THE CITY OF SAN DIEGO

MITIGATED NEGATIVE DECLARATION

Project No. 460737
SCH No. N/A

SUBJECT: **VIA GRIMALDI (ROSS) ~~RESIDENCE~~ NDP & CDP**

I. PROJECT DESCRIPTION: See attached Initial Study.

II. ENVIRONMENTAL SETTING: See attached Initial Study.

III. DETERMINATION:

The City of San Diego conducted an Initial Study which determined that the proposed project could have a significant environmental effect in the following areas(s): **HISTORICAL RESOURCES (ARCHAEOLOGY); LAND USE; BIOLOGICAL RESOURCES.** Subsequent revisions in the project proposal create the specific mitigation identified in Section V of this Mitigated Negative Declaration. The project as revised now avoids or mitigates the potentially significant environmental effects previously identified, and the preparation of an Environmental Impact Report will not be required.

UPDATE: **Please Note that changes within this document are identified in ~~strikeout~~ and added language is within an underlined format as it relates to the DRAFT document.**

Since Distribution of this Draft document, there was revisions were made to the "Greenhouse Gas Emission Section", incorporating the provisions of the Climate Act Plan (CAP) Consistency Checklist (Adopted July 12, 2016). It was determined that this project is subject to the provisions of the checklist and any requirements will be incorporated as such. There were no new significant factors which were identified within this checklist that affects the prior CEQA determination for the project as detailed under Section 15162 of CEQA.

For reference, in December 2015, the City adopted a Climate Action Plan (CAP) that outlines the actions that City will undertake to achieve its proportional share of State greenhouse gas (GHG) emission reductions. The purpose of the Climate Action Plan Consistency Checklist (Checklist) is to, in conjunction with the CAP, provide a streamlined review process for proposed new development

projects that are subject to discretionary review and trigger environmental review pursuant to the California Environmental Quality Act (CEQA).

Analysis of GHG emissions and potential climate change impacts from new development is required under CEQA. The CAP is a plan for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP.

The Checklist is part of the CAP and contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that new development is consistent with the CAP's assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects that are consistent with the CAP as determined through the use of this Checklist may rely on the CAP for the cumulative impacts analysis of GHG emissions. Projects that are not consistent with the CAP must prepare a comprehensive project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible. Cumulative GHG impacts would be significant for any project that is not consistent with the CAP.

Additionally, there was an inquiry concerning impacts to visual resources and access this has been clarified further within the "Aesthetics" and the "Land Use" sections.

All in all, there were no new significant factors which were identified within this checklist the affects the prior CEQA determination for the project as detailed under Section 15162 of CEQA.

IV. DOCUMENTATION: The attached Initial Study documents the reasons to support the above Determination.

V. MITIGATION, MONITORING AND REPORTING PROGRAM:

A. GENERAL REQUIREMENTS – PART I
Plan Check Phase (prior to permit issuance)

1. Prior to the issuance of a Notice To Proceed (NTP) for a subdivision, or any construction permits, such as Demolition, Grading or Building, or beginning any construction related activity on-site, the Development Services Department (DSD) Director's Environmental Designee (ED) shall review and approve all Construction Documents (CD), (plans, specification, details, etc.) to ensure the MMRP requirements are incorporated into the design.

2. In addition, the ED shall verify that the MMRP Conditions/Notes that apply ONLY to the construction phases of this project are included VERBATIM, under the heading, "**ENVIRONMENTAL/MITIGATION REQUIREMENTS**."

3. These notes must be shown within the first three (3) sheets of the construction documents in the format specified for engineering construction document templates as shown on the City website:

http://www.sandiego.gov/development-services/industry/standtemp.shtml

4. The **TITLE INDEX SHEET** must also show on which pages the "Environmental/Mitigation Requirements" notes are provided.

5. **SURETY AND COST RECOVERY –** The Development Services Director or City Manager may require appropriate surety instruments or bonds from private Permit Holders to ensure the long term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

B. GENERAL REQUIREMENTS – PART II
Post Plan Check (After permit issuance/Prior to start of construction)

1. PRE CONSTRUCTION MEETING IS REQUIRED TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT. The PERMIT HOLDER/OWNER is responsible to arrange and perform this meeting by contacting the CITY RESIDENT ENGINEER (RE) of the Field Engineering Division and City staff from MITIGATION MONITORING COORDINATION (MMC). Attendees must also include the Permit holder's Representative(s), Job Site Superintendent and the following consultants:

Qualified Archaeologist, Native American Monitor
Qualified Biologist

Note:
Failure of all responsible Permit Holder's representatives and consultants to attend shall require an additional meeting with all parties present.

CONTACT INFORMATION:

a) The PRIMARY POINT OF CONTACT is the **RE** at the **Field Engineering Division – 858-627-3200**

b) For Clarification of ENVIRONMENTAL REQUIREMENTS, it is also required to call **RE and MMC at 858-627-3360**

2. MMRP COMPLIANCE: This Project, Project Tracking System (PTS) # 460737 and /or Environmental Document # 460737, shall conform to the mitigation requirements contained in the associated Environmental Document and implemented to the satisfaction of the DSD's Environmental Designee (MMC) and the City Engineer (RE). The requirements may not be reduced or changed but may be annotated (i.e. to explain when and how compliance is being met and location of verifying proof,

etc.). Additional clarifying information may also be added to other relevant plan sheets and/or specifications as appropriate (i.e., specific locations, times of monitoring, methodology, etc

Note:
Permit Holder's Representatives must alert RE and MMC if there are any discrepancies in the plans or notes, or any changes due to field conditions. All conflicts must be approved by RE and MMC BEFORE the work is performed.

3. OTHER AGENCY REQUIREMENTS: Evidence of compliance with all other agency requirements or permits shall be submitted to the RE and MMC for review and acceptance prior to the beginning of work or within one week of the Permit Holder obtaining documentation of those permits or requirements. Evidence shall include copies of permits, letters of resolution or other documentation issued by the responsible agency.

Not Applicable

4. MONITORING EXHIBITS
All consultants are required to submit , to RE and MMC, a monitoring exhibit on a 11x17 reduction of the appropriate construction plan, such as site plan, grading, landscape, etc., marked to clearly show the specific areas including the **LIMIT OF WORK**, scope of that discipline's work, and notes indicating when in the construction schedule that work will be performed. When necessary for clarification, a detailed methodology of how the work will be performed shall be included.

NOTE:
Surety and Cost Recovery – When deemed necessary by the Development Services Director or City Manager, additional surety instruments or bonds from the private Permit Holder may be required to ensure the long term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

5. OTHER SUBMITTALS AND INSPECTIONS:

The Permit Holder/Owner's representative shall submit all required documentation, verification letters, and requests for all associated inspections to the RE and MMC for approval per the following schedule:

Document Submittal/Inspection Checklist		
Issue Area	**Document Submittal**	**Associated Inspection/Approvals/ Notes**
General	Consultant Qualification Letters	Prior to Preconstruction Meeting
General	Consultant Construction Monitoring Exhibits	Prior to Preconstruction Meeting
Historical Resources (Archeology)	Monitoring Report(s)	Archeological/Historic Site Observation
Biological Resources	Biological Construction Mitigation/Monitoring Exhibit	Approval by MMC

	(BCME)	
Biological Resources	Avian Protection - Pre-construction survey	Within 10 Calendar Days prior to the start of construction activities (including removal of vegetation)
Biological Resources	Resource Delineation	Prior to Construction Activities
Biological Resources	Education	Prior to commencement of Construction Activities
Biological Resources	Consultant Site Visit Record (CSVR)	Monitoring During Construction
Biological Resources	Final BCME/Report	Within 30 days of Construction Completion
Bond Release	Request for a Bond Release Letter	Final MMRP Inspections Prior to Bond Release Letter

C. SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS

HISTORICAL RESOURCES (ARCHAEOLOGY)

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.
3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a

confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.

2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
    a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Identify Areas to be Monitored
    a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
    b. The AME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
3. When Monitoring Will Occur
    a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
    b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor(s) Shall be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.**

2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.
4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
   1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
   2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
   3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
   4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance
   1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.
      a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
      b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) which has been reviewed by the Native American consultant/monitor, and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.**

c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification
   1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process.
   2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site
   1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenance of the remains.
   2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenance.
   3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American
   1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
   2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
   3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
   4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
   5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
      a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;
      b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN,
      c. In order to protect these sites, the Landowner shall do one or more of the following:

(1) Record the site with the NAHC;
(2) Record an open space or conservation easement on the site;
(3) Record a document with the County.

d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and items associated and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.

D. If Human Remains are **NOT** Native American
1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

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V. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract
1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.
2. The following procedures shall be followed.
a. No Discoveries
In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day.
b. Discoveries
All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.
c. Potentially Significant Discoveries
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV-Discovery of Human Remains shall be followed.
d. The PI shall immediately contact MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction
1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.

2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

VI. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe resulting from delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.**
    a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.
    b. Recording Sites with State of California Department of Parks and Recreation The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts

1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.
3. The cost for curation is the responsibility of the property owner.

C. Curation of artifacts: Accession Agreement and Acceptance Verification

1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
3. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were

treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection 5.

D. Final Monitoring Report(s)

1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.

2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

The above mitigation monitoring and reporting program will require additional fees and/or deposits to be collected prior to the issuance of building permits, certificates of occupancy and/or final maps to ensure the successful completion of the monitoring program.

MSCP SUBAREA PLAN -LAND USE ADJACENCY GUIDELINES

Prior to issuance of any construction permit or notice to proceed, DSD/ LDR, and/or MSCP staff shall verify the Applicant has accurately represented the project's design in or on the Construction Documents (CD's/CD's consist of Construction Plan Sets for Private Projects) are in conformance with the associated discretionary permit conditions and Exhibit "A", and also the City's Multi-Species Conservation Program (MSCP) Multi-Habitat Planning Area (MHPA) Land Use Adjacency Guidelines. The applicant shall provide an implementing plan and include references on/in CD's of the following:

A. Grading/Land Development/MHPA Boundaries - MHPA boundaries on-site and adjacent properties shall be delineated on the CDs. DSD Planning and/or MSCP staff shall ensure that all grading is included within the development footprint, specifically manufactured slopes, disturbance, and development within or adjacent to the MHPA. For projects within or adjacent to the MHPA, all manufactured slopes associated with site development shall be included within the development footprint.

B. Drainage - All new and proposed parking lots and developed areas in and adjacent to the MHPA shall be designed so they do not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials prior to release by incorporating the use of filtration devices, planted swales and/or planted detention/desiltation basins, or other approved permanent methods that are designed to minimize negative impacts, such as excessive water and toxins intothe ecosystems of the MHPA.

C. Toxics/Project Staging Areas/Equipment Storage - Projects that use chemicals or generate by-products such as pesticides, herbicides, and animal waste, and other substances that are potentially toxic or impactive to native habitats/flora/fauna (including water) shall incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. No trash, oil, parking, or other construction/development-related material/activities shall be allowed outside any approved construction limits. Where applicable, this requirement shall incorporated into leases on publicly-owned property when applications for renewal occur. Provide a note in/on the CD's that states: "All construction

related activity that may have potential for leakage or intrusion shall be monitored by the Qualified Biologist/Owners Representative or Resident Engineer to ensure there is no impact to the MHPA."

D. Lighting - Lighting within or adjacent to the MHPA shall be directed away/shielded from the MHPA and be subject to City Outdoor Lighting Regulations per LDC Section 142.0740.

E. Barriers - New development within or adjacent to the MHPA shall be required to provide barriers (e.g., non-invasive vegetation; rocks/boulders; 6-foot high, vinyl-coated chain link or equivalent fences/walls; and/or signage) along the MHPA boundaries to direct public access to appropriate locations, reduce domestic animal predation, protect wildlife in the preserve, and provide adequate noise reduction where needed.

F. Invasives- No invasive non-native plant species shall be introduced into areas within or adjacent to the MHPA.

G. Brush Management - New development adjacent to the MHPA shall be set back from the MHPA to provide required Brush Management Zone 1 area on the building pad outside of the MHPA. Zone 2 may be located within the MHPA provided the Zone 2 management will be the responsibility of an HOA or other private entity except where narrow wildlife corridors require it to be located outside of the MHPA. Brush management zones will not be greater in size than currently required by the City's regulations, the amount of woody vegetation clearing shall not exceed 50 percent of the vegetation existing when the initial clearing is done and vegetation clearing shall be prohibited within native coastal sage scrub and chaparral habitats from March 1-August 15 except where the City ADD/MMC has documented the thinning would be consist with the City's MSCP Subarea Plan. Existing and approved projects are subject to current requirements of Municipal Code Section 142.0412.

H. Noise - Due to the site's location adjacent to or within the MHPA where the Qualified Biologist has identified potential nesting habitat for listed avian species, construction noise that exceeds the maximum levels allowed shall be avoided during the breeding seasons for the following: California Gnatcatcher(3/1-8/15); Least Bell's vireo (3/15-9/15); and Southwestern Willow Flycatcher (5/1-8/30) (select only the species that apply). If construction is proposed during the breeding season for the species, U.S. Fish and Wildlife Service protocol surveys shall be required in order to determine species presence/absence. If protocol surveys are not conducted in suitable habitat during the breeding season for the aforementioned listed species, presence shall be assumed with implementation of noise attenuation and biological monitoring.

