

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

2375 Northside Drive, Suite.100, San Diego, CA 92108  
Phone (619) 516-1990 • Fax (619) 516-1994  
<http://www.waterboards.ca.gov/sandiego/>

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

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**PROJECT: Adlai Road Subdivision TM 5356-1 Project**  
**Certification Number R9-2014-0136**  
**WDID: 9000002786**

Reg. Meas. ID: 398776 Place ID: 715662 Party ID: 463939 Person ID: 463945
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**APPLICANT: RDWS LTD**  
**P.O. Box 21066**  
**EI Cajon, CA 92109**

**ACTION:**

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

**PROJECT DESCRIPTION**

An application dated October 15, 2014 was submitted by RDWS LTD (hereinafter Applicant), for Water Quality Certification pursuant to section 401 of the Clean Water Act (United States Code (USC) Title 33, section 1341) for the proposed Adlai Road Subdivision TM 5356-1 Project (Project). The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) deemed the application to be complete on July 17, 2015. The Applicant proposes to discharge dredged or fill material to waters of the United States and/or State associated with construction activity at the Project site. The Applicant has also applied for a Clean Water Act section 404 permit from the United States Army Corps of Engineers for the Project (USACE File No. SPL-2008-00510-RRS).

The Project is located within the community of Lakeside, San Diego County, California at Adlai Road and East Lakeview Road. The Project center reading is located at latitude 32.846086° and longitude -116.895988°. The Applicant has paid all required application fees for this Certification in the amount of \$3,105. On an annual basis, the Applicant shall also pay all active discharge fees and post discharge monitoring fees, as appropriate<sup>1</sup>. On July 17, 2015, the San Diego Water Board provided public notice of the Project application pursuant to California Code of Regulations, title 23, section 3858 by posting information describing the

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<sup>1</sup> The fee schedule is set forth in CCR title 23, division 3, chapter 9 (commencing with section 2200). Additional information regarding fees can be found electronically at the following location:

[http://www.waterboards.ca.gov/water\\_issues/programs/cwa401/docs/dredgefillcalculator.xlsx](http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/dredgefillcalculator.xlsx)

Project on the San Diego Water Board's web site and providing a period of twenty-one days for public review and comment. No comments were received.

The Applicant proposes to subdivide a 4.54 acre parcel into nine single family residences on graded pads with private roads and associated utilities. The project will fill a drainage with a reinforced concrete pipe to convey water flow.

The Project will convert approximately 1.18 acres of pervious ground cover to impervious surfaces. Runoff leaving the developed Project area would be significantly greater in volume, velocity, peak flow rate, and duration than pre-development runoff from the same area without mitigation. Post-construction best management practices (BMPs) to manage and control the effects of these runoff increases will consist of a sand filter trench system equipped with low flow orifices to treat the runoff from the proposed road. These BMPs will be designed, constructed, and maintained to meet County of San Diego Low Impact Development (LID) Capture Volume and hydromodification treatment requirements. Vegetated bioswales with low flow control orifices will also be used on the pads of the individual residences.

The Project application includes a description of the design objective, operation, and degree of treatment expected to be attained from equipment, facilities, or activities (including construction and post-construction BMPs) to treat waste and reduce runoff or other effluents which may be discharged. Compliance with the Certification conditions will help ensure that construction and post-construction discharges from the Project will not cause on-site or off-site downstream erosion, damage to downstream properties, or otherwise damage stream habitats in violation of water quality standards in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan).

Project construction will permanently impact 0.02 acre (230 linear feet) of non-wetland waters of the United States and/or State. The Applicant reports that the Project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impacts to aquatic resources considering all potential practicable alternatives, such as the potential for alternate available locations, designs, reductions in size, configuration or density.

The Applicant reports that compensatory mitigation for the permanent loss of 0.02 acre of jurisdictional waters will be achieved through the purchase of 0.1 acre of Waters of the United States and/or State Re-establishment credits from the San Luis Rey Mitigation Bank. Compensatory mitigation purchased from the San Luis Rey Mitigation Bank is required to be protected and maintained in perpetuity by Wildlands according to the conditions of Water Quality Certification No. R9-2013-0050 and the San Luis Rey Banking Enabling Instrument. By purchasing credits, the Performance Standards; Mitigation Site Design; Long-Term Management, Maintenance, and Monitoring; and Mitigation Site Preservation Mechanism for the Project will be implemented by Wildlands through San Luis Rey Mitigation Bank according to the conditions of Water Quality Certification No. R9-2013-0050 and the San Luis Rey Banking Enabling Instrument. Compensatory mitigation options for the Project within the watershed were deemed inadequate. The distance between the affected aquatic resource and the out-of watershed mitigation site is accounted for in the higher mitigation ratio for impacts.

Additional Project details are provided in Attachments 1 through 3 of this Certification.

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### Attachments:

1. Definitions
2. Project Location Maps
3. Project Site Plans

## I. STANDARD CONDITIONS

Pursuant to section 3860 of title 23 of the California Code of Regulations, the following three standard conditions apply to all water quality certification actions:

- 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 Water Code and chapter 28, article 6 (commencing with title 23, section 3867), of the California Code of Regulations.
- B. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to California Code of Regulations title 23, section 3855 subdivision (b), and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
- C. This Certification action is conditioned upon total payment of any fee required under title 23, chapter 28 (commencing with section 3830) of California Code of Regulations and owed by the applicant.

## II. GENERAL CONDITIONS

- A. **Term of Certification.** Water Quality Certification No. R9-2014-0136 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 USC Title 33, section 1344) permit issued by the U.S. Army Corps of Engineers for this Project, or b) five (5) years from the date of issuance of this Certification, whichever occurs first.
- B. **Duty to Comply.** The Applicant must comply with all conditions and requirements of this Certification. Any Certification noncompliance constitutes a violation of the Water Code and is grounds for enforcement action or Certification termination, revocation and reissuance, or modification.
- C. **General Waste Discharge Requirements.** The requirements of this Certification are enforceable through 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* (Water Quality Order No. 2003-0017-DWQ). This provision shall apply irrespective of whether a) the federal permit for which the Certification was obtained is subsequently retracted or is expired, or b) the Certification is expired. Water Quality Order No. 2003-0017-DWQ is accessible at:  
  
[http://www.waterboards.ca.gov/water\\_issues/programs/cwa401/docs/generalorders/gowdr401regulated\\_projects.pdf](http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/gowdr401regulated_projects.pdf).
- D. **Project Conformance with Application.** All water quality protection measures and BMPs described in the application and supplemental information for water quality certification are incorporated by reference into this Certification as if fully stated herein.

Notwithstanding any more specific conditions in this Certification, the Applicant shall construct, implement and comply with all water quality protection measures and BMPs described in the application and supplemental information. The conditions within this Certification shall supersede conflicting provisions within the application and supplemental information submitted as part of this Certification action.

- E. Project Conformance with Water Quality Control Plans or Policies.** Notwithstanding any more specific conditions in this Certification, the Project shall be constructed in a manner consistent with the Basin Plan and any other applicable water quality control plans or policies adopted or approved pursuant to the Porter Cologne Water Quality Act (Division 7, commencing with Water Code Section 13000) or section 303 of the Clean Water Act (33 USC section 1313). The Basin Plan is accessible at:

[http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/basin\\_plan/index.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml)

- F. Project Modification.** The Applicant must submit any changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this Certification, to the San Diego Water Board for prior review and written approval. If the San Diego Water Board is not notified of a significant change to the Project, it will be considered a violation of this Certification.
- G. Certification Distribution Posting.** During Project construction, the Applicant must maintain a copy of this Certification at the Project site. This Certification must be available at all times to site personnel and agencies. A copy of this Certification shall also be provided to any contractor or subcontractor performing construction work, and the copy shall remain in their possession at the Project site.
- H. Inspection and Entry.** The Applicant must allow the San Diego Water Board or the State Water Resources Control Board, and/or their authorized representative(s) (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents as may be required under law, to:
1. Enter upon the Project or Compensatory Mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Certification;
  2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Certification;
  3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Certification; and
  4. Sample or monitor, at reasonable times, for the purposes of assuring Certification compliance, or as otherwise authorized by the Clean Water Act or Water Code, any substances or parameters at any location.

- I. **Enforcement Notification.** In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall 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.
- J. **Certification Actions.** This Certification may be modified, revoked and reissued, or terminated for cause including but not limited to the following:
1. Violation of any term or condition of this Certification;
  2. Monitoring results indicate that continued Project activities could violate water quality objectives or impair the beneficial uses of Los Chocoes Creek and the San Diego River or their tributaries;
  3. Obtaining this Certification by misrepresentation or failure to disclose fully all relevant facts;
  4. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
  5. Incorporation of any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

The filing of a request by the Applicant for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Certification condition.

- K. **Duty to Provide Information.** The Applicant shall furnish to the San Diego Water Board, within a reasonable time, any information which the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Certification or to determine compliance with this Certification.
- L. **Property Rights.** This Certification does not convey any property rights of any sort, or any exclusive privilege.
- M. **Petitions.** Any person aggrieved by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with the California Code of Regulations, title 23, sections 3867 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Certification. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

### III. CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. **Approvals to Commence Construction.** The Applicant shall not commence Project construction until all necessary federal, State, and local approvals are obtained.
- B. **Personnel Education.** 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 measures, and BMP implementation and maintenance measures.
- C. **Spill Containment Materials.** 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.
- D. **General Construction Storm Water Permit.** Prior to start of Project construction, the Applicant must, as applicable, obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity*, (General Construction Storm Water Permit) and any reissuance. If Project construction activities do not require coverage under the General Construction Storm Water Permit, the Applicant must develop and implement a runoff management plan (or equivalent construction BMP plan) to prevent the discharge of sediment and other pollutants during construction activities.
- E. **Waste Management.** The Applicant must properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or storm water runoff. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination or nuisance as defined in Water Code section 13050. Upon Project completion, all Project generated debris, building materials, excess material, waste, and trash shall be removed from the Project site(s) for disposal at an authorized landfill or other disposal site in compliance with federal, state and local laws and regulations.
- F. **Waste Management.** Except for a discharge permitted under this Certification, the dumping, deposition, or discharge of trash, rubbish, unset cement or asphalt, concrete, grout, damaged concrete or asphalt, concrete or asphalt spoils, wash water, organic or earthen material, steel, sawdust or other construction debris waste from Project activities directly into waters of the United States and or State, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited.
- G. **Downstream Erosion.** Discharges of concentrated flow during construction or after Project completion must not cause downstream erosion or damage to properties or stream habitat.

- H. **Construction Equipment.** All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter. All equipment used in direct contact with surface water shall be steam cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment.
- I. **Process Water.** 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 State or placed in locations that may be subjected to storm water runoff flows. Pollutants discharged to areas within a stream diversion must be removed at the end of each work day or sooner if rain is predicted.
- J. **Surface Water Diversion.** All surface waters, including ponded waters, must be diverted away from areas of active grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of the receiving water quality objectives. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.
- K. **Re-vegetation and Stabilization.** All areas that have 14 or more days of inactivity must be stabilized within 14 days of the last activity. The Applicant shall implement and maintain BMPs to prevent erosion of the rough graded areas. After completion of grading, all areas must be re-vegetated with native species appropriate for the area. The re-vegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory, which can be accessed at <http://www.cal-ipc.org/ip/inventory/>.
- L. **Hazardous Materials.** Except as authorized by this Certification, substances hazardous to aquatic life including, but not limited to, petroleum products, unused 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.
- M. **Vegetation Removal.** Removal of vegetation must occur by hand, mechanically, or through application of United States Environmental Protection Agency (USEPA) approved herbicides deployed using applicable BMPs to minimize adverse effects to beneficial uses of waters of the United States and/or State. Discharges related to the application of aquatic pesticides within waters of the United States must be done in compliance with State Water Resources Control Board Water Quality Order No. 2004-0009-DWQ, the *Statewide General National Pollution Discharge Elimination System Permit for the Discharge of Aquatic Weed Control in Waters of the United States*, and any subsequent reissuance as applicable.

- N. **Limits of Disturbance.** The Applicant shall clearly define the limits of Project disturbance to waters of the United States and/or State using highly visible markers such as flag markers, construction fencing, or silt barriers prior to commencement of Project construction activities within those areas.
- O. **On-site Qualified Biologist.** The Applicant shall designate an on-site qualified biologist to monitor Project construction activities within or adjacent to waters of the United States and/or State to ensure compliance with the Certification requirements. The biologist shall be given the authority to stop all work on-site if a violation of this Certification occurs or has the potential to occur. Records and field notes of the biologist's activities shall be kept on-site and made available for review upon request by the San Diego Water Board.
- P. **Beneficial Use Protection.** The Applicant must take all necessary measures to protect the beneficial uses of waters of Los Coches Creek and the San Diego River). This Certification requires compliance with all applicable requirements of the Basin Plan. If at any time, an unauthorized discharge to surface waters (including rivers or streams) occurs or monitoring indicates that the Project is violating, or threatens to violate, water quality objectives, the associated Project activities shall cease immediately and the San Diego Water Board shall be notified in accordance with Notification Requirement VII.A of this Certification. Associated Project activities may not resume without approval from the San Diego Water Board.

#### IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. **Post-Construction Discharges.** The Applicant shall not allow post-construction discharges from the Project site to cause or contribute to on-site or off-site erosion or damage to properties or stream habitats.
- B. **Storm Drain Inlets.** All storm drain inlet structures within the Project boundaries must be stamped or stenciled (or equivalent) with appropriate language prohibiting non-storm water discharges.
- C. The Project must be designed to comply with the requirements for priority development projects in section E.3 of the Regional MS4 Permit Order No. R9-2013-0001, *National Pollutant Discharge Elimination Systems Permit and Waste Discharge Requirements for Discharges of Urban Runoff from the MS4s Draining the Watersheds within the San Diego Region* (Regional MS4 Permit) as well as the most current BMP Design Manual for the County of San Diego. Where conflict exists between the referenced documents the most stringent requirements shall apply.
- D. **Post-Construction BMP Maintenance.** The post construction BMPs must be designed, constructed, and maintained in accordance with the most recent California Storm Water Quality Association (CASQA)<sup>2</sup> guidance. The Applicant shall:

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<sup>2</sup> California Storm Water Quality Association (*California Storm Water BMP Handbook, New Development and Redevelopment 2003*), available on-line at: <http://www.cabmphandbooks.org/> [Accessed on January 15, 2012]

1. No less than two times per year, assess the performance of the BMPs to ensure protection of the receiving waters and identify any necessary corrective measures;
2. Perform inspections of BMPs, at the beginning of the wet season no later than October 1 and the end of the wet season no later than April 1, for standing water, slope stability, sediment accumulation, trash and debris, and presence of burrows;
3. Regularly perform preventative maintenance of BMPs, including removal of accumulated trash and debris, as needed to ensure proper functioning of the BMPs;
4. Identify and promptly repair damage to BMPs; and
5. Maintain a log documenting all BMP inspections and maintenance activities. The log shall be made available to the San Diego Water Board upon request.

**V. PROJECT IMPACTS AND COMPENSATORY MITIGATION**

- A. Project Impact Avoidance and Minimization.** The Project must avoid and minimize adverse impacts to waters of the United States and/or State to the maximum extent practicable.
- B. Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to Los Coches Creek, the San Diego River, and their unnamed tributaries within the San Diego Watershed must not exceed the type and magnitude of impacts described in the table below. At a minimum, compensatory mitigation required to offset unavoidable temporary and permanent Project impacts to waters of the United States and/or State must be achieved as described in the table below:

	<b>Impacts (acres)</b>	<b>Impacts (linear ft.)</b>	<b>Mitigation for Impacts (acres)</b>	<b>Mitigation Ratio (area mitigated :area impacted)</b>	<b>Mitigation for Impacts (linear ft.)</b>	<b>Mitigation Ratio (linear feet mitigated :linear feet impacted)</b>
<b>Permanent Impacts</b>						
Stream Channel	.02 <sup>1</sup>	230	0.1 Re-establishment <sup>2</sup>	5:1	N/A <sup>3</sup>	N/A

1. Permanent impacts associated with fill of ephemeral drainages  
 2. Permanent stream channel impacts will be mitigated through the purchase of 0.10 acre of re-established river credits from the San Luis Rey Mitigation Bank in Oceanside, CA, or other U.S. Army Corps of Engineers-approved mitigation bank. Mitigation purchased from the San Luis Rey Mitigation Bank is required to be protected and maintained in perpetuity by Wildlands according to the conditions of Water Quality Certification No. R9-2013-0050 and the San Luis Rey Banking Enabling Instrument. The mitigation provided for Project impacts contributes to the net gain of wetlands per the State of California Net Gain Policy (Executive Order W-59-93.)

3. Linear-foot compensatory mitigation is not required for this Project. Compensatory mitigation provided at the San Luis Rey Mitigation Bank (approximately 55.8 acres) is considered to be a large, contiguous restoration area that restores wetland functions, services, and values, as well as a suite of beneficial uses (WARM, WILD, and RARE). Additionally, mitigation credits are not reported in terms of feet of mitigation.

C. **Compensatory Mitigation Purchase.** The Applicant must submit to the San Diego Water Board proof of mitigation credit purchase from the San Luis Rey Mitigation Bank in the amount of 0.1 acre of wetland waters re-establishment credit prior to the start of construction.

## VI. MONITORING AND REPORTING REQUIREMENTS

A. **Representative Monitoring.** Samples and measurements taken for the purpose of monitoring under this Certification shall be representative of the monitored activity.

B. **Monitoring Reports.** Monitoring results shall be reported to the San Diego Water Board at the intervals specified in section VI of this Certification.

C. **Monitoring and Reporting Revisions.** The San Diego Water Board may make revisions to the monitoring program at any time during the term of this Certification and may reduce or increase the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

D. **Records of Monitoring Information.** Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;
3. The date(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

E. **Discharge Commencement Notification.** The Applicant must notify the San Diego Water Board in writing **at least 5 days prior to** the start of Project construction.

F. **Geographic Information System Data.** The Applicant must submit Geographic Information System (GIS) shape files of the Project impact sites within 30 days of the start of project construction and GIS shape files of the Project mitigation sites within 30 days of mitigation installation. All impact and mitigation site shape files must be polygons. Two GPS readings (points) must be taken on each line of the polygon and the polygon must have a minimum of 10 points. GIS metadata must also be submitted.

**G. Annual Project Progress Reports.** The Applicant must submit annual Project progress reports describing status of BMP implementation, compensatory mitigation, and compliance with all requirements of this Certification to the San Diego Water Board prior to **March 1** of each year following the issuance of this Certification, until the Project has reached completion. The Annual Project Progress Reports must contain compensatory mitigation monitoring information sufficient to demonstrate how the compensatory mitigation project is progressing towards accomplishing its objectives and meeting its performance standards. Annual Project Progress Reports must be submitted even if Project construction has not begun. The monitoring period for each Annual Project Progress Report shall be January 1<sup>st</sup> through December 31<sup>st</sup> of each year. Annual Project Progress Reports must include, at a minimum, the following:  
The names, qualifications, and affiliations of the persons contributing to the report;

1. The status, progress, and anticipated schedule for completion of Project construction activities including the installation and operational status of best management practices project features for erosion and storm water quality treatment;
2. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion; and
3. A description of each incident of noncompliance during the annual monitoring period 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 the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

**H. Final Project Completion Report.** The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 30 days of completion of the Project**. The final report must include the following information:

1. Date of construction initiation;
2. Date of construction completion;
3. BMP installation and operational status for the Project;
4. As-built drawings of the Project, no bigger than 11"X17";
5. Photo documentation of implemented post-construction BMPs and all areas of permanent and temporary impacts, prior to and after project construction. Photo documentation must be conducted in accordance with guidelines posted at [http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/401\\_certification/docs/StreamPhotoDocSOP.pdf](http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/StreamPhotoDocSOP.pdf). In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced; and

- I. **Reporting Authority.** The submittal of information required under this Certification, or in response to a suspected violation of any condition of this Certification, is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13385.
- J. **Electronic Document Submittal.** The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to [SanDiego@waterboards.ca.gov](mailto:SanDiego@waterboards.ca.gov). Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to:

California Regional Water Quality Control Board  
San Diego Region  
Attn: 401 Certification No. R9-2014-0036:715662:ngergans  
2375 Northside Drive, Suite 100  
San Diego, California 92108

Each electronic document must be submitted as a single file, in Portable Document Format (PDF), and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: Certification No. R9-2014-0036:715662:ngergans

- K. **Document Signatory Requirements.** All applications, reports, or information submitted to the San Diego Water Board must be signed 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.

If such authorization is no longer accurate because a different individual or position has

responsibility for the overall operation of the Project, a new authorization satisfying the above requirements must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative.

- L. **Document Certification Requirements.** All applications, reports, or information submitted to the San Diego Water Board must be 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."*

## VII. NOTIFICATION REQUIREMENTS

- A. **Twenty Four Hour Non-Compliance Reporting.** The Applicant shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the San Diego Water Board within **24 hours** from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of 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 recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
- B. **Hazardous Substance Discharge.** Except as provided in Water Code section 13271(b), any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, shall as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the County of San Diego, in accordance with California Health and Safety Code section 5411.5 and the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.17), and immediately notify the State Water Board or the San Diego Water Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of section 13271 of the Water Code unless the Applicant is in violation of a Basin Plan prohibition.
- C. **Oil or Petroleum Product Discharge.** Except as provided in Water Code section 13272(b), any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is

possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.1). This requirement does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Clean Water Act section 311, or the discharge is in violation of a Basin Plan prohibition.

- D. **Anticipated Noncompliance.** The Applicant shall give advance notice to the San Diego Water Board of any planned changes in the Project or the Compensatory Mitigation project which may result in noncompliance with Certification conditions or requirements.
- E. **Transfers.** This Certification is not transferable in its entirety or in part to any person or organization except after notice to the San Diego Water Board in accordance with the following terms:
1. **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.**
  2. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**
  3. **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 responsibility for compliance with this Certification in the event that a transferee fails to comply.

### **VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE**

- A. The County of San Diego is the Lead Agency under the California Environmental Quality Act (CEQA) (Public Resources Code section 21000, et seq.) section 21067, and CEQA Guidelines (California Code of Regulations, title 14, section 15000 et seq.) section 15367, and has filed a Notice of Determination dated April 6, 2007 for the Mitigated Negative Declaration (MND) titled Mitigated Negative Declaration (State Clearing House Number 2006081102). The Lead Agency has determined the Project will have a significant effect on the environment and mitigation measures were made a condition of the Project.
- B. The San Diego Water Board is a Responsible Agency under CEQA (Public Resources Code section 21069; CEQA Guidelines section 15381). The San Diego Water Board has considered the Lead Agency's FEIR and finds that the Project as proposed will have a significant effect on resources within the San Diego Water Board's purview.
- C. The San Diego Water Board has required mitigation measures as a condition of this Certification to avoid or reduce the environmental effects of the Project to resources within the Board's purview to a less than significant level.
- D. The Lead Agency has adopted a mitigation monitoring and reporting program pursuant to Public Resources Code section 21081.6 and CEQA Guidelines section 15097 to ensure that mitigation measures and revisions to the Project identified in the MND are implemented. The Applicant shall implement the Lead Agency's MMRP described in the MND, as it pertains to resources within the San Diego Water Board's purview. The San Diego Water Board has imposed additional MMRP requirements as specified in sections V and VI of this Certification.
- E. As a Responsible Agency under CEQA, the San Diego Water Board will file a Notice of Determination in accordance with CEQA Guidelines section 15096 subdivision (i).

### **IX. SAN DIEGO WATER BOARD CONTACT PERSON**

Nicole Gergans, Environmental Scientist  
Telephone: (619) 521-3969  
Email: [nicole.gergans@waterboards.ca.gov](mailto:nicole.gergans@waterboards.ca.gov)

### **X. WATER QUALITY CERTIFICATION**

I hereby certify that the proposed discharge from the **Adlai Road Subdivision TM 5356-1 Project** (Certification No. R9-2014-0036) 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 to, and all proposed mitigation being completed in strict compliance with, the applicants' Project description and/or the description in this Certification, and (b) compliance with all applicable requirements of the Basin Plan.

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Certification No. R9-2014-0036 issued on February 21, 2018.

  
\_\_\_\_\_  
DAVID W. GIBSON  
Executive Officer  
San Diego Water Board

21 February 2018  
Date

# ATTACHMENT 1

## DEFINITIONS

**Activity** - when used in reference to a permit means any action, undertaking, or project including, but not limited to, construction, operation, maintenance, repair, modification, and restoration which may result in any discharge to waters of the state.

**Buffer** - means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

**California Rapid Assessment Method (CRAM)** - is a wetland assessment method intended to provide a rapid, scientifically-defensible and repeatable assessment methodology to monitor status and trends in the conditions of wetlands for applications throughout the state. It can also be used to assess the performance of compensatory mitigation projects and restoration projects. CRAM provides an assessment of overall ecological condition in terms of four attributes: landscape context and buffer, hydrology, physical structure and biotic structure. CRAM also includes an assessment of key stressors that may be affecting wetland condition and a "field to PC" data management tool (eCRAM) to ensure consistency and quality of data produced with the method.

**Compensatory Mitigation Project** - means compensatory mitigation implemented by the Applicant as a requirement of this Certification (i.e., applicant -responsible mitigation), or by a mitigation bank or an in-lieu fee program.

**Discharge of dredged material** – means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States and/or State.

**Discharge of fill material** – means the addition of fill material into waters of the United States and/or State.

**Dredged material** – means material that is excavated or dredged from waters of the United States and/or State.

**Ecological Success Performance Standards** – means observable or measurable physical (including hydrological), chemical, and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

**Enhancement** – means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

**Establishment** – means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist. Creation results in a gain in aquatic resource area.

**Fill material** – means any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a water body.

**Isolated wetland** – means a wetland with no surface water connection to other aquatic resources.

**Mitigation Bank** – means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing mitigation for impacts authorized by this Certification.

**Preservation** - means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

**Re-establishment** - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

**Rehabilitation** - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/ historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

**Restoration** - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

**Start of Project Construction** - For the purpose of this Certification, "start of Project construction" means to engage in a program of on-site construction, including site clearing, grading, dredging, landfilling, changing equipment, substituting equipment, or even moving the location of equipment specifically designed for a stationary source in preparation for the fabrication, erection or installation of the building components of the stationary source within waters of the United States and/or State.

**Uplands** - means non-wetland areas that lack any field-based indicators of wetlands or other aquatic conditions. Uplands are generally well-drained and occur above (i.e., up-slope) from nearby aquatic areas. Wetlands can, however, be entirely surrounded by uplands. For example, some natural seeps and constructed stock ponds lack aboveground hydrological connection to other aquatic areas. In the watershed context, uplands comprise the landscape matrix in which aquatic areas form. They are the primary sources of sediment, surface runoff, and associated chemicals that are deposited in aquatic areas or transported through them.

**Water quality objectives and other appropriate requirements of state law** – means the water quality objectives and beneficial uses as specified in the appropriate water quality control plan(s); the applicable provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act; and any other appropriate requirement of state law.

RDWS LTD  
Adlai Road Subdivision TM 5356-1  
Certification No. R9-2014-0136

**ATTACHMENT 2  
PROJECT LOCATION MAPS**

- 1) Figure 1 – Regional Location Map**
- 2) Figure 2 – Project Location Map**
- 3) Figure 3 – Drainage Location**
- 4) Figure 5 – Aerial Photography**

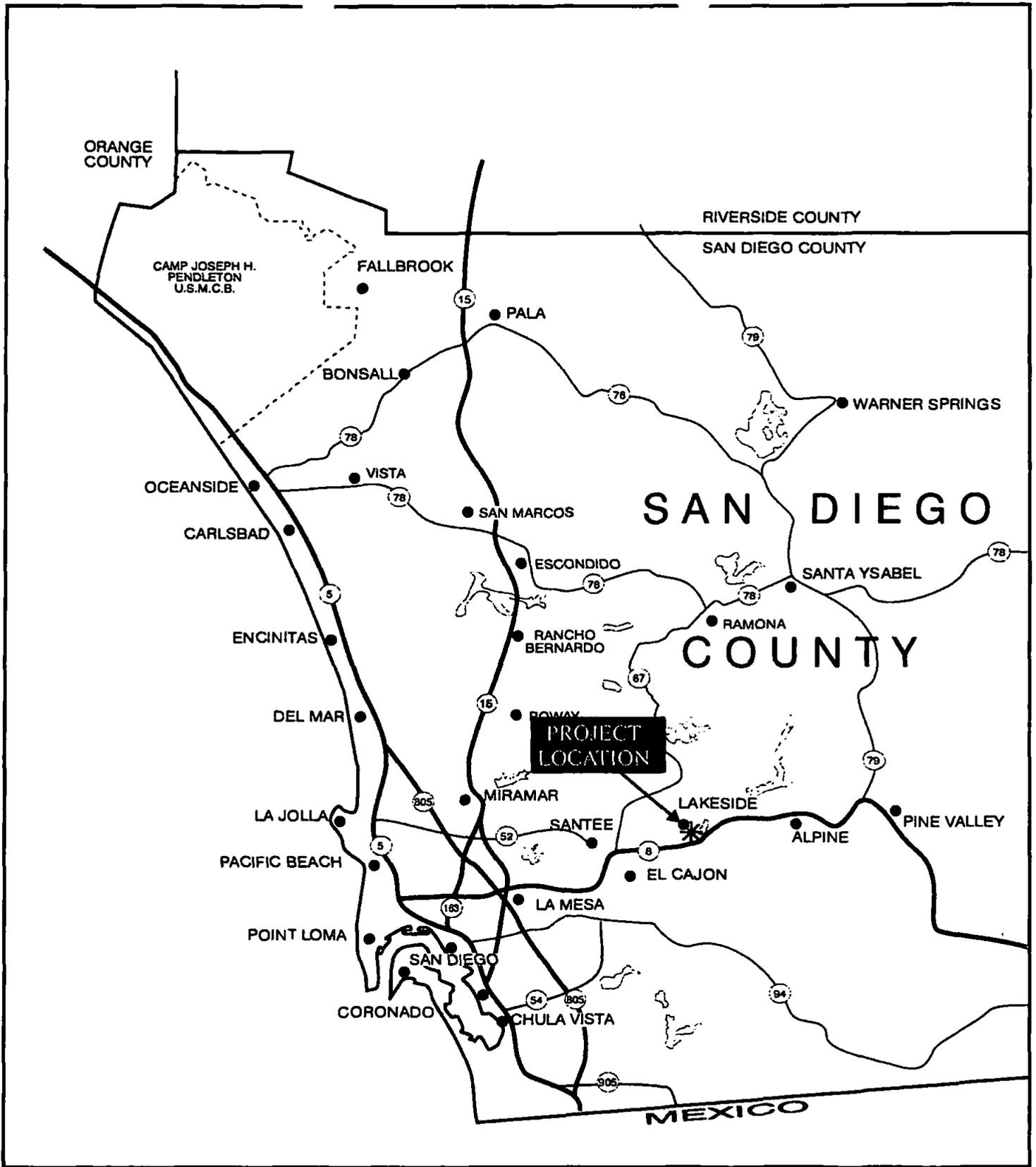
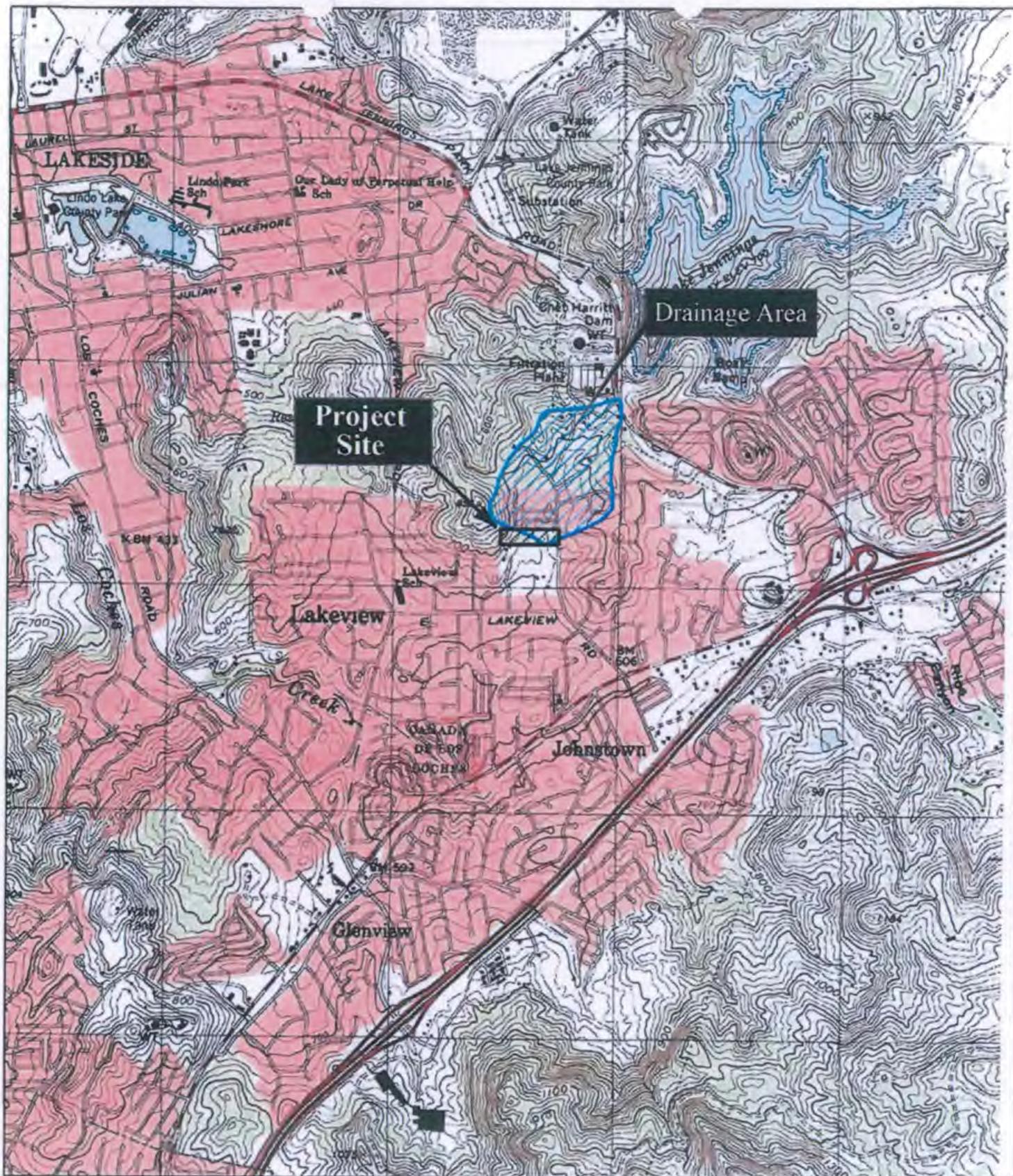


