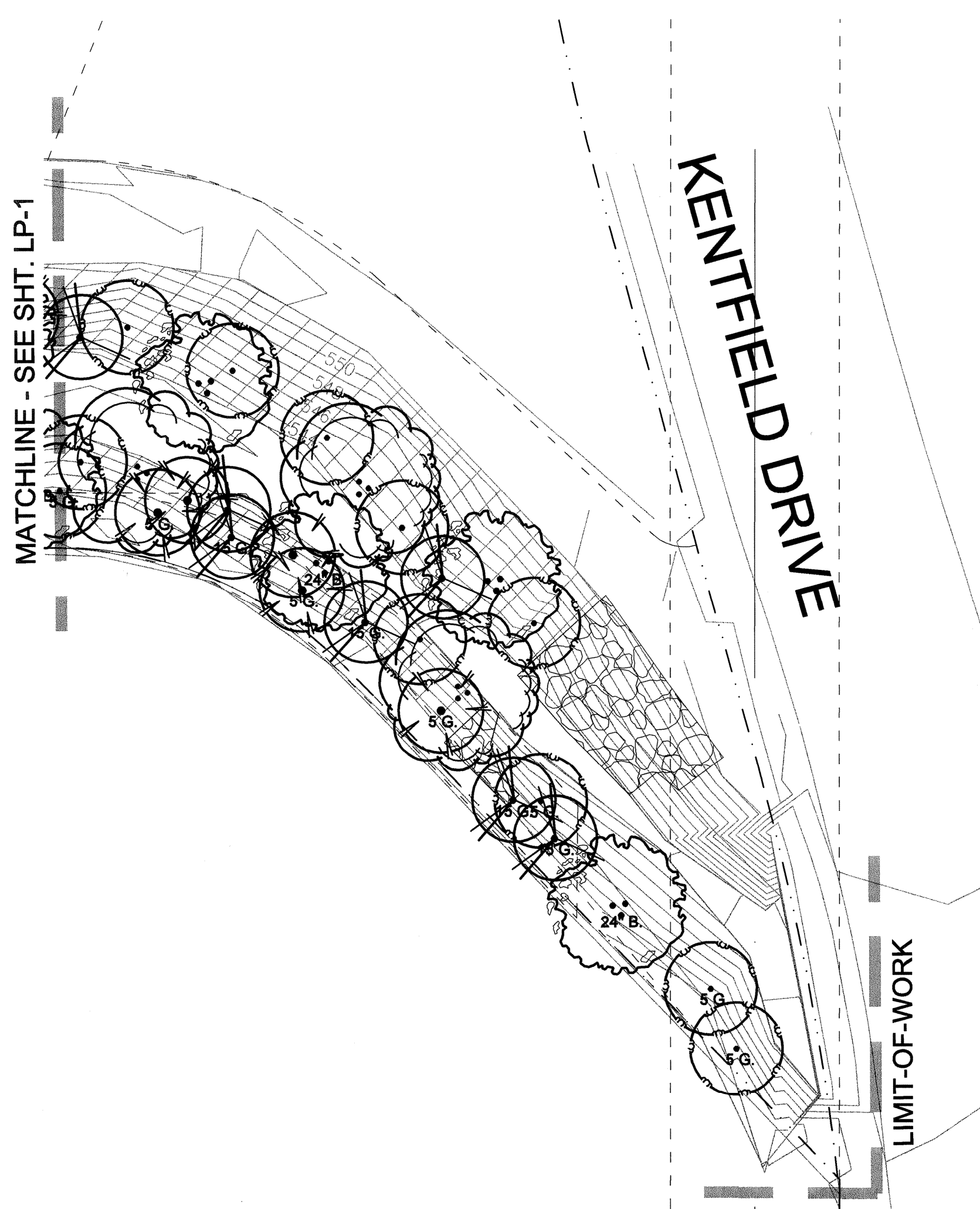
CITY OF POWAY PROJECT MANAGER: MELODY ROCCO	
DESIGNED	
DRAWN	
CHECKED	

LOCATION: ON THE TOP OF CURB LOCATED AT THE SOUTH POINT OF CURVE OF THE SOUTHWEST CORNER OF COMMUNITY ROAD & AUBREY STREET.
RECORDED FROM: 1986 ADJ. PER POWAY VERTICAL CONTROL BOOK
ELEVATION: 521.704 DATUM: NONE LISTED