When applicable (i.e., habitat is occupied or if presence of the covered species is assumed), adequate noise reduction measures shall be incorporated as follows:

COASTAL CALIFORNIA GNATCATCHER (Federally Threatened)

1. Prior to the issuance of any grading permit, the City Manager (or appointed designee) shall verify that the Multi-Habitat Planning Area (MHPA) boundaries and the following project

requirements regarding the coastal California gnatcatcher are shown on the construction plans:

NO CLEARING, GRUBBING, GRADING, OR OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR BETWEEN MARCH 1 AND AUGUST 15, THE BREEDING SEASON OF THE COASTAL CALIFORNIA GNATCATCHER, UNTIL THE FOLLOWING REQUIREMENTS HAVE BEEN MET TO THE SATISFACTION OF THE CITY MANAGER:

A. A QUALIFIED BIOLOGIST (POSSESSING A VALID ENDANGERED SPECIES ACT SECTION 10(a)(1)(A) RECOVERY PERMIT) SHALL SURVEY THOSE HABITAT AREAS WITHIN THE MHPA THAT WOULD BE SUBJECT TO CONSTRUCTION NOISE LEVELS EXCEEDING 60 DECIBELS [dB(A)] HOURLY AVERAGE FOR THE PRESENCE OF THE COASTAL CALIFORNIA GNATCATCHER. SURVEYS FOR THE COASTAL CALIFORNIA GNATCATCHER SHALL BE CONDUCTED PURSUANT TO THE PROTOCOL SURVEY GUIDELINES ESTABLISHED BY THE U.S. FISH AND WILDLIFE SERVICE WITHIN THE BREEDING SEASON PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. IF GNATCATCHERS ARE PRESENT, THEN THE FOLLOWING CONDITIONS MUST BE MET:

   I. BETWEEN MARCH 1 AND AUGUST 15, NO CLEARING, GRUBBING, OR GRADING OF OCCUPIED GNATCATCHER HABITAT SHALL BE PERMITTED. AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; AND

   II. BETWEEN MARCH 1 AND AUGUST 15, NO CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN ANY PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES WOULD RESULT IN NOISE LEVELS EXCEEDING 60 dB (A) HOURLY AVERAGE AT THE EDGE OF OCCUPIED GNATCATCHER HABITAT. AN ANALYSIS SHOWING THAT NOISE GENERATED BY CONSTRUCTION ACTIVITIES WOULD NOT EXCEED 60 dB (A) HOURLY AVERAGE AT THE EDGE OF OCCUPIED HABITAT MUST BE COMPLETED BY A QUALIFIED ACOUSTICIAN (POSSESSING CURRENT NOISE ENGINEER LICENSE OR REGISTRATION WITH MONITORING NOISE LEVEL EXPERIENCE WITH LISTED ANIMAL SPECIES) AND APPROVED BY THE CITY MANAGER AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES DURING THE BREEDING SEASON, AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; OR

   III. AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, UNDER THE DIRECTION OF A QUALIFIED ACOUSTICIAN, NOISE ATTENUATION MEASURES (e.g., BERMS, WALLS) SHALL BE IMPLEMENTED TO ENSURE THAT NOISE LEVELS RESULTING FROM CONSTRUCTION ACTIVITIES WILL NOT EXCEED 60 dB(A) HOURLY AVERAGE AT THE EDGE OF HABITAT OCCUPIED BY THE COASTAL CALIFORNIA GNATCATCHER. CONCURRENT WITH THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND THE CONSTRUCTION OF NECESSARY NOISE ATTENUATION FACILITIES, NOISE MONITORING* SHALL BE CONDUCTED AT THE EDGE OF THE OCCUPIED

HABITAT AREA TO ENSURE THAT NOISE LEVELS DO NOT EXCEED 60 dB (A) HOURLY AVERAGE. IF THE NOISE ATTENUATION TECHNIQUES IMPLEMENTED ARE DETERMINED TO BE INADEQUATE BY THE QUALIFIED ACOUSTICIAN OR BIOLOGIST, THEN THE ASSOCIATED CONSTRUCTION ACTIVITIES SHALL CEASE UNTIL SUCH TIME THAT ADEQUATE NOISE ATTENUATION IS ACHIEVED OR UNTIL THE END OF THE BREEDING SEASON (AUGUST 16).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB (A) hourly average or to the ambient noise level if it already exceeds 60 dB (A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. IF COASTAL CALIFORNIA GNATCATCHERS ARE NOT DETECTED DURING THE PROTOCOL SURVEY, THE QUALIFIED BIOLOGIST SHALL SUBMIT SUBSTANTIAL EVIDENCE TO THE CITY MANAGER AND APPLICABLE RESOURCE AGENCIES WHICH DEMONSTRATES WHETHER OR NOT MITIGATION MEASURES SUCH AS NOISE WALLS ARE NECESSARY BETWEEN MARCH 1 AND AUGUST 15 AS FOLLOWS:

I. IF THIS EVIDENCE INDICATES THE POTENTIAL IS HIGH FOR COASTAL CALIFORNIA GNATCATCHER TO BE PRESENT BASED ON HISTORICAL RECORDS OR SITE CONDITIONS, THEN CONDITION A.III SHALL BE ADHERED TO AS SPECIFIED ABOVE.

II. IF THIS EVIDENCE CONCLUDES THAT NO IMPACTS TO THIS SPECIES ARE ANTICIPATED, NO MITIGATION MEASURES WOULD BE NECESSARY.

BIOLOGICAL RESOURCE PROTECTION DURING CONSTRUCTION

I. Prior to Construction

A. **Biologist Verification -** The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.

B. **Preconstruction Meeting -** The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.

C. **Biological Documents -** The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), Environmentally Sensitive Lands Ordinance (ESL), project permit conditions; California Environmental Quality Act (CEQA); endangered species acts (ESAs); and/or other local, state or federal requirements.

D. **BCME -**The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coastal cactus wren plant salvage, burrowing owl exclusions, etc.), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.

E. **Avian Protection Requirements -** To avoid any direct impacts to raptors and/or any native/migratory birds, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable State and Federal Law (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

F. **Resource Delineation -** Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora & fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.

G. **Education –**Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-

site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

II. During Construction

A. **Monitoring**- All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR shall be e-mailed to MMC on the 1st day of monitoring, the 1st week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

B. **Subsequent Resource Identification -** The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna onsite (e.g., flag plant specimens for avoidance during access, etc). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

III. Post Construction Measures

A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

VI. PUBLIC REVIEW DISTRIBUTION:

Draft copies or notice of this Mitigated Negative Declaration were distributed to:

STATE OF CALIFORNIA
Coastal Commission (48)

CITY OF SAN DIEGO
Mayor's Office
Councilmember Lightner - District 1
City Attorney's Office (93C)

Development Services:

Development Project Manager
LDR - Engineering Review
LDR - EAS
LDR - Geology
LDR – Landscaping
LDR - Planning Review

MSCP Reviewer, MS-5A
MMC, MS-1102B (77A)

Facilities Financing (93B)
Water Review (86A)
San Diego Central Library (81A)
Carmel Valley Library (81F)

OTHER ORGANIZATIONS AND INTERESTED PARTIES
Carmen Lucas (206)
South Coastal Information Center (210)
San Diego Archaeological Center (212)
Save Our Heritage Organization (214)
Ron Christman (215)
Clint Linton (215B)
Frank Brown, Inter-Tribal Cultural Resources Council (216)
Campo Band of Mission Indians (217)
San Diego County Archaeological Society, Inc. (218)
Kumeyaay Cultural Heritage Preservation (223)
Kumeyaay Cultural Repatriation Committee (225)
Native American Distribution - Public Notice and Location Map Only (225A-S)
Torrey Pines Community Planning Board (469)
Torrey Pines Association (472)
Crest Canyon Citizens Advisory Committee (475)
Friends of Los Penasquitos Canyon Preserve (477)
UCSD Physical & Community Planning Group (478)
California Dept. of Parks and Recreation (40B)
Sierra Club (165)
Endangered Habitats League (182A)
Alex Miller (Hubbell & Hubbell), Applicant
Gail & Chuck Ross, Owner(s)

VII. RESULTS OF PUBLIC REVIEW:

( ) No comments were received during the public input period.

( ) Comments were received but did not address the accuracy or completeness of the draft environmental document. No response is necessary and the letters are incorporated herein.

(X) Comments addressing the accuracy or completeness of the draft environmental document were received during the public input period. The letters and responses are incorporated herein.

Copies of the draft Mitigated Negative Declaration, the Mitigation, Monitoring and Reporting Program and any Initial Study material are available in the office of the Entitlements Division for review, or for purchase at the cost of reproduction.

MARK BRUNETTE
SENIOR PLANNER
Development Services Department

October 5, 2016
Date of Draft Report

11/21/16
Date of Final Report

Analyst: CHRIS TRACY, AICP, ASSOCIATE PLANNER

Attachments: Figure 1 – Location Map
Figure 2 – Site Plan
Letter A and Response
Letter B and Response
Letter C and Response
Initial Study Checklist

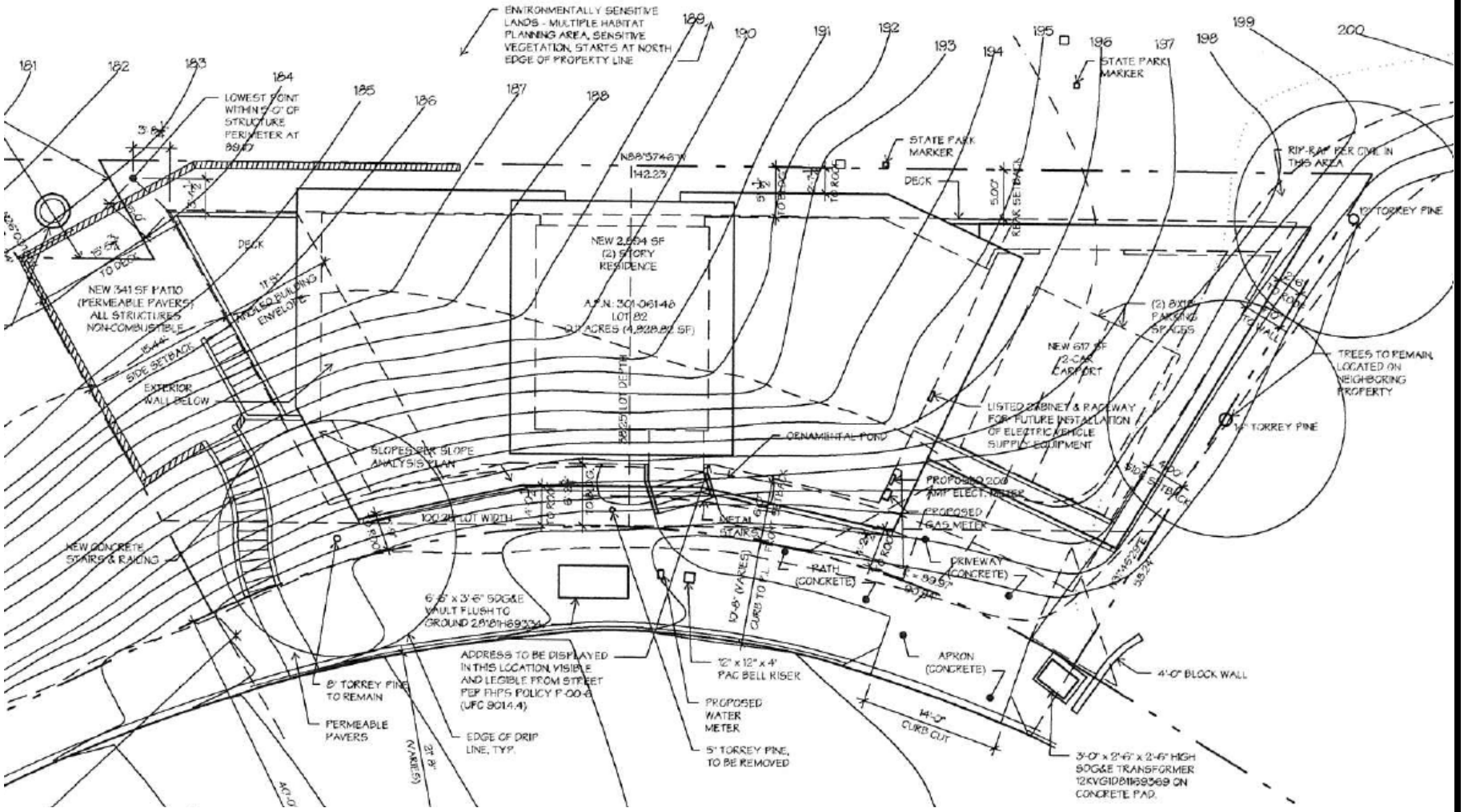
Location Map

Ross Residence NDP-CDP/Project No. 460737 Address – 13062 1/3 Via Grimaldi

City of San Diego – Development Services Department

FIGURE

No. 1



Site Plan

Ross Residence NDP-CDP/Project No. 460737 Address – 13062 1/3 Via Grimaldi

City of San Diego – Development Services Department

FIGURE

No. 2

Letter A

RINCON BAND OF LUISEÑO INDIANS
Cultural Resources Department
1 W. Tribal Road · Valley Center, California 92082 ·
(760) 297-2330 Fax:(760) 297-2339

October 17, 2016

Chris Tracy
City of San Diego
Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

Re: Ross Residence NDP/CDP Project No. 460737

Dear Mr. Tracy:

This letter is written on behalf of the Rincon Band of Luiseño Indians. Thank you for inviting us to submit comments on the Ross Residence NDP/CDP Project No. 460737. Rincon is submitting these comments concerning your projects potential impact on Luiseño cultural resources.