Figure 1  
Regional Location Map

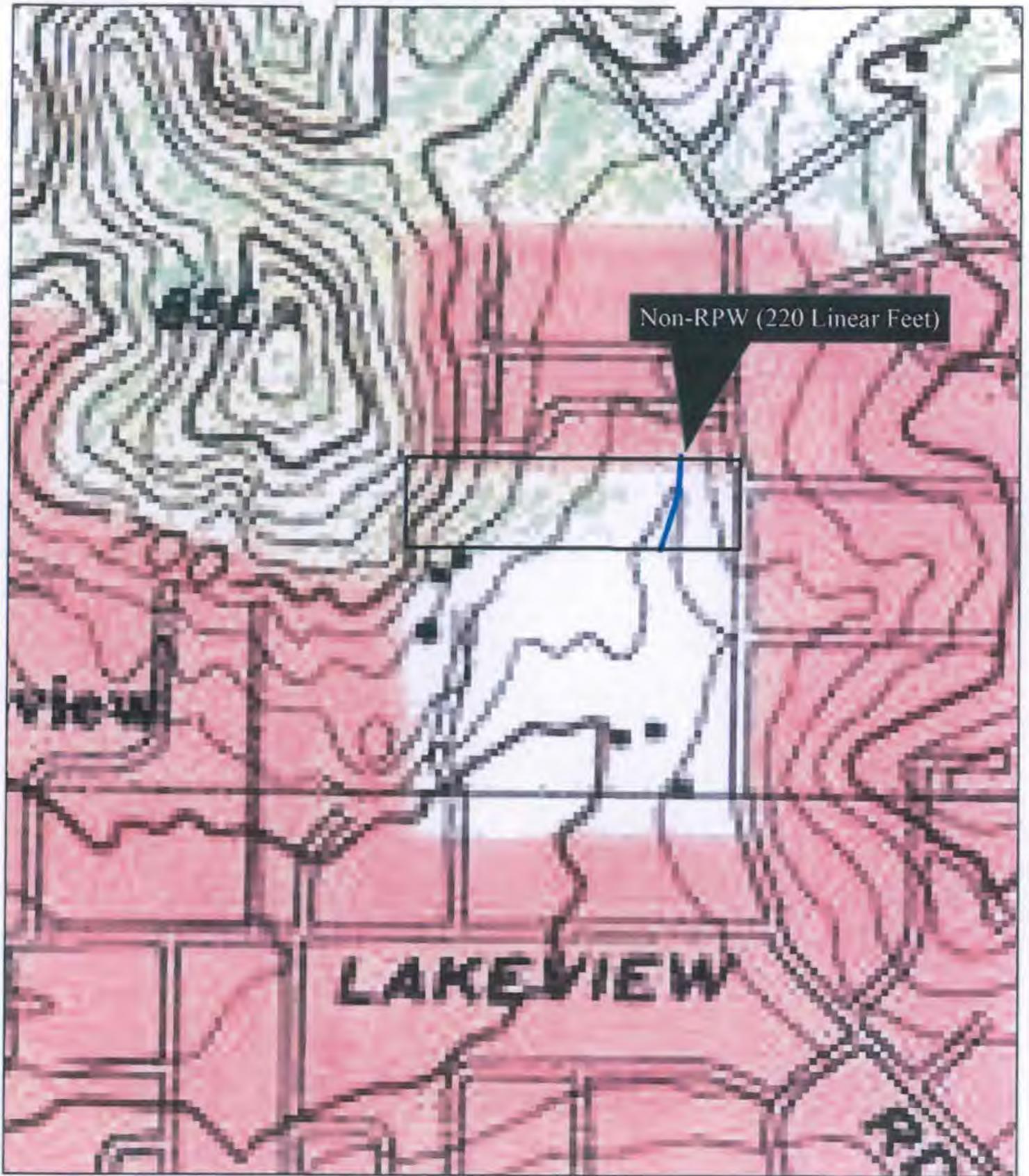




Source: USGS 7.5' El Cajon Quadrangle

**Figure 2**  
**Project Location**  
**Swaim Subdivision TM5356**



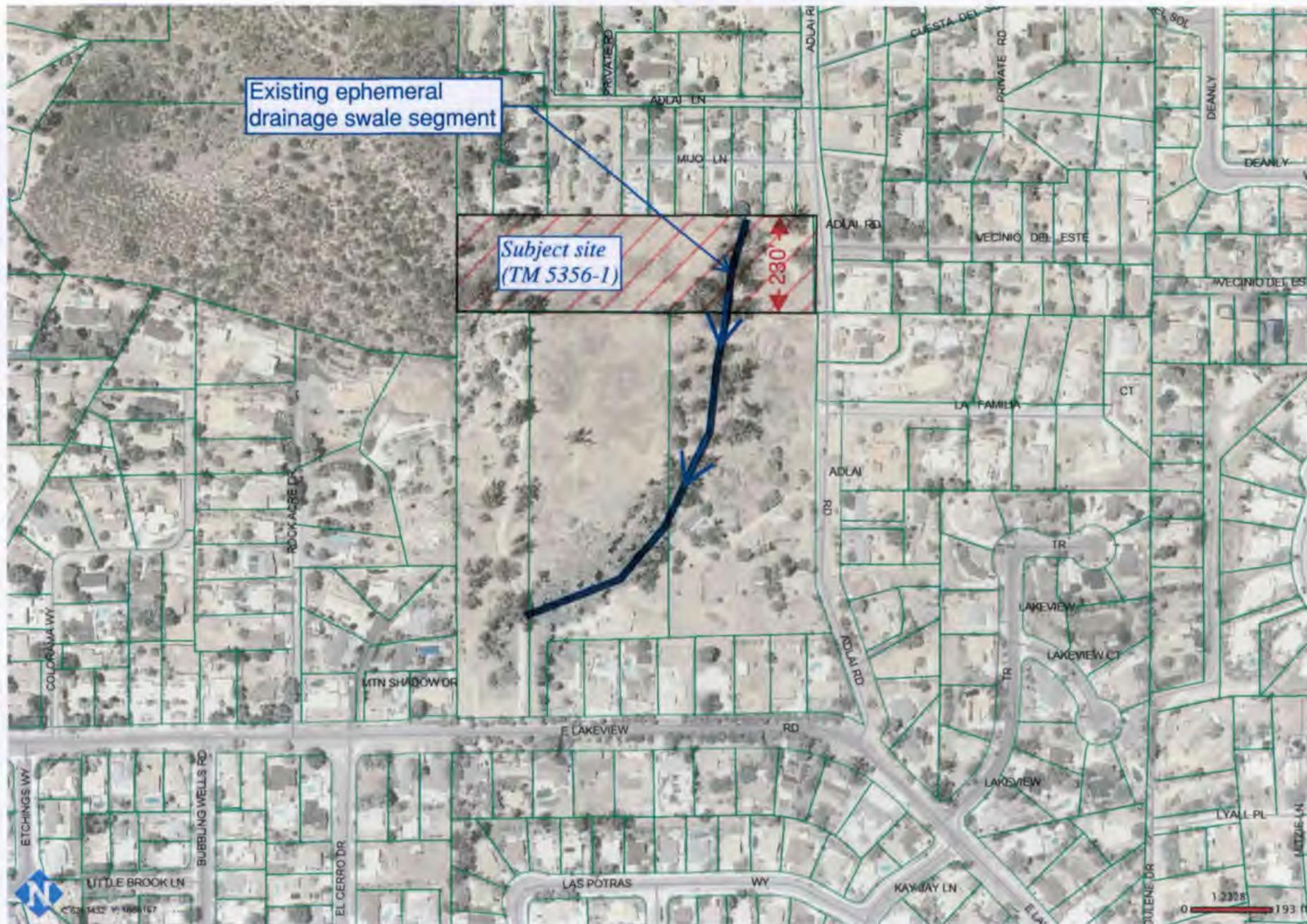


Source: USGS 7.5' El Cajon Quadrangle

**Figure 3**  
**Drainage Location**  
**Swaim Subdivision TM5356**



# FIGURE 5 AERIAL PHOTOGRAPH

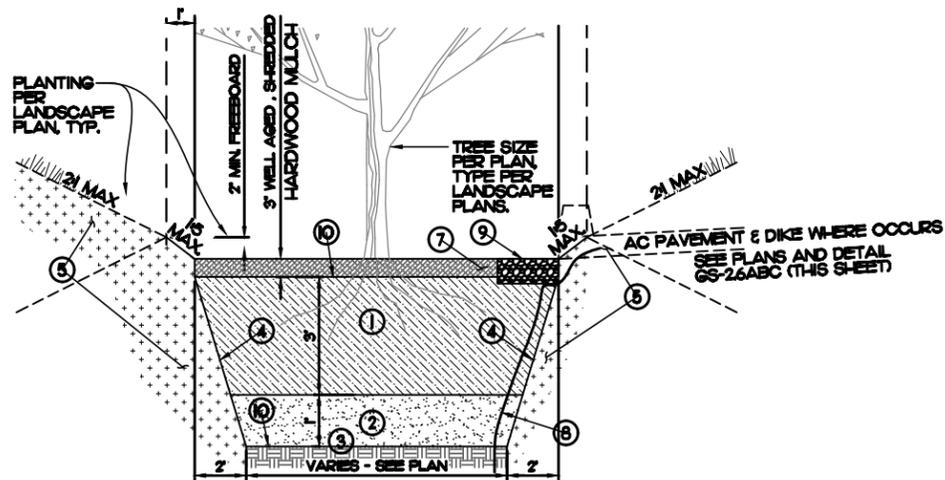
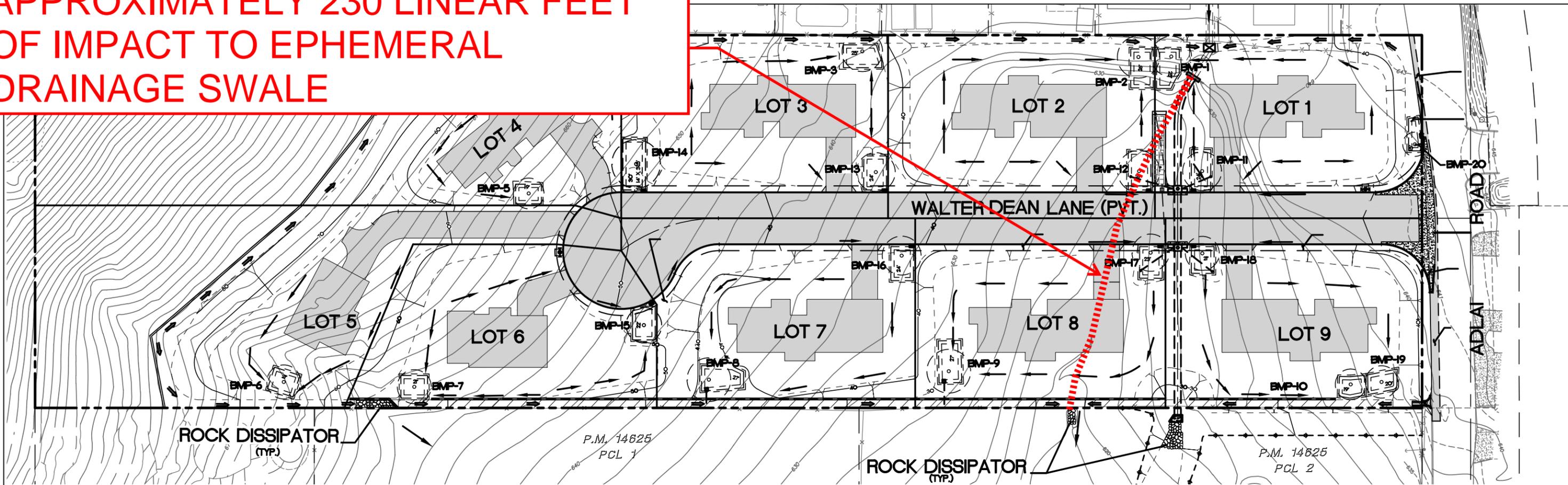


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Adlai Road Subdivision TM 5356-1  
Certification No. R9-2014-0136

**ATTACHMENT 3  
PROJECT SITE PLANS**

- 1) Figure 6 – Impact Areas**
- 2) Plans for the Improvement of Walter Dean 5356 Private Road**
- 3) Grading Plans for Adlai Road Subdivision (TN 5356)**

**APPROXIMATELY 230 LINEAR FEET  
OF IMPACT TO EPHEMERAL  
DRAINAGE SWALE**



- SECTION**
- ① 36" MIN. STRUCTURAL SOIL
  - ② 12" SAND FILTER LAYER
  - ③ EXISTING UNCOMPACTED SOIL OR COMPACTED FILL WITH MIN. 0.5"/HOUR INFILTRATION RATE
  - ④ EXCAVATED SLOPE 0.5:1
  - ⑤ COMPACTED SOIL TO GEOTECHNICAL ENGINEER SPECIFICATIONS
  - ⑥ NOT USED.
  - ⑦ 3" MIN. MULCH LAYER.
  - ⑧ IMPERMEABLE LINER ON ROADSIDE ROOT BARRIER PER RSD L-6.
  - ⑨ SPLASH PAD (WHERE OCCURS) SEE GS-26BAC (SHEET 3).
  - ⑩ TOP/BOTTOM CALLED ON PLANS.
- TYPICAL TREE WELL SECTION (SD-A)**  
NO SCALE  
SEE PLAN VIEW, THIS SHEET

**NOTES**

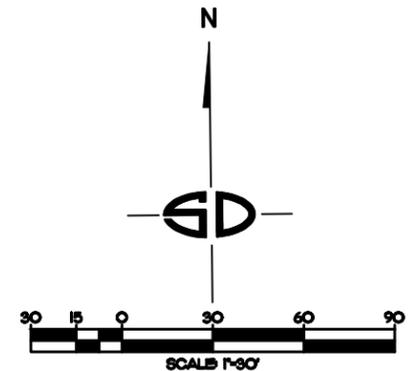
1. SITE IS LOCATED WITHIN OCEANSIDE RAIN GAUGE BASIN.
2. HYDROLOGIC SOIL GROUP C & D.
3. SITE HAS MODERATE SLOPE.
4. CHANNEL ASSESSMENT WAS NOT CONDUCTED. LOW FLOW THRESHOLD ASSUMED 10% OF Q<sub>2</sub>(0.1Q<sub>2</sub>).
5. PROPOSED SITE DESIGN BMP ARE TREE WELLS (SD-A).
6. COUNTY OF SAN DIEGO'S 85TH PERCENTILE ISOPLUVIAL MAP WAS UTILIZED TO DETERMINE DESIGN CAPTURE VOLUME, WHILE SIZING FACTORS FOR HYDROMODIFICATION FLOW CONTROL. SITE DESIGN BMPs (TREE WELLS PER SD-A) WERE UTILIZED TO COMPLY WITH COMBINED POLLUTANT CONTROL AND FLOW CONTROL REQUIREMENTS.
7. NO GROUNDWATER WAS ENCOUNTERED IN SITE EXPLORATION TEST PITS (3'-8' BELOW SURFACE).
8. CRITICAL COARSE SEDIMENT YIELD AREAS (CCSYAS) WERE NOT IDENTIFIED ONSITE OR UPSTREAM (OFFSITE) OF THE SITE.
9. TREE WELL BMP'S SHALL BE MAINTAINED BY THE INDIVIDUAL HOMEOWNERS.
10. EXISTING NATURAL HYDROLOGIC FEATURES: WATER COURSES.

**LEGEND**

- DIRECTION OF FLOW
- IMPERVIOUS SURFACE
- CONCRETE DRAINAGE DITCH

**POST - CONSTRUCTION BMP LEGEND**

- TREE WELL BMP #X



**FIGURE 6 : IMPACT AREAS.**

6

6 SHEETS

IMPACT AREAS

**ADLAI ROAD SUBDIVISION (TM 5356)  
POR. LOT 14 "S" TRACT, RANCHO EL CAJON**

CALIFORNIA COORDINATE INDEX 246-1797

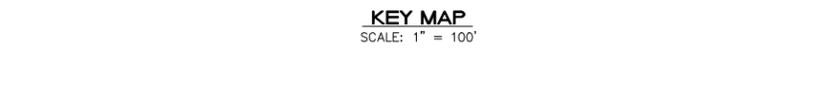
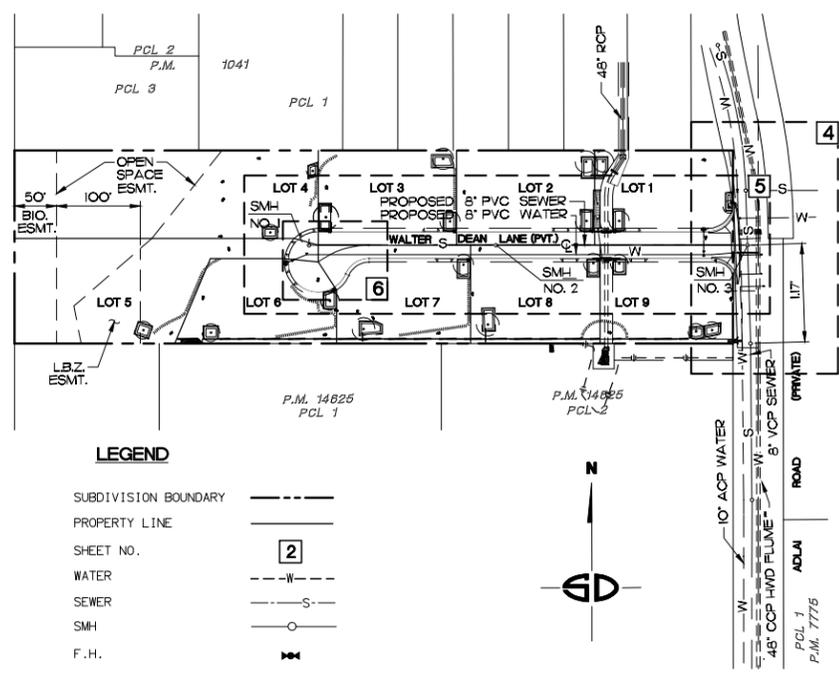


**Snipes-Dye associates**  
*civil engineers and land surveyors*

8348 CENTER DRIVE, STE. G, LA MESA, CA 91942  
TELEPHONE (619) 697-9234 FAX (619) 460-2033

**GENERAL NOTES**

- A PERMIT SHALL BE OBTAINED FROM THE COUNTY DEPARTMENT OF PUBLIC WORKS FOR ANY WORK WITHIN THE STREET RIGHT-OF-WAY.
- THE STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH SAN DIEGO COUNTY STANDARDS AND AS APPROVED BY THE MATERIALS LABORATORY.
- APPROVAL OF THESE IMPROVEMENT PLANS AS SHOWN DOES NOT CONSTITUTE APPROVAL OF ANY CONSTRUCTION OUTSIDE THE PROJECT BOUNDARY.
- ALL UNDERGROUND UTILITIES WITHIN THE STREET RIGHT-OF-WAY SHALL BE CONSTRUCTED, CONNECTED AND TESTED PRIOR TO CONSTRUCTION OF BERM, CURB, CROSS GUTTER AND PAVING.
- THE EXISTENCE AND LOCATION OF EXISTING UNDERGROUND FACILITIES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO OTHER EXISTING FACILITIES EXCEPT AS SHOWN ON THESE PLANS. HOWEVER, THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT ANY EXISTING FACILITY SHOWN HEREON AND ANY OTHER WHICH IS NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
- LOCATION AND ELEVATION OF IMPROVEMENTS TO BE MET BY WORK TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR WILL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
- THE CONTRACTOR SHALL NOTIFY THE SAN DIEGO GAS & ELECTRIC COMPANY PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND SHALL COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES.  
ALL ELECTRICAL AND GAS SERVICES WITHIN THIS PROJECT ARE "UNDERGROUND INSTALLATIONS" FOR LOCATION OF ELECTRICAL CABLES AND GAS PIPING AND APPURTENANCES CONTACT THE SAN DIEGO GAS & ELECTRIC COMPANY.  
TELEPHONE: 1-800-227-2600 OR 811
- THE CONTRACTOR SHALL NOTIFY THE AT&T TELEPHONE COMPANY PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND SHALL COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES.  
NOTICE: ALL TELEPHONE SERVICES WITHIN THIS PROJECT BOUNDARY ARE "UNDERGROUND INSTALLATIONS". FOR LOCATION OF CABLES AND APPURTENANCES CONTACT THE AT&T TELEPHONE COMPANY.  
TELEPHONE: 1-800-227-2600 OR 811
- THE CONTRACTOR SHALL NOTIFY THE HELIX WATER DISTRICT PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND SHALL COORDINATE HIS WORK WITH DISTRICT REPRESENTATIVES.  
NOTICE: ALL WATER SERVICES WITHIN THIS PROJECT BOUNDARY ARE "UNDERGROUND INSTALLATIONS". FOR LOCATION OF PIPES AND APPURTENANCES CONTACT HELIX WATER DISTRICT.  
TELEPHONE: 1-800-227-2600 OR 811.
- IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO CONTACT THE UTILITY AGENCIES, ADVISE THEM OF THE PROPOSED IMPROVEMENTS, AND BEAR THE COST OF RELOCATIONS, IF NEEDED.
- ALL TELEVISION SERVICES WITHIN THIS PROJECT ARE "UNDERGROUND INSTALLATIONS" FOR LOCATION OF CABLES AND APPURTENANCES CONTACT: 1-800-227-2600 OR 811.
- POWER SOURCES AND RUNS SERVING STREET LIGHTS SHALL BE SHOWN ON THE "RECORD PLAN" IMPROVEMENT DRAWINGS. ALL POWER SOURCES SHALL BE LOCATED WITHIN THE DEDICATED RIGHT-OF-WAY, OR WITHIN EASEMENTS DEDICATED TO THE COUNTY OF SAN DIEGO.
- NO PAVING SHALL BE DONE UNTIL EXISTING POWER POLES ARE RELOCATED OUTSIDE THE AREAS TO BE PAVED.
- PRIVATE ROAD IMPROVEMENTS SHOWN HEREON ARE FOR INFORMATION ONLY. COUNTY OFFICIALS SIGNATURE HEREON DOES NOT CONSTITUTE APPROVAL OR RESPONSIBILITY OF ANY KIND FOR THE DESIGN OR CONSTRUCTION OF THESE PRIVATE IMPROVEMENTS. (IF APPLICABLE)
- ALL SIGNS TO BE ALUMINUM WITH 3M HIGH INTENSITY TYPE REFLECTIVE FACE OR EQUIVALENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY STRIPING, PAVEMENT MARKERS, OR LEGENDS OBLITERATED BY THE CONSTRUCTION OF THIS PROJECT.
- ALL NEW STRIPING AND SANDBLASTING OF REDUNDANT STRIPING SHALL BE DONE BY CONTRACTOR.
- ALL CUT AND FILL SLOPES THREE FEET (3') HIGH CREATED BY GRADING FOR STREETS AND DRIVEWAYS SHALL BE HYDROSEEDED WITH SAN DIEGO COUNTY APPROVED HYDROSEED MIXTURE. HYDROSEEDED SLOPES SHALL BE IRRIGATED BY WATER TRUCK UNTIL THE MIXTURE GERMINATES AND 70% GROWTH IS ESTABLISHED.
- ASPHALT CONCRETE SURFACING MATERIAL SHALL BE HAND RAKED AND COMPACTED TO FORM SMOOTH TAPERED CONNECTIONS ALONG ALL EDGES INCLUDING THOSE EDGES ADJACENT TO SOIL. THE EDGES OF ASPHALT CONCRETE SHALL BE HAND-RAKED AT 45 DEGREES OR FLATTER, SO AS TO PROVIDE A SMOOTH TRANSITION NEXT TO EXISTING SOIL, INCLUDING THOSE AREAS SCHEDULED FOR SHOULDER BACKING. THE ABOVE SHALL BE DONE TO THE SATISFACTION OF THE DIRECTOR OF PUBLIC WORKS.
- CONTRACTOR SHALL APPLY FOR A TRAFFIC CONTROL PERMIT TWO WEEKS PRIOR TO COMMENCEMENT OF WORK. NO WORK SHALL COMMENCE UNTIL ISSUANCE OF SAID PERMIT. FOR INFORMATION CALL (858) 694-3863. THE TRAFFIC CONTROL PERMIT SHALL REQUIRE SPECIFICATIONS FOR THE INFORMATIONAL SIGNS.
- STREET IMPROVEMENTS AND DRAINAGE STRUCTURES SHALL BE CONSTRUCTED ACCORDING TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND THE COUNTY OF SAN DIEGO SPECIAL PROVISIONS AND SPECIFICATIONS FOR THE IMPROVEMENT OF NEW STREETS.
- IF EXISTING A.C. IS DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL REMOVE AND REPLACE EXISTING PAVEMENT.



STORMWATER TREATMENT CONTROL, L.I.D. AND HYDROMODIFICATION (HMP) BMP'S			
DESCRIPTION/TYPE	SHEET MAINT. CAT.	BMP-ID#	MAINTENANCE AGREEMENT REF. DOC. NO.
SEE GRADING PLANS PDS 2014-LDRMJ-00018			

BMP'S APPROVED AS PART OF STORMWATER QUALITY MANAGEMENT PLAN (SWQMP) DATED AUGUST 24th, 2017 ON FILE WITH DPW. ANY CHANGES TO THE ABOVE BMP'S WILL REQUIRE SWQMP REVISION AND PLAN CHANGE APPROVALS.

**SOLAR ACCESS STATEMENT:**  
THIS IS A SOLAR SUBDIVISION AS REQUIRED BY SECTION 81.401(M) OF THE SUBDIVISION ORDINANCE. ALL LOTS HAVE AT LEAST 100 SQUARE FEET OF UNOBSTRUCTED ACCESS TO SUNLIGHT ON THE BUILDABLE PORTION OF THE LOT.

BY: William A. Snipes DATE 01/29/18  
WILLIAM A. SNIPES, R.C.E. 50477  
EXP. DATE: 06-30-19



**MONUMENTATION NOTE**  
THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND PROTECT ALL SURVEY CONTROL MONUMENTS, WHETHER SHOWN ON THESE PLANS OR NOT, WITHIN THE PROJECT AREA. ALL SURVEY MONUMENTS, WHETHER FOR HORIZONTAL OR VERTICAL CONTROL, THAT WILL OR COULD BE DISTURBED OR REMOVED BY THE CONTRACTOR, OR HIS EMPLOYEES, AGENTS, SUBCONTRACTORS, CONSULTANT OR LICENSEES, SHALL BE LOCATED PRIOR TO BEING DISTURBED OR REMOVED AND REPLACED OR RESET, IN ACCORDANCE WITH THE CALIFORNIA BUSINESS & PROFESSIONS CODE SECTION 8771(b), AT THE CONTRACTOR'S SOLE EXPENSE, UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING IN THE STATE OF CALIFORNIA. IN ADDITION, A RECORD OF SURVEY OR CORNER RECORD, AS APPLICABLE, SHALL BE FILED AND/OR RECORDED, IN ACCORDANCE WITH THE PROVISIONS OF SAID CODE.

<b>HELIX WATER DISTRICT AS-BUILT</b> WO: _____ PLAT(S): _____ CONTRACTOR: _____ PIPE DIA./MAT/CLASS: _____ INSPECTOR: _____ DATE: _____ AS CONSTRUCTED BY: _____ DATE: _____ REFERENCES: _____ PRESSURE SYSTEM: THOMAS GUIDE	<b>PDS ENVIRONMENTAL REVIEW</b> APPROVED FOR COMPLIANCE WITH ENVIRONMENTAL REVIEW APPROVED BY: _____ DATE: _____
---	---

**BMP STENCIL PLACEMENT NOTES**

- ALL STORM DRAIN INLETS AND CATCH BASINS WITHIN THE PROJECT AREA SHALL HAVE A STENCIL OR TILE PLACED WITH PROHIBITIVE LANGUAGE (SUCH AS: "NO DUMPING-1 LIVE IN LOS COCHES CREEK") AND/OR GRAPHICAL ICONS TO DISCOURAGE ILLEGAL DUMPING.
- SIGNS AND PROHIBITIVE LANGUAGE AND/OR GRAPHICAL ICONS, WHICH PROHIBIT ILLEGAL DUMPING, MUST BE POSTED AT PUBLIC ACCESS POINTS ALONG CHANNELS AND CREEKS WITHIN THE PROJECT AREA.
- LEGIBILITY OF STENCILS, TILES AND SIGNS MUST BE MAINTAINED AND TILES MUST BE PLACED FLUSH WITH THE TOP OF CONCRETE TO REDUCE TRIPPING BY PEDESTRIANS.

**NOTICE**

THE ISSUANCE OF THIS PERMIT/APPROVAL BY THE COUNTY OF SAN DIEGO DOES NOT AUTHORIZE THE APPLICANT FOR SAID PERMIT/APPROVAL TO VIOLATE AND FEDERAL, STATE, OR COUNTY LAWS, ORDINANCES, REGULATIONS, OR POLICIES INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT AND ANY AMENDMENTS THERETO.

**OWNER'S CERTIFICATE**

IT IS AGREED THAT FIELD CONDITIONS MAY REQUIRE CHANGES TO THESE PLANS.  
I HEREBY AGREE THAT THE OWNER (DEVELOPER) SHALL HAVE A REGISTERED CIVIL ENGINEER MAKE SUCH CHANGES, ALTERATIONS, OR ADDITIONS TO THESE PLANS WHICH THE DIRECTOR OF PUBLIC WORK DETERMINES TO BE NECESSARY AND DESIRABLE FOR THE PROPER COMPLETION OF THE IMPROVEMENTS. PROVIDED, HOWEVER, SUCH CHANGES, ALTERATIONS, OR ADDITIONS SHALL NOT EXCEED 10 PERCENT (10%) OF THE ORIGINAL ESTIMATED COST OF THE IMPROVEMENTS WITHOUT THE WRITTEN CONSENT OF THE SURETY COMPANY.

I FURTHER AGREE TO COMMENCE WORK ON ANY IMPROVEMENTS SHOWN ON THESE PLANS WITHIN 60 DAYS AFTER ISSUANCE OF THE CONSTRUCTION PERMIT AND TO PURSUE SUCH WORK ACTIVELY ON EVERY NORMAL WORKING DAY UNTIL COMPLETED, IRRESPECTIVE AND INDEPENDENT OF ANY OTHER WORK ASSOCIATED WITH THIS PROJECT OR UNDER MY CONTROL.

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
RONNIE SWAIM  
P.O. BOX 21066  
EL CAJON, CA 92021  
(619) 454-5797

**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 COUNTY OF SAN DIEGO AND THE HELIX WATER DISTRICT IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

BY: William A. Snipes DATE 01/29/18  
WILLIAM A. SNIPES, R.C.E. 50477  
EXP. DATE: 06-30-19

THE REQUIRED OFFSITE ROAD IMPROVEMENTS CONSISTING OF IMPROVING ADLAI ROAD TO A GRADED WIDTH OF 32 FEET WITH 24 FEET OF A.C. PAVEMENT OVER APPROVED BASE PER CONDITION OF APPROVAL ITEM C.2.B. OF TM 5356 HAS BEEN SATISFIED BY THE CONSTRUCTION OF THE IMPROVEMENTS PER TM 5186-1 AND TM 5009-1. THESE IMPROVEMENTS HAVE BEEN INSPECTED BY THE COUNTY, AND WERE FOUND TO SATISFY THE CONDITIONS OF TM 5186-1 AND TM 5009-1 AND COUNTY STANDARDS FOR PRIVATE STREETS SECTION 3.1(c) ON SEPTEMBER 16, 2005.

BY: William A. Snipes DATE 01/29/18  
WILLIAM A. SNIPES, R.C.E. 50477  
EXP. DATE 06-30-19

I CERTIFY THAT THE PRIVATE ROAD IMPROVEMENTS AS SHOWN ON THIS PLAN SATISFIES THE REQUIREMENTS AS STATED IN THE CONDITIONS OF APPROVAL FOR TM 5356 AND THE STANDARDS FOR PRIVATE STREETS SECTION 3.1(c).

WILLIAM A. SNIPES R.C.E. 50477 DATE \_\_\_\_\_  
EXP. DATE 06-30-19

INSPECTION BY: X ENGINEER OF WORK SECURITY REQUIRED X YES  
COUNTY \_\_\_\_\_ NO

COUNTY NOT LIABLE FOR THE DESIGN IN ANY WAY.  
REVIEWED FOR CLARITY ONLY:

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
FOR WILLIAM P. MORGAN, COUNTY ENGINEER

**SHEET INDEX**

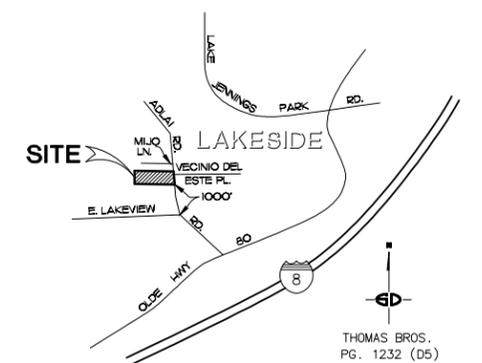
- TITLE/NOTES SHEET
- ADDITIONAL NOTES SHEET
- SEWER NOTES SHEET
- ADLAI ROAD (PVT.) IMPROVEMENT PLAN
- WALTER DEAN LANE (PVT.) IMPROVEMENT PLANS
- WALTER DEAN LANE CUL DE SAC (PVT.) IMPROVEMENT PLANS

**WORK TO BE DONE**

IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS. THE CURRENT SAN DIEGO COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR IMPROVEMENT OF SUBDIVISION STREETS AND STANDARD REFERENCE DRAWINGS. THE WATER FACILITIES SHOWN IN THE LEGEND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS AND THE CURRENT WATER AGENCIES STANDARDS (WAS).