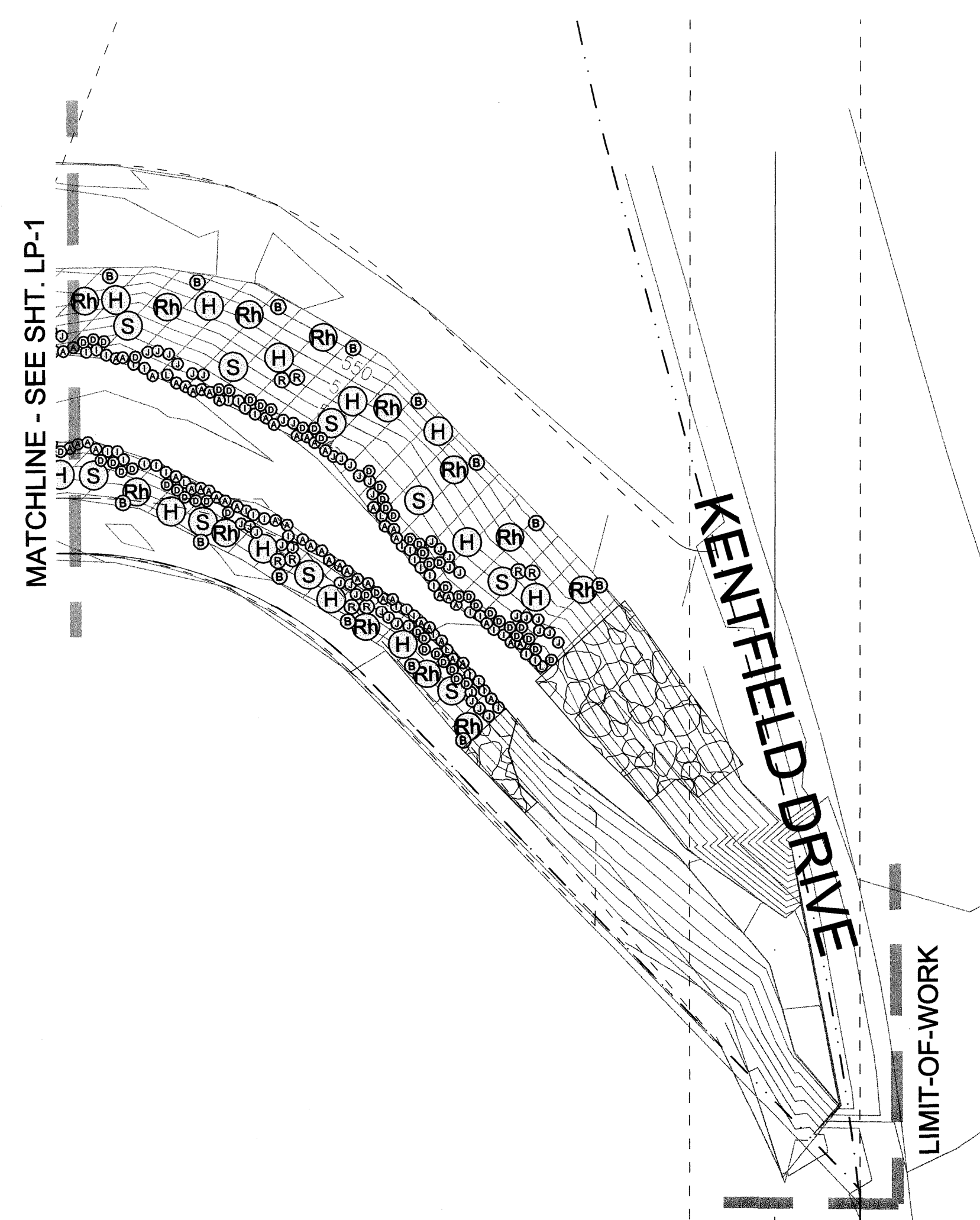
CIP NUMBER:		
Sheet 14	CITY OF POWAY Department of Development Services	15 Sheets
LANDSCAPE PLANTING PLANS FOR: EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK STREAMBANK STABILIZATION		
APPROVED BY: 41		DATE
CITY ENGINEER: STEVE CROSBY R.C.E. 41975		
ENGINEER OF WORK:		DATE
JOHN D. GODDARD JR. R.C.E. # 33037		

LP-1

RECORD DRAWING NUMBER



TREE PLANTING PLAN TYP.