The Rincon Band has concerns for the impacts to historic and cultural resources and the finding of items of significant cultural value that could be disturbed or destroyed and are considered culturally significant to the Luiseño people. This is to inform you, your identified location is not within the Luiseño Aboriginal Territory. We recommend that you locate a tribe within the project area to receive direction on how to handle any inadvertent findings according to their customs and traditions.

If you would like information on tribes within your project area, please contact the Native American Heritage Commission and they will assist with a referral.

Thank you for the opportunity to protect and preserve our cultural assets.

Sincerely,

Vincent Whipple
Manager
Rincon Cultural Resources Department

Letter A - Response

Comment Noted.

Letter B

San Diego County Archaeological Society, Inc.

Environmental Review Committee

25 October 2016

To: Mr. Chris Tracy
Development Services Department
City of San Diego
1222 First Avenue, Mail Station 501
San Diego, California 92101

Subject: Draft Mitigated Negative Declaration
Ross Residence NDP/CDP
Project No. 460737

Dear Mr. Tracy:

I have reviewed the subject DMND on behalf of this committee of the San Diego County Archaeological Society.

Based on the information contained in the initial study and DMND, we concur with the application of the City's standard cultural resources mitigation measures as included in the DMND.

Thank you for including SDCAS in the public review of this DMND.

Sincerely,

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: SDCAS President
File

P.O. Box 81106 San Diego, CA 92138-1106 (858) 538-0935

Letter B - Response

Comment Noted.

Letter C

TORREY PINES ASSOCIATION

October 24, 2016

Mr. Geatano Martedi
Project Manager
City of San Diego
Development Services Department

Re: Ross Residence NDP & DSP – Project 460737

Dear Mr. Geatano;

On behalf of the Torrey Pines Association (TPA) we respectfully submit this response to the Project 460737 Draft MND. We hope that you will consider and respond in writing to our questions that relate to the value of the Reserve Extension as a resource worthy of preservation, and fully review the Project for compliance with the Torrey Pines Community Plan and Local Coastal Program Policies, Appendix E, during further analysis of the applicant's proposal.

Our questions are prompted by the Torrey Pines Community Plan itself, which states "...**adverse visual impacts to the Torrey Pines State Preserve Extension must be considered from new development.**" Policies contained within the Community Plan are detailed below, followed in each case by our questions and concerns.

We are certain that each of these can be addressed in a collaborative and cooperative way, and we appreciate that the property owners, city, community planning board, and other stakeholders will consider these points during the proposal process.

Torrey Pines Association is a non-profit 501c3 founded in 1950 by Guy Fleming (first ranger at Torrey Pines and an appointee of Ellen Browning Scripps). Our mission is to protect and preserve Torrey Pines State Natural Reserve, which includes the Reserve Extension abutting this project, through both fundraising efforts and advocacy. TPA led the drive to successfully purchase the Extension lands over 40 years ago when they were slated for development.

TORREY PINES COMMUNITY PLAN

Issue/ Response 1

Resource Management & Open Space Elements Goal

Policy:

Item 5, Preserve, enhance and restore all natural open space and sensitive resource areas,

TPA Inquiry 1:

Does this project diminish or otherwise impact this goal of enhance and restore the natural open space and sensitive resource area?

Issue/ Response 2

Policy:

Item 6, Establish a pedestrian/bicycle pathway system that links all open space areas, from Carroll Canyon in the south to the San Dieguito River Valley in the north. This pathway system shall be provided concurrent with adjacent development, and shall be designed consistent with the design guidelines provided within this Plan.

TPA Inquiry 2:

It appears the project eliminates a longstanding public access point to the Reserve. How is this consistent with this Policy Goal? Please note that the "Area Closed" signage is a relatively recent addition when considering the long history of the Extension, and was prompted in good part by the presence of illegal swings in several trees that are now dead (hence, the "attractive nuisance" is gone). State Parks is planning to do a trail plan for the Extension, and this access point will be an important element in such a plan. Removal of public access will adversely affect the ability of the neighborhood to access Reserve trails and will remove a trail link to Del Mar Heights Elementary School.

Issue/ Response 3

Policy:

"14. All Torrey Pine trees on public property should be preserved and protected."

TPA Inquiry 3:

Are all Torrey Pines within the public right of way being protected and preserved?

Policies Specific to Torrey Pines Extension follow:

TORREY PINES STATE RESERVE EXTENSION

The Torrey Pines Reserve Extension includes over 180 acres of undeveloped property containing high quality Torrey Pines woodland habitat. The Reserve is an extension of Torrey Pines State Park, and is owned by and under the jurisdiction of the State of California Park and Recreation Department.

Issue/ Response 4

"Residential development along the rim of the Reserve Extension represents the most significant encroachment problem, creating both visual and erosion impacts.

Note: Several policies overlap regarding the proposed setback. However, despite some redundancy, we will inquire on each.

Policy:

1. New development, both public and private, shall not encroach into or negatively impact the Reserve Extension. Adequate buffer areas and appropriate landscaped screening shall be provided and maintained between development and the Reserve Extension to avoid significant visual and erosion impacts from construction."

TPA Inquiry 4:

A. How is a 5' setback planned as an "adequate buffer area?"

B. How will the project adequately screen the Project *via landscape* from the Reserve Extension?

Policy:

3. Future development adjacent to the Torrey Pines Reserve Extension area shall provide for adequate buffer areas. Development proposals shall provide adequate setbacks to avoid significant erosion, visual, or sediment impacts from construction. Setbacks also shall be provided to prevent the necessity of firebreaks being constructed on reserve property.

Issue/ Response 5

TPA Inquiry 5:

As above, how does the project adequately buffer and appropriately mitigate visual impact via landscape screening and does this buffer consist of more than a 5'bio swale planted with native grasses? How can a 5' setback be adequate to "avoid...impacts from construction?"

Policy:

4. Landscaping of properties adjacent to the Extension shall not use invasive plant species. Landscaping adjacent to this area should use plant species naturally occurring in that area.

Issue/ Response 6

TPA Inquiry 6:

Does the project specify plant species naturally occurring in this Extension area?

APPENDIX E, LOCAL COASTAL PROGRAM POLICIES (LCP)

The State Coastal Act states that the scenic and visual qualities of the coastal areas shall be considered and protected as a resource of public importance.

The Plan further states that;

Residential development along the rim of the Reserve Extension represents the most significant encroachment problem, creating both visual and erosion impacts.

Issue/ Response 7

Relevant Policies pertaining to the preservation of coastal resources follow below:

VISUAL RESOURCES

Policy:

Item 4, Future development adjacent to the Torrey Pines Reserve Extension shall provide for adequate buffer areas. Development proposals shall provide adequate setbacks to avoid significant visual impacts from construction.

TPA Inquiry 7:

Once again, how does the project comply? What will buffer the two-story mass from view?

Policy:

Item 6, New residential development shall be compatible with the existing neighborhood, and designed to blend into adjacent natural open space areas. Only low-profile dwellings designed to fit with the natural terrain and not be visually prominent from the canyon floor shall be allowed. For development located in visually prominent areas adjacent to space areas, building colors and materials shall be limited to earth tones and colors subordinate to the surrounding natural

environment, which minimize the development's contrast with the surrounding hillsides and open space areas.

TPA Inquiry 8:

How has the project been designed to comply with Item 6?

Issue/ Response 8

Building colors and materials are limited to earth tones and natural colors according to the planner but to ensure compatibility with the existing neighborhood, and blend into adjacent natural open space areas, shouldn't the project be stepped with a single story element adjacent the Resource area to minimize impacts to users within the Reserve?

Regarding neighborhood compatibility:

Does the proposed architecture include height variations and breaks in mass that allow views toward the Extension Reserve from Via Latina/Via Grimaldi? How is a two-story structure rising 5' from the Torrey Pines State Reserve considered a low-profile dwelling when viewed from the Extension?

Policy:

11. The Plan recommends the preservation of Torrey Pines trees in private as well as public areas, and encourages the planting of Torrey Pines trees in roadways and other landscaped areas. Should Torrey Pines trees require removal, relocation or replacement of the trees shall occur whenever feasible.

Issue/ Response 9

TPA Inquiry 9:

The project proposes the retention a Torrey Pine(s) on the property. Are there conditions that mandate the replacement of trees removed from the public right of way and/or retained on site as part of project mitigation?

We are losing our Torrey Pine Trees to the drought and bark beetle. Torrey Pines are a defining neighborhood element and should be preserved in the interest of neighborhood compatibility.

Pedestrian Access to Coastal Resource Areas:

Issue/ Response 10

TPA Inquiry 10:

The public has enjoyed access to the Reserve, from this location, for over 20 years.

Why has the trail access been eliminated and is the public entitled to a prescriptive right to continue using it for access to the Reserve?

Where will access be provided alternatively so that this neighborhood can conveniently access the Natural Open Space System consistent with Policies of the Community Plan?

MSCP Subarea Plan—Land Use Adjacency Guidelines

Issue/ Response 11

"Drainage—All new and proposed parking lots and developed areas in and adjacent to the MHPA shall be designed so they do not drain directly into the MHPA."

TPA Inquiry 11:

Excessive water from downspout and hardscape runoff are directed to a bio-swale. Is this this adequate to keep runoff from reaching the Reserve?

Issue/ Response 12

"Noise—re. "breeding seasons" for Gnatcatcher et al. "

TPA Inquiry 12:

There is a high likelihood that this may be habitat that will impact (prolong) construction schedules and require attenuation and biological monitoring. Is biological monitoring currently being proposed?

TPA SUMMARY

The Torrey Pines Association recommends maintaining a carefully considered balance between development and resource preservation *in compliance with the Adopted Community Plan*, and LCP policies. TPA proposes that the following points be considered carefully:

1. Allow for public access to Reserve via 12'-15' min. trail easement consistent with City Trail Guidelines.

2. Step down architecture such that single story element lies next to Reserve thereby reducing mass of structure and allowing Project to subordinate to Reserve as required by the LCP.

3. Require use of earth tone colors consistent with the requirements of the Community Plan.

4. Vary height and mass of architecture to allow for views into the Reserve from public roadway.

Change assessment of "Less Than Significant Impact" re. "substantial adverse effect on a scenic vista" to "Potentially Significant."

Change assessment of "No Impact" re. "Physically divide an established community?" to "Potentially Significant Impact." Reason: House divides roadway from significant view, which is a community asset.

5. Increase the rear yard setback to 12'-15' minimum, with appropriate landscaping, to allow for "adequate visual buffering " of proposed development. Note that the project is only providing a 5' grass planted bio swale as an "adequate buffer" to avoid significant visual impacts.

6. When homes in a neighborhood are approved inconsistent with the Community Plan and LCP it is especially impactful to disregard an adjacent property so biologically and scenically valuable as a designated "State Natural Reserve." Such statements in the development review as "already impacted by the edge effects of existing development" and "the presence of a large blanket of ice plant within the adjoining MHPA in TPSNR is an example of existing edge effects" diminish and/or disregard the significance of this property's location.

Note re. "Ice Plant"—Removal of ALL invasives (caused BY development and the City of San Diego's disregard of various codes) is an ongoing program within ALL state park Natural Reserve properties. Because the ice plant is established there

doesn't mean it is going to be there... or that the presence of an INVASIVE diminishes the MHPA value of this area in the long run.

Thank you for your consideration and commitment to the Torrey Pines Community.

Respectfully,

Adam Gevanthor, Landscape Architect #3393
Counselor, Torrey Pines Association

Cc: Noel Spaid, Chair, Torrey Pines Community Planning Board;
Dylan Hardenbrook, Supervising Ranger, California State Parks;
Sherri Lightner, Council President, District 1;
Peter Jensen, President, Torrey Pines Association

Letter C (Transmitted Via Email)

Thank you Mr. Gevanthor for your input on this project.

Please see the following responses concerning your letter dated 10/24/16 transmitted via email 10/25/16:

Issue 1:

TORREY PINES COMMUNITY PLAN
Resource Management & Open Space Elements Goal
Policy:
Item 5, Preserve, enhance and restore all natural open space and sensitive resource areas,

TPA Inquiry 1:
Does this project diminish or otherwise impact this goal of enhance and restore the natural open space and sensitive resource area?

Response 1

Comment Noted. The proposed lot is zoned for residential use based on the designations in the Land Development Code. The Community Plan and LCP designates the lot for a residential use. The lot is not designated as open space and does not encroach into designated open space.

Issue 2:

Policy:
Item 6, Establish a pedestrian/bicycle pathway system that links all open space areas, from Carroll Canyon in the south to the San Dieguito River Valley in the north. This pathway system shall be provided concurrent with adjacent development, and shall be designed consistent with the design guidelines provided within this Plan.

TPA Inquiry 2:
It appears the project eliminates a longstanding public access point to the Reserve. How is this consistent with this Policy Goal? Please note that the "Area Closed" signage is a relatively recent addition when considering the long history of the Extension, and was prompted in good part by the presence of illegal swings in several trees that are now dead (hence, the "attractive nuisance" is gone). State Parks is planning to do a trail plan for the Extension, and this access point will be an important element in such a plan. Removal of public access will adversely affect the ability of the neighborhood to access Reserve trails and will remove a trail link to Del Mar Heights Elementary School.

Response 2

Comment Noted. A trail is not identified at this location per the current Torrey Pines Community Plan and LCP. The proposed project does not adversely impact current or proposed trails. The lot is not an access point to the park and is not planned to become an access point. Per Alex Stehl, Senior Park & Rec Specialist at California State Parks, "we don't make plans on land we don't own." She continued, "we

would not be making any trail connection plans [through a private parcel]." Per Darren Smith, District Services Manager (San Diego Coast District) with California State Parks, "there are no official trails or trailheads in the vicinity of Mr. Ross' property." He continued, "since your project has been designed (storm water treatment system, fire safe structure/no off property fuel management, and others) according to City of San Diego standards to minimize these effects, CA State Parks feels that these issues have been addressed."