**LEGEND**

IMPROVEMENT	STD. DWG.	SYMBOL	QUANTITY
EXISTING CONTOUR		---	1752
EXISTING ELEVATION		---	x1752.3
PROPOSED CONTOUR		---	1752
PROPOSED ELEVATION		---	1752.00
A.C. PAVEMENT AND BASE (SEE GENERAL NOTE NO. 2)		---	
PROPERTY BOUNDARY		---	
6" PCC CURB	G-1	---	
6" A.C. DIKE (TYPE 'A')	G-5	---	
A.C. DRIVEWAY	MOD.DS-7	---	
TYPE B CURB INLET	D-2, D-11	---	
TYPE F CATCH BASIN	D-7, D-11	---	
48" RCP STORM DRAIN (1350-D)		---	
ROCK DISSIPATOR	D-40	---	
STREET NAME SIGN	DS-13	---	
8" CL305 PVC WATER MAIN	WP-01, WP-02	---	534 L.F.
1" COPPER WATER SERVICE WITH PASSIVE PLUG/FLOW THROUGH BACKFLOW PROTECTION.	WS-01, WS-03, WC-17, RFS-3	---	9 EA.
6" FIRE HYDRANT ASSEMBLY (1-4" & 2-2 1/2" PORTS)	WF-01, WF-04	---	2 EA.
GATE VALVE	WV-01, WV-03, WV-04	---	
CONCRETE THRUST BLOCK	WT-01	---	
8" SEWER MAIN	SP-02	---	
SEWER MANHOLE	SM-01, SM-03, SM-04, SM-05	---	
4" PVC SEWER LATERAL	SP-01, SS-01, SS-02, SS-03, SS-04	---	
PROPOSED TRENCH REPAIR	SP-03, D-60, DETAIL SHEET 2	---	
PROPOSED SEWER BACKWATER VALVE	SDS 104, DETAIL 5, SHT. 5	---	
PROPOSED CROSS GUTTER	G-12	---	
6" AC DIKE CUT	MOD. GS-2.6b, DETAIL SHEET 3	---	
AC SPILL WAY	D22	---	
ABANDON 1" WATER SERVICE BY HWD		---	1 EA.



**NOTE**  
Construction contractor agrees that in accordance with generally accepted construction practices, construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property, that this requirement shall be made to apply continuously and not be limited to normal working hours, and construction contractor further agrees to defend, indemnify and hold design professional 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 design professional.

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

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	<b>SITE ADDRESS</b> 9288 ADLAI ROAD LAKESIDE, CA. 92040	<b>SAN DIEGO COUNTY SANITATION DISTRICT</b> LAKESIDE SERVICE AREA APPROVED BY: _____ DATE _____ VALID TWO YEARS FROM DATE _____	<b>REFERENCE DRAWINGS</b> TM 5186-1 TM 5009-1 TM 14601 HWD W.O. 5844 HWD W.O. 9211 HWD W.O. 9509 L-14448	<b>COUNTY APPROVED CHANGES</b> No. Description Approved by Date	<b>BENCH MARK</b> DESCRIPTION: GPS STATION "VS PM1" LOCATION: STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET RECORD FROM: SAN DIEGO COUNTY VERTICAL CONTROL ELEVATION: 399.08' DATUM: NAVD29
	<b>ASSESSOR'S PARCEL NUMBER</b> 398-390-19				<b>PRIVATE CONTRACT</b> SHEET 1 COUNTY OF SAN DIEGO PUBLIC WORKS DEPARTMENT SHEETS 6 PLANS FOR THE IMPROVEMENT OF: <b>WALTER DEAN LANE</b> TM 5356 PRIVATE ROAD (PER 3.1.C) CALIFORNIA COORDINATE INDEX 246-1797 Recommended for approval: N/A SUBDIVISION ENGINEER Approved For: WILLIAM P. MORGAN PRIVATE - SEE LEFT FOR COUNTY ENGINEER Engineer of work: <u>William A. Snipes</u> 01/29/18 IMPROVEMENT PLAN NO: PDS2014-LDMJP-00013 WILLIAM A. SNIPES R.C.E. 50477

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**SEWER NOTES**

UNLESS OTHERWISE INDICATED HEREIN, ALL WORK SHALL BE DONE IN ACCORDANCE WITH:

- A. THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) LATEST APPROVED EDITION.
- B. THE REGIONAL SUPPLEMENTAL AMENDMENTS TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST APPROVED EDITION.
- C. THE SAN DIEGO REGIONAL STANDARD DRAWINGS (SDRSD) AND THE FOLLOWING PROVISIONS:

- 1. TRENCH WIDTH SHALL BE PER SDRSD NO. SP-02, FOR PIPE UP TO 15 INCHES, UNLESS OTHERWISE NOTED. FOR PIPE 15 INCHES AND OVER, TRENCH WIDTH SHALL BE PER SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 306-3.
- 2. PIPE AND BEDDING CONDITIONS INCLUDING FILTER FABRIC WRAP "BURRITO WRAP" WITH 12 INCH AN OVERLAP, SHALL BE PER SDRSD SP-02, FOR PIPE UP TO 18 INCHES. FOR PIPE 18 INCHES AND ABOVE, REFER TO SSPWC SECTION 306-7.7. WHENEVER THE EXCAVATED MATERIAL IS NOT SUITABLE FOR BACKFILL, THE CONTRACTOR SHALL REMOVE THIS MATERIAL AND ARRANGE FOR AND FURNISH SUITABLE IMPORTED BACKFILL MATERIAL WHICH IS CAPABLE OF ATTAINING THE REQUIRED RELATIVE DENSITY, IMPORTED BACKFILL MATERIAL, OR OTHER BACKFILL MATERIAL SHALL BE APPROVED BY THE ENGINEER, AND PER SECTION 306-12 OF THE "GREENBOOK" STANDARD SPECIFICATIONS.
- 3. PVC PIPE BEDDING FROM THE BOTTOM OF PIPE TO 12 INCHES MINIMUM ABOVE THE PIPE SHALL BE 3/4" INCH CRUSHED ROCK. FILTER FABRIC WRAP "BURRITO WRAP" IS REQUIRED WHERE CRUSHED ROCK ENVELOPE IS USED.
- 4. AFTER COMPLETION OF PIPE LAYING, ALL MAIN LINE SEWERS, SERVICE LATERALS AND STRUCTURES SHALL BE TESTED IN THE PRESENCE OF THE INSPECTOR. AIR PRESSURE TEST, PER SSPWC SECTION 306-7.8.2.4, AND MANDREL TEST, PER SECTION 306-7.8.3.2 SHALL BE USED UNLESS OTHERWISE DIRECTED BY THE COUNTY INSPECTOR.

FINAL ACCEPTANCE OF SEWER LINES WILL BE SUBJECT TO INTERNAL CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION. IT WILL BE THE PERMITTEE'S RESPONSIBILITY TO PAY FOR THE COST OF THIS WORK.

A. CCTV INSPECTION PROCEDURES:

A-1. VIDEO INSPECTION SHALL SHOW WITH HIGH RESOLUTION OPERATIONAL AND STRUCTURAL DEFECTS E.G., INFLOWS, SAGS, OFFSET JOINTS, CRACKS, ROUGHNESS, "FINS" OR FOLDS IN THE PIPELINES, COMPLETE WITH AUDIO COMMENTARY AND INSPECTION LOG.

A-2. THE SANITATION DISTRICT ENGINEER AND COUNTY INSPECTOR SHALL BE NOTIFIED A MINIMUM OF 2 WORKING DAYS IN ADVANCE OF VIDEO INSPECTING.

A-3. VIDEO INSPECTION SHALL BE PERFORMED ONE PIPE REACH (E.G., MAN-HOLE TO MAN-HOLE) AT A TIME.

A-4. THE CONTRACTOR SHALL VIDEO INSPECT THE PIPELINE WITH MAXIMUM FLOW DIVERTED (IF REQUIRED) FROM THE PIPELINE. THE PIPE REACH BEING INSPECTED SHALL BE ISOLATED FROM THE REMAINDER OF THE PIPELINES WITH THE UPSTREAM SEWAGE FLOW BYPASSED (IF REQUIRED). IN THE EVENT THAT THE EXISTING FLOW IS INTERFERING WITH THE VIDEO OPERATION, A BYPASS SHALL BE PERFORMED BY THE CONTRACTOR TO LOWER THE FLOW VOLUME SUFFICIENTLY TO ALLOW FOR A CLEAR VIDEO PICTURE. SUFFICIENT WATER SHALL BE SUPPLIED TO THE ISOLATED SECTION TO CAUSE DRAINAGE REACHING THE DOWNSTREAM MAN-HOLE PRIOR TO VIDEO INSPECTING. IF EXISTING FLOWS ARE HIGH, PRE-CONSTRUCTION VIDEO INSPECTION CAN BE DONE WITH PARTIAL FLOW. DEPTH OF THE FLOW SHALL NOT EXCEED:

- A. PIPES 6" - 10" - 20% OF THE PIPE DIAMETER.
- B. PIPES 12" - 24" - 25% OF THE PIPE DIAMETER.
- C. PIPES 27" AND UP - 30% OF THE PIPE DIAMETER.

A-5. THE CAMERA SHALL BE MOVED THROUGH THE PIPELINE IN A DOWNSTREAM DIRECTION AT A UNIFORM RATE BY MEANS OF POWER CABLE WINCHES OR SELF-PROPELLED TRACTORS AT EACH MAN-HOLE STOPPING AND ROTATING THE CAMERA HEAD AT EACH LATERAL CONNECTION, DEFECT, OR BOTH TO ALLOW FOR ADEQUATE EVALUATION. THE CONTRACTOR SHALL STOP WHEN NECESSARY TO ENSURE PROPER DOCUMENTATION OF THE PIPE CONDITION, BUT IN NO CASE SHALL THE CAMERA BE PULLED AT A SPEED GREATER THAN 30' PER MINUTE. A CLEAR PICTURE SHALL BE PROVIDED LOOKING INTO EACH SERVICE CONNECTION, BOTH PRE AND POST VIDEO INSPECTIONS SHALL BE SUBMITTED TO THE ENGINEER.

A-6. MEASUREMENT FOR LOCATION OF DEFECTS SHALL BE ABOVE GROUND BY MEANS OF A MEASURING DEVICE. FOOTAGES SHOWN IN THE DIGITAL FILES SHALL COINCIDE WITH HORIZONTAL LENGTHS FROM STATIONING AS SHOWN ON THE PLANS. FOOTAGE MEASUREMENTS SHALL BEGIN PERMISSION IS GIVEN BY THE ENGINEER TO DO OTHERWISE.

A-7. THE CONTRACTOR SHALL CLEAN THE SEWER MAINS PRIOR TO VIDEO INSPECTING AS NECESSARY TO ADEQUATELY PERFORM THE VIDEO RECORDING OPERATIONS. IF THE CAMERA WILL NOT PASS THROUGH THE ENTIRE PIPELINE SECTION, THE CONTRACTOR SHALL RESET THE EQUIPMENT AT THE DOWNSTREAM MAN-HOLE AND ATTEMPT TO INSPECT THE SECTION OF PIPE FROM THE OPPOSITE DIRECTION. IF THE CAMERA FAILS TO PASS THROUGH THE ENTIRE SECTION, IT SHALL BE ASSUMED THAT AN OBSTRUCTION EXISTS. EFFORTS TO VIDEO RECORD THAT SECTION OF PIPE SHALL BE TEMPORARILY SUSPENDED AND THE CONTRACTOR SHALL NOTIFY THE ENGINEER. UPON REMOVAL OF THE OBSTRUCTION, THE CONTRACTOR SHALL COMPLETE THE INSPECTION.

A-8. IF AN OBSTRUCTION IS ENCOUNTERED DURING THE POST-CONSTRUCTION VIDEO INSPECTION, THE CONTRACTOR SHALL REMOVE THE OBSTRUCTION BY EXCAVATION, REPAIR, OR OTHER MEANS APPROVED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE, IN ORDER THAT VIDEO INSPECTION MAY CONTINUE.

A-9. THE SYSTEM USED TO MOVE THE CAMERA THROUGH THE PIPE SHALL NOT OBSTRUCT THE CAMERA'S VIEW. THE CONTRACTOR SHALL CALIBRATE THE MEASURING DEVICE EACH DAY WITH A KNOWN DISTANCE TO THE SATISFACTION OF THE ENGINEER PRIOR TO STARTING THE INSPECTION AND VIDEO RECORDING PROCESS.

A-10. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S APPROVAL FOR ANY ADDITIONAL POINT REPAIRS.

B. TOLERANCES ENCOUNTERED FOLLOWING INSPECTION SHALL BE ADDRESSED AS FOLLOWS:

B-1. FOR NEW UNDERGROUND SEWER INSTALLATIONS, THE MAXIMUM OPERATIONAL TOLERANCE FOR SAG SHALL BE 1/2". WHEN VIDEO RECORDED INSPECTION IS USED TO CHECK FOR SAG, A CALIBRATED 1/4" DIAMETER STEEL "BAR/SAG GAGE" OR APPROVED EQUAL DEVICE, MOUNTED IN FRONT OF THE CAMERA, SHALL BE USED TO MEASURE THE DEPTH OF SAG.

B-2. IF THE ENGINEER DETERMINES THAT THE DEFICIENCIES OR SAGS ARE NON-REPAIRABLE IN PLACE, THE AFFECTED PORTION(S) SHALL BE RECONSTRUCTED.

5. THE CONSTRUCTION OF RCC SEWER MAN-HOLE PER SDRSD SM-01 OR SM-02 POURED-IN-PLACE MAN-HOLE BASES SHALL BE A MONOLITHIC POLYMER FINISHED COMPLETE AT TIME OF POUR. EACH NEW MAN-HOLE SHALL BE VACUUM TESTED PRIOR TO BACK FILLING. THE TEST SHALL BE CONDUCTED IMMEDIATELY AFTER PLACEMENT OF PRE-CAST UNITS WITH POLYMER MORTAR/BUTYL SEALANT. ALL PIPES IN THE MAN-HOLE SHALL BE SECURELY PLUGGED. THE TEST HEAD SHALL BE PLACED AT THE INSIDE OF THE TOP PRE-CAST UNIT PRIOR TO THE INSTALLATION OF THE GRADE RING, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

A VACUUM OF 10 PSI SHALL BE DRAWN AND THE VACUUM PUMP SHUT OFF. WITH THE VALVE CLOSED, THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 PSI. THE MAN-HOLE SHALL PASS IF THE TIME IS GREATER THAN 75 SECONDS FOR SDRSD SM-2 AND 60 SECONDS FOR SDRSD SM-1 MAN-HOLE. IF THE MAN-HOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE WITH NO SHRINK GROUT WHILE VACUUM IS STILL BEING DRAWN. RETESTING SHALL PROCEED UNTIL A SATISFACTORY TEST IS OBTAINED.

6. THE CONSTRUCTION OF 4-INCH SEWER LATERALS SHALL BE PER SDRSD SS-01 AND SS-02. LATERALS SHALL NOT DISCHARGE DIRECTLY INTO MAN-HOLES. A CLEANOUT SHALL BE INSTALLED APPROXIMATELY 2 FEET INSIDE THE PROPERTY LINE.

7. THE CONSTRUCTION OF CUT-OFF WALLS SHALL BE PER SDRSD NO. SP-07 ON ALL SEGMENTS HAVING A SLOPE OF 20% TO 50%. CONSTRUCTION OF CONCRETE ANCHOR WALLS SHALL BE PER SP-09 (SEPTEMBER 2012).

8. ALL MAINS AND LATERALS SHALL BE CONSTRUCTED WITH 48 INCHES MINIMUM COVER, PROVIDED THAT THE INVERT OF THE LATERAL AT THE PROPERTY LINE IS ABOVE THE SOFFIT LINE OF THE SEWER MAIN.

9. THE FINAL LOCATION AND ELEVATION OF SEWER AND WATER LATERALS SHALL BE SHOWN ON ORIGINAL PLANS, PRIOR TO ACCEPTANCE FOR PUBLIC USE.

10. ALL DESIGN CHANGES OF SEWER MAINS SHALL BE APPROVED BY THE DISTRICT ENGINEER, IN WRITING, PRIOR TO ACCEPTANCE OF WORK.

11. FILL AREAS MUST BE COMPACTED TO 90% PRIOR TO PIPE INSTALLATION.

12. THE CONTRACTOR SHALL NOTIFY THE DISTRICT'S INSPECTION DEPARTMENT 48 HOURS IN ADVANCE OF BEGINNING WORK TO ARRANGE FOR INSPECTION OF THE PROJECT.

13. THE CONTRACTOR SHALL PURCHASE A PERMIT FROM THE COUNTY DEPARTMENT OF PUBLIC WORKS FOR ANY EXCAVATION WITHIN EXISTING COUNTY RIGHTS-OF-WAY.

14. CONTRACT RECORD DRAWINGS MUST BE SUBMITTED PRIOR TO FINAL ACCEPTANCE OF THE WORK. THEY MUST REFLECT POST CONSTRUCTION VERIFICATION OF PIPE LENGTHS AND INVERT ELEVATIONS.

15. THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF 1 YEAR AFTER THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER AND SHALL REPAIR OR REPLACE ANY OR ALL SUCH WORK TOGETHER WITH ANY OTHER WORK THAT MAY BE DISPLACED IN SO DOING, THAT MAY PROVE DEFECTIVE IN WORKMANSHIP AND/OR MATERIALS WITHIN THE 1-YEAR PERIOD FROM DATE OF ACCEPTANCE WITHOUT EXPENSE WHATSOEVER TO THE OWNER, ORDINARY WEAR AND TEAR, UNUSUAL ABUSE OR NEGLIGENCE EXCEPTED.

16. THE CONTRACTOR SHALL FURNISH AND INSTALL, PER SPECIFICATIONS, THE APPROPRIATE BURIED UTILITY WARNING AND IDENTIFICATION TAPE ABOVE ALL PUBLIC SEWER LINES, INCLUDING SEWER LATERALS, LOCATED IN THE PUBLIC RIGHT-OF-WAY.

17. THE CONTRACTOR MUST CALL "DIG-ALERT" OF SOUTHERN CALIFORNIA TO HAVE UNDERGROUND SERVICE UTILITIES LOCATED PRIOR TO CONSTRUCTION. THE CALL WILL BE MADE AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION. 1-800-422-4133.

18. AT ALL MAN-HOLES, THE MINIMUM FALL ACROSS MAN-HOLE SHALL BE 0.1 FEET, AT ANGLES LARGER THAN 45 DEGREES, ALLOW 0.2 FEET FALL.

19. JOINT SEALANT AND EXTERIOR WATER PROOFING (WHERE SPECIFIED)

POLYMER MORTAR SHALL BE USED TO JOIN PRE-CAST COMPONENTS ON ALL MAN-HOLES TO CREATE WATERTIGHT JOINTS TO RESIST INFILTRATION. THE MORTAR SHALL BE MIXED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, AND SHALL NOT EXCEED FIVE PARTS SAND TO ONE PART POLYMER. ACCEPTABLE JOINT SEALANT PRODUCTS SHALL BE SKIDDER 91 AND 92 HI-MOD GEL, MANUFACTURED BY SIKKA CORPORATION, 490 EPOXY PUTTY AND 498 UNDERWATER EPOXY PUTTY, MANUFACTURED BY ENGARD COATINGS, AND CS 102 BUTYL GASKETS (ROPE FORM) MANUFACTURED BY CONCRETE SEALANTS OR APPROVED EQUAL.

THE CONCRETE OR OTHER SURFACES THAT ARE TO ADHERE TO POLYMER MORTAR SHALL BE FREE FROM DUST, LOOSE AGGREGATES, OIL, GREASE OR OTHER CONTAMINANTS.

ON ALL MAN-HOLES, CONTRACTOR SHALL APPLY WATERPROOFING AGENT CONSISTING OF A COAL TAR EMULSION ON ALL EXTERIOR SURFACES. THE EMULSION SHALL BE THE MEC 46-465, OR APPROVED EQUAL. THE EMULSION SHALL BE APPLIED IN NO LESS THAN TWO COATS TO ACHIEVE A TOTAL DRY THICKNESS OF 25 MILS MINIMUM. THE EXTERIOR EMULSION COATINGS SHALL BE APPLIED PRIOR TO DELIVERY TO THE JOBSITE. IN ADDITION, A BITUMASTIC BAND 6 INCHES WIDE SHALL BE APPLIED AT ALL JOINTS ON EXTERIOR OF SUCH MAN-HOLES THAT SHALL BE WATERPROOFED. FULL COMPENSATION FOR THE WATERPROOFING OF MAN-HOLES SHALL BE AWARDED.

WHEN COMPLETED, ALL MAN-HOLES SHALL BE WATERTIGHT WITH ZERO INFILTRATION OF GROUNDWATER.

20. EPOXY LINING COATING (WHERE SPECIFIED).

SM-07 CONSTRUCTED MAN-HOLES AS IDENTIFIED ON EACH PROPOSED SEWER MAIN PROFILE: MAN-HOLE BOTTOM SHALL BE LINED WITH EPOXY. THE EPOXY PRODUCT SHALL BE RAVEN 40S MANUFACTURED BY RAVEN LINING SYSTEMS, OR APPROVED EQUAL.

THE PRIMER MATERIAL SHALL BE 100% SOLIDS, MOISTURE TOLERANT EPOXY CAPABLE OF SPRAY APPLICATION TO 5 MILS THICKNESS IN ONE CONTINUOUS COAT.

THE LINING MATERIAL SHALL BE 100% SOLID, HIGH BUILD EPOXY CAPABLE OF SPRAY APPLICATION TO 125 MILS THICKNESS IN ONE CONTINUOUS COAT. THE MATERIAL SHALL MEET THE REQUIREMENT OF THE SSPWC SECTION 210-2.3.3, "CHEMICAL RESISTANCE TEST", AND THE SSPWC SECTION 500-2.4.10, "APPLICABLE STANDARD".

ONLY WORKERS TRAINED BY, AND QUALIFIED AS INSTALLERS BY THE MANUFACTURER, SHALL BE USED ON THIS WORK. CONTRACTOR SHALL PROVIDE MANUFACTURER'S CERTIFICATIONS.

THE EPOXY LINING SHALL BE CONTINUOUS WITHOUT SEAMS, UNIFORM IN COLOR, FULLY CURED, AND FREE OF PIN-HOLES, SURFACE IMPERFECTIONS, AND BUSTERS. THE LINING MUST COMPLETELY BOND TO THE CONCRETE. THE COLOR SHALL BE LIGHT BLUE.

**TESTING OF MANHOLE**

THE CURED EPOXY LINING SHALL BE SPARK TESTED FOR PIN-HOLES AT 15,000 VOLTS MINIMUM. ALL PIN-HOLES SHALL BE REPAIRED AS SPECIFIED IN SECTION 500-2.4.5, "LINER REPAIRS" OF THE SSPWC (GREENBOOK).

**ENGINEER OF WORK**

ENGINEER OF WORK  
**Snipes-Dye associates**  
*civil engineers and land surveyors*  
 8348 CENTER DRIVE, STE. G, LA MESA, CA 91942  
 TELEPHONE (619) 697-9234 FAX (619) 460-2033  
 WILLIAM A. SNIPES R.C.E. 50477  
 EXPIRES 06-30-19



COUNTY APPROVED CHANGES			BENCH MARK		
No.	Description	Approved by	Date		
				DESCRIPTION: GPS STATION "VS PMI"	
				LOCATION: STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET	
				RECORD FROM: SAN DIEGO COUNTY VERTICAL CONTROL	
				ELEVATION: 399.08' DATUM: NAVD29	

I CERTIFY THAT THE PRIVATE ROAD IMPROVEMENTS AS SHOWN ON THIS PLAN SATISFIES THE REQUIREMENTS AS STATED IN THE CONDITIONS OF APPROVAL FOR TM 5356 AND THE STANDARDS FOR PRIVATE STREETS SECTION 3.1(C).

WILLIAM A. SNIPES R.C.E. 50477 DATE  
 EXP. DATE 06-30-19  
 INSPECTION BY: \_\_\_\_\_ ENGINEER OF WORK SECURITY REQUIRED  YES  
 \_\_\_\_\_ COUNTY  NO

COUNTY NOT LIABLE FOR THE DESIGN IN ANY WAY. REVIEWED FOR CLARITY ONLY:

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
 FOR WILLIAM P. MORGAN, COUNTY ENGINEER

**PRIVATE CONTRACT**

SHEET **3** COUNTY OF SAN DIEGO PUBLIC WORKS DEPARTMENT SHEETS **6**

PLANS FOR THE IMPROVEMENT OF:  
**WALTER DEAN LANE**  
**TM 5356**  
**PRIVATE ROAD (PER 3.1.C)**  
 CALIFORNIA COORDINATE INDEX 246-1797

Recommended for approval: N/A SUBDIVISION ENGINEER  
 Approved For: WILLIAM P. MORGAN PRIVATE - SEE LEFT FOR COUNTY ENGINEER

Engineer of work: \_\_\_\_\_ DATE 01/29/18  
 WILLIAM A. SNIPES R.C.E. 50477

IMPROVEMENT PLAN NO: **PDS2014-LDMJP-00013**



**HELIX WATER DISTRICT NOTES**

- CONSTRUCTION OF PUBLIC IMPROVEMENTS SHALL NOT START UNTIL HELIX WATER DISTRICT AND THE DEVELOPER HAVE EXECUTED THE CONSTRUCTION AGREEMENT AND A PRE-CONSTRUCTION MEETING HAS BEEN HELD IN ACCORDANCE WITH WAS SPECIFICATION 01000.
- THE HELIX WATER DISTRICT SHALL RECEIVE A CONSTRUCTION SCHEDULE FROM THE CONTRACTOR PRIOR TO START OF CONSTRUCTION IN ACCORDANCE WITH WAS SPECIFICATION 01000. WORK DONE WITHOUT HELIX WATER DISTRICT INSPECTION SHALL BE SUBJECT TO REMOVAL.
- THE CONTRACTOR SHALL POTHOLE ALL TIE-IN AND POTENTIAL CONFLICT LOCATIONS BEFORE PIPE INSTALLATION IN ACCORDANCE WITH WAS SPECIFICATIONS 01000 AND 15000. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE HELIX WATER DISTRICT'S ENGINEERING DEPARTMENT PRIOR TO PROCEEDING.
- ALL UNDERGROUND UTILITIES AND LATERALS SHALL BE INSTALLED BEFORE CONSTRUCTION OF CURBS, CONCRETE CROSS GUTTERS, OR SURFACING OF STREETS.
- THE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR RELOCATION OR ADJUSTMENT OF ANY NEW OR EXISTING WATER SERVICE APPURTENANCES, MANHOLES, GATE VALVE COVERS, OR METER BOXES TO NEW FINISH GRADE BY DISTRICT FORCES.
- THE CONTRACTOR SHALL KEEP AND MAINTAIN A SIGNED SET OF IMPROVEMENT PLANS ON-SITE PER WAS SPECIFICATION 01000. THE CONTRACTOR'S SUPERINTENDENT IS REQUIRED TO UPDATE SAID PLANS WITH "AS-BUILT" INFORMATION ON A DAILY BASIS AS WORK IS PERFORMED. FAILURE TO MAINTAIN FIELD AS-BUILTS ARE GROUNDS FOR JOB SHUTDOWN OR NO INSPECTIONS BY THE DISTRICT UNTIL AS-BUILTS ARE CURRENT.
- CONSTRUCTION OF WATER FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH WAS SPECIFICATIONS, DRAWINGS, AND APPROVED MATERIALS LIST. ALL CONTRACTORS WORKING ON WATER PROJECTS WILL BE REQUIRED TO HAVE A CURRENT COPY OF THE WAS. THIS DOCUMENT MAY BE DOWNLOADED AT WWW.SDWAS.COM.
- THRUST BLOCK AREAS ARE BASED ON SOIL BEARING VALUES LISTED IN WAS DRAWING WT-01. SHOULD FIELD CONDITIONS INDICATE A LESSER SOIL BEARING CAPACITY THAN LISTED, THE SOILS ENGINEER OR CONTRACTOR SHALL NOTIFY THE HELIX WATER DISTRICT'S ENGINEERING DEPARTMENT BY WRITTEN DOCUMENTATION, PRIOR TO THE INSTALLATION OF THRUST BLOCKS.
- WATER LINES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS AND THE CURRENT APPROVED WATER AGENCIES' STANDARDS (WAS).
- DEVELOPER SHALL PAY A CHARGE PER OCCURRENCE PER HELIX WATER DISTRICT'S RULES AND REGULATIONS IF THEY, THEIR EMPLOYEES, AGENTS, OR ANY INDEPENDENT CONTRACTORS OR SUBCONTRACTORS USE WATER OTHER THAN THROUGH AN AUTHORIZED WATER METER OR CONSTRUCTION METER. DEVELOPER SHALL PAY A CHARGE PER OCCURRENCE FOR SAID USE. SAID PAYMENT MAY BE DEDUCTED FROM ANY DEPOSIT DEVELOPER HAS WITH HELIX WATER DISTRICT.
- NO PERSON, OTHER THAN AN EMPLOYEE OR AGENT OF THE HELIX WATER DISTRICT, SHALL HAVE A RIGHT TO OPERATE ANY PART OF A HELIX WATER DISTRICT WATER DISTRIBUTION SYSTEM PER WAS SPECIFICATION 01000. ANY PERSON WHO TAMPER OR INTERFERES WITH ANY PART OR COMPONENT OF SAID SYSTEM, OR CAUSES OR PERMITS ANY ACT OF TAMPERING OR INTERFERING WITH THE SYSTEM, SHALL BE LIABLE FOR ANY INJURY OR DAMAGE CAUSED THEREBY OR RESULTING THEREFROM. A CHARGE PER OCCURRENCE WILL BE IMPOSED ON ANY PERSON OR COMPANY WHO OPERATES ANY PART OF THE HELIX WATER DISTRICT WATER SYSTEM WITHOUT PROPER AUTHORIZATION.
- HELIX WATER DISTRICT WILL BE RESPONSIBLE TO MAKE SERVICE LATERAL AND PIPELINE WETTED AND CUT IN TREES AND CROSSINGS TO LIVE SYSTEMS IN ACCORDANCE WITH WAS SPECIFICATION 15000. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PHASES OF WORK NOT PERFORMED BY HELIX WATER DISTRICT, PROVIDE ALL THE MATERIALS, HAND AND MACHINE EXCAVATION, REMOVAL OF END CAPS AND THRUST BLOCKS, INSTALL THRUST/ANCHOR BLOCKS, MAKE CONNECTION TO EXISTING STUBS OR NEW PIPELINE, INSTALL GATE WELL CASING, PAINT, AND WRAP FITTINGS, BACKFILL AND COMPACT TRENCH AREA, MAKE NECESSARY PAVING REPAIRS, AND ALL OTHER WORK TO COMPLETE INSTALLATION.
- UNLESS SHOWN ON THESE PLANS, PRIVATE WATER LINES AND OTHER PRIVATE UTILITIES (PROPOSED OR EXISTING) SHALL NOT RUN PARALLEL WITHIN A WATER LINE EASEMENT. PERPENDICULAR CROSSINGS ONLY SHALL BE PLACED IN A CASING AND SHALL BE SHOWN ON RECORD DRAWINGS. THE CASING SHALL BE CENTERED ON THE PUBLIC WATER LINE, 5' ON BOTH SIDES, AND ENCASED IN CONCRETE (RED COLORED CONCRETE FOR ELECTRICAL CONDUITS) THE FULL LENGTH OF THE CASING. CONTRACTOR SHALL MAINTAIN A MINIMUM 12-INCH VERTICAL SEPARATION BETWEEN THE WATER MAIN AND ALL OTHER UTILITIES AT THE CROSSINGS. IN ADDITION PRIVATE UTILITIES INSTALLED AFTER THE WATER FACILITIES THAT CROSS OR OTHERWISE DISTURB THE WATER FACILITY'S TRENCH LINE INCLUDING WATER MAINS, SERVICES AND APPURTENANCES, SHALL BE BACKFILLED WITH THE MATERIAL AS APPROVED PER WAS.
- THE CONTRACTOR SHALL INSTALL ANODES AT EACH WATER SERVICE LOCATION IN ACCORDANCE WITH WAS SPECIFICATION 1310 AND DRAWING WC-17. WHERE METER BOXES CANNOT BE INSTALLED PERPENDICULAR TO THE MAIN, TRACER WIRE SHALL BE INSTALLED FROM THE MAIN TO THE METER BOX, AS DIRECTED BY DISTRICT INSPECTOR.
- WHERE FIRE HYDRANTS AND WATER APPURTENANCES ARE INSTALLED AT THE TOE OF A SLOPE, RETAINING WALLS SHALL BE INSTALLED (WAS DRAWING WM-03), AS DIRECTED BY DISTRICT INSPECTOR.
- CONTRACTOR IS TO COORDINATE THE APPROVAL OF THE LOCATION (AFTER STAKING) OF THE PROPOSED FIRE PROTECTION FACILITIES WITH THE FIRE DEPARTMENT OF JURISDICTION, PRIOR TO INSTALLATION OF THE FACILITIES.