SHRUB PLANTING PLAN TYP.

Planting Legend

Container Plants

Symbol	Plant Name	Size	Quantity	Spacing	Location
⊙	Freshwater/Alkali Marsh				
⊙	Anemopsis californica	Yerba mansa	1 gal.	207	2 foot O.C.
⊙	Artemisia douglasiana	Douglas mugwort	1 gal.	162	2 foot O.C.
⊙	Iva hayesiana	San Diego marsh elder	4in	157	1 foot O.C.
⊙	Juncus mexicanus	Mexican rush	1 gal.	178	4 foot O.C.
⊙	Leymus condensatus	Giant wild rye	1 gal., 3 / sym	32	Groups of 3; 7 foot O.C. use sparingly
⊙	Southern Riparian Scrub				
⊙	Baccharis salicifolia	Mulefat	1 gal., 3 / sym.	72	15' O.C. (groups of 3)
⊙	Heteromeles arbutifolia	Toyon	1 gal.	58	15' O.C.
⊙	Rhus integrifolia	Lemonadeberry	1 gal.	51	15' o.c.
⊙	Rosa californica	California rose	1 gal.	39	4' O.C. groupings sparingly
⊙	Sambucus mexicana	Mexican elderberry	1 gal.	33	20' O.C.
⊙	Plantanus racemosa	Western sycamore	1 gal.	12	40' O.C.
⊙	Plantanus racemosa	Western sycamore	24" Box	3	See Sym.
⊙	Populus fremontii	Fremont's cottonwood	1 gal.	9	40' O.C.
⊙	Populus fremontii	Fremont's cottonwood	15 gal.	4	See Sym.
⊙	Quercus agrifolia	Coast live oak	1 gal. (Deep Typ.)	13	40' O.C.
⊙	Salix lasiolepis	Arroyo willow	1 gal.	24	20' O.C.
⊙	Salix lasiolepis	Arroyo willow	5 gal.	4	See Sym.
⊙	Salix laevigata	Red willow	1 gal.	17	20' O.C.
⊙	Salix laevigata	Red willow	5 gal.	4	See Sym.

Hydroseed Mix

Plant Name	%PLS*	Lbs. per ac.
Coastal Sage Scrub		
Artemisia californica	California sagebrush	7.5
Encelia californica	Coast sunflower	24
Eriogonum fasciculatum	Flat-topped buckwheat	5
Eschscholzia californica	California poppy	1
Isocoma menziesii	Coast goldenbush	10
Salvia mellifera	Black sage	35
Salvia apiana	White sage	2

* This seed mix should cover from 4' up the slope to the top of the slope.

Southern Riparian Scrub

Plant Name	%PLS*	Lbs. per ac.
Ambrosia psilostachya	Western ragweed	8
Artemisia douglasiana	Mugwort	7.5
Artemisia palmeri	San Diego sagewort	7.5
Iva hayesiana	San Diego marsh elder	10
Juncus acutus	Spiny rush	60
Oenothera elata spp. hookeri	Hooker's evening primrose	74
Pluchea odorata	Marsh fleabane	15

* This seed mix shall cover the edges of the bottom of the channel to 4' up the slope.