On the Torrey Pines State Natural Reserve home webpage, the following is noted: "please keep in mind that a reserve is not a park. A natural reserve status is assigned to an area of importance, and typically is one that contains threatened plants, animals, habitats, or unique geological formations. As such, a reserve is a protected area targeted for conservation and carries with it restrictions that are not found in parks."This site states, "please remember: **Stay on the trails**. Walking off trail causes erosion, tramples plants and frightens animals." This point is stressed through the use of bold font. A trail map is also found on this webpage. The map does not indicate a trail or access point on the proposed lot. The first note on this map reads: "**Stay on officially designated trails.** Cutting across switchbacks and between trails, going into closed areas, and climbing cliffs causes severe environmental damage, and is illegal and dangerous." The trail map on the Torrey Pines Association webpage is the same map found on the Torrey Pines State Natural Reserve webpage. Again, this map does not indicate the lot is an access point to the trails and stresses (via bold font) users stay on designated trails.

Issue 3

Policy:
"14. All Torrey Pine trees on public property should be preserved and protected."

TPA Inquiry 3:
Are all Torrey Pines within the public right of way being protected and preserved? Policies Specific to Torrey Pines Extension follow:

Response 3

Comment Noted. In communications with the applicant, it was determined that all Torrey Pine trees will be retained on-site and within the adjacent right-of-way through trimming techniques and installation of root barriers. A note on the "Exhibit A" will be provided to address this. Per the Torrey Pines Community Plan, "The Plan recommends the preservation of Torrey Pines trees in private as well as public areas, and encourages the planting of Torrey Pines trees in roadways and other landscaped areas. Should Torrey Pines trees require removal, relocation or replacement of the trees shall occur whenever feasible."

Issue 4

Policies Specific to Torrey Pines Extension follow:

TORREY PINES STATE RESERVE EXTENSION

The Torrey Pines Reserve Extension includes over 180 acres of undeveloped property containing high quality Torrey Pines woodland habitat. The Reserve is an extension of Torrey Pines State Park, and is owned by and under the jurisdiction of the State of California Park and Recreation Department.
"Residential development along the rim of the Reserve Extension represents the most significant encroachment problem, creating both visual and erosion impacts".

Note: Several policies overlap regarding the proposed setback. However, despite some redundancy, we will inquire on each.
Policy:

1. New development, both public and private, shall not encroach into or negatively impact the Reserve Extension. Adequate buffer areas and appropriate landscaped screening shall be provided and maintained between development and the Reserve Extension to avoid significant visual and erosion impacts from construction."

TPA Inquiry 4:

A. How is a 5' setback planned as an "adequate buffer area?"
B. How will the project adequately screen the Project via landscape from the Reserve Extension?

Response 4

Comments Noted.

For "A.", The proposed residence has been designed to meet underlying zone requirements. In addition, Per Darren Smith, District Services Manager (San Diego Coast District) with California State Parks, "Our largest concern with this or any other development projects adjacent to the Reserve is the potential negative edge effects including changes in hydrology, noise, lighting, invasive species, and habitat impacts from new fuel management zones. Since the your project has been designed (storm water treatment system, fire safe structure/no off property fuel management, and others) according to City of San Diego standards to minimize these effects CA State Parks feels that these issues have been addressed."

For "B.", Additional native shrubs are proposed in the rear of the site which will help address this issue and it should be noted that the residence is not visible from designated trail for a user within the reserve, as it is blocked by an existing ridgeline.

Issue 5

Policy:
3. Future development adjacent to the Torrey Pines Reserve Extension area shall provide for adequate buffer areas. Development proposals shall provide adequate setbacks to avoid significant erosion, visual, or sediment impacts from construction. Setbacks also shall be provided to prevent the necessity of firebreaks being constructed on reserve property.

TPA Inquiry 5:

As above, how does the project adequately buffer and appropriately mitigate visual impact via landscape screening and does this buffer consist of more than a 5'bio swale planted with native grasses? How can a 5' setback be adequate to "avoid...impacts from construction?"

Response 5

Comment Noted. Additional native shrubs (outside of the bioswale) are proposed in the rear of the site which will help address this issue. The project is required to incorporate Land Use Adjacency Mitigation Measures to address habitat interface issues at the construction phase, therefore addressing this concern. From an operational perspective, the rear setback area will not be occupied by people other than for landscape maintenance as needed once construction is completed.

Issue 6

Policy:
4. Landscaping of properties adjacent to the Extension shall not use invasive plant species. Landscaping adjacent to this area should use plant species naturally occurring in that area.

TPA Inquiry 6:
Does the project specify plant species naturally occurring in this Extension area?

Response 6

Comment Noted. The project is required to provide plant species naturally occurring in this Extension area.

Issue 7

APPENDIX E, LOCAL COASTAL PROGRAM POLICIES (LCP)
The State Coastal Act states that the scenic and visual qualities of the coastal areas shall be considered and protected as a resource of public importance.

The Plan further states that;
Residential development along the rim of the Reserve Extension represents the most significant encroachment problem, creating both visual and erosion impacts. Relevant Policies pertaining to the preservation of coastal resources follow below:

VISUAL RESOURCES
Policy:
Item 4, Future development adjacent to the Torrey Pines Reserve Extension shall provide for adequate buffer areas. Development proposals shall provide adequate setbacks to avoid significant visual impacts from construction.

TPA Inquiry 7:
Once again, how does the project comply? What will buffer the two-story mass from view?

Response 7

Comment Noted. The setback is what is prescribed by the underlying RS zone. This zone is consistent with the approved Torrey Pines Community Plan and LCP. Providing an additional buffer area was determined to be infeasible due narrow depth of the lot which would affect the functionality of the residence. As previously stated, the residence is not visible from designated trail within the reserve, as it is blocked by an existing ridgeline, and the building will incorporate an earth-tone color palette, which should assist in softening the two-story mass.

Issue 8

Policy:
Item 6, New residential development shall be compatible with the existing neighborhood, and designed to blend into adjacent natural open space areas. Only low-profile dwellings designed to fit with the natural terrain and not be visually prominent from the canyon floor shall be allowed. For development located in visually prominent areas adjacent to space areas, building colors and materials shall be limited to earth tones and colors subordinate to the surrounding natural environment, which minimize the development's contrast with the surrounding hillsides and open space areas.

TPA Inquiry 8:
How has the project been designed to comply with Item 6?
Building colors and materials are limited to earth tones and natural colors according to the planner but to ensure compatibility with the existing neighborhood, and blend into adjacent natural open space areas, shouldn't the project be stepped with a single story element adjacent the Resource area to minimize impacts to users within the Reserve?

Regarding neighborhood compatibility:

Does the proposed architecture include height variations and breaks in mass that allow views toward the Extension Reserve from Via Latina/Via Grimaldi? How is a two-story structure rising 5' from the Torrey Pines State Reserve considered a low-profile dwelling when viewed from the Extension?

Response 8

Comment noted. The project is compatible with the neighborhood, in that the neighborhood is characterized by large homes with a variety of massing (including two-story) and providing the step back feature at the rear was determined to be infeasible due narrow depth of the lot which would affect the functionality of the residence. Furthermore, earth tone colors and materials will be implemented in conjunction with the project which help blend the project into the natural environmental adjacent to the site.

As stated previously, as currently designed the residence is not visible from designated trail within the reserve, as it is blocked by an existing ridgeline, therefore this should not impact users of the reserve from a visual perspective and the site is not "visually prominent from the canyon floor" since there is no nearby canyon floor that will be occupied with users of the park

Issue 9

Policy:
11. The Plan recommends the preservation of Torrey Pines trees in private as well as public areas, and encourages the planting of Torrey Pines trees in roadways and other landscaped areas. Should Torrey Pines trees require removal, relocation or replacement of the trees shall occur whenever feasible.

TPA Inquiry 9:
The project proposes the retention a Torrey Pine(s) on the property. Are there conditions that mandate the replacement of trees removed from the public right of way and/or retained on site as part of project mitigation?

We are losing our Torrey Pine Trees to the drought and bark beetle. Torrey Pines are a defining neighborhood element and should be preserved in the interest of neighborhood compatibility.

Response 9

Comment noted. Please see Response 3 that addresses this concern.

Issue 10

Pedestrian Access to Coastal Resource Areas:
TPA Inquiry 10:
The public has enjoyed access to the Reserve, from this location, for over 20 years. Why has the trail access been eliminated and is the public entitled to a prescriptive right to continue using it for access to the Reserve?

Where will access be provided alternatively so that this neighborhood can conveniently access the Natural Open Space System consistent with Policies of the Community Plan?

Response 10

Comment noted. See Response 2.

Issue 11

MSCP Subarea Plan—Land Use Adjacency Guidelines
"Drainage—All new and proposed parking lots and developed areas in and adjacent to the MHPA shall be designed so they do not drain directly into the MHPA."

TPA Inquiry 11:
Excessive water from downspout and hardscape runoff are directed to a bio-swale. Is this this adequate to keep runoff from reaching the Reserve?

Response 11

Comment noted. The project is required and has been designed in manner to prevent run-off into the reserve as it relates to on-site downspout and hardscape runoff.

Issue 12

"Noise—re. "breeding seasons" for Gnatcatcher et al. "

TPA Inquiry 12:
There is a high likelihood that this may be habitat that will impact (prolong) construction schedules and require attenuation and biological monitoring. Is biological monitoring currently being proposed?

Response 12

Comment noted. Mitigation specifically for the California Gnatcatcher has been incorporated into MMRP (Mitigation Monitoring Ressource Plan). Please note the following:

COASTAL CALIFORNIA GNATCATCHER (Federally Threatened)

1. Prior to the issuance of any grading permit, the City Manager (or appointed designee) shall verify that the Multi-Habitat Planning Area (MHPA) boundaries and the following project requirements regarding the coastal California gnatcatcher are shown on the construction plans:

   NO CLEARING, GRUBBING, GRADING, OR OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR BETWEEN MARCH 1 AND AUGUST 15, THE BREEDING SEASON OF THE COASTAL CALIFORNIA GNATCATCHER, UNTIL THE FOLLOWING REQUIREMENTS HAVE BEEN MET TO THE SATISFACTION OF THE CITY MANAGER:

   A. A QUALIFIED BIOLOGIST (POSSESSING A VALID ENDANGERED SPECIES ACT SECTION 10(a)(1)(A) RECOVERY PERMIT) SHALL SURVEY THOSE HABITAT AREAS WITHIN THE MHPA THAT WOULD BE SUBJECT TO CONSTRUCTION NOISE LEVELS EXCEEDING 60 DECIBELS [dB(A)] HOURLY AVERAGE FOR THE PRESENCE OF THE COASTAL CALIFORNIA GNATCATCHER. SURVEYS FOR THE COASTAL CALIFORNIA GNATCATCHER SHALL BE CONDUCTED PURSUANT TO THE PROTOCOL SURVEY GUIDELINES ESTABLISHED BY THE U.S. FISH AND WILDLIFE SERVICE WITHIN THE BREEDING SEASON PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. IF GNATCATCHERS ARE PRESENT, THEN THE FOLLOWING CONDITIONS MUST BE MET:

      I. BETWEEN MARCH 1 AND AUGUST 15, NO CLEARING, GRUBBING, OR GRADING OF OCCUPIED GNATCATCHER HABITAT SHALL BE PERMITTED. AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; AND

      II. BETWEEN MARCH 1 AND AUGUST 15, NO CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN ANY PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES WOULD RESULT IN NOISE LEVELS EXCEEDING 60 dB (A) HOURLY AVERAGE AT THE EDGE OF OCCUPIED GNATCATCHER HABITAT. AN ANALYSIS SHOWING THAT NOISE GENERATED BY CONSTRUCTION ACTIVITIES WOULD NOT EXCEED

60 dB (A) HOURLY AVERAGE AT THE EDGE OF OCCUPIED HABITAT MUST BE COMPLETED BY A QUALIFIED ACOUSTICIAN (POSSESSING CURRENT NOISE ENGINEER LICENSE OR REGISTRATION WITH MONITORING NOISE LEVEL EXPERIENCE WITH LISTED ANIMAL SPECIES) AND APPROVED BY THE CITY MANAGER AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES DURING THE BREEDING SEASON, AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; OR

III. AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, UNDER THE DIRECTION OF A QUALIFIED ACOUSTICIAN, NOISE ATTENUATION MEASURES (e.g., BERMS, WALLS) SHALL BE IMPLEMENTED TO ENSURE THAT NOISE LEVELS RESULTING FROM CONSTRUCTION ACTIVITIES WILL NOT EXCEED 60 dB(A) HOURLY AVERAGE AT THE EDGE OF HABITAT OCCUPIED BY THE COASTAL CALIFORNIA GNATCATCHER. CONCURRENT WITH THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND THE CONSTRUCTION OF NECESSARY NOISE ATTENUATION FACILITIES, NOISE MONITORING* SHALL BE CONDUCTED AT THE EDGE OF THE OCCUPIED HABITAT AREA TO ENSURE THAT NOISE LEVELS DO NOT EXCEED 60 dB (A) HOURLY AVERAGE. IF THE NOISE ATTENUATION TECHNIQUES IMPLEMENTED ARE DETERMINED TO BE INADEQUATE BY THE QUALIFIED ACOUSTICIAN OR BIOLOGIST, THEN THE ASSOCIATED CONSTRUCTION ACTIVITIES SHALL CEASE UNTIL SUCH TIME THAT ADEQUATE NOISE ATTENUATION IS ACHIEVED OR UNTIL THE END OF THE BREEDING SEASON (AUGUST 16).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB (A) hourly average or to the ambient noise level if it already exceeds 60 dB (A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. IF COASTAL CALIFORNIA GNATCATCHERS ARE NOT DETECTED DURING THE PROTOCOL SURVEY, THE QUALIFIED BIOLOGIST SHALL SUBMIT SUBSTANTIAL EVIDENCE TO THE CITY MANAGER AND APPLICABLE RESOURCE AGENCIES WHICH DEMONSTRATES WHETHER OR NOT MITIGATION MEASURES SUCH AS NOISE WALLS ARE NECESSARY BETWEEN MARCH 1 AND AUGUST 15 AS FOLLOWS:

I. IF THIS EVIDENCE INDICATES THE POTENTIAL IS HIGH FOR COASTAL CALIFORNIA GNATCATCHER TO BE PRESENT BASED ON HISTORICAL RECORDS OR SITE CONDITIONS, THEN CONDITION A.III SHALL BE ADHERED TO AS SPECIFIED ABOVE.