**HELIX WATER DISTRICT NOTES CONT'**

- DEVELOPER/CONTRACTOR SHALL INSTALL ONLY HIGH EFFICIENCY WATER APPLIANCES. USE ONLY HIGH EFFICIENCY TECHNOLOGIES, AND LANDSCAPE USING LOW WATER USE PLANTS. DEVELOPER/CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HIGH WATER EFFICIENT APPLIANCES, TECHNOLOGIES, AND LANDSCAPING WITH DISTRICT REPRESENTATIVE. PLEASE CALL MICHELLE CURTIS AT (619) 667-6261 FOR DESIGN, INSPECTION AND COORDINATION.
- FOR WORK OVER EXISTING WATER FACILITIES, HEAVY EQUIPMENT (ABOVE H2O LOADING) SHALL NOT BE USED WHEN COVER OVER THE WATER MAIN IS LESS THAN 36 INCHES THROUGH ALL PHASES OF CONSTRUCTION, INCLUDING THE REMOVAL, OVER EXCAVATION, AND/OR INSTALLATION OF PAVEMENT SECTIONS, WITHOUT THE WRITTEN APPROVAL OF HELIX WATER DISTRICT.
- FINAL STREET SUB-GRADE SHALL BE ESTABLISHED PRIOR TO THE EXCAVATION OF PIPELINE TRENCHES, AND MINIMUM COVER OVER ABOVE PIPE SHALL BE 24-INCHES FOR HYDROTASTING PER WAS SECTION 02223.
- COMMERCIAL/INDUSTRIAL PROPERTIES AND MULTIPLE DWELLING PROPERTIES WITH MORE THAN 5,000 SQUARE FEET OF IRRIGATED LANDSCAPE MUST HAVE A SEPARATE WATER METER FOR LANDSCAPE PURPOSES. THIS POLICY DOES NOT APPLY TO SINGLE-FAMILY RESIDENTIAL CONNECTIONS OR CONNECTIONS USED TO SUPPLY WATER FOR COMMERCIAL PRODUCTION OF AGRICULTURAL CROPS OR LIVESTOCK. IRRIGATION METERS ARE SUBJECT TO ALL DISTRICT REQUIREMENTS AND FEES, UNLESS OTHERWISE APPROVED BY THE DISTRICT.
- ALL EXISTING AND PROPOSED WATER AND FIRE SERVICES SHALL BE REQUIRED TO INSTALL AN APPROVED BACKFLOW PREVENTION ASSEMBLY (BPA). ANY EXISTING WATER SERVICES SERVING THE PROPERTY THAT WILL NOT BE USED SHALL BE ABANDONED BY THE DISTRICT AT THE OWNER'S EXPENSE. COORDINATE APPROVAL OF THE BPA WITH THE DISTRICT'S CROSS CONNECTION CONTROL COORDINATOR AT 619-667-6224. ALL NEW RESIDENTIAL DWELLINGS WITH FIRE PROTECTION SYSTEMS SHALL HAVE A TESTABLE BACKFLOW PREVENTION ASSEMBLY OR A PASSIVE PURGE SYSTEM INSTALLED FOR SYSTEM PROTECTION.
- ALL WATER SERVICE LATERALS, FIRE SERVICE LATERALS, FIRE HYDRANT LATERALS, BLOW-OFF LATERALS AND WATER MAINS THAT CROSS ANY BIO-RETENTION SWALE, MUST BE WITHIN A HARDENED SURFACE (CONCRETE).
- ANY FINISHED SURFACE IMPROVEMENT OTHER THAN ASPHALT ABOVE THE PIPELINE OR UNDERGROUND FACILITIES, WILL REQUIRE AN ENCROACHMENT REMOVAL AGREEMENT. PERMEABLE FINISHED SERVICE IMPROVEMENTS ARE PROHIBITED WITHIN HELIX WATER DISTRICT WATER MAIN EASEMENT.
- TRENCH REPAIRS IS TO BE BY HELIX WATER DISTRICT TRENCH DETAIL OR THE CITY OR COUNTY TRENCH REPAIR DETAIL, WHICHEVER IS MORE STRINGENT.

**CEQA FINDINGS**

- THE NEGATIVE DECLARATION DATED AUGUST 17, 2006 ON FILE WITH DPLU AS ENVIRONMENTAL REVIEW NUMBER 04-14-005, IS HEREBY ADOPTED.

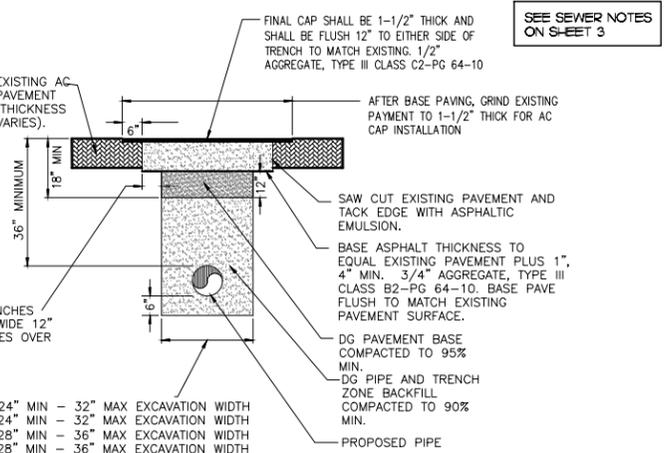
**OTHER REQUIRED ENVIRONMENTAL FINDINGS**

- IT IS HEREBY FOUND THAT THE USE OR DEVELOPMENT PERMITTED BY THE APPLICATION IS CONSISTENT WITH THE PROVISIONS OF THE RESOURCE PROTECTION ORDINANCE.
- IT IS HEREBY FOUND THAT THE PROJECT PROPOSED BY THE APPLICATION HAS PREPARED PLANS AND DOCUMENTATION DEMONSTRATING COMPLIANCE WITH THE PROVISIONS OF THE COUNTY OF SAN DIEGO WATERSHED PROTECTION, STORM-WATER MANAGEMENT, AND DISCHARGE CONTROL ORDINANCE.
- THE MULTIPLE SPECIES CONSERVATION PLANNING CONFORMANCE FINDINGS DATED AUGUST 17, 2006 ON FILE WITH DPLU AS ENVIRONMENTAL REVIEW NUMBER 04-14-005 IS HEREBY ADOPTED.
- IN ADDITION TO THE ABOVE FINDING, INCLUDE THE FOLLOWING AS A STATEMENT IN THE RESOLUTION OF APPROVAL OR FORM OF DECISION:

NOTICE: THIS PROJECT HAS BEEN FOUND TO CONFORM TO THE SAN DIEGO COUNTY MULTIPLE SPECIES CONSERVATION PROGRAM SUBAREA PLAN, BIOLOGICAL MITIGATION ORDINANCE AND IMPLEMENTING AGREEMENT. UPON FULFILLMENT OF THE REQUIREMENTS FOR PERMANENT MITIGATION AND MANAGEMENT OF PRESERVED AREAS AS OUTLINED IN SECTION 17.1(A) OF THE COUNTY'S IMPLEMENTING AGREEMENT FOR THE MULTIPLE SPECIES CONSERVATION PROGRAM (MSCP) PLAN, THIRD PARTY BENEFICIARY STATUS CAN BE ATTAINED FOR THE PROJECT. THIRD PARTY BENEFICIARY STATUS ALLOWS THE PROPERTY OWNER TO PERFORM "INCIDENTAL TAKE" UNDER STATE AND FEDERAL ENDANGERED SPECIES ACT, OF SPECIES COVERED BY THE MSCP PLAN WHILE UNDERTAKING LAND DEVELOPMENT ACTIVITIES IN CONFORMANCE WITH AN APPROVAL GRANTED BY THE COUNTY IN COMPLIANCE WITH THE COUNTY'S IMPLEMENTING AGREEMENT.

- INCLUDE IN THE FOLLOWING AS A STATEMENT IN THE RESOLUTION OF APPROVAL OR FORM OF DECISION:

NOTICE: THE ISSUANCE OF THIS PERMIT/APPROVAL BY THE COUNTY OF SAN DIEGO DOES NOT AUTHORIZE THE APPLICANT FOR SAID PERMIT/APPROVAL TO VIOLATE ANY FEDERAL, STATE, OR COUNTY LAWS, ORDINANCES, REGULATIONS, OR POLICIES INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT AND ANY AMENDMENTS THERETO.



**TYPICAL H.W.D. TRENCH SECTION (WATER)**

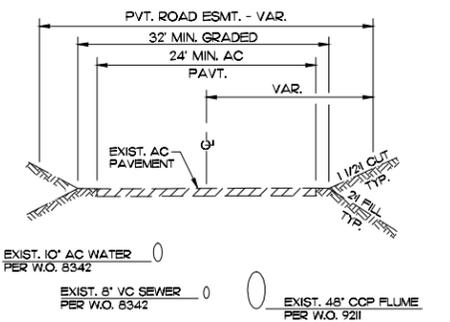
NO SCALE

**SPECIFIC NOTES:**

- PRIOR TO THE PRECONSTRUCTION MEETING, PROVIDE THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES (PDS) USE EVIDENCE OF A CONTRACT WITH A NOISE MONITOR WHO SHALL BE ON SITE DURING ANY GRADING WITHIN 500 FEET OF THE OPEN SPACE AS SHOWN ON THE OPEN SPACE EXHIBIT ON FILE WITH THE DEPARTMENT OF PDS AS ENVIRONMENTAL REVIEW NUMBER 04-14-005 TO MONITOR NOISE LEVELS ON SENSITIVE RECEPTORS.
- PRIOR TO THE PRECONSTRUCTION MEETING, PROVIDE THE DIRECTOR OF THE DEPARTMENT OF PDS, EVIDENCE OF A CONTRACT WITH A BIOLOGICAL CONSULTANT TO PERFORM THREE FOCUSED SURVEYS:
  - CONDUCT SURVEYS ON SEPARATE DAYS, TO DETERMINE THE PRESENCE OF CALIFORNIA GNATCATCHERS IN THE PROJECT IMPACT FOOTPRINT.
  - SURVEYS WILL BEGIN A MAXIMUM OF SEVEN DAYS PRIOR TO PERFORMING VEGETATION CLEARING, GRUBBING, OR GRADING AND ONE SURVEY WILL BE CONDUCTED THE DAY IMMEDIATELY PRIOR TO THE INITIATION OF REMAINING WORK. IF ANY GNATCATCHERS ARE FOUND WITHIN THE PROJECT IMPACT FOOTPRINT, THE BIOLOGIST WILL DIRECT CONSTRUCTION PERSONNEL TO BEGIN VEGETATION CLEARING/GRUBBING IN AN AREA AWAY FROM THE GNATCATCHERS.
  - PROVIDE A COPY OF THE SURVEY RESULTS IN REPORT FORMAT TO THE DIRECTOR OF PDS PRIOR TO THE START OF CLEARING, GRUBBING OR GRADING.
- PRIOR TO THE PRECONSTRUCTION MEETING, PROVIDE THE DIRECTOR OF PDS EVIDENCE THAT A 15-FOOT TALL NOISE ATTENUATION BARRIER HAS BEEN INSTALLED AT THE BOUNDARY OF THE LIMITED BUILDING ZONE AND BIOLOGICAL OPEN SPACE EASEMENTS AS SHOWN ON THE OPEN SPACE EXHIBIT AND ON FILE WITH THE DEPARTMENT OF PDS AS ENVIRONMENTAL REVIEW NUMBER 04-14-005:
  - THE SOUND ATTENUATION BARRIER IS TEMPORARY AND SHALL BE LEFT IN PLACE UNTIL THE MASS GRADING PHASE OF THE WORK IS COMPLETED.
  - THE SOUND ATTENUATION BARRIER SHALL BE A SOLID WALL OF MASONRY, WOOD, PLASTIC, LEXAN, PLEXIGLAS, OR MATERIAL DESIGNED FOR SOUND BARRIERS, OR A COMBINATION OF THESE MATERIALS WITH NO CRACKS OR GAPS THROUGH OR BELOW THE WALL. IF WOOD IS USED, IT MUST BE AT LEAST 7/8" INCHES THICK OR HAVE A DENSITY OF AT LEAST 3.5 POUNDS PER SQUARE FOOT, AND IT MUST BE TONGUE-IN-GROOVE DESIGN OR HAVE ANY GAPS OR CRACKS FILLED CALKED.
  - EVIDENCE SHALL BE A STATEMENT AND SITE PHOTOS FROM A CALIFORNIA REGISTERED ENGINEER, OR LICENSED SURVEYOR THAT THE SOUND ATTENUATION BARRIER HAS BEEN INSTALLED.
- PRIOR TO THE PRECONSTRUCTION MEETING, PROVIDE EVIDENCE TO THE DIRECTOR OF PDS THAT TEMPORARY FENCING HAS BEEN INSTALLED AROUND ALL PROPOSED BIOLOGICAL OPEN SPACE AS SHOWN ON THE OPEN SPACE EXHIBIT AND ON FILE WITH THE DEPARTMENT OF PDS AS ENVIRONMENTAL REVIEW NUMBER 04-14-005, WHERE GRADING, BRUSHING OR CLEARING WILL OCCUR WITHIN 100 FEET.
  - EVIDENCE SHALL BE A STATEMENT AND SITE PHOTOS FROM A CALIFORNIA REGISTERED ENGINEER, OR LICENSED SURVEYOR THAT THE TEMPORARY FENCING HAS BEEN INSTALLED.
  - EVIDENCE SHALL BE A STATEMENT AND SITE PHOTOS FROM A CALIFORNIA REGISTERED ENGINEER, OR LICENSED SURVEYOR THAT THE PERMANENT WALLS OR FENCES, AND OPEN SPACE SIGNS HAVE BEEN INSTALLED SOUND ATTENUATION BARRIER HAS BEEN INSTALLED.
  - THE SIGNS MUST BE CORROSION RESISTANT, A MINIMUM OF 6' X 9" IN SIZE, ON POSTS NOT LESS THAN THREE (3) FEET IN HEIGHT FROM THE GROUND SURFACE, AND MUST STATE THE FOLLOWING:
 

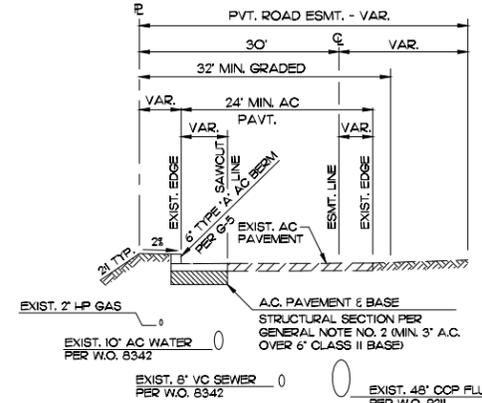
SENSITIVE ENVIRONMENTAL RESOURCES  
DISTURBANCE BEYOND THIS POINT IS RESTRICTED  
BY EASEMENT

INFORMATION:  
CONTACT COUNTY OF SAN DIEGO, DEPARTMENT OF PDS REF: 04-14-005
- RESTRICT ALL BRUSHING, CLEARING AND/OR GRADING SUCH THAT NONE WILL BE ALLOWED WITHIN 300 FEET OF COASTAL SAGE SCRUB HABITAT DURING THE BREEDING SEASON OF THE CALIFORNIA GNATCATCHER. THIS IS DEFINED AS OCCURRING BETWEEN MARCH 15 AND AUGUST 31.
- ALL TEMPORARY AND PERMANENT FENCING AND/OR WALLS AND OPEN SPACE SIGNS SHALL BE PLACED ALONG THE OPEN SPACE BOUNDARY ON LOTS 4 AND 5 AS SHOWN ON THE OPEN SPACE EXHIBIT AND ON FILE WITH THE DEPARTMENT OF PDS AS ENVIRONMENTAL REVIEW NUMBER 04-14-005. FENCE OR WALL DESIGN ARE SUBJECT TO APPROVAL BY THE DEPARTMENT OF PDS. SIGNS SHALL BE SPACED NO MORE THAN FIFTY (50) FEET APART.



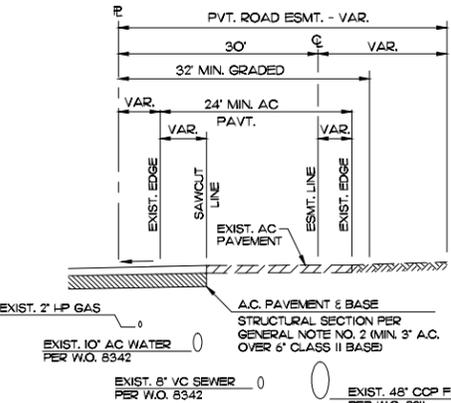
**TYPICAL SECTION - ADLAI ROAD (PVT.) TRACT TO LAKEVIEW RD.**

NO SCALE



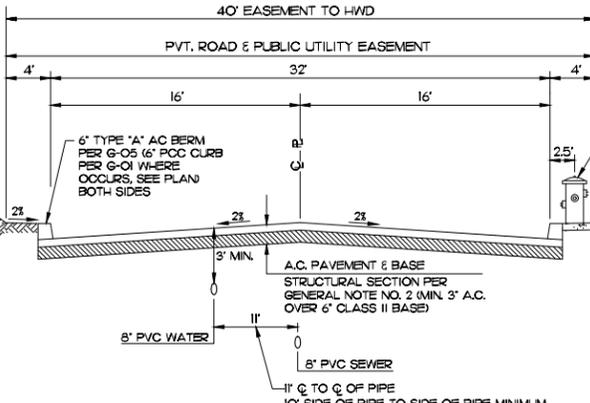
**TYPICAL SECTION - ADLAI ROAD (PVT.) ALONG TRACT FRONTAGE**

NO SCALE



**TYPICAL SECTION - ADLAI ROAD (PVT.) INTERSECTION OF WALTER DEAN LANE (PVT.)**

NO SCALE



**TYPICAL SECTION - WALTER DEAN LANE (PVT.)**

NO SCALE

**ENGINEER OF WORK**  
ENGINEER OF WORK  
**Snipes-Dye associates**  
civil engineers and land surveyors  
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942  
TELEPHONE (619) 697-9234 FAX (619) 460-2033  
WILLIAM A. SNIPES R.C.E. 50477  
EXPIRES 06-30-19



COUNTY APPROVED CHANGES			BENCH MARK	
No.	Description	Approved by	Date	
				DESCRIPTION: GPS STATION "VS PMI"
				LOCATION: STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET
				RECORD FROM: SAN DIEGO COUNTY VERTICAL CONTROL
				ELEVATION: 399.08' DATUM: NAVD29

I CERTIFY THAT THE PRIVATE ROAD IMPROVEMENTS AS SHOWN ON THIS PLAN SATISFIES THE REQUIREMENTS AS STATED IN THE CONDITIONS OF APPROVAL FOR TM 5356 AND THE STANDARDS FOR PRIVATE STREETS SECTION 3.1(C).

WILLIAM A. SNIPES R.C.E. 50477 DATE  
EXP. DATE 06-30-19  
INSPECTION BY: \_\_\_\_\_ ENGINEER OF WORK SECURITY REQUIRED  YES  NO  
BY: \_\_\_\_\_ DATE  
FOR WILLIAM P. MORGAN, COUNTY ENGINEER

**PRIVATE CONTRACT**

SHEET 2 COUNTY OF SAN DIEGO PUBLIC WORKS DEPARTMENT 6 SHEETS

PLANS FOR THE IMPROVEMENT OF:  
**WALTER DEAN LANE**  
TM 5356  
**PRIVATE ROAD (PER 3.1(C))**  
CALIFORNIA COORDINATE INDEX 246-1797

Recommended for approval: N/A SUBDIVISION ENGINEER  
Approved For: WILLIAM P. MORGAN PRIVATE - SEE LEFT FOR COUNTY ENGINEER

Improvement Plan No. PDS2014-LDMJP-00013









**ENGINEER OF WORK**

**Snipes-Dye Associates, Inc.**  
 Civil Engineers and Land Surveyors  
 8348 CENTER DRIVE, STE. G, LA MESA, CA 91942  
 TELEPHONE: (619) 697-9234 FAX: (619) 466-2033  
 01/29/18  
 WILIAM A. SNIPES, R.C.E. 50477  
 EXPRESSES 06-30-19



**NOTE:**  
 1. 24" X 24" CATCH BASIN OUTLET PIPE THRU WALL AND CONNECT TO BROW DITCH. SEE DETAIL SHEET 2.  
 2. TREE WELL, BMP.  
 3. AC BERM CUT WITH SPLASH PAD PER MOD. GS-264, SEE SHEET 3.

**NOTE:**  
 PERMANENT POST-CONSTRUCTION BMP DEVICES (TREE WELLS) SHOWN ON PLAN SHALL NOT BE REMOVED OR MODIFIED WITHOUT THE APPROVAL OF THE COUNTY OF SAN DIEGO.

**CAUTION:**  
 LOCATION OF EXISTING UTILITIES ON THIS PLAN ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.

**BENCH MARK**

No.	Description	Approved by	Date
1	GPS STATION "V5 B.M."		
2	STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET		
3	RECORD FROM SAN DIEGO COUNTY VERTICAL CONTROL		
	ELEVATION: 399.08'		DATE: 11/11/09

**PRIVATE CONTRACT**

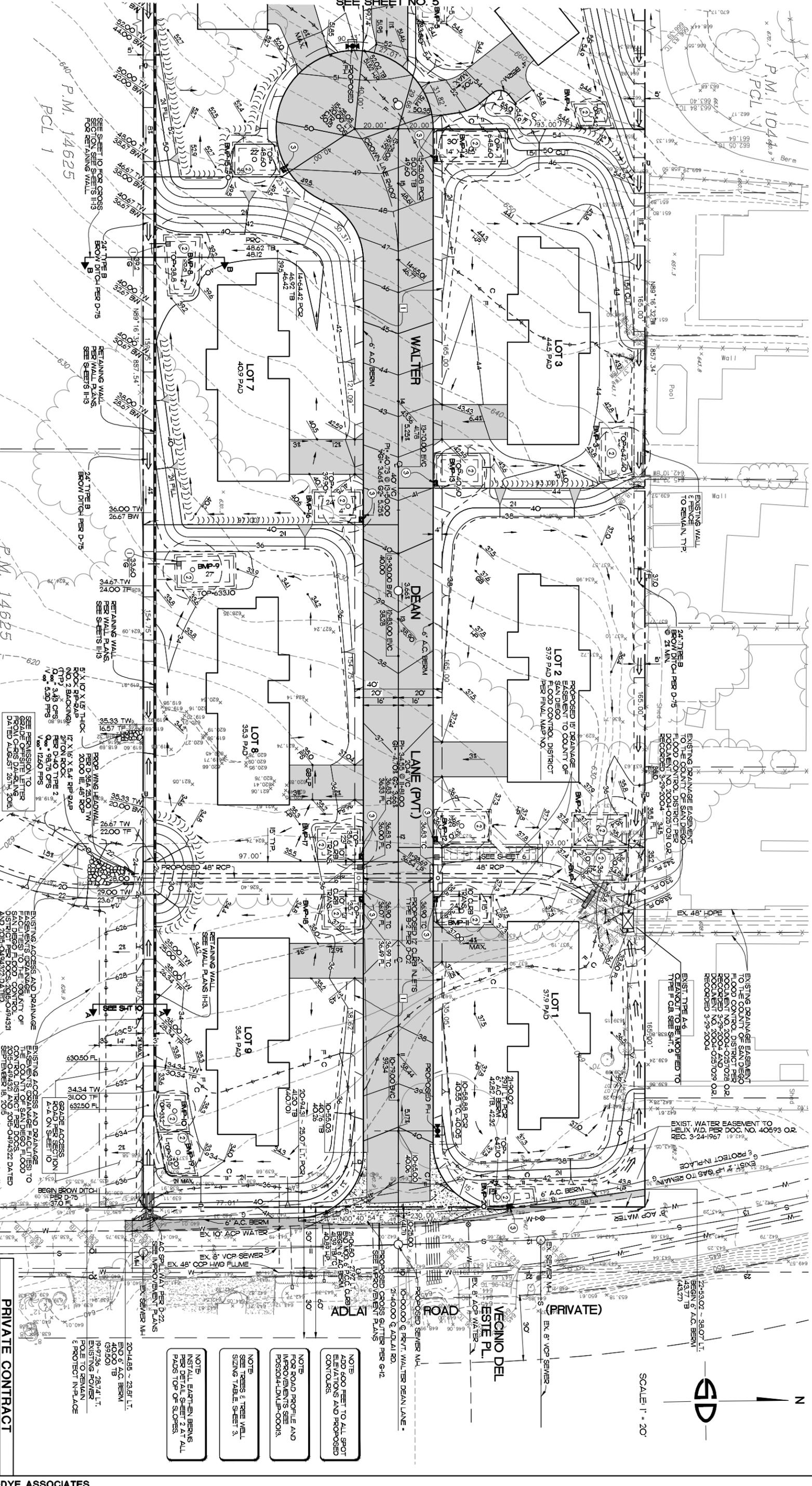
ADLAI ROAD SUBDIVISION (TM 5556)  
 FOR LOT 14'S TRACT, RANCHO EL CAJON

CALIFORNIA COORDINATE INDEX 46-179

ENGINEER: WILIAM A. SNIPES, R.C.E. 50477  
 DATE: 01/29/18

GRADING PLANS FOR: SHEET 4 OF 18 SHEETS  
 COUNTY OF SAN DIEGO  
 DEPARTMENT OF PUBLIC WORKS

**ENGINEER'S NAME - SNIPES-DYE ASSOCIATES**  
**PHONE NO. (619) 697-9234**



**ENGINEER'S NAME - SNIPES-DYE ASSOCIATES**  
**PHONE NO. (619) 697-9234**

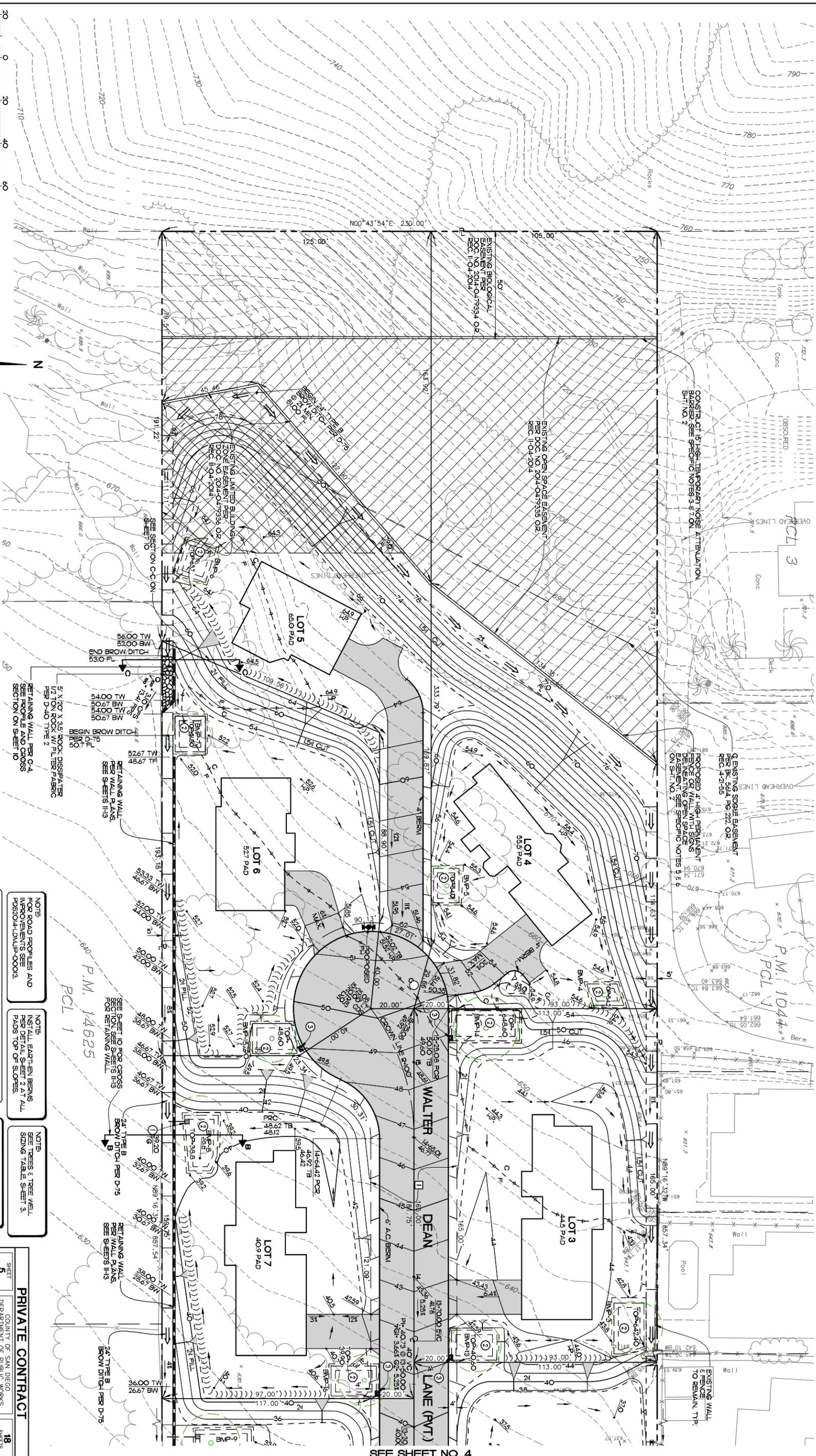


**Snipes-Dye Associates**  
 civil engineers and land surveyors  
 8348 CENTER DRIVE, STE. C, LA MESA, CA 91942  
 TELEPHONE: (619) 697-9234 FAX: (619) 466-2033  
 01/29/18  
 WILLIAM A. SNIPES, R.C.E. 50977  
 EXPRES 06-30-19

**ENGINEER OF WORK**



**SCALE 1" = 20'**



**NOTE**  
 1. 40' PRIVATE ROAD AND UTILITIES EASEMENT PER FINAL MAP NO. \_\_\_\_\_

**NOTE:** PERMANENT POST-CONSTRUCTION BMP DEVICES (TREE WELLS) SHOWN ON PLAN SHALL NOT BE REMOVED OR MODIFIED WITHOUT THE APPROVAL OF THE COUNTY OF SAN DIEGO.

**NOTE:** ADD 600 FEET TO ALL SPOT ELEVATIONS AND PROPOSED CONTROLS.

**NOTE:** SEE SHEET 10 FOR CROSS SECTION FOR RETAINING WALL. SEE SHEETS 11-13 FOR RETAINING WALL PER C-4. SEE PROFILE AND CROSS SECTION ON SHEET 10.

**NOTE:** FOR ROAD PROFILES AND IMPROVEMENTS SEE PDS014-DLGNM-00018.

**NOTE:** INST ALL EXISTING BERMS PER DETAIL SHEET 2 AT ALL PADS TOP OF SLOPES.

**NOTE:** SEE TREES & TREE WELL SIZING TABLE SHEET 3.

**NOTE:** SEE SHEET 10 FOR CROSS SECTION FOR RETAINING WALL.

- GRADING CONSTRUCTION NOTES**
- 24" X 24" CATCH-BASIN CUT-OUT PIPE THRU WALL AND CONNECT TO BROW DITCH. SEE DETAIL SHEET 2.
  - TREE WELL BMP.
  - AC BERM CUT WITH SPLASH PAD PER MOD. GS-26A. SEE SHEET 3.

**COUNTY APPROVED CHANGES**

No.	Description	Approved by	Date

**BENCH MARK**

DESCRIPTION:	GPS STATION "VS PM1"
LOCATION:	STREET INTERSECTION LOCATED AT MAPLEVIEW STREET
RECORD FROM:	SAN DIEGO COUNTY VERTICAL CONTROL
ELEVATION:	399.08'
	DATA11M NAVD09

**PRIVATE CONTRACT**

SHEET	COUNTY OF SAN DIEGO	DEPARTMENT OF PUBLIC WORKS	SHEETS
5			18

GRADING PLANS FOR:  
**ADLAI ROAD SUBDIVISION (TM 5556)**  
 FOR LOT 14'S TRACT, RANCHO EL CAJON  
 CALIFORNIA COORDINATE INDEX 246-1797

ENGINEER: WILLIAM A. SNIPES  
 COUNTY ENGINEER: WILLIAM A. SNIPES  
 DATE: 01/29/18  
 PDS2014-LDGNM-00018

SEE SHEET NO. 4



**ENGINEER OF WORK**

ENGINEER OF WORK

REGISTERED PROFESSIONAL ENGINEER

NO. 50477

DATE: 01/29/18

PROJECT: ADL1 ROAD SUBDIVISION (TM 55566)

FOR LOT 14 'S' TRACT, RANCHO EL CAJON

CALIFORNIA COORDINATE INDEX 246-1797

DATE: 01/29/18

PROJECT: ADL1 ROAD SUBDIVISION (TM 55566)

FOR LOT 14 'S' TRACT, RANCHO EL CAJON

CALIFORNIA COORDINATE INDEX 246-1797

DATE: 01/29/18

PROJECT: ADL1 ROAD SUBDIVISION (TM 55566)

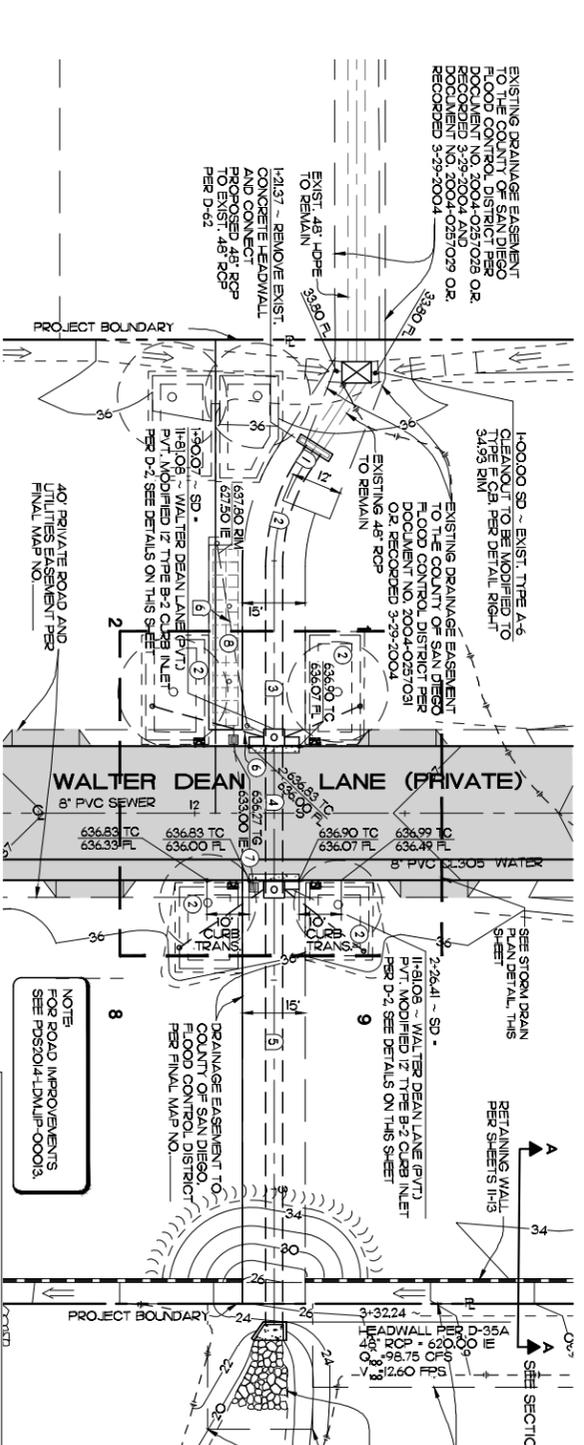
FOR LOT 14 'S' TRACT, RANCHO EL CAJON

CALIFORNIA COORDINATE INDEX 246-1797

DATE: 01/29/18

PROJECT: ADL1 ROAD SUBDIVISION (TM 55566)

FOR LOT 14 'S' TRACT, RANCHO EL CAJON



**STORM DRAIN DATA**

BEARING/DELTA	RADIUS	LENGTH	NOTE	SLOPE
1 N 37°29'36" E	41.8'	29.66'	48" RCP 1850-D	8.64%
2 A 37°42'08" E	45.00'	35.84'	48" RCP 1850-D	8.64%
3 N 00°43'28" E	---	32.34'	48" RCP 1850-D	5.01%
4 N 00°43'28" E	---	10.83'	48" RCP 1850-D	0.5%
5 N 07°37'07" W	---	43.30'	6" PVC PERFORATED PIPE	4.7%
6 N 00°43'28" E	---	2.66'	12" PVC SDR35	---
7 N 00°43'28" E	---	4.50'	6" PVC SDR35	23 MIN.