PLANTING NOTES:

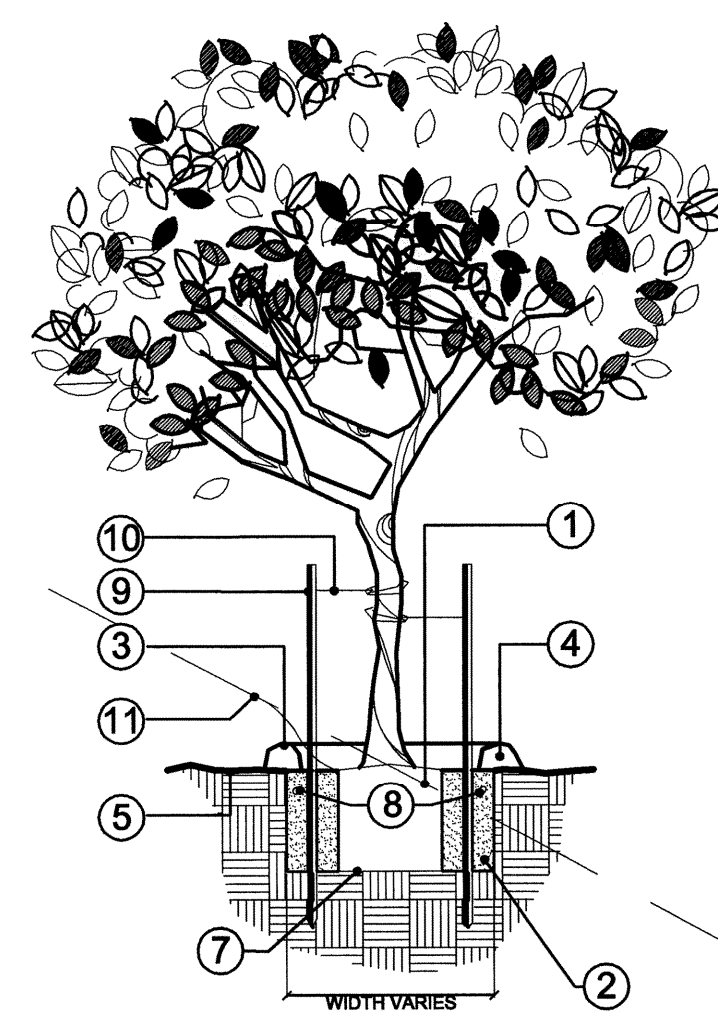
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SPECIAL LANDSCAPE NOTES:

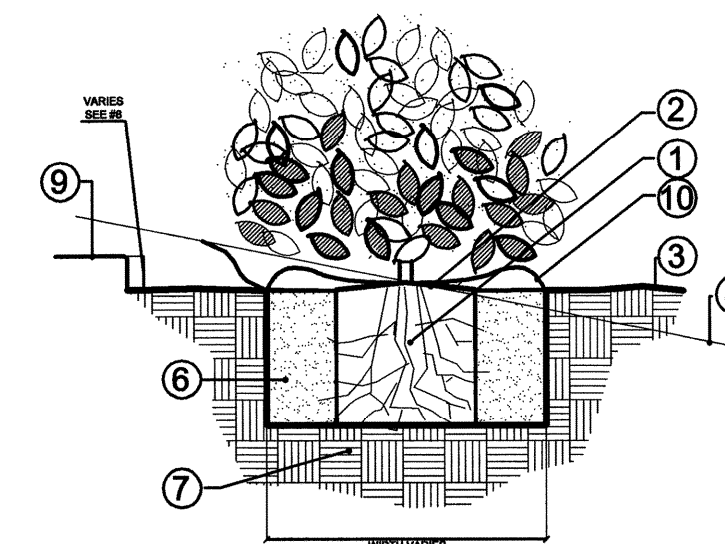
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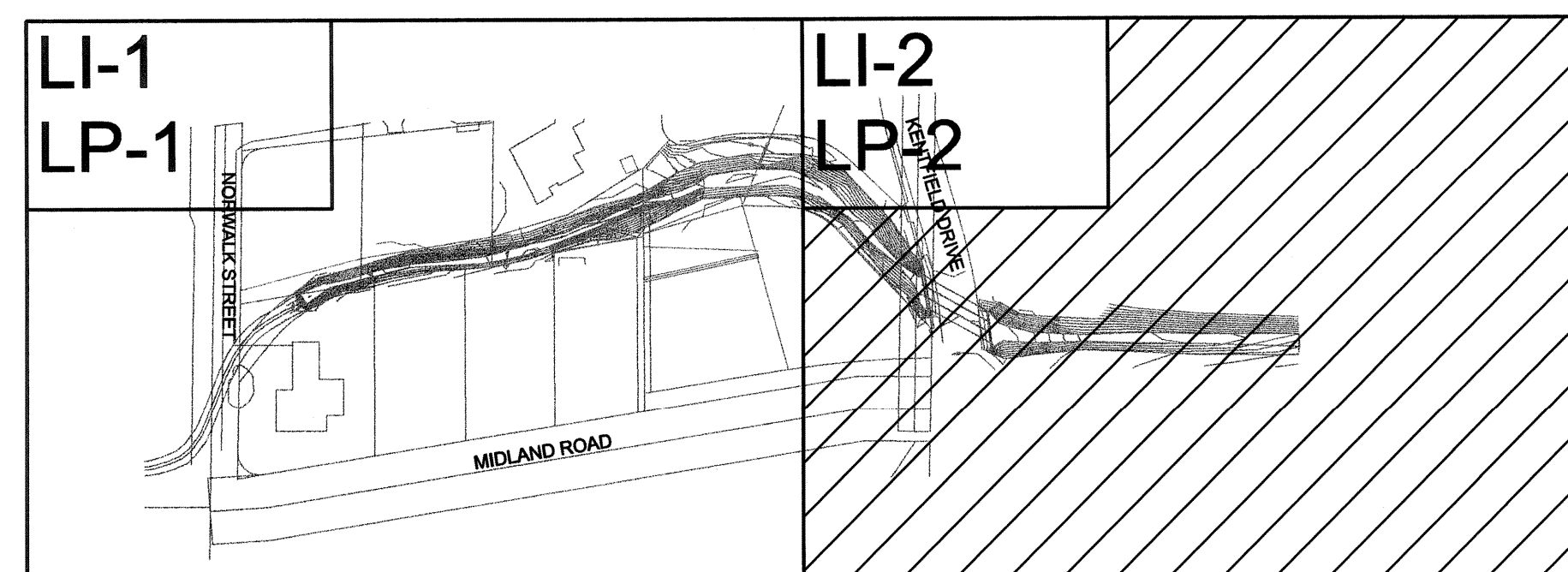
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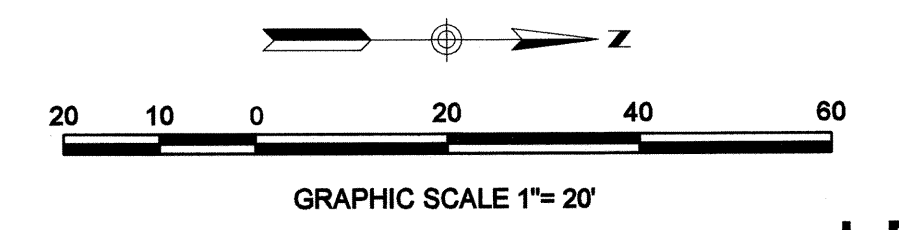
A LARGE TREE PLANTING
NOT TO SCALE-ELEVATION



B SM. TREE / SHRUB PLANTING
NOT TO SCALE-ELEVATION



KEY MAP

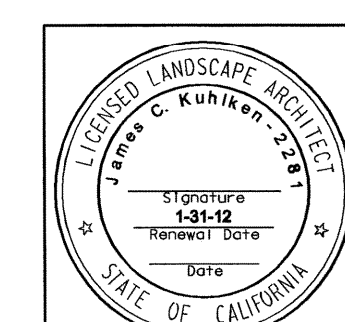


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LP-2

Sheet 15	CITY OF POWAY Department of Development Services	15 Sheets
LANDSCAPE PLANTING PLANS FOR: EPHEMERAL TRIBUTARY TO RATTLESNAKE CREEK STREAMBANK STABILIZATION		
California Coordinate Index:		
APPROVED BY: 41	DATE	
CITY ENGINEER: STEVE CROSBY R.C.E. 41975	DATE	
ENGINEER OF WORK:	DATE	
JOHN D. GODDARD JR. R.C.E. # 33037	DATE	



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