II. IF THIS EVIDENCE CONCLUDES THAT NO IMPACTS TO THIS SPECIES ARE ANTICIPATED, NO MITIGATION MEASURES WOULD BE NECESSARY.

INITIAL STUDY CHECKLIST

1. Project title/Project number: Via Grimaldi (Ross) ~~Residence~~ NDP & CDP/460737

2. Lead agency name and address: City of San Diego, 1222 First Avenue, MS-501, San Diego, California 92101

3. Contact person and phone number: Chris Tracy, AICP, Associate Planner / (619) 446-5381

4. Project location: 13062 1/3 Via Grimaldi (APN: 301-061-47 & 301-061-48), San Diego, CA 92014

5. Project Applicant/Sponsor's name and address: Alex Miller, Hubbell & Hubbell, 1970 Sixth Avenue, San Diego, CA 92101

6. General/Community Plan designation: Residential/Low Density Residential (5- 9 dwelling units per acre).

7. Zoning: RS 1-7 (Residential Single-Family)

8. Description of project (Describe the whole action involved, including but not limited to, later phases of the project, and any secondary, support, or off-site features necessary for its implementation.):

   NEIGHBORHOOD DEVELOPMENT PERMIT and COASTAL DEVELOPMENT PERMIT for the construction of a 2,895 sq. ft., two-story single family residence, inclusive of a two car carport, patio, and retaining walls, on a vacant 4,828.82 sq. ft. site parcel. The site is located on the north side of Via Grimaldi, 13062 1/3 Via Grimaldi (Temporary Address), intersecting with the northern apex of Via Latina.

   The parcel is designated Low Density Residential (5 – 9 dwelling units per acre) and zoned RS-1-7 within the Torrey Pines Community Plan. Additionally, the project site is within the Coastal Height Limit Overlay Zone, the Coastal Overlay Zone (Non-Appealable 1 Area), and the Parking Impact Overlay Zone (Coastal Impact Area) and Council District 1. The parcel is situated in a neighborhood setting of similar uses (residential development). The Torrey Pines State Preserve borders the property's northern property line. In addition, the project site is located in a developed area currently served by existing public services and utilities. The site is not included on any Government Code listing of hazardous waste sites. (LEGAL DESCRIPTION: Lots

81 and 82 in Block 12 of Del Mar Terrace, County of San Diego, State of California, According to Map thereof Mo. 1527, filed in the Office of the County Recorder of San Diego County February 5, 1913).

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

None required.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Greenhouse Gas Emissions	☐	Population/Housing
☐	Agriculture and Forestry Resources	☐	Hazards & Hazardous Materials	☐	Public Services
☐	Air Quality	☐	Hydrology/Water Quality	☐	Recreation
☒	Biological Resources	☒	Land Use/Planning	☐	Transportation/Traffic
☒	Cultural Resources	☐	Mineral Resources	☐	Utilities/Service System
☐	Geology/Soils	☐	Noise	☐	Mandatory Findings Significance

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial evaluation:

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ The proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required.

☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or (MITIGATED) NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or (MITIGATED) NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact answer should be explained where it is based on project specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.)

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses", as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or (mitigated) negative declaration. *Section 15063(c)(3)(D).* In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Measures Incorporated", describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

    a. The significance criteria or threshold, if any, used to evaluate each question; and

    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

	Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I)	AESTHETICS – Would the project:				
	a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

No designated public and/or scenic corridors per the Torrey Pines Community Plan exist on the site. Therefore, the project would not result in a substantial adverse effect. Therefore, any impacts would be less than significant. Furthermore he project will incorporate a natural earth-tone color palette and provide on-site landscaping features in the rear (native landscaping), which will help provide a visual transition from the adjacent natural open space and sensitive resource area.

	b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

The project is situated within a developed residential neighborhood. No such scenic resources or state scenic highways are located on, near, or adjacent to the project site. Therefore, no impacts would result.

	c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐

The site is currently vacant. The construction of a single-dwelling residence would be compatible and the construction of a single- family residence with an attached carport is permitted by the community plan and zoning designation and would not substantially degrade the existing visual character of the neighborhood. Therefore, any impacts would be less than significant. Furthermore he project will incorporate a natural earth-tone color palette and provide on-site landscaping features in the rear (native landscaping), which will help provide a visual transition from the adjacent natural open space and sensitive resource area.

	d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Development of the residential project would comply with City glare regulations. All permanent exterior lighting would be required to comply with City regulations to reduce potential adverse effects on neighboring properties. In addition, no substantial sources of light would be generated during project construction, as construction activities would occur during daylight hours. The project would also be subject to the City's Outdoor Lighting Regulations per Municipal Code Section 142.0740. and no significant impacts would occur.

II. AGRICULTURAL AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. – Would the project:				
a) Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

The project is consistent with the community plan's land use designation, and is located within a developed residential neighborhood. As such, the project site does not contain, and is not adjacent to, any lands identified as Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland),as show on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency. Therefore, the project would not result in the conversion of such lands to non-agricultural use. No significant impacts would occur, and no mitigation measures are required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒

Refer to response to ll(a) above. There are no Williamson Act Contract lands on or within the vicinity of the project site. The project is consistent with the existing land use and the underlying zone. The project does not conflict with any agricultural use. No impacts would result.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. No designated forest land or timberland occur onsite as the project is consistent with the community plan, and the underlying zone. No impacts would result.

d) Result in the loss of forest land or	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
conversion of forest land to non-forest use?				

Refer to response ll(c) above. Additionally, the project would not contribute to the conversion of any forested land to non-forest use, as surrounding land uses are built out. No impacts would result.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact, Refer to ll(a) and (c) above.

III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations – Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

The San Diego Air Pollution Control District (SDAPCD) and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the San Diego Air Basin (SDAB). The County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis (most recently in 2009). The RAQS outlines the SDAPCD's plans and control measures designed to attain the state air quality standards for ozone (03). The RAQS relies on information from the California Air Resources Board (CARB) and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the county, to project future emissions and then determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by San Diego County and the cities in the county as part of the development of their general plans.

The RAQS relies on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and by the county as part of the development of their general plans. As such, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the RAQS. However, if a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the RAQS and may contribute to a potentially significant cumulative impact on air quality.
The project would construct a single-family residence with an attached carport within a developed neighborhood of similar residential uses. The project is consistent with the General Plan, community plan, and the underlying zoning for residential development. Therefore, the project would be Consistent at a sub-regional level with the underlying growth forecasts in the RAQS, and would not obstruct implementation of the RAQS. As such, any impacts would be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
projected air quality violation?				

Short-term Emissions (Construction)

Project construction activities would potentially generate combustion emissions from on-site heavy duty construction vehicles and motor vehicles transporting the construction crew and necessary construction materials. Exhaust emissions generated by construction activities would generally result from the use of typical construction equipment that may include excavation equipment, forklift, skip loader, and/or dump truck. Variables that factor into the total construction emissions potentially generated include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on or off-site. It is anticipated that construction equipment would be used on-site for four to eight hours a day; however, construction would be short-term and impacts to neighboring uses would be minimal and temporary.
Fugitive dust emissions are generally associated with land clearing and grading operations. Due to the nature and location of the project, construction activities are expected to create minimal fugitive dust, as a result of the disturbance associated with grading. The project would construct a single-family residence with attached carport. Construction operations would include standard measures as required by the City of San Diego grading permit to reduce potential air quality impacts to less than significant. Therefore, impacts associated with fugitive dust are considered less than significant, and would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. Impacts related to short term emissions would be less than significant.

Long-term Emissions (Operational)

Long-term air emission impacts are those associated with stationary sources and mobile sources related to any change caused by a project. The project would produce minimal stationary source emissions. Once construction of the project is complete, long-term air emissions would potentially result from such sources as fireplaces, heating, ventilation, and cooling (HVAC) systems, and other motorized equipment typically associated with residential uses. The project is compatible with the surrounding development and is permitted by the community plan and zone designation. Based on the residential land use, project emissions over the long-term are not anticipated to violate any air quality standard or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant.

Overall, the project is not expected to generate substantial emissions that would violate any air quality standard or contribute to an existing or projected air quality violation; therefore, impacts would be less than significant.

c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				

As described above in response lll (b), construction operations may temporarily increase the emissions of dust and other pollutants. However, construction emissions would be temporary and short-term in durat ion. Implementation of Best Management Practices (BMP's) would reduce potential impacts related to construction activities to a less than significant level. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under applicable federal or state ambient air quality standards. Impacts would be less than significant.

d)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Short-term (Construction)

Odors would be generated from vehicles and/or equipment exhaust emissions during construction of the project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and architectural coatings. Such odors are temporary and generally occur at magnitudes that would not affect a substantial number of people. Therefore, impacts would be less than significant.

Long-term (Operational)

Typical long-term operational characteristics of the project are not associated with the creation of such odors nor anticipated to generate odors affecting a substantial number of people. The project would construct a single-family residence with attached carport. Residential dwelling units, in the long-term operation, are not typically associated with the creation of such odors nor are they anticipated to generate odors affecting a substantial number or people. Therefore, project operations would result in less than significant impacts.

IV. BIOLOGICAL RESOURCES – Would the project:

a)	Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

The following is a discussion concerning species as it relates to substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or

special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service:

Sensitive Vegetation Communities

Sensitive vegetation communities are those recognized by the City's MSCP (City of San Diego, 1997) and Land Development Code - Biology Guidelines (2012) as depleted, rare within the region, supporting sensitive animal or plant species, and/or serving as important wildlife corridors. These habitats are typically rare throughout their ranges, or are highly localized and/or fragmented. The U/D/NNV habitat affected by development of the Ross Residence Project site is not considered a sensitive habitat- type.

Sensitive Plants

No sensitive plant species were observed on the Ross Residence Project site, and none would be expected, given the highly disturbed nature of the property. Sensitive plants known from the vicinity are presented in Attachment A. As mentioned previously, the site supports two small Torrey Pine trees and is shadowed by the canopy of four more. All of these trees are of horticultural origin and were clearly planted as evidenced by their configuration, Four are planted in a row set back from the curb, and the other two are planted on the neighbor's manufactured slope to the east. For this reason, they are not considered significant biological resources.

Sensitive Animals

No sensitive animals were detected during the site surveys. A few species of sensitive, wide-ranging animals have a moderate probability to utilize this property on at least an occasional basis. These might include various sensitive bats or raptors that could fly over or roost onsite on occasion. No occupied habitat or raptor nests were detected, however. One or two species of locally-abundant but sensitive reptiles, such as Coronado Skink (Eumeces skiltonianus interparietalis) and others could occur here in low numbers. In any case, no sensitive animal populations would depend on the resources provided by this small property. Sensitive animals known from the vicinity are presented in Attachment A.

Narrow Endemics

The City of San Diego recognizes a variety of “narrow endemics” within the MSCP, including the following: SanDiego Thorn-mint (Acanthomintha ilicifolia), Shaw’s Agave (Agave shawii), San Diego Ambrosia (Ambrosia pumila), Aphanisma (Aphanisma blitoides), Coastal Dunes Milk Vetch (Astragalus tener var. titi), Short-Leaved Dudleya (Dudleya brevifolia), Variegated Dudleya (Dudleya variegata), Otay Tarplant (Hemizonia conjugens), Prostrate Navarretia (Navarretia fossalis), Snake Cholla (Opuntia serpentina), California Orcutt Grass (Orcuttia californica), San Diego Mesa Mint (Pogogyne abramsii), and Otay Mesa Mint (Pogogyne nudiuscula). Most of these occur in habitats, such as vernal pools, maritime sage scrub, coastal dunes, etc., not found on this property. In any case, no narrow endemics are anticipated to occur on the subject property. Narrow endemics and

other sensitive species known from the vicinity of this site are listed in Attachment A.

Direct Impacts

Development of the Ross Residence Project site as proposed will directly impact approximately 0.11 acre of the U/D/NNV along with the site's resident plants and animals, none of which are considered sensitive. These impacts are considered "less than significant" as defined by CEQA.

Indirect Impacts

Indirect impacts associated with site construction are also considered "less than significant", assuming the adoption of the MHPA adjacency measures described below. This is because all adjoining areas are developed, other than to the north. For this reason, the surrounding lands are already impacted by the edge effects of existing development. The presence of a large blanket of Ice Plant within the adjoining MHPA in TPSNR is an example of existing edge effects.

Environmentally Sensitive Lands

The Ross Residence Project site does not support Environmentally Sensitive Lands (ESL). The site does not support sensitive native vegetation types, sensitive native habitats, coastal bluffs, or any known biological resources essential to support sensitive species.