\* 4' LENGTH, 5' BEVEL ONE END

**COUNTY APPROVED CHANGES**

No.	Description	Approved by	Date

**BENCH MARK**

DESCRIPTION	GPS STATION "VS PM1"

**PRIVATE CONTRACT**

SHEET	COUNTY OF SAN DIEGO	DEPARTMENT OF PUBLIC WORKS
6		

**ADL1 ROAD SUBDIVISION (TM 55566)**  
**FOR LOT 14 'S' TRACT, RANCHO EL CAJON**

CALIFORNIA COORDINATE INDEX 246-1797

DATE: 01/29/18

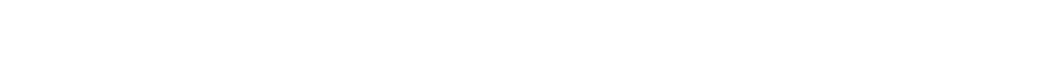
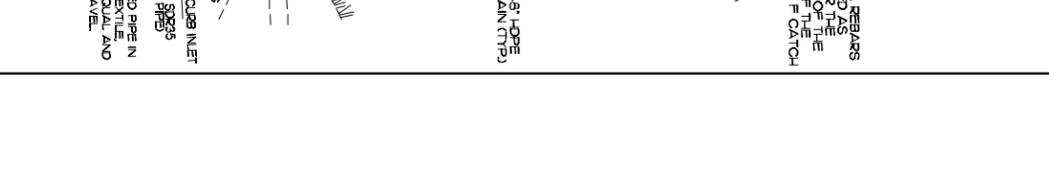
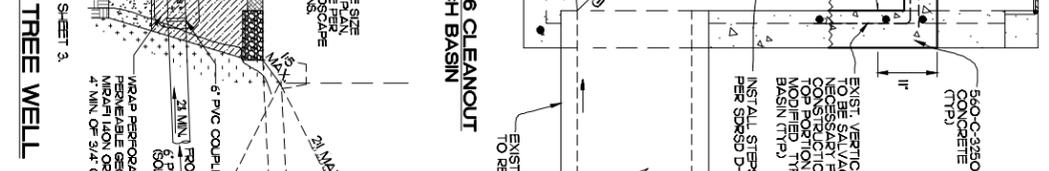
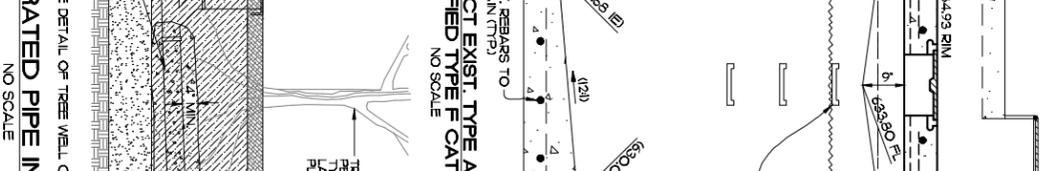
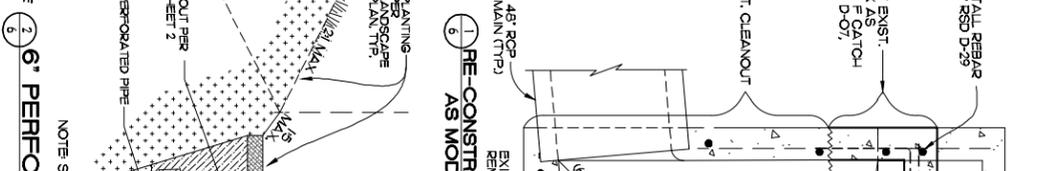
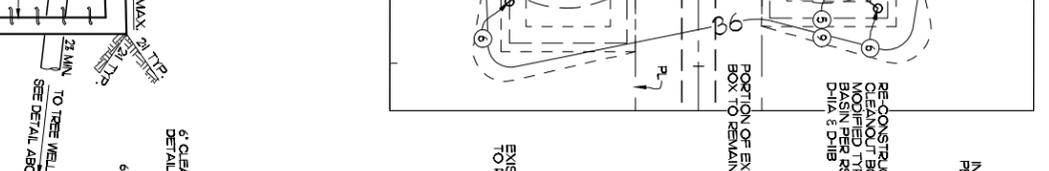
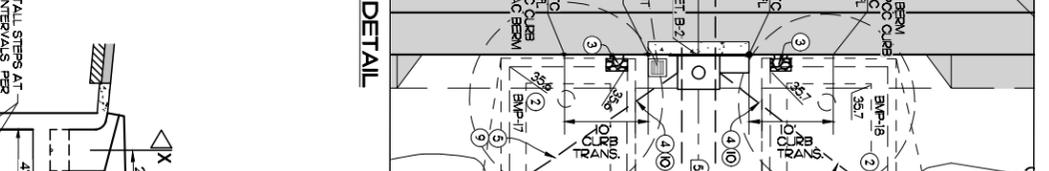
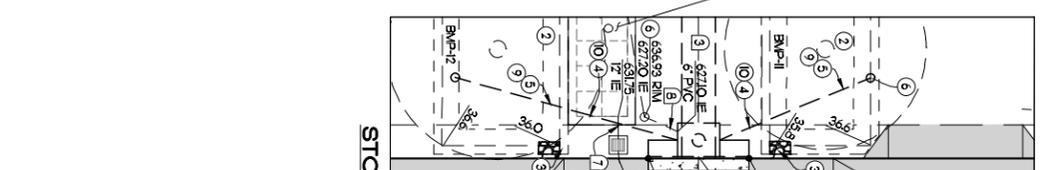
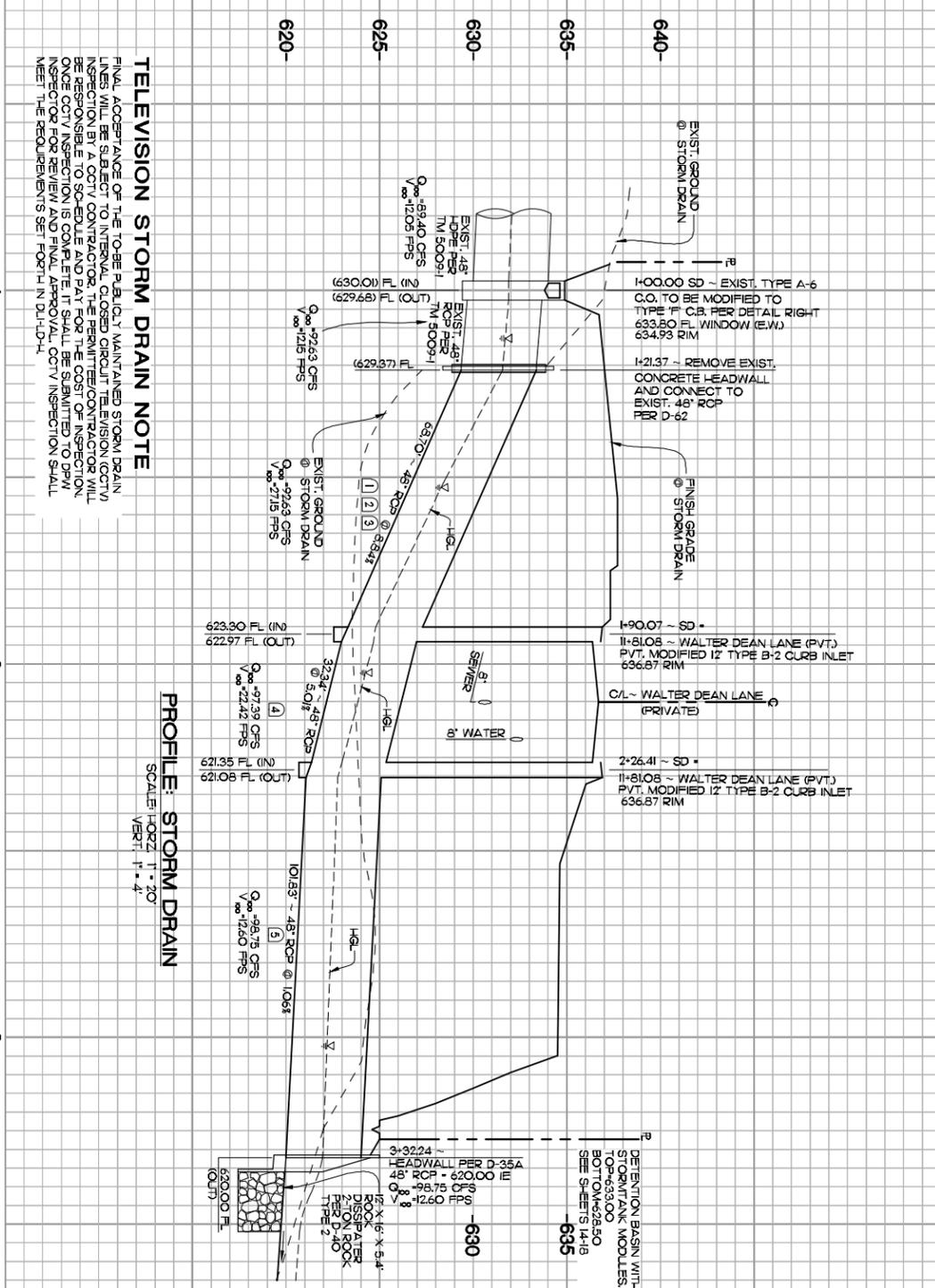
PROJECT: ADL1 ROAD SUBDIVISION (TM 55566)

FOR LOT 14 'S' TRACT, RANCHO EL CAJON

CALIFORNIA COORDINATE INDEX 246-1797

DATE: 01/29/18

**ENGINEER'S NAME - SNIPES-DYE ASSOCIATES**  
**PHONE NO. (619) 697-9234**



**SOIL STABILIZATION RULES**

- PHYSICAL STABILIZATION THROUGH USE OF GEOTEXTILES, MAT, FIBER ROLLS (SS-7 OR ESC20), BONDED FIBER MATRIX OR OTHER MATERIAL APPROVED BY THE COUNTY FOR STABILIZING SLOPES, OR
- VEGETATION STABILIZATION USING HYDROSEED (SS-4 OR ESC10) OR ACCEPTABLE LANDSCAPING. HYDROSEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING: HYDROSEEDING SHALL BE INSTALLED BY AUGUST 15, WATERED AND ESTABLISHED PRIOR TO OCTOBER 1. THE PROPERTY OWNER SHALL SHOW ON THE PLAN A CONTINGENCY PHYSICAL BMP TO BE INSTALLED BY OCTOBER 1 IF HYDROSEED ESTABLISHMENT DOES NOT OCCUR BY THAT DATE. IF LANDSCAPING IS PROPOSED, EROSION CONTROL MEASURES MUST ALSO BE USED WHILE LANDSCAPING IS BEING ESTABLISHED. ESTABLISHED VEGETATION SHALL HAVE A SUBSURFACE MAT OF INTERMEDIATE VERTICAL ROOTS WITH A UNIFORM VEGETATION COVERAGE OF 70 PERCENT OF THE NATURAL VEGETATIVE COVERAGE OR MORE ON ALL DISTURBED AREAS.
- ALL MANUFACTURED SLOPES AND CLEARED SLOPES OF 3 TO 1 (HORIZONTAL TO VERTICAL) AND STEEPER ARE TO BE PROTECTED WITH A BMP APPROVED BY THE COUNTY OF SAN DIEGO, AS DESCRIBED IN NUMBER 1 AND 2 ABOVE. CLEARED SLOPES FLATTER THAN 3 TO 1 MUST STILL BE PROTECTED FROM EROSION USING EITHER AN APPROVED BMP OR BY USING HYDROMULCH WITH A GRAV BINDER. FLAT AREAS OF LESS THAN 5% (LIKE BUILDING PADS, PARKING AREAS, LEACH FIELDS) SHALL HAVE 100% PROTECTION USING GEOTEXTILES, MATS (SS-7 OR ESC20), OR OTHER MATERIAL APPROVED BY THE COUNTY FOR STABILIZING SLOPES, OR USING FRACKING AND SOIL STABILIZING PRODUCTS (SS-2) OR SEDIMENTATION PRODUCTS (SS-3, SS-4, SS-6, SS-8), AS DESCRIBED IN NUMBER 7. THE COUNTY MAY REQUIRE THIS REQUIREMENT FOR FILL AREAS AND THE BELOW REQUIREMENT PROVIDED FULL SEDIMENT CONTROL IS PROVIDED THROUGH THE CONSTRUCTION AND MAINTAINED DESILTATION BASINS (SC-2) AT ALL PROJECT DISCHARGE POINTS.
- AREAS OF GRADED PADS THAT HAVE ACTIVE STRUCTURE CONSTRUCTION UNDERWAY MAY BE PROTECTED BY ROLLED PLASTIC AS A PART OF A WEATHER-TRIGGERED ACTION PLAN UNTIL THE STRUCTURE'S ROOF HAS BEEN COMPLETED. THE REMAINDER OF THE PAD AREA MUST CONTINUE TO BE PROTECTED USING EROSION CONTROL MEASURES IDENTIFIED ABOVE.
- UNPAVED ROADS ARE EXEMPT FROM THE 100% PROTECTION REQUIREMENT BUT SHALL HAVE APPROPRIATE BMP'S INSTALLED SUCH AS GRAVEL BAG CHEVRONS.

STRUCTURAL BMP SIZING  
 IF A PROJECT CHOOSES TO RELY ON DESILTATION BASINS FOR TREATMENT PURPOSES, AT A MINIMUM ALL DESILTATION BASINS SHALL BE DESIGNED BY A REGISTERED CIVIL ENGINEER AND SIZED TO EITHER:

- HAVE AT LEAST A CAPACITY TO 3,600 GALLON FEET OF STORAGE AREA PER ACRE DRAINED, OR
- BE DESIGNED USING THE STANDARD EQUATION:  $As=1,200/Vs$ ,  $Vs$  IS THE MINIMUM SQUARE AREA FOR TRAPPING SOIL PARTICLES OF A CERTAIN SIZE.  $Vs$  IS THE SETTLING VELOCITY OF THE DESIGN PARTICLE SIZE CHOSEN.  $Q=C \times I \times A$  WHERE  $Q$  IS THE DISCHARGE RATE MEASURED IN CUBIC FEET PER SECOND,  $C$  IS THE RUNOFF COEFFICIENT IN THE RECEIPTATION INTENSITY DETERMINED BY THE DESIGN PARTICLE SIZE,  $I$  IS THE RECEIPTATION INTENSITY DETERMINED BY THE MET SIEVE ANALYSIS, OR THE FINE SILT SIZED (0.075MM) PARTICLE, AND THE  $Vs$  USED SHALL BE 100 PERCENT OF THE CALCULATED SETTLING VELOCITY.

THE LENGTH OF ANY BASIN, AS MEASURED FROM INLET TO OUTLET, SHALL BE MORE THAN TWICE THE WIDTH WHENEVER PRACTICAL. THE DEPTH MUST NOT BE LESS THAN THREE FEET NOR GREATER THAN FIVE FEET FOR SAFETY REASONS AND MAXIMUM EFFICIENCY. THE BASIN(S) SHALL BE CONSTRUCTED WITH A SLOPE OF 1:1. THE LENGTH OF THE BASIN SHALL BE SIZED TO MEANS FOR DEMANDING WITH SEVEN CHAIRDRAWS FOLLOWING. THE BASIN(S) SHOULD BE FENCED IF SAFETY (WORKER OR PUBLIC) IS A CONCERN, AND SHALL BE MAINTAINED AT LEAST ONCE BEFORE THE START OF THE RAINY SEASON (OCTOBER 1) AND AS NEEDED TO RETAIN A MINIMUM OF TWO FEET OF CAPACITY AT ALL TIMES.

**BONDED FIBER MATRIX (BFM)**  
**THE USE OF BFM IS SUBJECT TO THE FOLLOWING LIMITATIONS AND RESTRICTIONS:**

- APPLICATION RATES SHALL BE 3500 POUNDS PER ACRE MINIMUM FOR 2:1 OR SHALLOWER SLOPES AND 4000 POUNDS PER ACRE FOR SLOPES STEEPER THAN 2:1.
- BFM SHALL BE APPLIED AT LEAST 24 HOURS BEFORE OR AFTER RAINFALL.
- THE SITE MUST BE PROTECTED WITH BROW DITCHES AND / OR DIVERSION BERMS AT THE TOP OF SLOPES TO DIVERT FLOW FROM THE FACE OF THE SLOPE.
- BFM SHALL BE APPLIED TO PROVIDE 100% COVERAGE (I.E. APPLICATION FROM MULTIPLE ANGLES).
- FOR PERMANENT EROSION CONTROL PURPOSES, BFM MUST BE INSTALLED IN CONJUNCTION WITH SEEDED EROSION CONTROL VEGETATION.
- A LETTER FROM THE HYDROSEED CONTRACTOR CERTIFYING THAT THE BFM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED APPLICATION RATES AND COVERAGE REQUIREMENTS SHALL BE SUBMITTED TO THE COUNTY INSPECTOR FOR APPROVAL.

**STABILIZED FIBER MATRIX (SFM)**  
**THE USE OF SFM IS SUBJECT TO THE FOLLOWING LIMITATIONS AND RESTRICTIONS:**

- SFM MAY BE USED FOR TEMPORARY EROSION CONTROL FOR DISTURBED AREAS WITH A SLOPE RATIO OF 1 VERTICAL TO 2 HORIZONTAL OR SHALLOWER, INCLUDING PAD AND SEPTIC FIELD AREAS.
- THE SFM SHALL BE APPLIED AT LEAST 24 HOURS BEFORE OR AFTER RAINFALL AND SHALL BE APPLIED TO PROVIDE 100% COVERAGE (I.E. APPLIED FROM MULTIPLE DIRECTIONS AND ANGLES).
- THE APPLICATION AREA MUST BE PROTECTED BY BROW DITCHES AND OR DIVERSION BERMS AT TOP OF SLOPES TO DIVERT FLOW FROM THE FACE OF THE PROTECTED SLOPE.
- FOR PERMANENT EROSION CONTROL PURPOSES, SFM MUST BE INSTALLED IN CONJUNCTION WITH SEEDED EROSION CONTROL VEGETATION OR HAND PLANTINGS. AS WITH ALL OTHER APPLICATIONS, SFM WILL NOT BE CONSIDERED PERMANENT UNTIL 70% VEGETATION ESTABLISHMENT.
- COVERAGE AND NON-TOXIC WATER-PERMEABLE SOIL-STABILIZING LIQUID EMULSION WITH 3,000 LBS. OF HYDRAULIC MULCH. THE EMULSION MUST BE DESIGNED TO PROTECT SOIL. PREVENT EROSION, AND FLOCCULATE (CLUMP) SEDIMENT.
- A LETTER FROM THE HYDROSEED CONTRACTOR CERTIFYING THE SFM WAS INSTALLED IN ACCORDANCE WITH APPROVED APPLICATION RATES, COVERAGE, AND MANUFACTURE'S DILUTION RATIO SHALL BE SUBMITTED TO THE COUNTY INSPECTOR FOR APPROVAL.

**EMERGENCY EROSION CONTROL MEASURES NOTES**

- ALL BUILDING PADS TO BE DIKED AND THE DIKES MAINTAINED TO PREVENT WATER FROM FLOWING FROM THE PAD UNTIL THE STREETS AND DRIVEWAYS ARE PAVED AND WATER CAN FLOW FROM THE PAD WITHOUT CAUSING EROSION, OR CONSTRUCT DRAINAGE FACILITIES TO THE SATISFACTION OF THE COUNTY DEPARTMENT OF PUBLIC WORKS THAT WILL ALLOW WATER TO DRAIN FROM THE PAD WITHOUT CAUSING EROSION.
- TOPS OF ALL SLOPES TO BE DIKED OR TREKCOED TO PREVENT WATER FROM FLOWING OVER THE CREST OF SLOPES.
- MANUFACTURED SLOPES AND PADS SHALL BE ROUNDED VERTICALLY AND HORIZONTALLY APPROPRIATE TO BLEND WITH THE SURROUNDING TOPOGRAPHY.
- AS SOON AS CUTS OR EMBANKMENTS ARE COMPLETED, BUT NOT LATER THAN OCTOBER AN EQUAL TREATMENT APPROVED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS BETWEEN OCTOBER 1 AND APRIL 15. APPROVED SLOPE PROTECTION MEASURES SHALL PROCEED IMMEDIATELY BEHIND THE EXPOSURE OF CUT SLOPES AND/OR THE CREATION OF EMBANKMENT SLOPES.
- CATCH BASINS, DESILTING BASINS AND STORM DRAIN SYSTEM SHALL BE INSTALLED TO THE SATISFACTION OF THE COUNTY DEPARTMENT OF PUBLIC WORKS.
- GRAVEL BAG CHECK DAMS TO BE PLACED IN A MANNER APPROVED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS IN UNPAVED STREETS WITH GRADIENTS IN EXCESS OF 2% AND ON OR IN OTHER GRADED OR EXCAVATED AREAS AS REQUIRED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS.
- THE DEVELOPER TO MAINTAIN THE PLANTING AND EROSION CONTROL MEASURES DESCRIBED ABOVE UNTIL RELIEVED OF THE SAME BY THE COUNTY DEPARTMENT OF PUBLIC WORKS. THE DEVELOPER SHALL MAINTAIN THE GRADINGS AND EROSION CONTROL MEASURES AND DESTABILIZED AREAS UNTIL THE DEVELOPER HAS BEEN NOTIFIED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS THAT THE DEVELOPER SHALL REPAIR ANY ERODED SLOPES AS DIRECTED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS.

**SILTATION AND SEDIMENT CONTROL MEASURES NOTES:**

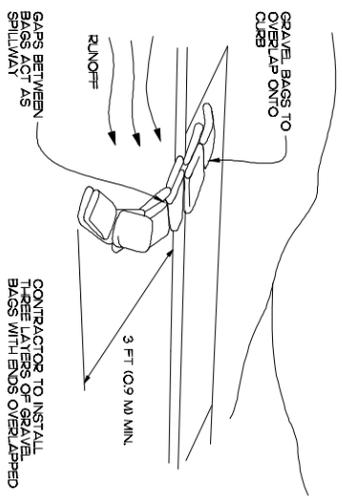
- THE SEDIMENT BASINS SHALL BE PROVIDED AT THE LOWER END OF EVERY DRAINAGE AREA PRODUCING SEDIMENT RUNOFF. THE BASINS SHALL BE MAINTAINED AND CLEANED TO DESIGN CONDITIONS. THE EVENT OF A MAJOR PRODUCING STORM, THE BASINS SHOULD BE SEMI-PERMANENT ESTABLISHED ON ALL ERODIBLE SLOPES.
  - SEDIMENTATION BASINS MAY NOT BE REMOVED OR MADE INOPERATIVE WITHOUT PRIOR APPROVAL OF THE COUNTY ENGINEER.
  - SEWER OR STORM DRAIN TRENCHES THAT ARE CUT THROUGH BASIN DIKES OR BASIN INLET DIKES SHALL BE PLOUGED WITH GRAVEL BAGS FROM TOP OF PIPE TO TOP OF DIKE.
  - ALL UTILITY TRENCHES SHALL BE BLOCKED AT THE PRESCRIBED INTERVALS WITH A DOUBLE ROW OF GRAVEL BAGS WITH A TOP ELEVATION TWO GRAVELBAGS BELOW THE GRADED SURFACE OF THE STREET. GRAVEL BAGS ARE TO BE PLACED WITH LAPPED COURSES. THE INTERVALS PRESCRIBED BETWEEN GRAVEL BAG BLOCKING SHALL DEPEND ON THE SLOPE OF THE GROUND SURFACE BUT NOT TO EXCEED THE FOLLOWING:
- | GRADE OF THE STREET | INTERVAL    |
|---------------------|-------------|
| LESS THAN 2 %       | AS REQUIRED |
| 2 % TO 4 %          | 100 FEET    |
| 4 % TO 10 %         | 50 FEET     |
| OVER 10 %           | 25 FEET     |
- AFTER UTILITY TRENCHES ARE BACKFILLED AND COMPLETED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDLED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS FLOW AT FREQUENT INTERVALS WHERE TRENCHES ARE NOT ON THE CENTERLINE OF A CROWNED STREET.
  - ALL BUILDING PADS SHOULD BE SLOPED TOWARDS THE DRIVEWAYS AND VELOCITY DAMS PROVIDED AT THE BASE OF ALL DRIVEWAYS DRAINING INTO THE STREET.
  - PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED GRADED CHANNELS AT THE INTERVALS INDICATED BELOW:
- | GRADE OF CHANNEL | INTERVALS BETWEEN CHECK DAMS |
|------------------|------------------------------|
| LESS THAN 3 %    | 100 FEET                     |
| 3 % TO 6 %       | 50 FEET                      |
| OVER 6 %         | 25 FEET                      |
- PROVIDE VELOCITY CHECK DAMS IN ALL PAVED STREET AREAS ACCORDING TO RECOMMENDED CRITERIA INDICATED ON THE ENCLOSED GRAPH ENTITLED "SANDBAG BARRIER SPACING FOR EROSION CONTROL IN GRADED STREETS". VELOCITY CHECK DAMS MAY BE CONSTRUCTED OF GRAVEL BAGS, TIMBER, OR OTHER EROSION RESISTANT MATERIALS APPROVED BY THE COUNTY ENGINEER, AND SHALL EXTEND COMPLETELY ACROSS THE STREET OR CHANNEL AT RIGHT ANGLES TO THE CENTERLINE. VELOCITY CHECK DAMS MAY ALSO SERVE AS SEDIMENT TRAPS.
- | GRADE OF STREET | INTERVAL     | NO. OF BAGS HIGH |
|-----------------|--------------|------------------|
| LESS THAN 2 %   | AS REQ'D     |                  |
| 2 % TO 4 %      | 200 FEET MAX | 1                |
| 4 % TO 6 %      | 100 FEET     | 1                |
| 6 % TO 10 %     | 50 FEET      | 2                |
| > 10 %          | 25 FEET      | 2                |
- ALL EROSION CONTROL DEVICES WITHIN THE DEVELOPMENT SHOULD BE MAINTAINED WORKING AND AFTER EVERY MAJOR PRODUCING STORM, IF NECESSARY, MAINTENANCE OPERATIONS SHOULD BE REQUIRED TO HAVE ACCESS TO ALL AREAS.
  - PROVIDE ROCK RIPRAP ON CURVES AND STEEP DROPS IN ALL EROSION PRONE DRAINAGE CHANNELS DOWNSTREAM FROM THE DEVELOPMENT. THIS PROTECTION WOULD REDUCE EROSION CAUSED BY THE INCREASED FLOWS THAT MAY BE ANTICIPATED FROM DENDED SLOPES, OR FROM IMPROVED SURFACES.
  - ANY PROPOSED ALTERNATE CONTROL MEASURES MUST BE APPROVED IN ADVANCE BY ALL RESPONSIBLE AGENCIES: THE COUNTY ENGINEERS DEPARTMENT OF SANITATION AND FLOOD CONTROL, OFFICE OF ENVIRONMENTAL MANAGEMENT, ETC.

**STORM WATER MANAGEMENT NOTES**

- DURING THE RAINY SEASON THE AMOUNT OF EXPOSED SOIL ALLOWED AT ONE TIME SHALL NOT EXCEED THAT WHICH CAN BE ADEQUATELY PROTECTED BY THE PROPERTY OWNER IN THE EVENT OF A RAINSTORM. 125% OF ALL SLOPES NEEDED FOR BMP MEASURES SHALL BE RETAINED ON THE JOB SITE IN A MANNER THAT ALLOWS FULL DEPLOYMENT AND COMPLETE INSTALLATION IN 48 HOURS OR LESS OF A FORECAST RAIN.
- NO AREA BEING DISTURBED SHALL EXCEED 50 ACRES AT ANY GIVEN TIME WITHOUT DEMONSTRATING TO THE SAN DIEGO COUNTY DEPARTMENT OF PUBLIC WORKS THAT ADEQUATE EROSION AND SEDIMENT CONTROL CAN BE MAINTAINED. ANY DISTURBED AREA THAT IS NOT ACTIVELY GRADED FOR 10 DAYS MUST BE FULLY PROTECTED FROM EROSION. UNTIL ADEQUATE LONG-TERM PROTECTIONS ARE INSTALLED, THE DISTURBED AREA SHALL BE INCLUDED WHEN CALCULATING THE ACTIVE DISTURBANCE AREA. ALL EROSION CONTROL MEASURES SHALL REMAIN INSTALLED AND MAINTAINED DURING ANY INACTIVE PERIOD.
- THE PROPERTY OWNER IS OBLIGATED TO INSURE COMPLIANCE WITH ALL APPLICABLE STORMWATER REGULATIONS AT ALL TIMES. THE BMP'S (BEST MANAGEMENT PRACTICES) THAT HAVE BEEN INCORPORATED INTO THIS PLAN SHALL BE IMPLEMENTED AND MAINTAINED TO EFFECTIVELY PREVENT THE POTENTIALLY NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORMWATER QUALITY. THE MAINTENANCE OF THE BMP'S IS THE PERMITTEE'S RESPONSIBILITY, AND FAILURE TO PROPERLY INSTALL OR MAINTAIN THE BMP'S MAY RESULT IN ENFORCEMENT ACTION BY THE COUNTY OF SAN DIEGO OR OTHERS. IF INSTALLED BMP'S FAIL, THEY MUST BE REPAIRED OR REPLACED WITH AN ACCEPTABLE ALTERNATE WITHIN 24 HOURS, OR AS SOON AS SAFE TO DO SO.
- A NOTICE OF INTENT (NOI) HAS BEEN FILED WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) AND A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) WILL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA REGULATION 226500 (SWPPP) AND THE REQUIREMENTS OF CALIFORNIA ACTIVITY (PERMIT NO. CAS000002) FOR ALL OPERATIONS ASSOCIATED WITH THESE PLANS. THE NOI NUMBER ASSIGNED FOR THIS PROJECT IS W.D.1.D. NO. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR REVIEW BY COUNTY.

**IRRIGATION NOTES**

- THE FACE OF ALL CUT AND FILL SLOPES IN EXCESS OF THREE FEET VERTICAL HEIGHT SHALL BE PLANTED AND MAINTAINED WITH A GRASS COVER OR OTHER PLANTING IN ACCORDANCE WITH SAN DIEGO COUNTY SPECIFICATIONS, TO PROTECT AGAINST EROSION AND INSTABILITY. PLANTING SHALL COMMENCE AS SOON AS SLOPES ARE COMPLETED AND MUST BE COMPLETED AND ESTABLISHED PRIOR TO ROUGH APPROVAL OF THE GRADING AND BUILDING PLANS.