Compatibility with the MSCP and MHPA

The Ross Residence Project site is immediately adjacent to the City's MHPA (Figures 2 and 5) in the TPSNR. Due to proximity to the MHPA, the project must comply with the Land Use Adjacency Guidelines contained in Section 1.4.3 of the City's MSCP Subarea Plan. In particular, lighting, drainage, landscaping, grading, noise, and access.

...No specific habitat-based or species-based mitigation is required in order to reduce projects impacts to "less than significant". All impacts are considered "less than significant", from a local and regional perspective, pursuant to CEQA and the City's Biology Guidelines, assuming the adoption of the Land Use Adjacency Guidelines #1-#6. The onsite vegetation is ranked as a Tier IV in the City of San Diego. Impacts to this Tier-type do not normally require habitat-based or species-based mitigation. No specific mitigation is recommended (Biological Resources Report, Ross Residence, 2016)."

All potential impacts related to the presence of biological resources at the site would be reduced and addressed through the implementation of the Mitigation, Monitoring, and Reporting Program (MMRP), as detailed within Section V of the Mitigated Negative Declaration (MND). With implementation of the historical resources monitoring program, potential impacts on resources would be reduced to less than significant.

b) Have a substantial adverse effect on any	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
riparian habitat or other community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				

Refer to response IV (a) above. The project site is urban developed and currently supports non native landscaping. Additionally, the project site is presently developed with an existing single-family residence and located within a residential neighborhood. The project site does not contain any riparian habitat or other identified community. No impacts would result.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

The project site does not contain any federally protected wetlands as defined by Section 404 of the Clean Water Act. The project site is located within a developed residential neighborhood. No impacts would result. Also refer to response IV (a) above.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒

Per the biological report, "Wildlife corridors are not present on the Ross Residence Project site. No significant impacts to wildlife movement would thus result from the development of this site, as homes are present on adjoining parcels to the east, south, and west. Furthermore, because the Ross Residence Project site is not located within the City's Urban Area MHPA, any effort at onsite habitat or corridor preservation would not be viable in the long term." As such, no impacts would result. Also refer to response IV (a) above.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

The project would not conflict with any local policies and/or ordinances protecting biological resources such as a tree preservation policy or ordinance. All Torrey Pine trees on-site and within the adjacent right-of-way will remain in place. A Condition of Approval has been provided to address this concern. Therefore, no impacts would result. Also refer to response IV (a) above.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

Refer to response IV(a) above. The project site is located adjacent to the City's Multi-Habitat Planning Area (MHPA). As such, the project must comply with the Land Use Adjacency Guidelines contained in Section 1.4.3 of the City's MSCP Subarea Plan. Specifically areas of lighting, drainage, landscaping, grading, noise, and access. All potential impacts related to the presence of biological resources at the site would be reduced and addressed through the implementation of the Mitigation, Monitoring, and Reporting Program (MMRP), as detailed within Section V of the Mitigated Negative Declaration (MND). With implementation of the historical resources monitoring program, potential impacts on biological resources would be reduced to less than significant.

V. CULTURAL RESOURCES – Would the project:

a) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?	☐	☒	☐	☐

The purpose and intent of the Historical Resources Regulations of the Land Development Code (Chapter 14, Division 3, and Article 2) is to protect, preserve and, where damaged, restore the historical resources of San Diego. The regulations apply to all proposed development within the City of San Diego when historical resources are present on the premises. Before approving discretionary projects, CEQA requires the Lead Agency to identify and examine the significant adverse environmental effects which may result from that project. A project that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (Sections 15064.5(b) and 21084.1). A substantial adverse change is defined as demolition, destruction, relocation, or alteration activities, which would impair historical significance (Sections 15064.5(b)(1)). Any historical resource listed in, or eligible to be listed in the California Register of Historical Resources, including archaeological resources, is considered to be historically or culturally significant.

Archaeological Resources

Many areas of San Diego County, including mesas and the coast, are known for intense and diverse prehistoric occupation and important archaeological resources. The region has been inhabited by various cultural groups spanning 10,000 years or more. The project site is located on the City of San Diego's Historical Resources Sensitivity map. Furthermore, the project site is located within an area of the Del Mar/Torrey Pines area that requires special considerations with respect to the high potential archaeological sensitivity for project grading that could reveal unknown prehistoric

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

resources.

A record search of the California Historic Resources Information System (CHRIS) digital database was reviewed by qualified archaeological City staff to determine presence or absence of potential resources within the project site. Although no recorded archaeological sites were located within or adjacent to the project site there are several within the vicinity; therefore, there is a potential for the project to impact archaeological resources and mitigation measures related to historical resources (archaeology) is required.

All potential impacts related to the presence of archeological resources at the site would be reduced and addressed through the purview of a qualified Native American monitor. Monitoring by this individual would occur at all stages of ground-disturbing activities at the site. Furthermore, a Mitigation, Monitoring, and Reporting Program (MMRP), as detailed within Section V of the Mitigated Negative Declaration (MND), would be implemented to address this issue specifically. With implementation of the historical resources monitoring program, potential impacts on historical resources would be reduced to less than significant.

Built Environment

Historic property (built environment) surveys are required for properties which are 45 years of age or older and which have integrity of setting, location, design, materials, workmanship, feeling, and association. There are no existing structures on site. No impact would result.

b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

Refer to response V (a) above.

c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

According to the "Geology of the San Diego Metropolitan Area, California, La Jolla, 7.5 Minute Quadrangle Maps" (Kennedy and Peterson, 1975) the project site is located on the Bay Point Formation with highly sensitive deposits.

The City's Significance Determination Thresholds state that monitoring is required when a depth of 10 feet and 1,000 cubic yards of excavation would be exceeded when a project is located on a formation that has a high sensitivity rating. The project proposes approximately 15 cubic yards of cut with a maximum depth of six inches. No impact would result.

d)	Disturb and human remains, including those interred outside of formal	☐	☒	☐	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
cemeteries?				

Refer to response V (a) above. Although no known burial sites are known to be on the site, there is a potential for buried archaeological resources, including human remains, to be on-site. Please see Section V of the MND and the Initial Study.

VI. GEOLOGY AND SOILS – Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐

The project is not located within an Alquist-Priolo Fault Zone. The nearest fault to the project site is the Rose Canyon/Newport-Englewood Fault, located off-shore approximately 2.48 miles west of the site (Updated Geotechnical Report, Proposed Ross Residence, 2015). The project would be required to comply with seismic requirement of the California Building Code, utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts based on regional geologic hazards would remain less than significant and mitigation is not required.

ii) Strong seismic ground shaking?	☐	☐	☒	☐

The site could be affected by seismic activity as a result of earthquakes on major active faults located throughout the Southern California area. The project would utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts from regional geologic hazards would remain less than significant and mitigation is not required.

iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

Liquefaction occurs when loose, unconsolidated, water-laden soils are subject to shaking, causing the soils to lose cohesion. Implementation of the project would not result in an increase in the potential for seismic-related ground failure, including liquefaction. The project would utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts from regional geologic hazards would remain less than significant and mitigation is not required.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
iv) Landslides?	☐	☐	☒	☐

The City of San Diego Seismic Safety Study Maps (1995 Edition, Map 38) have designated the geology at the project location as being within the City of San Diego Geologic Hazard Categories 53 (low to moderate risk of landslides). The project would utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts from regional geologic hazards would remain less than significant and mitigation is not required. No mitigation measures are required.

b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Construction of the project would temporarily disturb onsite soils during grading activities, thereby increasing the potential for soil erosion to occur; however, the use of standard erosion control measures during construction would reduce potential impacts to a less than a significant level. Therefore, impacts would be less than significant, and no mitigation measures are required.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

The City of San Diego Seismic Safety Study Maps (1995 Edition, Map 38) have designated the geology at the project location as being within the City of San Diego Geologic Hazard Categories 53 (level or sloping terrain, unfavorable geologic structure). The project would utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts from regional geologic hazards would remain less than significant and mitigation is not required.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

The City of San Diego Seismic Safety Study Maps (1995 Edition, Map 38) have designated the geology at the project location as being within the City of San Diego Geologic Hazard Categories 53 (level or sloping terrain, unfavorable geologic structure). The project would utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts from regional geologic hazards would remain less than significant and mitigation is not required.

e) Have soils incapable of adequately supporting the use of septic tanks or	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
alternative waste water disposal systems where sewers are not available for the disposal of waste water?				

Not Applicable, as the project does not propose such structures.

VII. GREENHOUSE GAS EMISSIONS – Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

The construction of a single dwelling unit is consistent with the land use and designated zone and would not be expected to have a significant impact related to greenhouse gases. ~~Potential impacts from greenhouse gas emissions are considered less than significant. No mitigation measures are required.~~

In December 2015, the City adopted a Climate Action Plan (CAP) that outlines the actions that City will undertake to achieve its proportional share of State greenhouse gas (GHG) emission reductions. The purpose of the Climate Action Plan Consistency Checklist (Checklist) is to, in conjunction with the CAP, provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to the California Environmental Quality Act (CEQA).

Analysis of GHG emissions and potential climate change impacts from new development is required under CEQA. The CAP is a plan for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP.

This Checklist is part of the CAP and contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that new development is consistent with the CAP's assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects that are consistent with the CAP as determined through the use of this Checklist may rely on the CAP for the cumulative impacts analysis of GHG emissions. Projects that are not consistent with the CAP must prepare a comprehensive project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible. Cumulative GHG impacts would be significant for any project that is not consistent with the CAP.

Per the Climate Action Plan (CAP) Consistency Checklist, the proposed project will have a less-than-significant impact on the environment, either directly or indirectly, because the proposed project is

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

consistent with the existing General Plan and Community Plan land use and underlying zoning designations. The proposed project is located in low density residential land use designation and is within the RS-1-7 (Residential Single-Unit) zone and meets the criteria for consistency with the General Plan, Community Plan land use and zoning designations. The project will provide roofing materials with a minimum 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under the California Green Building Standards Code; Provide only low-flow plumbing fixtures will be installed in the project that meet the following standards: Kitchen faucets: maximum flow rate not to exceed 1.5 gallons per minute at 60 psi; Standard dishwashers: 4.25 gallons per cycle; Compact dishwashers: 3.5 gallons per cycle; and Clothes washers: water factor of 6 gallons per cubic feet of drum capacity; Provide a 15% improvement over current code for low-rise residential as calculated by Compliance Software certified by the California Energy Commission, and provide listed cabinet connected to a raceway linking the required parking space to the electrical service, to allow for the future installation of electric vehicle supply equipment to provide an electric vehicle charging station for use by the resident. As such, potential impacts from greenhouse gas emissions are considered less than significant and no mitigation measures are required; however, the improvements described within this checklist will required as a part of required project design features.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

The project as proposed would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing greenhouse gas emissions in that it would be constructed in an established urban area with services and facilities available. In addition, the project is consistent with the underlying zone and land use designation.

VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:

a) Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

The project would result in the construction of a single-dwelling residence. Although minimal amounts of such substances may be present during construction, they are not anticipated to create a significant public hazard. Once constructed, due to the nature of the project, the routine transport, use, or disposal of hazardous materials on or through the subject site is not anticipated. Therefore, impacts would be less than significant, and no mitigation is required.

b) Create a significant hazard to the public or the environment through reasonably	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				

Refer to response Vlll (a) above. Construction of a single-family residence with an attached carport within a neighborhood of similar uses would not be associated with such impacts. Therefore, no significant impacts related to this issue were identified, and no mitigation measures are required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐

Refer to responses Vlll (a) and VIII (b) above. The project site is not within one quarter mile of a school. Future risk of releases of hazardous substances would not occur as a result of project operations because it is anticipated that future on-site operations would not require the routine use or transport of acutely hazardous materials.

Construction of the project may require the use of hazardous materials (fuels, lubricants, solvents, etc.), which would require proper storage, handling, use and disposal. Further, the project would be required to comply with all federal, state and local requirements associated with hazardous materials; therefore, impacts would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

A hazardous waste site records search was completed in February 2016 using Geotracker; the records search showed that no hazardous waste sites exist onsite or in the surrounding area. No impacts would result.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two mile of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Activities associated with the necessary grading and construction would not increase the potential to result in a safety hazard for people residing or working in areas surrounding the project site. Long-

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

term operation of the residential unit would not interfere with the operations of any airport. The project site is not located within any airport land use plan, the airport environs overlay zone, or airport approach overlay zone. The project site is also not located within two miles of any airport. Therefore, no significant impacts would occur, and no mitigation measures are required.

f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Refer to response Vlll(e) above. The project site is not in proximity to any private airstrip. Therefore, no significant impacts will occur, and no mitigation measures are required.

g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

The project would not impair the implementation of, or physically interfere with an adopted emergency response plan or evacuation plan. No roadway improvements are proposed that would interfere with circulation or access, and all construction would take place on-site. No impacts would occur, and no mitigation measures are required.

h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

The Project site is located adjacent to the City's Multi-Habitat Preservation Area (MHPA), California State Park land, and within high fire sensitive area; therefore, a comprehensive Brush Management Plan must be established. Since the full Brush Management Zones cannot be provided entirely on-site, the proposed structures would have to meet alternative compliance measures. Alternative compliance measures are proposed to provide for fire rated walls and all openings shall incorporate dual glazed/dual tempered window panes. Additionally, all proposed landscaping adjoining the northern portion of the site shall not use invasive plant species. Landscaping adjacent to these areas shall use plant species naturally occurring in that area. With the incorporation of these project design features; any impacts would be reduced to a level below significance.

IX. HYDROLOGY AND WATER QUALITY - Would the project:

a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project would comply with all storm water quality standards during and after construction, and appropriate Best Management Practices (BMP's) will be utilized and provided for on-site. Implementation of theses BMP's would preclude any violations of existing standards and discharge regulations. This will be addressed through the project's Conditions of Approval; therefore, impacts would be less than significant, and no mitigation measures are required.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

The project does not require the construction of wells. The project is located within a developed residential neighborhood with existing public water supply infrastructure. No impacts would result.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

The project would not substantially alter the existing drainage pattern of the site or the area. Streams or rivers do not occur on or adjacent to the site. Although grading is proposed, the project would implement on-site BMPs, therefore ensuring that substantial erosion or siltation on- or off-site would not occur. Impacts would be less than significant, and no mitigation measures are required.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	☐	☐	☒	☐

The project would implement low impact development principles ensuring that a substantial increase in the rate or amount of surface runoff resulting in flooding on or off-site, or a substantial alteration to the existing drainage pattern would not occur. Streams or rivers do not occur on or adjacent to the project site. Impacts would be less than significant, and no mitigation measures are required.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐

The project would comply with all City storm water quality standards during and after construction. Appropriate BMP's would be implemented to ensure that water quality is not degraded; therefore, ensuring that the project runoff is directed to appropriate onsite drainage systems. Due to the nature of the project, any runoff from the site is not anticipated to exceed the capacity of existing storm water systems or provide substantial additional sources of polluted runoff that would require new or expanded facilities. See IX(a) for additional discussion. Impacts would be less than significant, and no mitigation measures are required.

f) Otherwise substantially degrade water quality?	☐	☐	☒	☐

The project would comply with all City storm water quality standards during and after construction. Appropriate BMP's would be implemented to ensure that water quality is not degraded. Impacts would be less than significant, and no mitigation measures are required.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

The project site is not located within a 100-year flood hazard area or any other known flood area.

h) Place within a 100-year flood hazard area, structures that would impede or redirect flood flows?	☐	☐	☒	☐

See Response (IX) (g). As such, impacts would be less than significant, and no mitigation measures are required.

X. LAND USE AND PLANNING – Would the project:

a) Physically divide an established community?	☐	☐	☐	☒

The project would be consistent with the General Plan land use designation of Residential as well as the Torrey Pines Community Plan land use designation of Low Density Residential (5-9 dwelling units per acre). As described, the project is located within a developed residential neighborhood, and therefore, would not physically divide an established community. No impact would result. Furthermore, per email dated Nov 14, 2016, Darren Smith with California State Parks stated, "There

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

are no official trails or trailheads in the vicinity of Mr. Ross' property. The area has apparently been used to access areas that are meant to be closed to the public. State Parks is currently collecting data for a trails plan for the Reserve that will evaluate the trail system and possibly propose some trail realignments. One of the concepts that may be evaluated is a perimeter trail that would reduce the number and acreage of social trails in the Extension. But this concept has not yet been developed for evaluation so we are unable to state that the current social trail would be an alignment nor can we support that the access point "will be an important element in such plan"."

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

The project is consistent with the General Plan's and Community Plan's land use designation. The project site is located within a developed residential neighborhood and surrounded by similar residential development. Construction of a single-family residence with attached carport would not affect adjacent properties and is consistent with surrounding land uses. No impacts would result.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☒	☐	☐

The project site is located adjacent to the City's Multi-Habitat Planning Area (MHPA). As such, the project must comply with the Land Use Adjacency Guidelines contained in Section 1.4.3 of the City's MSCP Subarea Plan. Specifically areas of lighting, drainage, landscaping, grading, noise, and access. All potential impacts related to the presence of biological resources at the site would be reduced and addressed through the implementation of the Mitigation, Monitoring, and Reporting Program (MMRP), as detailed within Section V of the Mitigated Negative Declaration (MND). With implementation of the historical resources monitoring program, potential impacts on resources would be reduced to less than significant.

XI. MINERAL RESOURCES – Would the project?

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

There are no known mineral resources located on the project site. The urbanized and developed nature of the project site and vicinity would preclude the extraction of any such resources. No

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

impacts would result.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

See response Xl (a) above. The project site has not been delineated on a local general plan, specific plan, or other land use plan as a locally important mineral resource recovery site, and no such resources would be affected with project implementation. Therefore, no significant impacts were identified, and no mitigation measures are required.

XII. NOISE – Would the project result in:

a) Generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

Short Term

Short-term noise impacts would be associated with onsite grading, and construction activities for the project. Construction-related short-term noise levels would be higher than existing ambient noise levels in the project area, but would no longer occur once construction is completed. Sensitive receptors (e.g. residential uses) occur in the immediate area and may be temporari ly affected by construction noise; however, construction activities would be required to comply with the construction hours specified in the City's Municipal Code (Section 59.5.0404, Construction Noise), which are intended to reduce potential adverse effects resulting from construction noise. With compliance to the City's construction noise requirements, project construction noise levels would be reduced to less than significant, and no mitigation measures are required.

Long Term

For the long-term, typical noise levels associated with residential uses are anticipated, and the project would not result in an increase in the existing ambient noise level. The project would not result in noise levels in excess of standards established in the City of San Diego General Plan or Noise Ordinance. No significant long-term impacts would occur, and no mitigation measures are required.

b) Generation of, excessive ground borne vibration or ground borne noise levels?	☐	☐	☐	☒

See response XII (a) above. Potential effects from construction noise would be reduced through compliance with City restrictions. Pile driving activities that would potentially result in ground borne

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

vibration or ground borne noise are not anticipated with construction of the project. No impacts would result.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒

The project would not significantly increase long-term (ambient) noise levels. The project would not introduce a new land use or significantly increase the intensity of the allowed land use. Post-construction noise levels and traffic would be generally unchanged as compared to noise with the existing residential use. Therefore, no substantial permanent increase in ambient noise levels is anticipated. A less than significant impact would result.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing without the project?	☐	☐	☒	☐

The project would not expose people to a substantial increase in temporary or periodic ambient noise levels. Construction noise would result during grading and construction activities, but would be temporary in nature. Construction-related noise impacts from the project would generally be higher than existing ambient noise levels in the project area, but would no longer occur once construction is completed. In addition, the project would be required to comply with the San Diego Municipal Code, Article 9.5, Noise Abatement and Control. Implementation of these standard measures would reduce potential impacts from an increase in ambient noise level during construction to a less than significant level, and no mitigation measures are required.

e) For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☒

The project site is not located within an airport land use plan. The project site is also not located within two miles of a public airport or public use airport. No impacts would result.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The project site is not located within the vicinity of a private airstrip. No impacts would result, and no mitigation measures are required.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

The project site is located in a developed residential neighborhood, and is surrounded by similar residential development. The project site currently receives water and sewer service from the City, and no extension of infrastructure to new areas is required. As such, the project would not substantially increase housing or population growth in the area. No roadway improvements are proposed as part of the project. No impacts would result.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

The project site is currently undeveloped and no such displacement would occur as the project would construct a single-family residence with attached carport. No impacts would result.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

See response Xlll (b) above. No impacts would result.

XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:				
i) Fire Protection	☐	☐	☒	☐

The project site is located in an urbanized area where fire protection services are already provided. The Project site is located adjacent to the City's Multi-Habitat Preservation Area (MHPA), California State Park land, and within high fire sensitive area; therefore, a comprehensive Brush Management Plan must be established. Since the full Brush Management Zones cannot be provided entirely on-site, the proposed structures would have to meet alternative compliance measures. Alternative compliance measures are proposed to provide for fire rated walls and all openings shall incorporate dual glazed/dual tempered window panes. Additionally, all proposed landscaping adjoining the northern portion of the site shall not use invasive plant species. Landscaping adjacent to these areas shall use plant species naturally occurring in that area. Construction of the project would not

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

adversely affect existing levels of fire protection services to the area, and would not require the construction of new, or expansion of, existing governmental facilities. Impacts would be less than significant, and no mitigation measures are required.

ii) Police Protection	☐	☐	☒	☐

The project site is located in an urbanized and developed area within the City of San Diego where police protection services are already provided. Construction of the project would not adversely affect existing levels of police protection services to the area or create significant new demand for such services. Additionally, the project would not require the construction of new, or expansion of, existing governmental facilities. Any impacts would be less than significant, and no mitigation measures are required.

iii) Schools	☐	☐	☒	☐

The project site is located in an urbanized and developed area where public school services are available. The project would not significantly increase the demand on public schools over that which currently exists. Construction of the project is not anticipated to result in a significant increase in demand for public educational services. Any impacts would be less than significant, and no mitigation measures are required.

v) Parks	☐	☐	☒	☐

The project site is located in an urbanized and developed area where City-operated parks are available. The project would not significantly increase the demand on existing neighborhood or regional parks, or other recreational facilities, over that which presently exists. Construction of the project is not anticipated to result in a significant increase in demand for parks or other offsite recreational facilities. Any impacts would be less than significant, and no mitigation measures are required.

vi) Other public facilities	☐	☐	☒	☐

The project site is located in an urbanized and developed area where City services are already available. Construction of the project would not require the construction of new, or expansion of, existing governmental facilities. No impacts would result.

XV. RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project would construct a single-family residence with attached carport and therefore, not adversely affect the availability of and/or need for new or expanded recreational resources. The project would not adversely affect existing levels of public services, and would not require the construction or expansion of an existing governmental facility. The project would not significantly increase the use of existing neighborhood or regional parks or other recreational facilities. Therefore, the project is not anticipated to result in the use of available parks or facilities such that substantial deterioration occurs, or that would require the construction or expansion of recreational facilities to satisfy demand. As such, no significant impacts related to recreational facilities have been identified, and no mitigation measures are required.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

See response to XIV(a) above. The project does not propose recreation facilities, nor does it require the construction or expansion of any such facilities. No impacts would result.

XVI. TRANSPORTATION/TRAFFIC – Would the project?

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

Construction of the project would not change existing circulation patterns on area roadways; however, a temporary minor increase in traffic may occur during construction. The project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. The project is not expected to cause a significant short-term or long-term increase in traffic volumes, and thus, would not adversely affect existing levels of service along area roadways. Therefore, impacts are considered less than significant, and no mitigation measures are required.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
congestion management agency for designated roads or highways?				

Refer to response XVI(a) above. Construction of the project would not generate additional vehicular traffic nor would it adversely affect any mode of transportation in the area. Therefore, the project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts are considered less than significant, and no mitigation measures are required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

The project would not result in a change to air traffic patterns in that the structures would be less than 30 feet in height, due to height restrictions within the Coastal Zone. Therefore, the project would not create a safety risk. The project site is not located within any ALCUPs or near any private airstrips. No impacts would result.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

The project would not alter existing circulation patterns on Via Grimaldi or Via Latina. No design features or incompatible uses that would increase potential hazards are proposed. The project would not affect emergency access to the project site or adjacent properties. Access would be provided to the project site from Via Grimaldi. Driveway design for the project is consistent with City design requirements to ensure safe ingress/egress from the properties. Additionally, the project site is located within an existing residential neighborhood and is not an incompatible use that would create hazardous conditions. No impacts would result.

e) Result in inadequate emergency access?	☐	☐	☐	☒

The project is consistent with the underlying zone and would not result in inadequate emergency access. The project design would be subject to City review and approval for consistency with all design requirements to ensure that no impediments to emergency access occur. No impacts would result.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project would not alter the existing conditions of the project site or adjacent facilities with regard to alternative transportation. Construction of the project would not result in design measures or circulation features that would conflict with existing policies, plan, or programs supporting alternative transportation. No impacts would result.

XVII. UTILITIES AND SERVICE SYSTEMS – Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐

Implementation of the project would not interrupt existing sewer service to the project site or other surrounding uses. No increase in demand for wastewater disposal or treatment would be created by the project, as compared to current conditions. The proposed residential unit is not anticipated to generate significant amounts of wastewater. Wastewater facilities used by the project would be operated in accordance with the applicable wastewater treatment requirements of the Regional Water Quality Control Board (RWQCB). Additionally, the project site is located in an urbanized and developed area. Adequate services are already available to serve the project. Impacts would be less than significant, and no mitigation measures are required.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

See response XVll(a) above. Adequate services are available to serve the project site. Additionally, the proposed residential unit would not significantly increase the demand for water or wastewater treatment services and thus, would not trigger the need for new treatment facilities. Impacts would be less than significant, and no mitigation measures are required.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

The project would not exceed the capacity of the existing storm water drainage systems and therefore, would not require construction of new or expansion of existing storm water drainage facilities of which could cause significant environmental effects. The project was reviewed by qualified City staff who determined that the existing facilities are adequately sized to accommodate the proposed development. Impacts would be less than significant, and no mitigation measures are required.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

The project does not meet the CEQA significance threshold requiring the need for the project to prepare a water supply assessment. The existing project site currently receives water service from the City, and adequate services are available to serve the proposed residential dwelling units without requiring new or expanded entitlements. Impacts would be less than significant.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Construction of the project would not adversely affect existing wastewater treatment services. Adequate services are available to serve the project site without requiring new or expanded entitlements. Impacts would be less than significant, and no mitigation measures are required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

Construction debris and waste would be generated from the construction of the project. All construction waste from the project site would be transported to an appropriate facility, which would have sufficient permitted capacity to accept that generated by the project. Long-term operation of the residential use is anticipated to generate typical amounts of solid waste associated with residential uses. Furthermore, the project would be required to comply with the City's Municipal Code requirement for diversion of both construction waste during the short-term, construction phase and solid waste during the long-term, operational phase. Impacts are considered to be less than significant, and no mitigation measures are required.

g) Comply with federal, state, and local statutes and regulation related to solid waste?	☐	☐	☒	☐

The project would comply with all Federal, State, and local statutes and regulations related to solid waste. The project would not result in the generation of large amounts of solid waste, nor generate or require the transport of hazardous waste materials, other than minimal amounts generated during the construction phase. All demolition activities would comply with any City of San Diego requirements for diversion of both construction waste during the demolition phase and solid waste during the long-term, operational phase. Impacts would be less than significant, and no mitigation measures are required.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE –				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

As documented in this Initial Study, the project may have the potential to degrade the quality of the environment, notably with respect to Historical Resources (Archaeology), Land Use, and Biological Resources. As such, mitigation measures have been incorporated to reduce impacts to less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable futures projects)?	☐	☒	☐	☐

As documented in this Initial Study, the project may have the potential to degrade the quality of the environment, notably with respect to Historical Resources (Archaeology), Land Use, and Biological Resources which may have cumulatively considerable impacts. As such, mitigation measures have been incorporated to reduce impacts to less than significant. Other future projects within the surrounding neighborhood or community would be required to comply with applicable local, State, and Federal regulations to reduce the potential impacts to less than significant, or to the extent possible. As such, the project is not anticipated to contribute potentially significant cumulative environmental impacts.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

The construction of a new single-dwelling residence is consistent with the setting and with the use anticipated by the City. It is not anticipated that demolition or construction activities would create conditions that would significantly directly or indirectly impact human beings. Impacts would be less

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

than significant.