**GRAVEL BAG BERM (SC-6)**  
 NO SCALE

**COUNTY APPROVED CHANGES**

No.	Description	Approved by	Date

**BENCH MARK**

DESCRIPTION: GPS STATION "V5 BMT"  
 LOCATION: STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET  
 RECORD FROM: SAN DIEGO COUNTY VERTICAL CONTROL  
 ELEVATION: 399.08' DATUM: NAVD09

**PRIVATE CONTRACT**

EROSION CONTROL PLANS FOR: SHEET 7 DEPARTMENT OF PUBLIC WORKS SHEETS 18

ADLAI ROAD SUBDIVISION (TM 5556)  
 FOR LOT 14 'S' TRACT RANCHO EL CAJON

DESIGNED BY: WILLIAM P. WORSKAY  
 COUNTY ENGINEER  
 DATE: \_\_\_\_\_  
 CHECKED BY: WILLIAM A. SNIERS  
 COUNTY ENGINEER  
 DATE: \_\_\_\_\_  
 PROJECT NO: PPS2014-LDGRM-00018



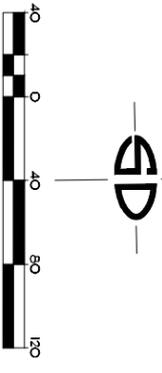
**Snipes-Dye associates**  
*Civil Engineers and Land Surveyors*  
 8348 CENTER DRIVE, STE. G, LA MESA, CA 91942  
 TELEPHONE: (619) 697-9234 FAX: (619) 466-2033  
 01/29/18  
 WILLIAM A. SNIERS, R.C.E. 50477  
 EXPIRES 06-30-19



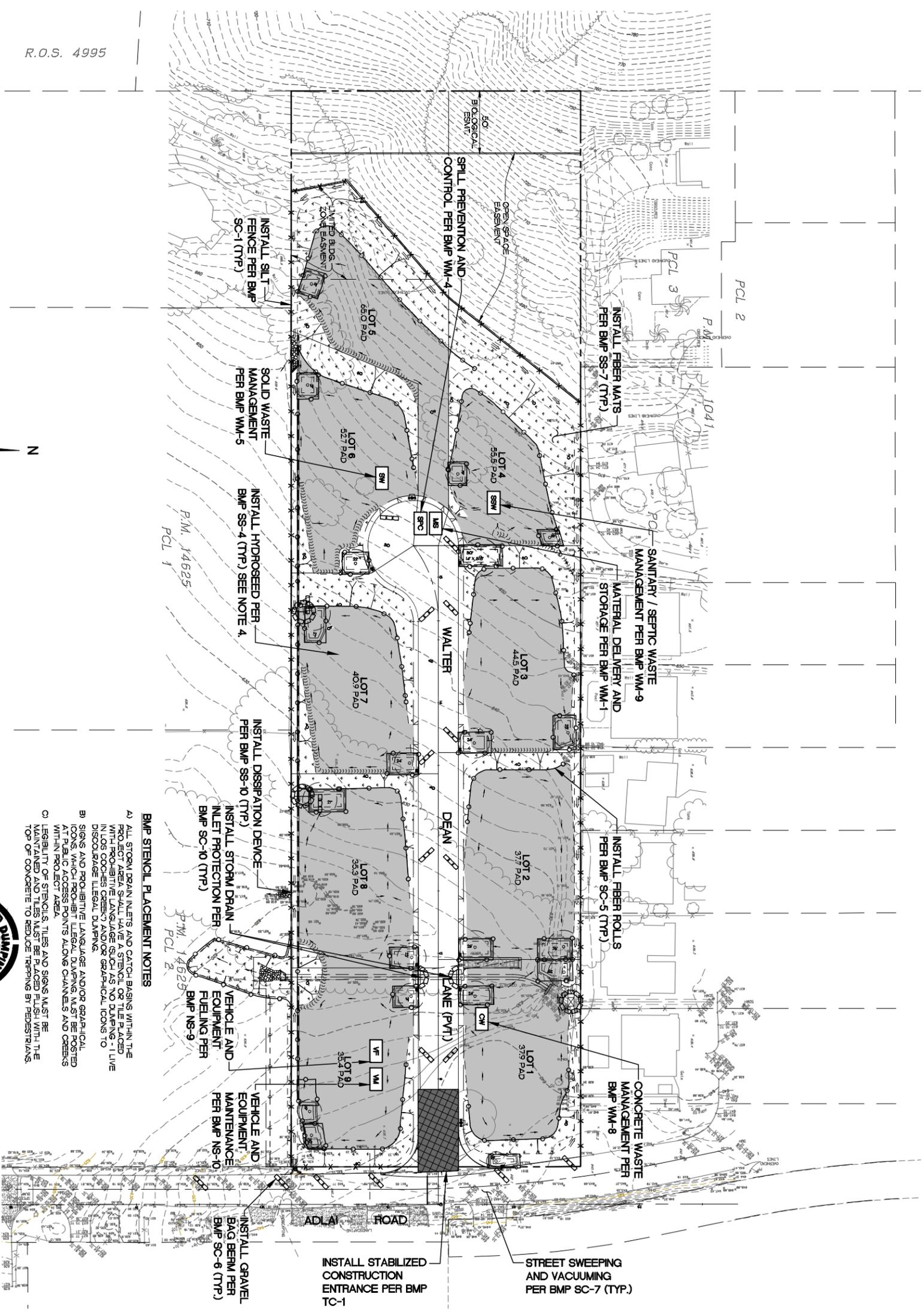


**ENGINEER OF WORK**

**Snipes-Dye Associates**  
 Civil Engineers and Land Surveyors  
 8348 CENTER DRIVE, STE. C, LA MESA, CA 91942  
 TELEPHONE: (619) 697-9234 FAX: (619) 466-2033  
 WILLIAM A. SNIPES, R.C.E. 50477  
 EXPRES 06-30-19



R.O.S. 4995



- BMP STENCIL PLACEMENT NOTES**
- ALL STORM DRAIN INLETS AND CATCH BASINS WITHIN THE PROJECT AREA SHALL HAVE A STENCIL OF THE PLACED BMP NUMBER, OR SIGNAGE, OR GRAPHICAL ICONS TO DISCOURAGE ILLLEGAL DUMPING.
  - SIGNS AND PROTECTIVE LANGUAGE AND/OR GRAPHICAL ICONS FOR PROHIBITED DUMPING MUST BE POSTED WITHIN PROJECT AREA.
  - LEGIBILITY OF STENCILS, TILES AND SIGNS MUST BE MAINTAINED AND MUST BE PLACED WITHIN THE TOP OF CONCRETE TO REDUCE TRIPPING BY PEDESTRIANS.



**WORK TO BE DONE**

THE FOLLOWING WORK SHALL BE DONE ACCORDING TO THESE PLANS, THE NOVEMBER 2009 EDITION, INCLUDING SUPPLEMENTS OF THE CALTRANS STORM WATER QUALITY HANDBOOK:

THE FOLLOWING BMPs FROM TABLE H ARE TO BE UTILIZED:

NO.	DESCRIPTION	APPROVED BY	DATE
1.	SCHEDULING	EC-1	
2.	PRESERVATION OF EXISTING VEGETATION	EC-2	
3.	HYDROSEEDING	SS-4	
4.	WIND EROSION CONTROL	WE-1	
5.	SILT FENCE	SC-1	
6.	STABILIZED CONSTRUCTION ENTRANCE	TO-1	
7.	FIBER ROLLS	SC-5	
8.	GRAVEL BAG BERM	SC-6	
9.	STREET SWEEPING AND VACUUMING	SC-7	
10.	STORM DRAIN INLET PROTECTION	SC-10	
11.	DISPATION DEVICE	SS-10	
12.	FIBER MATS	SS-7	
13.	MATERIAL DELIVERY AND STORAGE	WM-1	
14.	SPILL PREVENTION AND CONTROL	WM-4	
15.	SOLID WASTE MANAGEMENT	WM-5	
16.	CONCRETE WASTE MANAGEMENT	WM-8	
17.	SAINTARY / SEPTIC WASTE MANAGEMENT	WM-9	
18.	VEHICLE AND EQUIPMENT FUELING	NS-9	
19.	VEHICLE AND EQUIPMENT MAINTENANCE	NS-10	

**NOTES**

- STORMWATER CONTROL MEASURES SHOWN HEREON ARE BEST MANAGEMENT PRACTICES FOR THIS SITE BASED THE ANTICIPATED PROGRESS OF WORK. ADDITIONAL MEASURES MAY BE REQUIRED AT ANY TIME AT THE DISCRETION OF THE COUNTY ENGINEER AS THE WORK PROGRESSES. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE ADEQUATE PROTECTION IS IN PLACE AT ALL TIMES TO PREVENT ANY DISCHARGE POLLUTANTS, INCLUDING SEDIMENT, FROM THE EXPOSED SITE AREAS.
- IT IS THE RESPONSIBILITY OF THE OWNER TO INSTALL AND MAINTAIN ALL EROSION CONTROL AND OTHER APPLICABLE BEST MANAGEMENT PRACTICES. THE ENGINEER OF WORK IS NOT RESPONSIBLE FOR SITE CONDITIONS OR MANAGEMENT DURING THE CONSTRUCTION PERIOD.
- ALL EXPOSED DISTURBED AREAS MUST HAVE EROSION PREVENTION CONTROLS PROPERLY INSTALLED. SLOPE COVERAGE TYPICALLY COCONUT FIBER MATS FOR LONG TERM STABILIZATION OR WITH BONDED FIBER MATRIX FOR SHORT TERM STABILIZATION.
- GRADED PAD AREAS SHALL BE HYDROSEED TO PREVENT EROSION. IN THE EVENT THAT CONSTRUCTION OF BUILDING DOES NOT OCCUR WITHIN 30 DAYS OF SEEDING, HYDROSEED SHALL BE REAPPLIED OR REPLACED AS NECESSARY TO ESTABLISH GRASS WITH.

**HYDROSEED MIX**

WM #	LBBS / ACRE	COMMON NAME
1/6	90	GAZANIA
2/6	3	GAZANIA RED SHADERS
3/6	96 / 75	FLAVIADO NSLARS
4/6	20	FLAVIADO
5/6	360	TOTAL POUNDS PER ACRE

SOIL STABILIZER - 1/4 BINDER OR EQUAL  
 WOOD FIBER - COVERED 100% WOOD FIBER  
 FERTILIZER - 6-20-20  
 120 LBS/ACRE  
 1500 LBS/ACRE  
 50 LBS/ACRE

**COUNTY APPROVED CHANGES**

No.	Description	Approved by	Date

**BENCHMARK**

DESCRIPTION:	GPS STATION "V5 PM1"
LOCATION:	STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET
RECORD FROM:	SANI DIEGO COUNTY VERTICAL CONTROL
ELEVATION:	399.08'
DATE:	01/29/18

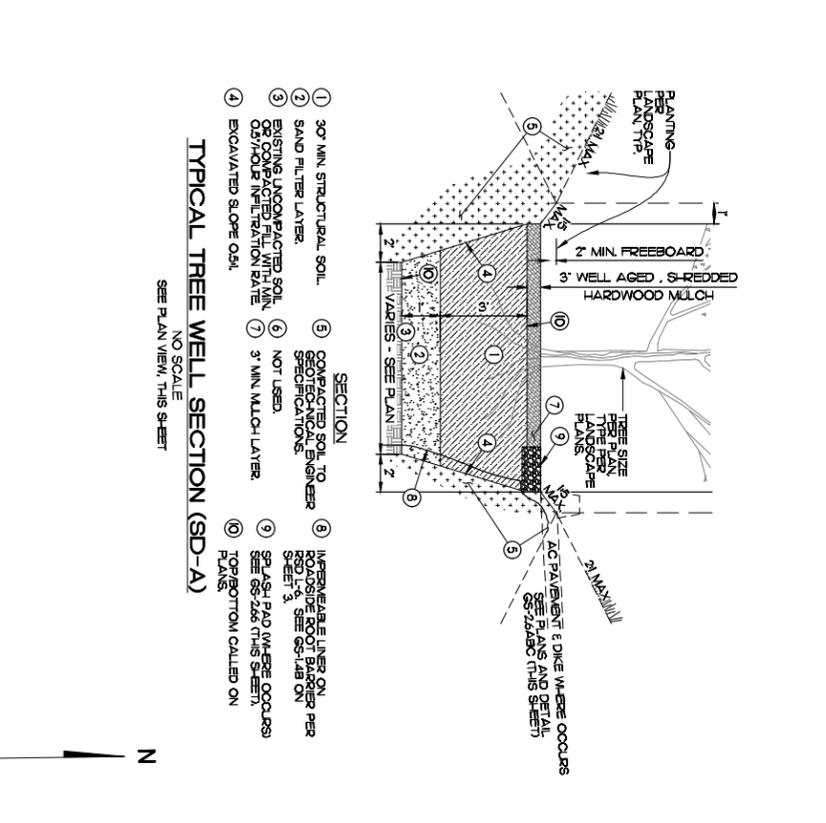
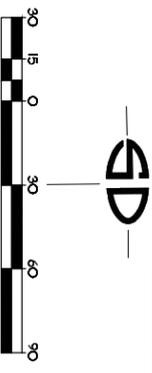
**PRIVATE CONTRACT**

SHEET	8	COUNTY OF SAN DIEGO	18
DEPARTMENT OF PUBLIC WORKS			
EROSION CONTROL PLANS:			
<b>ADLAI ROAD SUBDIVISION (TM 5356)</b>			
<b>FOR LOT 14'S TRACT, RANCHO EL CAJON</b>			
CALIFORNIA COORDINATE INDEX 246-1797			
DESIGNED BY:	WILLIAM A. SNIPES	DATE:	01/29/18
CHECKED BY:	WILLIAM A. SNIPES	DATE:	01/29/18
PROJECT NO.:	PBS2014-LDGRM-00018		

**Stripes-Dye Associates**  
 civil engineers and land surveyors  
 8348 CENTER DRIVE, STE. C, LA MESA, CA 91942  
 TEL: (619) 466-2033 FAX: (619) 466-2033  
 WILLIAM A. SNIPE, R.C.E. 50477  
 EXP. 06-30-19

**ENGINEER OF WORK**

ENGINEER OF WORK



DESCRIPTION	BMP TYPE	DRAIN TO BMP	TREE CANOPY DIAMETER	BMP AREA	BMP VOLUME	AREA (A/C)	PRE-PROJECT COVER	POST SURFACE TYPE	DRAINAGE SOIL	SLOPE
DMA 1-P	TREE WELL (SD-A)	BMP-1	25'	315 SF	994 CF	0.164	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 1-1	TREE WELL (SD-A)	BMP-1	25'	315 SF	994 CF	0.087	PERVIOUS	ROOFTOP	TYPE C	MODERATE
DMA 2-P	TREE WELL (SD-A)	BMP-2	28'	338 SF	1088 CF	0.197	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 2-1	TREE WELL (SD-A)	BMP-2	28'	338 SF	1088 CF	0.087	PERVIOUS	ROOFTOP	TYPE C	MODERATE
DMA 3-P	TREE WELL (SD-A)	BMP-3	25'	315 SF	994 CF	0.158	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 3-1	TREE WELL (SD-A)	BMP-3	25'	315 SF	994 CF	0.087	PERVIOUS	ROOFTOP	TYPE C	MODERATE
DMA 4-P	TREE WELL (SD-A)	BMP-4	15'	142 SF	366 CF	0.099	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 4-1	TREE WELL (SD-A)	BMP-4	15'	142 SF	366 CF	0.121	PERVIOUS	ROOFTOP	TYPE C	MODERATE
DMA 5-P	TREE WELL (SD-A)	BMP-5	19'	192 SF	570 CF	0.123	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 5-1	TREE WELL (SD-A)	BMP-5	19'	192 SF	570 CF	0.066	PERVIOUS	ROOFTOP	TYPE C	MODERATE
DMA 6-P	TREE WELL (SD-A)	BMP-6	21'	231 SF	708 CF	0.166	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 6-1	TREE WELL (SD-A)	BMP-6	21'	231 SF	708 CF	0.042	PERVIOUS	ROOFTOP	TYPE C	MODERATE
DMA 7-P	TREE WELL (SD-A)	BMP-7	21'	231 SF	706 CF	0.091	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 7-1	TREE WELL (SD-A)	BMP-7	21'	231 SF	706 CF	0.047	PERVIOUS	ROOFTOP	TYPE C	MODERATE
DMA 8-P	TREE WELL (SD-A)	BMP-8	27'	364 SF	1162 CF	0.217	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 8-1	TREE WELL (SD-A)	BMP-8	27'	364 SF	1162 CF	0.078	PERVIOUS	ROOFTOP, DRIVEWAY	TYPE C	MODERATE
DMA 9-P	TREE WELL (SD-A)	BMP-9	27'	364 SF	1162 CF	0.231	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 9-1	TREE WELL (SD-A)	BMP-9	27'	364 SF	1162 CF	0.078	PERVIOUS	ROOFTOP, DRIVEWAY	TYPE C	MODERATE
DMA 10-P	TREE WELL (SD-A)	BMP-10	19'	192 SF	570 CF	0.106	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 10-1	TREE WELL (SD-A)	BMP-10	19'	192 SF	570 CF	0.034	PERVIOUS	ROOFTOP, DRIVEWAY	TYPE C	MODERATE
DMA 11-P	TREE WELL (SD-A)	BMP-11	24'	300 SF	930 CF	0.064	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 11-1	TREE WELL (SD-A)	BMP-11	24'	300 SF	930 CF	0.069	PERVIOUS	DRIVEWAY, ROAD	TYPE C	MODERATE
DMA 12-P	TREE WELL (SD-A)	BMP-12	26'	336 SF	1066 CF	0.084	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 12-1	TREE WELL (SD-A)	BMP-12	26'	336 SF	1066 CF	0.084	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 13-P	TREE WELL (SD-A)	BMP-13	24'	294 SF	922 CF	0.066	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 13-1	TREE WELL (SD-A)	BMP-13	24'	294 SF	922 CF	0.066	PERVIOUS	DRIVEWAY, ROAD	TYPE C	MODERATE
DMA 14-P	TREE WELL (SD-A)	BMP-14	30'	441 SF	1428 CF	0.111	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 14-1	TREE WELL (SD-A)	BMP-14	30'	441 SF	1428 CF	0.073	PERVIOUS	DRIVEWAY, ROAD	TYPE C	MODERATE
DMA 15-P	TREE WELL (SD-A)	BMP-15	22'	252 SF	778 CF	0.155	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 15-1	TREE WELL (SD-A)	BMP-15	22'	252 SF	778 CF	0.049	PERVIOUS	DRIVEWAY, ROAD	TYPE C	MODERATE
DMA 16-P	TREE WELL (SD-A)	BMP-16	24'	294 SF	922 CF	0.073	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 16-1	TREE WELL (SD-A)	BMP-16	24'	294 SF	922 CF	0.073	PERVIOUS	DRIVEWAY, ROAD	TYPE C	MODERATE
DMA 17-P	TREE WELL (SD-A)	BMP-17	23'	273 SF	850 CF	0.024	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 17-1	TREE WELL (SD-A)	BMP-17	23'	273 SF	850 CF	0.024	PERVIOUS	DRIVEWAY, ROAD	TYPE C	MODERATE
DMA 18-P	TREE WELL (SD-A)	BMP-18	21'	231 SF	706 CF	0.022	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 18-1	TREE WELL (SD-A)	BMP-18	21'	231 SF	706 CF	0.022	PERVIOUS	DRIVEWAY, ROAD	TYPE C	MODERATE
DMA 19-P	TREE WELL (SD-A)	BMP-19	20'	216 SF	650 CF	0.044	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 19-1	TREE WELL (SD-A)	BMP-19	20'	216 SF	650 CF	0.024	PERVIOUS	ROOFTOP, DRIVEWAY	TYPE C	MODERATE
DMA 20-P	TREE WELL (SD-A)	BMP-20	15'	142 SF	366 CF	0.027	PERVIOUS	LANDSCAPE	TYPE C	MODERATE
DMA 20-1	TREE WELL (SD-A)	BMP-20	15'	142 SF	366 CF	0.027	PERVIOUS	ROAD	TYPE C	MODERATE
DMA 21	SELF-MITIGATING	DE MINIMIS	4880 SF	1120 SF	3480 CF	0.001	PERVIOUS	LANDSCAPE, DIRT ROAD	TYPE C	MODERATE
DMA 22	DE MINIMIS	DE MINIMIS	57 SF	57 SF	171 CF	0.001	PERVIOUS	ROAD	TYPE C	MODERATE

NOTE: SEE TREE WELL SIZES TABLE ON SHEET 3.

No.	Description	Approved by	Date

**COUNTY APPROVED CHANGES**

**BENCH MARK**

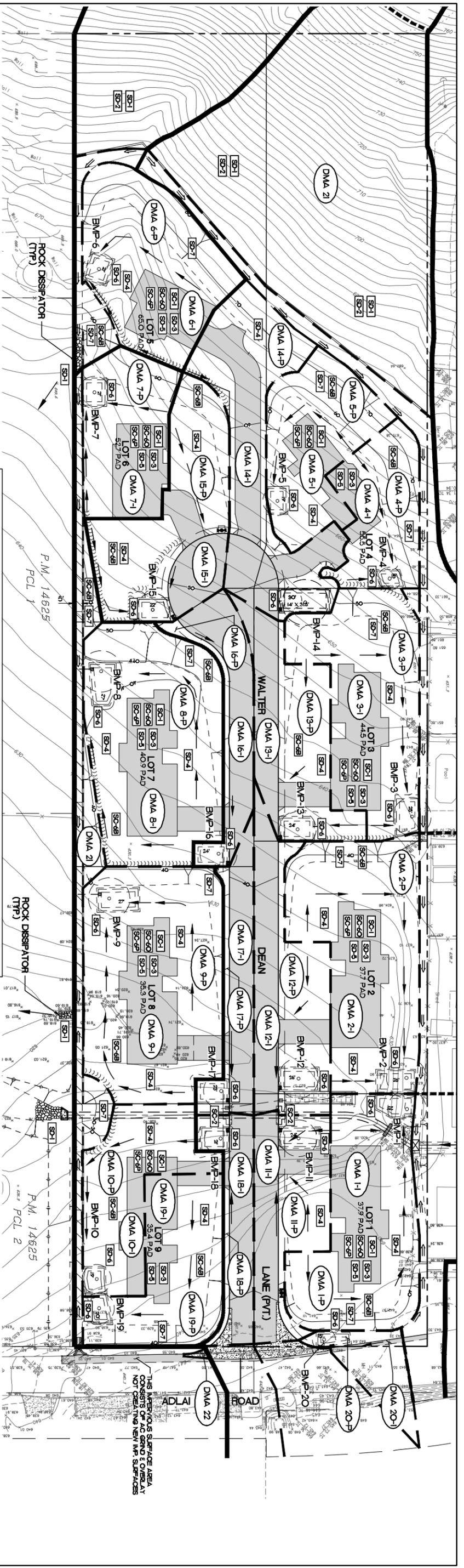
DESCRIPTION: GPS STATION "V5 PM1"  
 LOCATION: STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET  
 RECORD FROM: SAN DIEGO COUNTY VERTICAL CONTROL  
 ELEVATION: 399.08' DATUM: NAVD09

**PRIVATE CONTRACT**

COUNTY OF SAN DIEGO  
 DEPARTMENT OF PUBLIC WORKS  
 SHEET 9 OF 18

DRAINAGE MANAGEMENT EXHIBIT AND CALCULATIONS FOR:  
**ADLAI ROAD SUBDIVISION (TM 5556)**  
 POR LOT 14 'S' TRACT, RANCHO EL CAJON  
 CALIFORNIA COORDINATE INDEX 246-1797

DESIGNED BY: WILLIAM A. SNIPE  
 CHECKED BY: WILLIAM A. SNIPE  
 DATE: 01/29/18  
 PLS2014-LDGRM-00018



**SOURCE CONTROL AND SITE DESIGN BMPS**

**LEGEND**

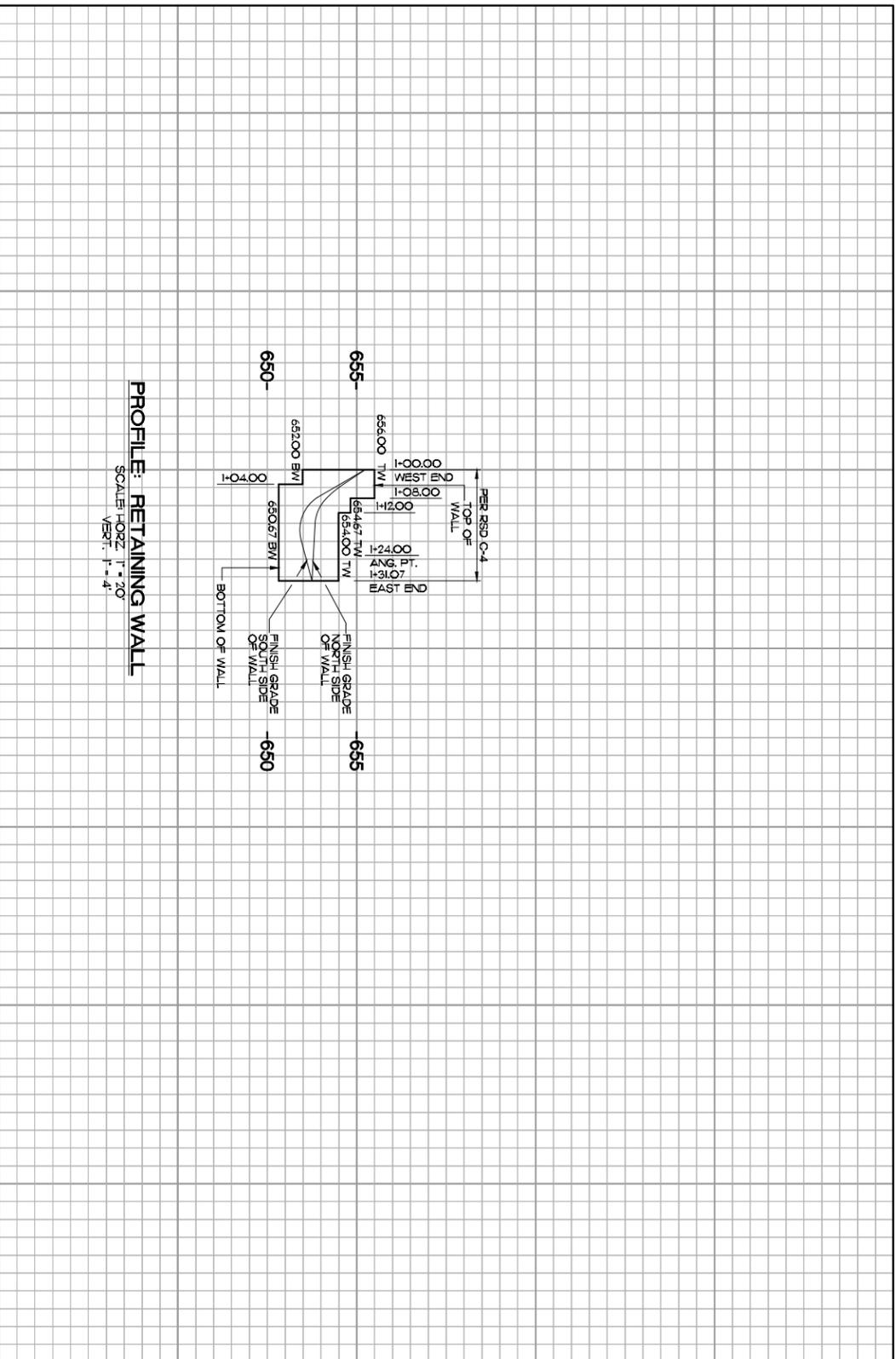
- BASIN BOUNDARY
- DRAINAGE MANAGEMENT AREA
- DIRECTION OF FLOW
- INTERVIOUS SURFACE
- CONCRETE DRAINAGE DITCH
- DRAINAGE MANAGEMENT AREA FOR SITE DESIGN BEST MANAGEMENT PRACTICE (BMP)
- POST - CONSTRUCTION BMP LEGEND
- TREE WELL BMP EX

**NOTES**

- SITE IS LOCATED WITHIN OCEANSIDE RAIN GAUGE BASIN.
- HYDROMODIFICATION SOIL, SLOPE, E.T.O.
- QUALITY ASSESSMENT WAS NOT CONDUCTED. LOW FLOW THRESHOLD ASSUMED FOR OROLOGA.
- PROPOSED SITE DESIGN BMP ARE TREE WELLS (SD-A).
- COUNTY OF SAN DIEGO'S 85TH PERCENTILE ISOPHYETAL MAP WAS UTILIZED TO DETERMINE DESIGN CAPTURE VOLUME WHILE SIZING TREE WELLS PER SD-A WERE UTILIZED TO COMPLY WITH CONVENTED POLLUTANT CONTROL AND FLOW CONTROL REQUIREMENTS.
- AS PER SD-A, TREE WELLS ARE ENCOUNTED IN SITE EXPLORATION TEST PITS.
- CRITICAL COARSE SEDIMENT YIELD AREAS (COSYAS) WERE NOT IDENTIFIED ON SITE OR UPSTREAM OFFSITE OF THE SITE.
- TREE WELL BMPs SHALL BE MAINTAINED BY THE INDIVIDUAL HOMEOWNERS.
- EXISTING NATURAL HYDROLOGIC FEATURES WATER COLLECTORS.

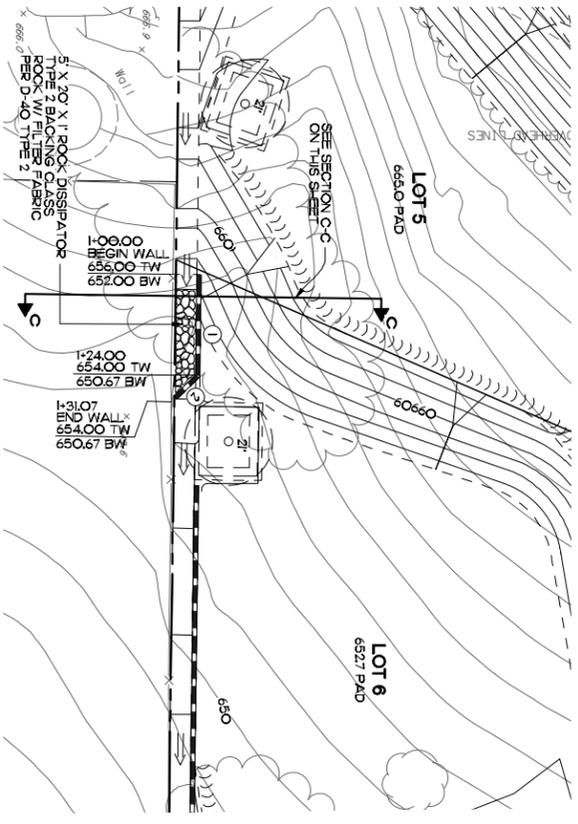
**HYDROMODIFICATION MANAGEMENT PLAN**

THIS DMA EXHIBIT IS ALSO A HYDROMODIFICATION EXHIBIT AS SITE DESIGN BMPs ACT AS FLOW CONTROL BMPs.



**PROFILE: RETAINING WALL**

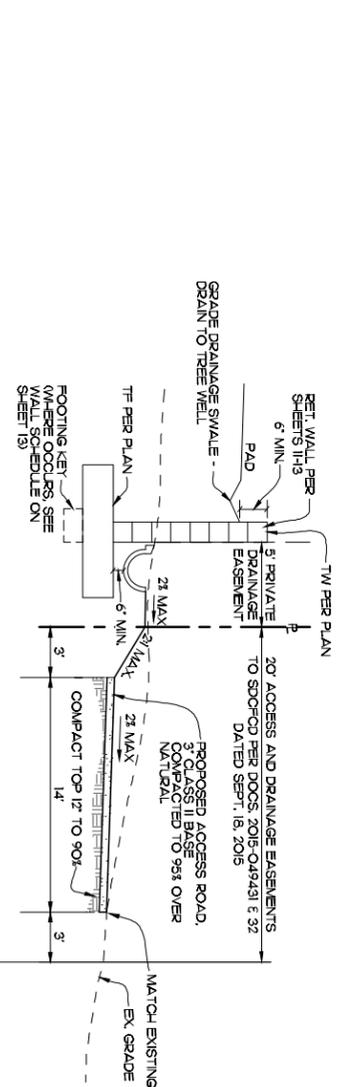
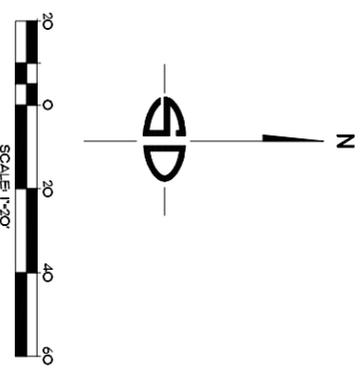
SCALE: HORIZ. 1" = 20'  
VERT. 1" = 4'



**PLAN: RETAINING WALL**

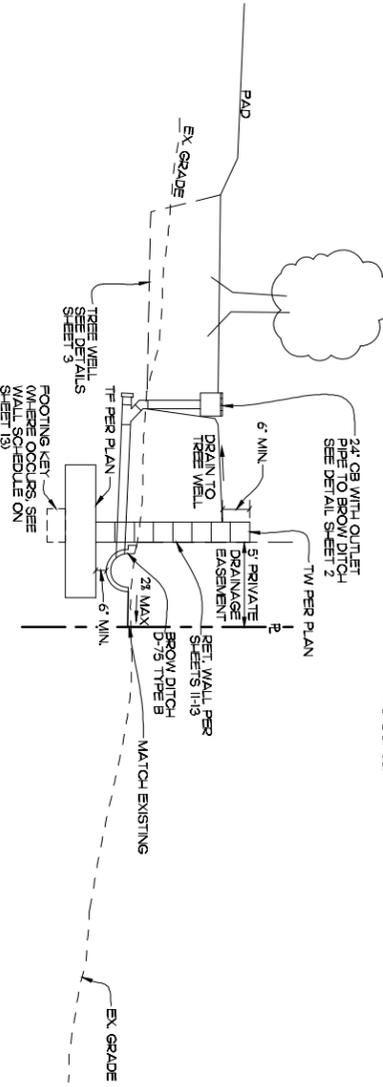
SCALE: 1" = 20'

RETAINING WALL DATA			
NO.	BEARING/Delta	RADIUS	REMARKS
1	N 89°16'52" W	--	24.00' WALL
2	N 44°16'52" W	7.07'	WALL



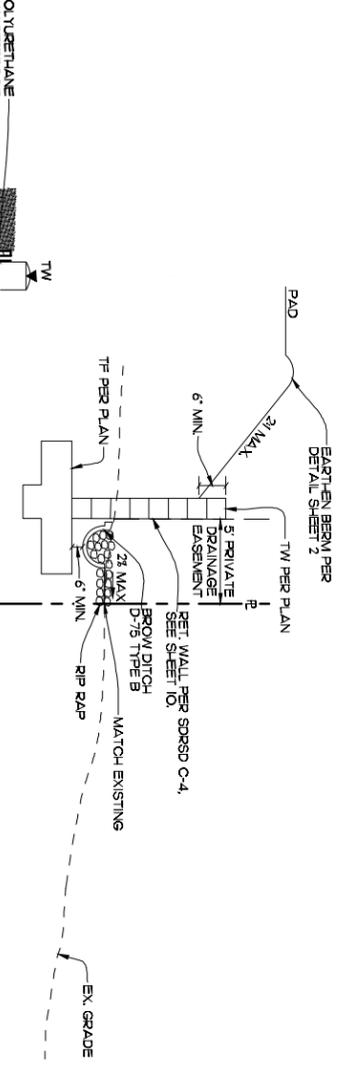
**DRAINAGE EASEMENT ACCESS ROAD**

NO SCALE



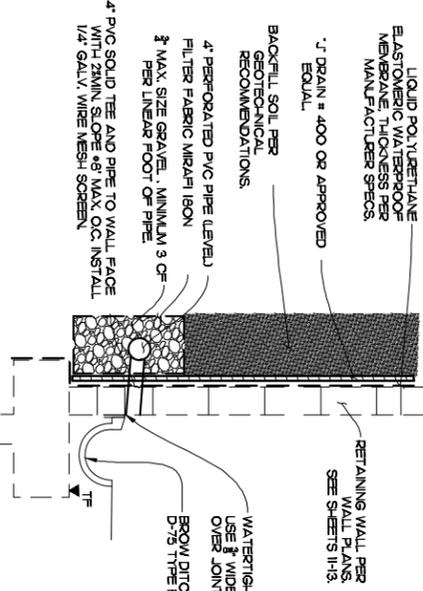
**GRADING CROSS SECTION B-B**

NO SCALE



**GRADING CROSS SECTION C-C**

NO SCALE



**TYPICAL WALL DRAINAGE**

NO SCALE



**PLAN: RETAINING WALL**

SCALE: 1" = 20'

ENGINEER OF WORK

ENGINEER OF WORK



**Snipes-Dye Associates**  
Civil Engineers and Land Surveyors  
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942  
TELEPHONE: (619) 697-9234 FAX: (619) 460-2033  
01/29/18  
WILLIAM A. SNIPESS R.C.E. 50977  
Expire: 06-30-19



**ENGINEER OF WORK**

ENGINEER OF WORK

**COUNTY APPROVED CHANGES**

No.	Description	Approved by	Date

**BENCH MARK**

DESCRIPTION:	GPS STATION "V5 PM1"
LOCATION:	STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET
RECORD FROM:	SAN DIEGO COUNTY VERTICAL CONTROL
ELEVATION:	399.08'
DATA/WM:	NAVD29

**PRIVATE CONTRACT**

SHEET 10 DEPARTMENT OF SAN DIEGO COUNTY OF PUBLIC WORKS 18 SHEETS

STANDARD RETAINING WALL PLANS FOR:

**ADLAI ROAD SUBDIVISION (TM 5556)**  
POR. LOT 14 'S' TRACT, RANCHO EL CAJON

CALIFORNIA COORDINATE INDEX 246-1797  
DRAWN BY: WILLIAM A. SNIPESS  
CHECKED BY: WILLIAM A. SNIPESS  
DATE: 01/29/18  
PROJECT NO.: PPS2014-LDGRM-00018

STATEMENT OF SPECIAL INSPECTIONS

MATERIAL SYSTEM COMPONENT AND WORK REQUIRED TO HAVE SPEC. INSP.	TYPE OF SPEC. INSP.	INSPECTION NOTES
	CONTINUOUS PERIODIC	
SOIL 5:		
VERIFY MATERIAL BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	X	
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	X	
PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS	X	
VERIFY USE OF PROPER MATERIALS, DRIBBLES AND LEFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	X	
PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE GRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	X	
CONCRETE:		
FOUNDATIONS WITH FC ≤ 2500 PSI	NOT REQUIRED	ACI 308: 3.5, 11-11.1
INSPECTION OF REIN. STEEL, INCLUDING PRESISTING TENDONS, AND PLACEMENT	X	ACI 308: CHAPTER 4, 5.2, 5.4
VERIFYING USE OF REQUIRED DESIGN MIX	X	ACI 308: 5.6, 5.8
TACKLING TEST SAMPLES	X	ACI 308: 5.9, 5.10
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT	X	ACI 308: 5.9, 5.10
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMP. AND TECHNIQUE	X	ACI 308: 18.20
APPLICATION OF FRESHENING FORCES	X	ACI 308: 18.18.4
TENDONS IN THE SERVICE FORCE RESISTING SYSTEM	X	ACI 308: CHAPTER 16
ERECTION OF PRECAST MEMBERS	X	ACI 308: 6.2
VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	X	ACI 308: 6.11
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	X	

CONCRETE NOTES (CBC CHAPTER 19)

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301 EXCEPT AS MODIFIED BY THESE NOTES.
- CONCRETE SHALL BE STANDARD WEIGHT CONCRETE (145 PCF) AND HAVE THE FOLLOWING ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS:
  - FOOTINGS: 3000 PSI
  - WALLS: 3000 PSI
  - BEAMTS SHALL CONFORM TO ASTM C-150, TYPE I OR TYPE II.
  - AGGREGATES SHALL CONFORM TO ASTM C-33 FOR NORMAL WEIGHT CONCRETE AND ASTM C-330 FOR LIGHTWEIGHT CONCRETE.
  - READY MIX CONCRETE SHALL CONFORM TO ASTM C94.
  - ADDITIONS SHALL CONFORM WITH ASTM A94 AND SHALL NOT BE CONSIDERED TO REDUCE THE CEMENT CONTENT. (CALCIUM CHLORIDE SHALL NOT BE USED)
  - STRUCTURAL LIGHTWEIGHT CONCRETE SHALL BE SAND LIGHTWEIGHT AND HAVE A DRY DENSITY RANGE OF 100 PCF TO 115 PCF.
  - MATER SHALL BE CLEAN AND FREE OF ACID, ALKALIS AND ORGANIC MATERIALS.
  - CONCRETE SLURPS SHALL CONFORM TO ASTM C-413 AND SHALL NOT EXCEED THE FOLLOWING:
    - FOOTINGS: 4"
    - SLAB ON GRADE: 4" (PROVIDE REINFORCED MIX DESIGN)
    - IF TEMP IS ABOVE 80°, 6" (PROVIDE REVISED MIX DESIGN)
  - CONCRETE SHALL BE PROPORTIONED SUCH THAT THE 1 DAY STRENGTHS ARE A MINIMUM OF SEVENTY PERCENT OF THE SPECIFIED 28 DAY STRENGTH FOR ANY CONCRETE CONSTRUCTION REQUIRING SHORING, BRACING OR TO RECEIVE CONSTRUCTION LOADS.
  - REFER TO ARCHITECTURAL DRAWINGS FOR CURBS, DEPRESSIONS, GROOVES AND GROUNDS REQUIRED TO BE CAST INTO CONCRETE.
  - SLEEVE PUMPING OPENINGS IN CONCRETE SLABS BEFORE PLACING CONCRETE. NO SLEEVES OR CHASES SHALL BE PLACED IN FOOTINGS UNLESS SPECIFICALLY NOTED BY THE STRUCTURAL PLANS.
  - PROTECTION CORNERS OF SLABS, WALLS, COLUMNS, ETC SHALL BE FORMED WITH A 3/4" CHAMFER.
  - MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO POURING CONCRETE.
  - COMPRESSIVE STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD WHEN CONCRETE REQUIRES SPECIAL INSPECTION.
  - REFER TO SECTION 1.1 OF ACI 308 FOR CONCRETE COVER NOT NOTED IN THE PLANS OR DETAILS.
  - DO NOT REPLACE REBAR FROM THEIR INTENDED POSITIONS DURING PLACEMENT OF CONCRETE.
  - CLEAN AND ROUGHEN THE SURFACES OF ANY COLD JOINTS. USE A BONDING AGENT THAT EXCEEDS THE COMPRESSIVE STRENGTH OF THE CONCRETE BY 25%.

MASONRY LEVEL 1:	INSPECTION NOTES
AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:	
A. PROPORTIONS OF SITE-PREPARED	X
B. CONSTRUCTION OF MORTAR JOINTS	X
C. LOCATION OF REIN.	X
THE INSPECTION PROGRAM SHALL VERIFY:	
A. SIZE AND LOCATION OF THE STRUCTURAL ELEMENTS	X
B. TYPE, SIZE AND LOCATION OF ANCHORS	X
C. SPECIFIED SIZE, GRADE AND TYPE OF	X
D. WELDING OF REIN.	X
E. PRETECTION OF MASONRY FROM HOT OR COLD	X
PRIOR TO GRouting THE FOLLOWING SHALL BE VERIFIED:	
A. GROUT SPACE IS CLEAN	X
B. PLACEMENT OF REINFORCING	X
C. PROPORTIONS OF SITE-PREPARED	X
D. CONSTRUCTION OF MORTAR JOINTS	X
GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS.	X
PREPARATION OF ANY REQUIRED GROUT SPECIES, MORTAR SPECIES AND/OR FIBERS SHALL BE OBSERVED.	X
COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.	X
MASONRY FOUNDATION WALLS	NOT REQUIRED
CONSTRUCTED IN ACCORDANCE WITH TABLE 905.5.1(1) 905.5.1(2), 905.5.1(3) OR 905.5.1(4).	

SPECIAL INSPECTION NOTES (CBC 2016 CHAPTER 17)

- THE OWNER OR OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION DURING CONSTRUCTION ON THE WORK LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR THE INSPECTION OF THE WORK REQUIRING SPECIAL INSPECTION.
- THE CONSTRUCTION INSPECTIONS LISTED ARE IN ADDITION TO THE INSPECTIONS REQUIRED BY CBC CHAPTER 17. SPECIAL INSPECTIONS IN ADDITION TO NOT A SUBSTITUTE FOR THE INSPECTION REQUIRED BY P.D.C.I.
- IT SHALL BE THE AGENCY'S RESPONSIBILITY TO PROVIDE A SUFFICIENT NUMBER OF INSPECTORS FOR ALL THE TYPES OF WORK THAT OCCUR SIMULTANEOUSLY.
- THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE LOCAL JURISDICTION IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION EXCEPT:
  - SOILS INSPECTION SHALL BE PROVIDED BY THE GEOTECHNICAL ENGINEER OF RECORD.
  - SHOKE CONTROL SYSTEM INSPECTIONS SHALL BE PERFORMED BY THE MECHANICAL ENGINEER OF RECORD.
- WHEN THIS REQUIREMENT IS MAINTAINED BY THE BUILDING OFFICIAL, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE SPECIAL INSPECTOR AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION.
- A PROPERT OWNER'S FINAL REPORT FORM FOR WORK REQUIRED TO HAVE SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATION MUST BE COMPLETED BY THE OWNER, THE OWNER'S AGENT, THE ARCHITECT OF RECORD OR THE ENGINEER OF RECORD AND SUBMITTED TO THE INSPECTION SERVICES DIVISION. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY THE LOCAL JURISDICTION FOR TESTING MATERIALS, SYSTEMS COMPONENTS AND EQUIPMENT.
- FABRICATOR MUST BE REGISTERED AND APPROVED BY THE LOCAL JURISDICTION FOR THE FABRICATION OF MEMBERS AND ASSEMBLIES AT THE SHOP. THE FABRICATOR SHALL SUBMIT AN APPLICATION TO PERFORM OFF-SITE FABRICATION TO THE INSPECTION SERVICES DIVISION PRIOR TO COMMENCEMENT OF FABRICATION. THE FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE INSPECTION SERVICES DIVISION PRIOR TO THE ERECTION OF FABRICATED ITEMS.
- A CERTIFICATE OF SATISFACTOR COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITTED TO THE FIELD INSPECTION DIVISION OF THE APPROVING MUNICIPALITY.

GENERAL NOTES (CBC 2016)

- THE CONTRACTOR SHALL VERIFY DIMENSIONS AND SITE CONDITIONS PRIOR TO STARTING WORK AND SHALL CONTACT THE ENGINEER OF RECORD IMMEDIATELY IF ANY DISCREPANCIES.
- USE PROVIDED DIMENSIONS FOR CONSTRUCTION. DIMENSIONS SHALL NOT BE SCALLED FROM STRUCTURAL PLANS OR DETAILS. CONTACT ENGINEER OF RECORD OR ARCHITECT FOR ANY MISSING DIMENSIONS.
- ALL CONDITIONS AND CONFLICTS BETWEEN THE WORKING DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO PROCEEDING WITH ANY AFFECTED WORK.
- THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING EXCAVATIONS.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH 2016 CALIFORNIA BUILDING CODE (CBC 2016).
- CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO THE ENGINEER OF RECORD PRIOR TO FABRICATION AND INSTALLATION.
- THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING AND SUPPORT NECESSARY TO ACHIEVE THE FINISHED STRUCTURE.

FOUNDATION NOTES

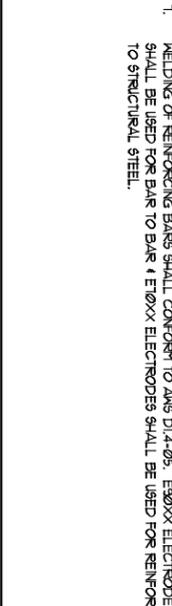
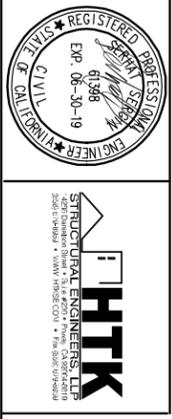
- SOILS REPORT BY: EAST COUNTY SOIL CONSULTATION
- SOILS REPORT NUMBER: 07-12345
- DATE OF REPORT: APRIL 26, 2021 & JUNE 5, 2021
- DESIGN SOIL PRESSURE: 2500 PSF
- FOOTING DEPTH: 18'
- BELOW BUILDING PAD: 18'
- BELOW EXTERIOR GRADE: 18'
- SHOULDER PREPARATION AND COMPACTION SHALL BE IN ACCORDANCE WITH THE SOILS REPORT UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER.
- FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND STANDING WATER. EXCAVATIONS SHALL BE CHECKED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE TO ACHIEVE COMPLIANCE WITH THE SOILS REPORT.
- FOUNDATIONS MUST BE PROTECTED AGAINST STABLE SOIL.
- METHOD OF SUPPORTING REINFORCING PIPE SLEEVES MUST BE APPROVED BY THE STRUCTURAL ENGINEER.
- CONTRACTOR SHALL PROTECT ALL UTILITIES ENCOMPASSED DURING EXCAVATION AND BACKFILLING.
- CONTRACTOR SHALL BRACE OR PROTECT FROM LATERAL LOADS ALL RETAINING WALLS UNTIL RESTRAINING FLOORS OR SLABS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.

MASONRY NOTES (CBC 2016 CHAPTER 21)

- CONCRETE MASONRY WALLS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF F<sub>cm</sub> = 10000 PSI. THE COMPRESSIVE STRENGTH OF THE MASONRY COMPONENTS (CONCRETE MASONRY UNITS, GROUT, AND MORTAR) MUST COMPLY WITH THE REQUIREMENTS NOTED BELOW UNLESS THE COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY UNITS ARE OTHERWISE VERIFIED BY FREESTANDING TESTS PRIOR TO AND DURING CONSTRUCTION AS SPECIFIED IN CBC SECTION 2105. SPECIAL INSPECTION IS REQUIRED UNLESS OTHERWISE NOTED ON THE PLANS OR DETAILS.
- CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS AND BE MINIMUM MEDIUM WEIGHT UNITS CONFORMING TO ASTM C-90 TYPE I WITH MAX LINEAR SHRINKAGE OF 0.065%.
- MORTAR SHALL BE TYPE 'S' OR 'NS' CONFORMING TO ASTM C111 WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS.
- ALL GROUT SHALL MAINTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. GROUT SHALL BE PROPORTIONED WITH SUFFICIENT WATER FOR POURING WITHOUT SEGREGATION OF GROUT COMPONENTS.
- ALL CELLS SHALL BE SOLID GROUTED UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL HORIZONTAL REINFORCING SHALL BE PLACED IN BOND BEYOND LINTEL BEAM UNITS.
- WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT FOUR 1/4" BELOW THE TOP OF THE UPPERMOST UNIT.
- ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.
- PROVIDE INSPECTION AND CLEANOUT HOLES AT BASE OF VERTICAL CELLS HAVING GROUT LIFTS IN EXCESS OF 4'-0" IN HEIGHT.
- ALL GROUT SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR IMMEDIATELY AFTER POURING AND AGAIN TO 10 MINUTES LATER.
- ANCHOR BOLTS MUST BE SET WITH TEMPLATES AND HELD IN PLACE PRIOR TO GROUTING. PROVIDE AT LEAST ONE INCH OF GROUT BETWEEN ANCHOR BOLT AND MASONRY WALLS.

REINFORCING STEEL

- REBAR GRADERS SHALL BE:
  - GRADE 40
  - GRADE 60
  - GRADE 60
- CONCRETE COVER FOR REBAR SHALL BE:
  - CONCRETE EXPOSED TO WEATHER: 3"
  - 1 1/2" AND SMALLER: 1 1/2"
  - 1 1/2" AND LARGER: 2"
  - CONCRETE NOT EXPOSED TO WEATHER: 3/4"
  - 1 1/2" AND SMALLER: 1 1/2"
  - 1 1/2" AND LARGER: 1 1/2"
- REBAR DETAILING AND PLACEMENT SHALL BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR THE REINFORCING STEEL INSTITUTE.
- VERTICAL BARS SHALL BE TIED IN PLACE AT THE TOP, BOTTOM AND INTERMEDIATE POINTS PER CBC CHAPTERS 18 AND 21.
- ALL REBAR ANCHOR BOLTS, DOWELS AND INSETS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
- WELDING OF REINFORCING BARS SHALL CONFORM TO AWS D1.4-05. E60XX ELECTRODES SHALL BE USED FOR BAR 4 E60XX ELECTRODES SHALL BE USED FOR REINFORCING TO STRUCTURAL STEEL.



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 PROFESIONAL CODE. THE DESIGN IS UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE COUNTY OF SAN DIEGO IS CONFINED TO MY RESPONSIBILITY AND DOES NOT CONSTITUTE A GUARANTEE OR WARRANTY WITH CURRENT STANDARDS.

DATE: 01/24/2018

BY: SERAH ESKIN

EXPIRES: 6/30/19

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK

GPS STATION "VS FMI"

DESCRIPTION: STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET

RECORD FROM: SAN DIEGO COUNTY VERTICAL CONTROL ELEVATION: 399.08' DATUM: NAVD29

PRIVATE CONTRACT

SHEET 11 OF 18

STRUCTURAL SPECIFICATIONS FOR RETAINING WALLS FOR ADLAI ROAD SUBDIVISION (TM 5356) FOR LOT 14 'S' TRACT, RANCHO EL CAJON CALIFORNIA COORDINATE INDEX 248-1797

DESIGNED BY: SERAH ESKIN DATE: 01/24/2018

CHECKED BY: SERAH ESKIN DATE: 01/24/2018

PROJECT NO.: PDS2014-LDGRM-00018

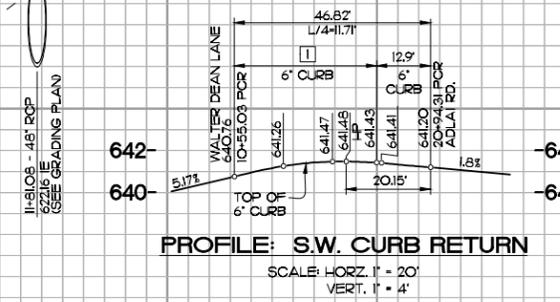
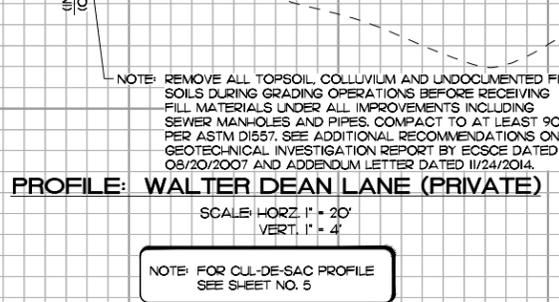
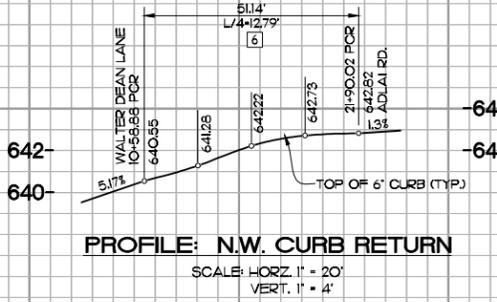
NOTE: TOP OF AC BERM ELEVATIONS ARE 0.18' HIGHER THAN CENTERLINE ELEVATIONS UNLESS OTHERWISE NOTED.

WATER DATA				
BEARING/Delta	RADIUS	LENGTH	REMARKS	
1 N 89°16'32" W	--	5.00'	8" PVC CL305	
2 N 86°50'45" E	--	27.52'	8" PVC CL305	
3 N 89°16'32" W	--	483.93'	8" PVC CL305	
4 N 68°13'28" E	--	17.63'	8" PVC CL305	

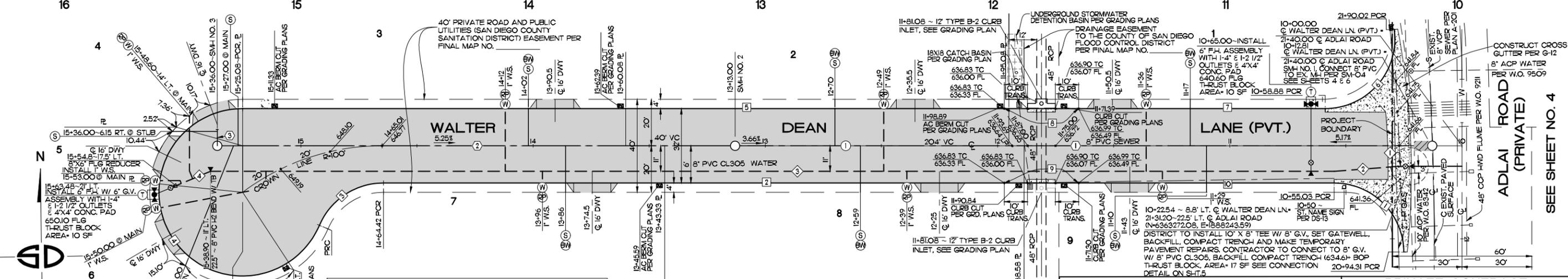
SEWER DATA				
BEARING/Delta	RADIUS	LENGTH	REMARKS	
1 N 89°16'32" W	--	296.19'	8" PVC - SDR35	
2 N 89°16'32" W	--	219.00'	8" PVC - SDR35	
3 N 00°43'28" E	--	5.00'	8" PVC - SDR35 (STUB W/CAP)	

SEWER LATERAL TABLE										
LOT NO.	STA. AT MAIN	I.E. AT MAIN	DROP TO MAIN	LENGTH IN FEET	I.E. AT R	SLOPE %	CURB ELEV.	DEPTH BELOW CURB AT R	BACKFLOW PREVENTOR NEEDED	
1	11-17	629.87	1.2'	20'	631.73	3.3	638.03	6.0'	Y	
2	12-70	630.67	0.9'	20'	632.02	2.3	638.02	6.0'	Y	
3	14-02	635.79	1.2'	20'	637.64	3.3	643.64	6.0'	Y	
4	15-27	642.54	0.5'	19.94'	643.71	3.4	650.21	6.5'	N	
5	15-31	643.28	1.2'	26.00'	644.88	2.0	651.50	6.62'	N	
6	15-29	642.65	1.2'	55.53'	644.96	2.0	651.38	6.42'	N	
7	13-86	634.92	0.5'	20'	635.82	2.0	642.80	6.98'	Y	
8	12-59	630.61	0.5'	20'	631.51	2.0	637.70	6.19'	Y	
9	11-10	629.83	0.5'	20'	630.73	2.0	638.26	7.53'	Y	

NOTE: INSTALL BACKFLOW PREVENTER (BACKWATER VALVE) PER STANDARD DRAWING SDS-104. SEE SHEET 5



CAUTION: LOCATION OF EXISTING UTILITIES ON THIS PLAN ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.



CENTERLINE DATA				
BEARING/Delta	RADIUS	LENGTH	REMARKS	
1 N 89°16'32" W	--	525.08'		

6" PCC CURB AND AC BERM DATA				
BEARING/Delta	RADIUS	LENGTH	NOTE	
1	Δ 89°25'11"	30.00'	46.82'	6" CURB PER G-01
2	N 89°16'32" W	--	275.34'	6" AC BERM TYPE 'A' PER G-05
3	Δ 66°48'00"	30.00'	34.98'	6" AC BERM TYPE 'A' PER G-05
4	Δ 246°48'00"	36.00'	155.07'	6" AC BERM TYPE 'A' PER G-05
5	N 89°16'32" W	--	328.00'	6" AC BERM TYPE 'A' PER G-05
6	Δ 97°40'03"	30.00'	51.14'	6" CURB PER G-01
7	N 89°16'32" W	--	106.20'	6" AC BERM TYPE 'A' PER G-05
8	N 89°16'32" W	--	32.00'	6" CURB PER G-01
9	N 89°16'32" W	--	32.00'	6" CURB PER G-01
10	N 89°16'32" W	--	110.05'	6" AC BERM TYPE 'A' PER G-05

COUNTY APPROVED CHANGES			BENCH MARK	
No.	Description	Approved by	Date	

I CERTIFY THAT THE PRIVATE ROAD IMPROVEMENTS AS SHOWN ON THIS PLAN SATISFIES THE REQUIREMENTS AS STATED IN THE CONDITIONS OF APPROVAL FOR TM 5356 AND THE STANDARDS FOR PRIVATE STREETS SECTION 3.1(C).

WILLIAM A. SNIPES R.C.E. 50477 DATE \_\_\_\_\_  
 EXP. DATE 06-30-19  
 INSPECTION BY: \_\_\_\_\_ ENGINEER OF WORK SECURITY REQUIRED  YES  NO  
 COUNTY \_\_\_\_\_  
 COUNTY NOT LIABLE FOR THE DESIGN IN ANY WAY.  
 REVIEWED FOR CLARITY ONLY:  
 BY: \_\_\_\_\_ DATE \_\_\_\_\_  
 FOR WILLIAM P. MORGAN, COUNTY ENGINEER

**PRIVATE CONTRACT**

SHEET 5	COUNTY OF SAN DIEGO PUBLIC WORKS DEPARTMENT	6 SHEETS
PLANS FOR THE IMPROVEMENT OF: <b>WALTER DEAN LANE</b> <b>TM 5356</b> <b>PRIVATE ROAD (PER 3.1.C)</b> CALIFORNIA COORDINATE INDEX 246-1797		
Recommended for approval: N/A SUBDIVISION ENGINEER	Approved For: WILLIAM P. MORGAN PRIVATE - SEE LEFT FOR COUNTY ENGINEER	
Engineer of work: WILLIAM A. SNIPES R.C.E. 50477 EXPIRES 06-30-19	IMPROVEMENT PLAN NO: PDS2014-LDMJP-00013	

**ENGINEER OF WORK**  
 Snipes-Dye associates  
 civil engineers and land surveyors  
 8348 CENTER DRIVE, S.J. G. LA MESA, CA 91944  
 TELEPHONE (619) 697-9234 FAX (619) 460-2033  
 WILLIAM A. SNIPES R.C.E. 50477  
 EXPIRES 06-30-19



WALL SCHEDULE W/ LEVEL BACKFILL									
H MAX.	A	B	C	D	E	F	J	K	
FTG. WIDTH	KEY DEPTH	TOE WIDTH	FTG. THICKNESS	CONC. STEM WIDTH & MIN. HEIGHT	16" OR 12" CMU HEIGHT	FDN. DOWEL	HEEL REINF.	16" STEM REINF.	8" STEM REINF.
0'-1'-11"	1'-9"	-	-	15"	-	4# @ 24"	4# @ 24"	-	-
2'-0"-3'-11"	2'-3"	-	-	15"	-	4# @ 16"	4# @ 24"	-	-
4'-0"-5'-11"	3'-9"	-	-	15"	-	4# @ 16"	4# @ 24"	-	-
6'-0"-7'-11"	5'-0"	-	-	15"	-	5# @ 16" OR (54" MIN. LAP)	5# @ 16"	-	-
8'-0"-9'-11"	5'-6"	-	-	15"	-	5# @ 16" OR (54" MIN. LAP)	5# @ 16"	-	-
10'-0"-11'-11"	7'-0"	-	-	15"	-	5# @ 16" OR (54" MIN. LAP)	5# @ 16"	-	-
12'-0"-13'-11"	8'-6"	-	-	18"	-	NO LAPS	5# @ 8"	-	-
14'-0"-15'-11"	9'-6"	-	-	18"	-	NO LAPS	5# @ 8"	-	-
16'-0"-17'-11"	11'-6"	-	-	20"	-	NO LAPS	5# @ 6"	-	-
18'-0"-20'-0"	13'-0"	-	-	20"	-	NO LAPS	5# @ 6"	-	-

NOTE:  
CONTRACTOR TO REFER TO SHEET 12 FOR GENERAL RETAINING WALL DETAILS FOR ALL OTHER HEIGHTS.

GUARDRAIL AS REQ'D BY OTHERS. REF. TO DTL. 2 ON SHEET 12 FOR POST SIZE & SPACING.

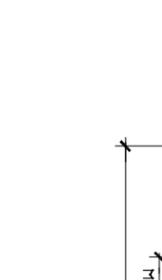
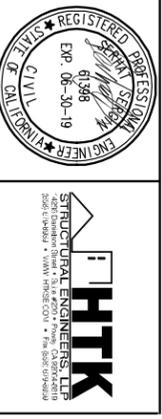
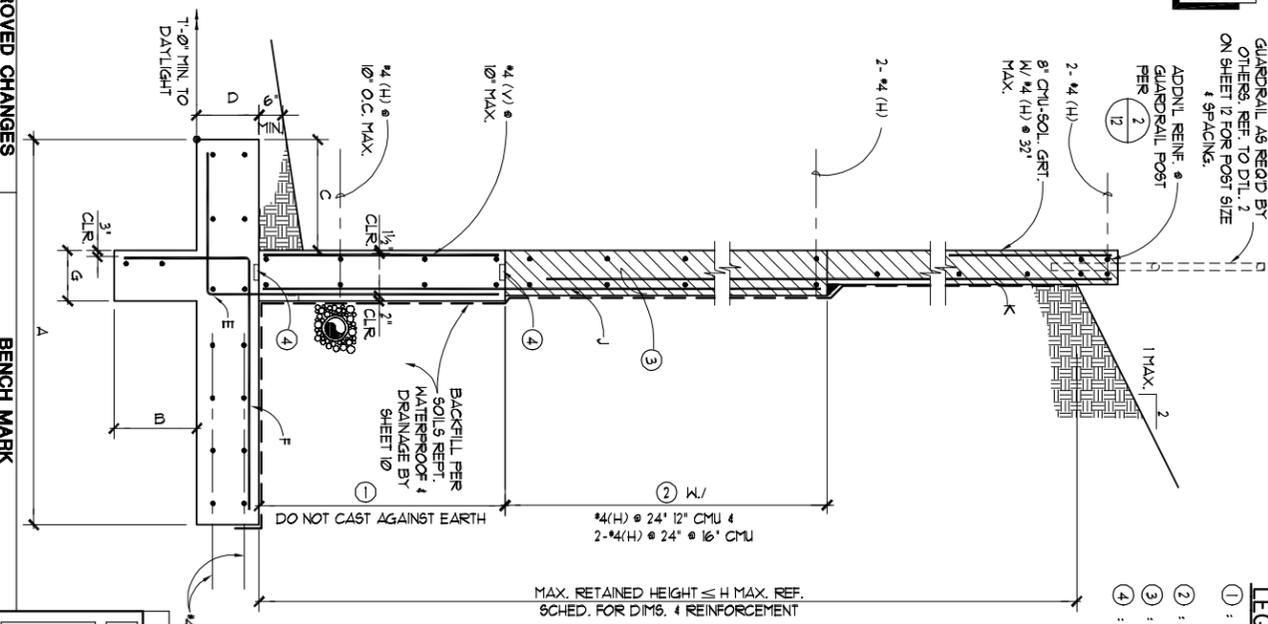
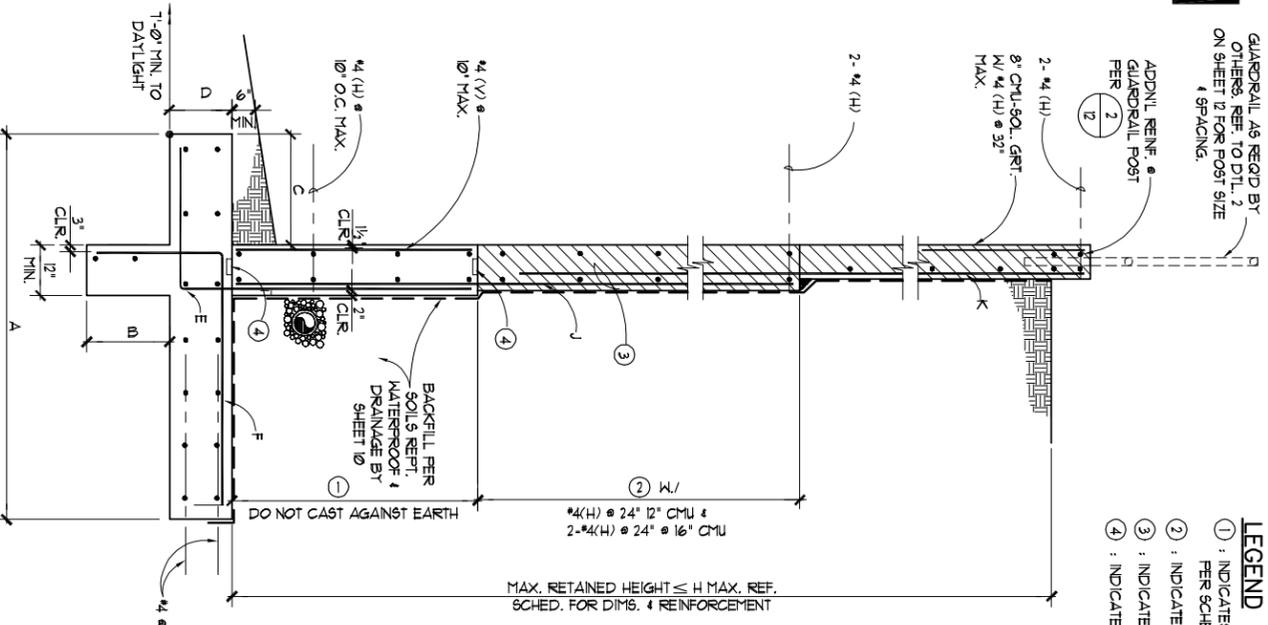
- LEGEND**
- ① : INDICATES CONCRETE STEM WIDTH & MIN. HEIGHT PER SCHEDULE
  - ② : INDICATES 12" OR 16" CMU PER SCHEDULE
  - ③ : INDICATES MIN. LAP PER SCHEDULE
  - ④ : INDICATES 2 x 6 MORTAR KEY

WALL SCHEDULE W/ SLOPED BACKFILL (2:1 MAX.)										
H MAX.	A	B	C	D	E	F	G	J	K	
FTG. WIDTH	KEY DEPTH	TOE WIDTH	FTG. THICKNESS	CONC. STEM WIDTH & MIN. HEIGHT	16" OR 12" CMU HEIGHT	FDN. DOWEL	HEEL REINF.	KEY THICKNESS	16" STEM REINF.	8" STEM REINF.
0'-1'-11"	2'-0"	-	-	15"	-	4# @ 16"	4# @ 24"	-	-	-
2'-0"-3'-11"	3'-0"	-	-	15"	-	4# @ 16"	4# @ 24"	-	-	-
4'-0"-5'-11"	4'-6"	-	-	15"	-	4# @ 16"	4# @ 24"	-	-	-
6'-0"-7'-11"	5'-0"	-	-	15"	-	5# @ 16" OR (54" MIN. LAP)	5# @ 16"	-	-	-
8'-0"-9'-11"	6'-6"	-	-	15"	-	5# @ 16" OR (54" MIN. LAP)	5# @ 16"	-	-	-
10'-0"-11'-11"	8'-3"	-	-	15"	-	5# @ 16" OR (54" MIN. LAP)	5# @ 16"	-	-	-
12'-0"-13'-11"	9'-3"	-	-	18"	-	NO LAPS	5# @ 8"	-	-	-
14'-0"-15'-11"	10'-9"	-	-	18"	-	NO LAPS	5# @ 6"	-	-	-
16'-0"-17'-11"	12'-6"	-	-	21"	-	NO LAPS	7# @ 6"	-	-	-
18'-0"-20'-0"	17'-3"	-	-	24 1/2"	-	NO LAPS	5# @ 4"	-	-	-

NOTE:  
CONTRACTOR TO REFER TO SHEET 12 FOR GENERAL RETAINING WALL DETAILS FOR ALL OTHER HEIGHTS.

GUARDRAIL AS REQ'D BY OTHERS. REF. TO DTL. 2 ON SHEET 12 FOR POST SIZE & SPACING.

- LEGEND**
- ① : INDICATES CONCRETE STEM WIDTH & MIN. HEIGHT PER SCHEDULE
  - ② : INDICATES 12" OR 16" CMU PER SCHEDULE
  - ③ : INDICATES MIN. LAP PER SCHEDULE
  - ④ : INDICATES 2 x 6 MORTAR KEY



1

2

DECLARATION OF RESPONSIBLE CHANGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHANGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 0703 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS. THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE COUNTY OF SAN DIEGO IS CONFINED TO AN INSPECTION OF THE DRAWINGS FOR CONFORMANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS.

DATE: 01/24/2018  
BY: SERIAT ESEVON  
RCE NO. 61398  
EXPIRES: 6/20/19

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK

No.	Description	Approved by	Date

PRIVATE CONTRACT

SHEET	COUNTY OF SAN DIEGO	SHEETS
13	DEPARTMENT OF PUBLIC WORKS	18

STRUCTURAL SPECIFICATIONS FOR RETAINING WALLS FOR ADLAI ROAD SUBDIVISION (TM 5356) FOR LOT 14 'S' TRACT, RANCHO EL CAJON CALIFORNIA COORDINATE INDEX 248-1797

DESIGNED BY: WILLIAM P. MORGAN  
DATE: 07/24/2018  
CHECKED BY: SERIAT ESEVON  
R.C.E. 61398

PROJECT NO.: PDS2014-LDGRM-00018  
PERMIT NO.:

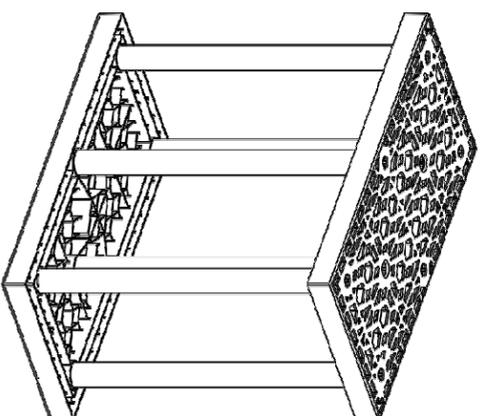
# BRENTWOOD®

## STORMTANK® DRAWINGS

FOR

# ADLAI ROAD SUBDIVISION

## CALIFORNIA



- DRAWING INDEX:**
- 0 OF 4 COVER SHEET
  - 1 OF 4 STORMTANK LAYOUT DRAWING
  - 2 OF 4 STORMTANK DETAILS
  - 3 OF 4 STORMTANK DETAILS
  - 4 OF 4 STORMTANK NOTES

Brentwood Industries, Inc.  
 5700 Shaw Ridge Drive  
 Reading, PA 19610 U.S.A.  
 Ph: (810) 374-5109  
[www.brentwoodindustries.com](http://www.brentwoodindustries.com)

**ENGINEER OF WORK**

**Snipes-Dye associates**  
*Civil engineers and land surveyors*  
 8348 CENTER DRIVE, STE. G, LA MESA, CA 91942  
 TELEPHONE: (619) 697-9234 FAX: (619) 466-2033  
 01/29/18  
 WILLIAM A. SNIPES  
 R.C.E. 50477  
 EXPRES 06-30-19



No.	Description	Approved by	Date
	<b>COUNTY APPROVED CHANGES</b>		
	<b>BENCH MARK</b>		
	DESCRIPTION: GPS STATION "V5 PM1"		
	LOCATION: STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET		
	RECORD FROM: SAN DIEGO COUNTY VERTICAL CONTROL		
	ELEVATION: 399.08'	DATE:	NAVD29

**PRIVATE CONTRACT**

SHEET **14** COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS SHEETS **18**

STORMTANK BY BRENTWOOD DETAILS:

**ADLAI ROAD SUBDIVISION (TM 5356)**  
**FOR LOT 14'S TRACT, RANCHO EL CAJON**

CALIFORNIA COORDINATE INDEX 246-1797

DESIGNED BY: WILLIAM A. SNIPES  
 CHECKED BY: [Signature]  
 DATE: [ ]

GRADING PLAN NO. **PSS2014-LDGRM-00018**



**ENGINEER OF WORK**

ENGINEER OF WORK

**Snipes-Dye Associates**  
*Civil Engineers and Land Surveyors*  
 8348 CENTER DRIVE, STE. G, LA MESA, CA 91942  
 TELEPHONE: (619) 697-9234 FAX: (619) 460-2033  
 01/20/18  
 WILLIAM A. SNIPES R.C.E. 50477  
 EXP. 06-30-19



**Proposed Layout (Double Stacked)**

(56) ST-18 StormTank Modules (Module Footprint = 252.00 sq ft)
(60) ST-36 StormTank Modules
Estimated Granite Fabric = 44,346 sq yd
Estimated Backfill Volume = 36,222 cu yd
Estimated Impervious Liner = 1,475.88 sq ft
Installed System Storage Volume (Excluding Stone) = 1,263.79 cf
Installed System Storage Volume (Including Stone) = 1,464.99 cf

**Material Quantities**

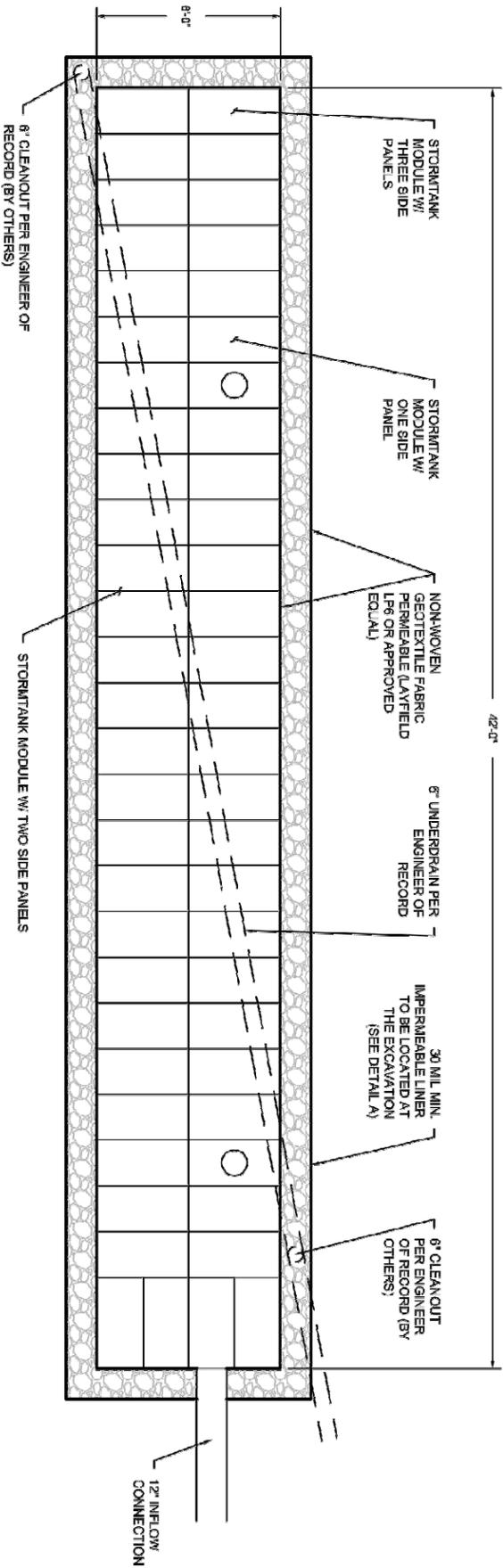
ST-18 (Bottom Layer)	ST-36 (Top Layer)
Modules	112
12" Side Panels	64
10" Columns	448
38" Side Panels	64
38" Columns	448
10" Observation Foot Kicks	2
Stacking Pins	112

**Elevations**

Stone Invert	628.00
Module Invert	628.60
Top of Module	633.00
Top of Stone Backfill	634.00
Min. Finished Grade	635.00
Max. Finished Grade	639.50

- NOTES:**
- REFERENCE BRENTWOOD INDUSTRIES STANDARD DRAWINGS AND NOTES FOR DETAILED INSTALLATION, PROPER INSTALLATION INSTRUCTIONS FOR ENGINEER OF RECORD TO CONFIRM CONFORMANCE TO MANUFACTURER'S ALLOWABLE PROXIMITY TO OTHER STRUCTURES.
  - ALL INLET AND PIPE LOCATIONS AND DESIGN BY OTHERS.

**LEGEND**



**STORMTANK SYSTEM**

Drawn By <b>C. BRENSINGER</b> Date 8/20/17 Drawing No. _____	Title <b>STORMTANK LAYOUT DRAWINGS</b> Scale: NTS Sheet: 1 of 4	Project Name ADLAI ROAD SUBDIVISION	500 Spring Ridge Drive Reading, PA 19610 Phone: (610) 374-5109 www.brentwoodindustries.com	<table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>RECORD OF CHANGES</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>8/29/17</td> <td>INITIAL RELEASE</td> <td>CSR</td> </tr> <tr> <td>B</td> <td>03/17/17</td> <td>REVISION PER MARKUPS</td> <td>CSR</td> </tr> <tr> <td>C</td> <td>8/7/17</td> <td>REVISION PER MARKUPS</td> <td>CSR</td> </tr> <tr> <td>D</td> <td>1/20/18</td> <td>REVISION PER MARKUPS</td> <td>DRB</td> </tr> </tbody> </table>	REV.	DATE	RECORD OF CHANGES	BY	A	8/29/17	INITIAL RELEASE	CSR	B	03/17/17	REVISION PER MARKUPS	CSR	C	8/7/17	REVISION PER MARKUPS	CSR	D	1/20/18	REVISION PER MARKUPS	DRB
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No.	Description	Approved by	Date
<b>COUNTY APPROVED CHANGES</b>			

BENCH MARK	
DESCRIPTION:	GPS STATION "V5 PM1"
LOCATION:	STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET
RECORD FROM:	SAN DIEGO COUNTY VERTICAL CONTROL
ELEVATION:	399.08' DATUM: NAVD09

**PRIVATE CONTRACT**

COUNTY OF SAN DIEGO  
 DEPARTMENT OF PUBLIC WORKS

SHEET **15** OF **18** SHEETS

STORMTANK BY BRENTWOOD DETAILS:

**ADLAI ROAD SUBDIVISION (TM 5356)**  
**PORT LOT 14 'S' TRACT RANCHO EL CAJON**

CALIFORNIA COORDINATE INDEX ZONE 1797

DESIGNED BY: WILLIAM A. SNIPES  
 COUNTY ENGINEER

DATE: 01/20/18

PROJECT NO: PPS2014-LDGRM-00018





**ENGINEER OF WORK**

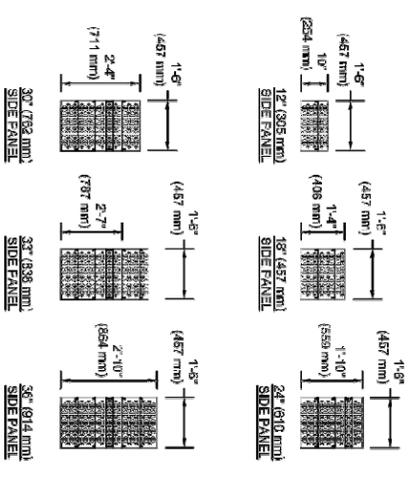
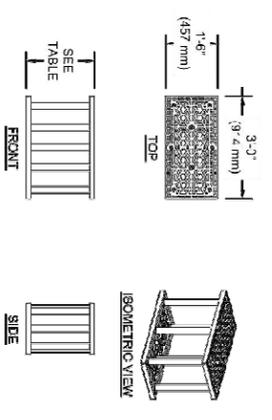
**Snipes-Dye associates**  
*civil engineers and land surveyors*  
 8348 CENTER DRIVE, STE. G, LA MESA, CA 91942  
 TELEPHONE: (619) 697-9234 FAX: (619) 460-2033  
 WILLIAM A. SNIPES R.C.E. 50477  
 01/29/18  
 EPOCHES 06-30-19



STORMTANK MODULES				
DESCRIPTION	HEIGHT ft. (mm)	CAPACITY d (cu. ft.)	NOMINAL VOID RATIO	WEIGHT lbs. (kg)
S7-12	12 (365)	4,216 (0.12)	80.7%	17.6 (8)
S7-16	16 (487)	6,496 (0.18)	80.5%	22.7 (10)
S7-24	24 (731)	9,896 (0.28)	80.0%	28.3 (13)
S7-30	30 (782)	10,878 (0.31)	80.5%	28.6 (13)
S7-36	36 (839)	11,990 (0.34)	80.5%	29.4 (13.5)
S7-36	36 (914)	13,096 (0.37)	87.0%	33.1 (15)

**NOTES:**  
 1. FOLLOW MANUFACTURER'S ASSEMBLY & INSTALLATION INSTRUCTIONS FOR PROPER IMPLEMENTATION

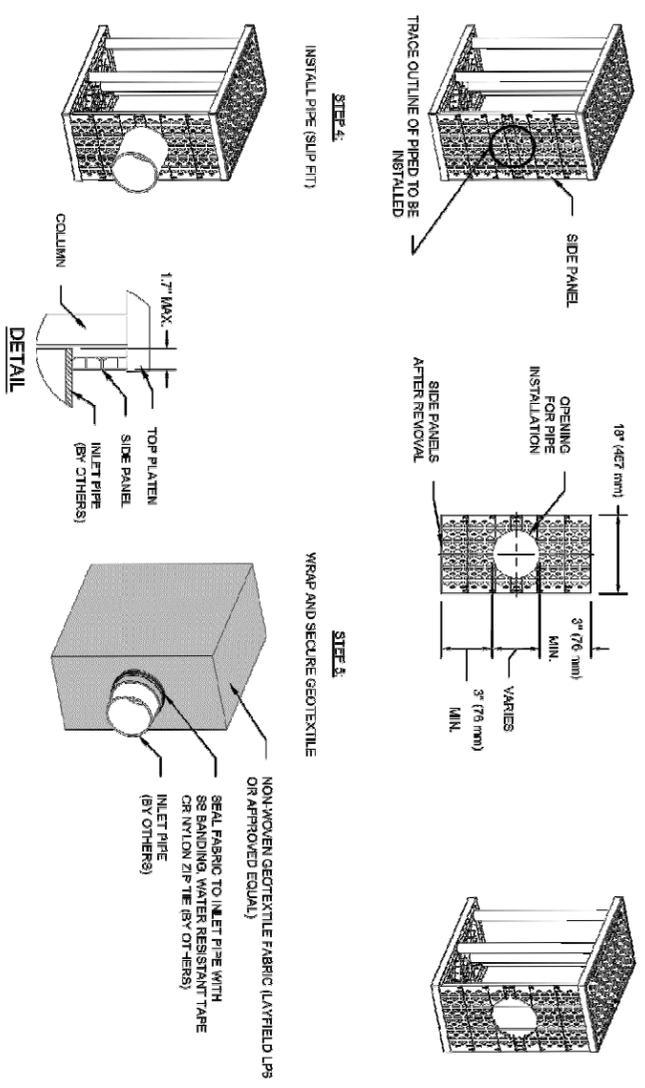
**MODULE DETAIL**



**NOTES:**  
 1. SIDE PANELS TO BE INSTALLED ALONG SYSTEM PERIMETER, UNLESS OTHERWISE SPECIFIED.  
 2. ALL HEIGHTS TO BE CUT FROM A 36" (914 mm) SIDE PANEL AT PRESCRIBED LOCATIONS, EXCEPT 36" (838 mm) & 12" (306 mm) SIDE PANEL.

**SIDE PANEL DETAIL**

- STEP 1: LOCATE AND MARK OPENING
- STEP 2: REMOVE SIDE PANELS FROM MODULES AND CUT OPENING
- STEP 3: REINSTALL SIDE PANELS



**SMALL DIAMETER (1 1/4" AND SMALLER) PIPE CONNECTION DETAIL**

COUNTY APPROVED CHANGES	
No.	Description

BENCH MARK	
Approved by	Date

DESCRIPTION: GPS STATION "VS PM1"  
 LOCATION: STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET  
 RECORD FROM: SAN DIEGO COUNTY VERTICAL CONTROL  
 ELEVATION: 399.08' DATUM: NAVD09

**PRIVATE CONTRACT**  
 COUNTY OF SAN DIEGO  
 DEPARTMENT OF PUBLIC WORKS  
 SHEET 17 OF 18 SHEETS  
 STORMTANK BY BRENTWOOD DETAILS:  
**ADLAI ROAD SUBDIVISION (TM 5356)**  
**POR. LOT 14 'S' TRACT RANCHO EL CAJON**  
 CALIFORNIA COORDINATE INDEX 24S-1797  
 PREPARED FOR WILLIAM P. MORGAN  
 COUNTY ENGINEER  
 DATE: 01/29/18  
 EXPIRES: 01/29/19  
 WILLIAM A. SNIPES R.C.E. 50477  
**POS2014-LDGRM-00018**

Drawn by <b>C. BRENSINGER</b>	Title <b>YIM</b>
Date <b>8/20/17</b>	Scale <b>NIS</b>
Drawing No. <b> </b>	Sheet <b>3 of 4</b>

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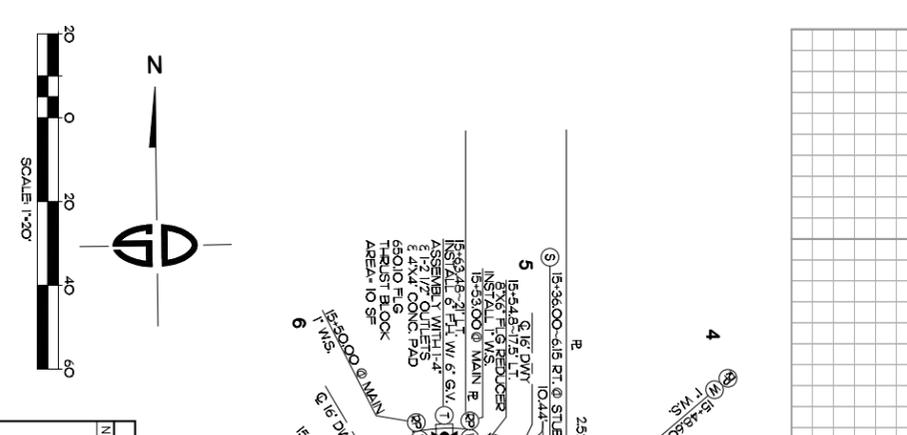
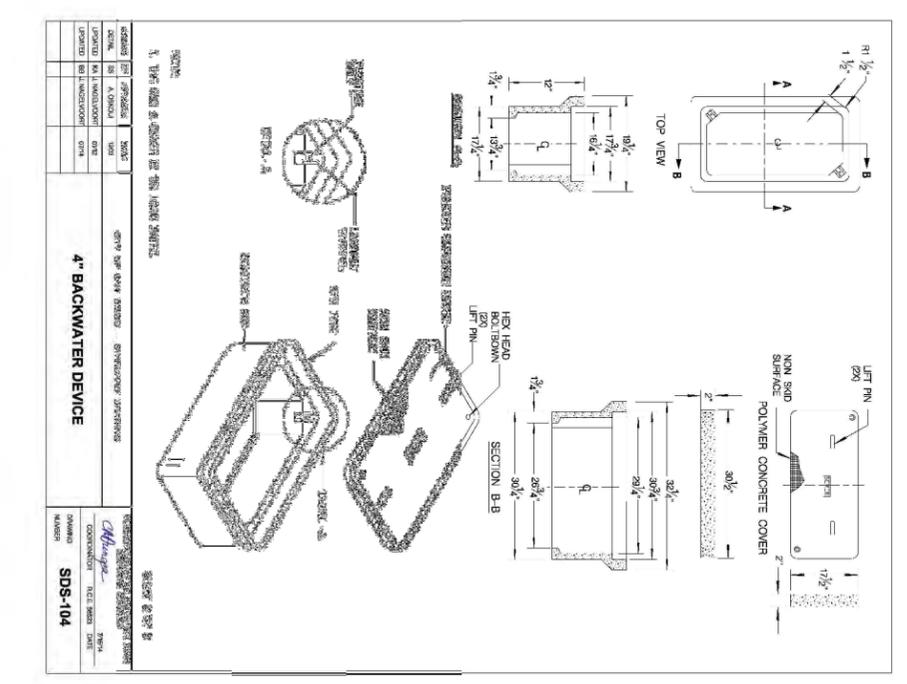
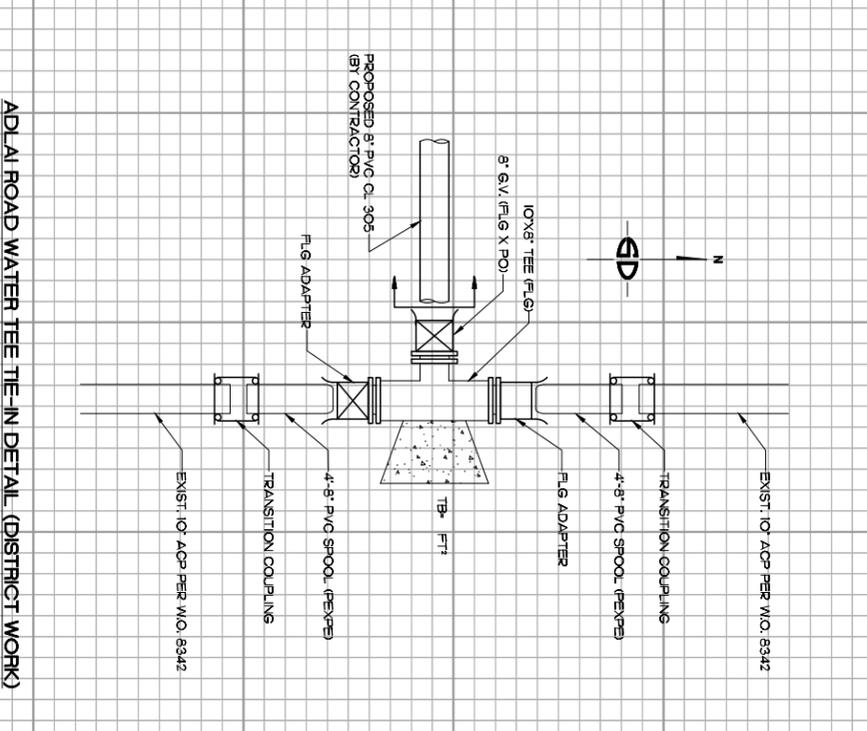
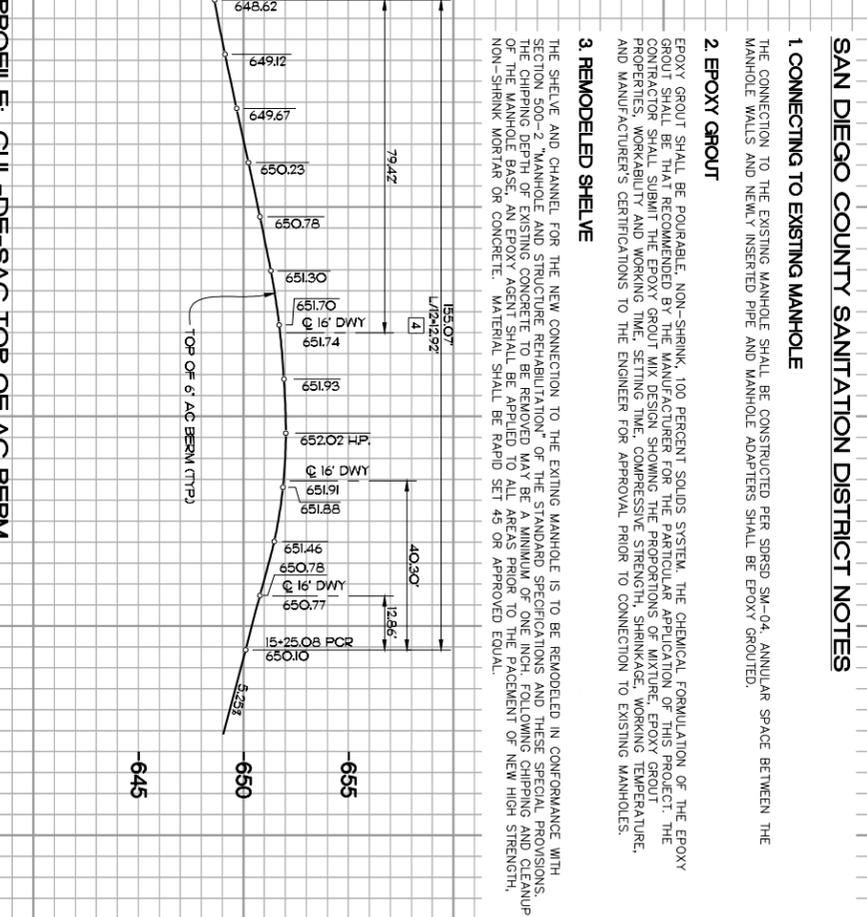
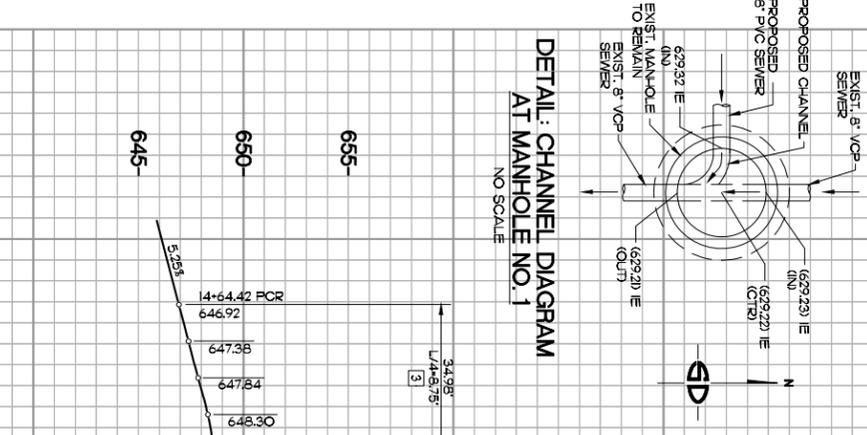
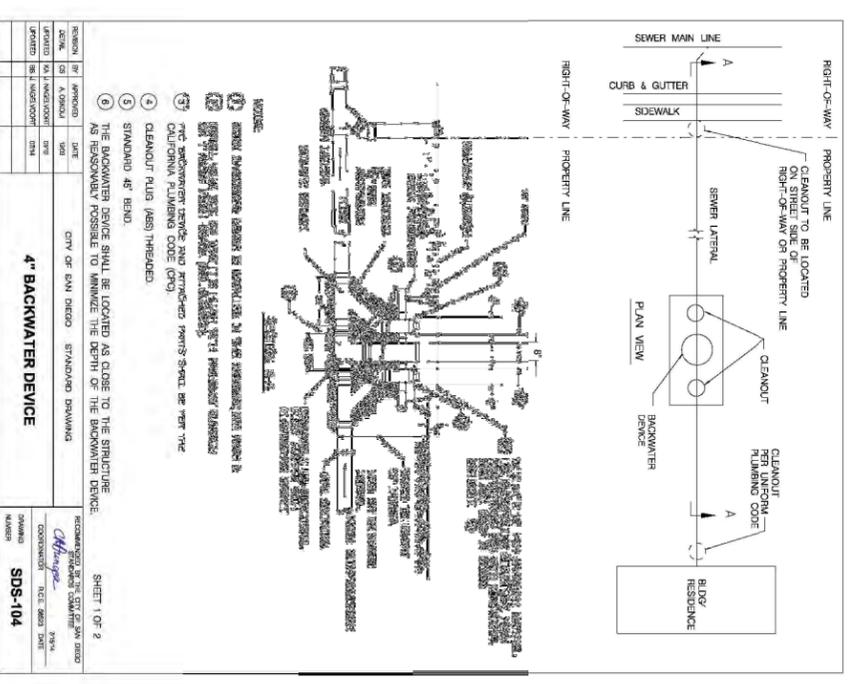
**STORMTANK**  
**CONSTRUCTION**  
**DETAILS**

Project Name  
**ADLAI ROAD SUBDIVISION**

**BRENTWOOD**  
 500 Spring Ridge Drive  
 Reading, PA 19610  
 Phone: (610) 374-5100  
 www.brentwoodindustries.com

REV.	DATE	RECORD OF CHANGES	BY
A	8/29/17	INITIAL RELEASE	CSB
B	03/17/17	REVISION PER MARKUPS	CSB
C	8/7/17	REVISION PER MARKUPS	CSB
D	1/26/18	REVISION PER MARKUPS	DRB





**COUNTY APPROVED CHANGES**

No.	Description	Approved By	Date

**BENCH MARK**

DESCRIPTION: GPS STATION "VS PM"  
 LOCATION: STREET MONUMENT LOCATED AT INTERSECTION OF VINE STREET AND MAPLEVIEW STREET  
 RECORD FROM: SAN DIEGO COUNTY VERTICAL CONTROL  
 ELEVATION: 399.08' DATUM: NAVD29

**ENGINEER OF WORK**

NOTE: SEE SHEET 4 FOR AC BERM DATA TABLE.

**THRUST/ANCHOR BLOCK TABLE**

PIPE STATION	DIAMETER	TYPE OF BLOCK	TYPE OF APPURTENANCE	TEST PRESSURE	TOTAL THRUST	ASSUMED SOIL CAPACITY	AREA OF VOLUME OF BLOCK
10+22.54 (ADLAI RD)	10" PVC/8"	THRUST	TEE	250 PSI	16092 LB	2500 LB/SF	17 SF
10+55.00 (ADLAI RD)	10" PVC/8"	THRUST	TEE	250 PSI	16092 LB	2500 LB/SF	10 SF
15+50.00 (WALTER DEAN LN)	10" PVC/8"	THRUST	TEE	250 PSI	16092 LB	2500 LB/SF	10 SF
15+54.00 (WALTER DEAN LN)	10" PVC/8"	THRUST	DEAD END	250 PSI	16092 LB	2500 LB/SF	10 SF

**PRIVATE CONTRACT**

PLANS FOR THE IMPROVEMENT OF:  
**WALTER DEAN LANE (CUL DE SAC) PRIVATE ROAD (PER 3.1(C))**

REGISTERED PROFESSIONAL ENGINEER  
 WILLIAM A. SNIPES  
 No. 50477  
 Exp. 06-30-19  
 CIVIL

RECOMMENDED FOR APPROVAL:  
 SUBMISSION ENGINEER: [Signature]  
 APPROVED FOR PRIVATE: [Signature]  
 COUNTY ENGINEER: [Signature]

PROJECT NO. PDS2014-LDMJP-00013