INITIAL STUDY CHECKLIST

REFERENCES

I. Aesthetics / Neighborhood Character

_X_ City of San Diego General Plan.

_X_ Community Plans: Torrey Pines

_X_ Site Specific Report: Proposed Site Exhibit, Architectural Drawings

II. Agricultural Resources & Forest Resources

_X_ City of San Diego General Plan

_X_ U.S. Department of Agriculture, Soil Survey - San Diego Area, California, Part I and II, 1973

___ California Agricultural Land Evaluation and Site Assessment Model (1997)

___ Site Specific Report:

III. Air Quality

___ California Clean Air Act Guidelines (Indirect Source Control Programs) 1990

_X_ Regional Air Quality Strategies (RAQS) - APCD

___ Site Specific Report:

IV. Biology

_X_ City of San Diego, Multiple Species Conservation Program (MSCP), Subarea Plan, 1997

_X_ City of San Diego, MSCP, "Vegetation Communities with Sensitive Species and Vernal Pools" Maps, 1996

_X_ City of San Diego, MSCP, "Multiple Habitat Planning Area" maps,1997

___ Community Plan - Resource Element

___ California Department of Fish and Game, California Natural Diversity Database, "State and Federally-listed Endangered, Threatened, and Rare Plants of California," January 2001

___ California Department of Fish & Game, California Natural Diversity Database, "State and Federally-listed Endangered and Threatened Animals of California, "January 2001

___ City of San Diego Land Development Code Biology Guidelines

_X_ Site Specific Report: Biological Resources; the Ross Residence Project, City of San Diego Project No. 460737, Vincent N. Scheidt, Biological Consultant, April,6 2016

V. Cultural Resources (includes Historical Resources)

_X_ City of San Diego Historical Resources Guidelines

_X_ City of San Diego Archaeology Library

____ Historical Resources Board List

____ Community Historical Survey:

____ Site Specific Report:

VI. Geology/Soils

_X_ City of San Diego Seismic Safety Study

____ U.S. Department of Agriculture Soil Survey - San Diego Area, California, Part I and II, December 1973 and Part III, 1975

_X_ Site Specific Report(s): Updated Geotechnical Report, Proposed Ross Residence, C.W, La Monte Company, Inc., November 16, 2015

VII. Greenhouse Gas Emissions

_X_ Site Specific Report: Climate Action Plan (CAP) Consistency Checklist, Via Grimaldi (Ross) Residence

VIII. Hazards and Hazardous Materials

____ San Diego County Hazardous Materials Environmental Assessment Listing

____ San Diego County Hazardous Materials Management Division

____ FAA Determination

____ State Assessment and Mitigation, Unauthorized Release Listing, Public Use Authorized

_X_ State Water Resources Control Board GeoTracker: http://geotracker.waterboards.ca.gov/

____ Airport Land Use Compatibility Plan

____ Site Specific Report:

IX. Hydrology/Water Quality

____ Flood Insurance Rate Map (FIRM)

_X_ Federal Emergency Management Agency (FEMA), National Flood Insurance Program-Flood Boundary and Floodway Map

____ Clean Water Act Section 303(b) list, http://www.swrcb.ca.gov/tmdl/303d_lists.html

_X_ Site Specific Report: Preliminary Drainage Study – Ross Residence - Via Grimaldi, Del Mar, CA 92014, Coffey Engineering, Inc., April 22, 2016.

_X_ Site Specific Report: Water Quality Technical Report – Ross Residence - Via Grimaldi, Del Mar, CA 92014, Coffey Engineering, Inc., December 7, 2015.

_X_ Site Specific Report: Priority Development Project (PDP) Storm Water Quality Management Plan (SWQMP) for Via Grimaldi CDP, PTS 460737, Coffey Engineering, Inc., July 1, 2016.

X. Land Use and Planning

_X_ City of San Diego General Plan

_X_ Community Plans: Torrey Pines

____ Airport Land Use Compatibility Plan

_X_ City of San Diego Zoning Maps

____ FAA Determination

____ Other Plans:

XI. Mineral Resources

____ California Department of Conservation - Division of Mines and Geology, Mineral Land Classification

____ Division of Mines and Geology, Special Report 153 - Significant Resources Maps

____ Site Specific Report:

XII. Noise

_X_ City of San Diego General Plan

____ Community Plan

____ San Diego International Airport - Lindbergh Field CNEL Maps

____ Brown Field Airport Master Plan CNEL Maps

____ Montgomery Field CNEL Maps

____ San Diego Association of Governments - San Diego Regional Average Weekday Traffic Volumes

____ San Diego Metropolitan Area Average Weekday Traffic Volume Maps, SANDAG

___ Site Specific Report:

XIII. Paleontological Resources

_X_ City of San Diego Paleontological Guidelines

_X_ Deméré, Thomas A., and Stephen L. Walsh, "Paleontological Resources City of San Diego," Department of Paleontology San Diego Natural History Museum, 1996

_X_ Kennedy, Michael P., and Gary L. Peterson, "Geology of the San Diego Metropolitan Area, California. Del Mar, La Jolla, Point Loma, La Mesa, Poway, and SW 1/4 Escondido 7 1/2 Minute Quadrangles," California Division of Mines and Geology Bulletin 200, Sacramento, 1975

____ Kennedy, Michael P., and Siang S. Tan, "Geology of National City, Imperial Beach and Otay Mesa Quadrangles, Southern San Diego Metropolitan Area, California," Map Sheet 29, 1977

____ Site Specific Report:

XIV. Population / Housing

_X_ City of San Diego General Plan

_X_ Community Plans: Torrey Pines

____ Series 11/Series 12 Population Forecasts, SANDAG

____ Other:

XV. Public Services

_X_ City of San Diego General Plan

_X_ Community Plans: Torrey Pines

XVI. Recreational Resources

_X_ City of San Diego General Plan

_X_ Community Plans: Torrey Pines

____ Department of Park and Recreation

____ City of San Diego - San Diego Regional Bicycling Map

____ Additional Resources:

XVII. Transportation / Circulation

_X_ City of San Diego General Plan

_X_ Community Plans: Community Plans: Torrey Pines

____ San Diego Metropolitan Area Average Weekday Traffic Volume Maps, SANDAG

____ San Diego Region Weekday Traffic Volumes, SANDAG

____ Site Specific Report:

XVIII. Utilities

_X_ City of San Diego General Plan

____ Site Specific Report:

XIX. Water Conservation

____ Sunset Magazine, New Western Garden Book, Rev. ed. Menlo Park, CA: Sunset Magazine

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Mr. Alex Miller
Hubbell & Hubbell Architects
1970 Sixth Avenue
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April 6, 2016

Subject: Biological Resources; the Ross Residence Project, City of San Diego Project No. 460737

Dear Mr. Miller:

This report addresses biological resources, project-related impacts, and mitigation requirements associated with the Ross Residence Coastal Development and Neighborhood Development Permit Project in the City of San Diego (Project No. 460737). The project site (APN 301-061-48), which consists of approximately 0.11-acre (~4,829 square feet) of vacant land, is located off Via Grimaldi in the Del Mar area of the City of San Diego, west of Interstate Highway 5 and north of Carmel Valley Road (Figures 1 and 2).

PROJECT DESCRIPTION

Development of the Ross Residence Project will result in the construction of a single family residence and associated improvements. Access to the new residence will be from the south off Via Grimaldi. The analysis in this report assumes that all of the subject property (100%) will be impacted by development, either directly or indirectly.

PURPOSE OF STUDY

The purpose of this study was to inventory the property for biological resources, identify onsite habitats, and search for signs of rare, endangered, threatened, or otherwise sensitive plants or animals which have a potential to occur here. These data were used in an assessment of biological resource values. This analysis allows a determination of project-related direct and indirect impacts, as required by the California Environmental Quality Act (CEQA), and mitigation, if appropriate and necessary. It further allows a determination of the project's conformance with the City of San Diego's Land Development Code (LDC), Environmentally Sensitive Lands (ESL) Ordinance, and Multiple Species Conservation Program (MSCP) Subarea Plan, including the Multi-Habitat Planning Area (MHPA) overlay.

METHODS

A field survey of the Ross Residence Project site was completed on 31 March 2016 between the hours of 10:30 and 12:00. Weather conditions during the survey consisted of clear skies with temperatures in the high 60˚s and a light westerly breeze. Surveys were completed by myself. The entire Ross Residence Project site was slowly walked and examined, and all plants, animals, and habitats encountered were inventoried. The locations and identities of all larger shrubs and trees were mapped utilizing a recent aerial site photo (Figure 3). All plants identified in association with the property are listed in Table 2, attached. Floral nomenclature used in this letter follows Hickman (1993) and others. Plant communities follow Holland (1996, as amended).

Wildlife observations were made opportunistically. Binoculars were used to assist with identifications and all wildlife species observed were noted (Table 2). Animal nomenclature used in this report is taken from Stebbins (2003) for reptiles and amphibians, American Ornithologist's Union (1998, as updated) for birds, and Jones, et. al (1992) for mammals.

RESULTS

Habitats

The Ross Residence Project site supports two broadly overlapping, disturbance-responsive plant associations or habitats. These are Urban/Developed (U/D) habitat and Non-native Vegetation (NNV), which are combined for analysis purposes in this report. Neither of these plant associations are of any local or regional biological resource value.

Urban/Developed/Non-native Vegetation (Holland Code 12000/11000) – Tier IV – 0.11 acre

Nearly the entire project site is covered by a blanket of Hottentot Fig (*Carpobrotus edulis*), also known as Ice Plant, a noxious invasive species that was planted on manufactured slopes for erosion control in the past. This cover, which qualifies as NNV, has encroached onto the adjacent Torrey Pines State Natural Reserve (TPSNR) for a short distance before the habitat transitions to Diegan Coastal Sage Scrub (Figure 4) further offsite to the north. The southern edge of the project site qualifies as U/D habitat, as it consists of the shoulder of Via Grimaldi and the upper part of a steep manufactured slope (Figure 6, Photo 3). A number of native species have naturalized on the Ice Plant, including two large Laurel Sumac *(Malosma laurina)* shrubs, small numbers of California Sunflower *(Encelia californica)*, and others. However, these do not dominate the vegetation and do not qualify the site as supporting anything other than U/D/NNV. Because the U/D habitat and the NNV broadly overlap, and because they are both MSCP Tier IV habitat-types, they are combined for analysis purposes in this report. Two small but mature Torrey Pine trees are present on the shoulder of Via Grimaldi at the southern edge of the parcel, and four others are present immediately adjoining the parcel to the northeast and southwest (see Figures 4 and 5). All of these trees are of horticultural origin, having been planted in these locations. This is discussed in more detail subsequently. U/D/NNV is a combined Tier IV habitat-type in the City of San Diego.

Plants

The plant species observed on the Ross Residence Project site typify the diversity normally found in U/D and NNV on small parcels in this part of the City. A complete list of the plants observed is presented in Table 2. Most of the plants are non-natives, although a number of natives are present, albeit in low numbers.

Animals

Very few animals were observed using the project site. This is a mostly reflection of the site's small size. The species observed are all common forms, abundant in the site's vicinity. Observed or expected species include various common birds, such as House Finch *(Carpodacus mexicanus)* and California Towhee *(Pipilo crissalis)*, and a few reptiles and mammals, including Western Fence Lizard *(Sceloporus occidentalis)*, Valley Pocket Gopher *(Thomomys bottae)*, various and others. No amphibians were detected, although one or two locally-common species, such as Pacific Slender Salamander *(Batrachoseps pacificus)* and Western Toad *(Bufo boreas)* could be expected. Animals observed on site are listed in Table 2, attached.

SENSITIVE RESOURCES

Sensitive Vegetation Communities

Sensitive vegetation communities are those recognized by the City's MSCP (City of San Diego, 1997) and Land Development Code - Biology Guidelines (2012) as depleted, rare within the region, supporting sensitive animal or plant species, and/or serving as important wildlife corridors. These habitats are typically rare throughout their ranges, or are highly localized and/or fragmented.

The U/D/NNV habitat affected by development of the Ross Residence Project site is not considered a sensitive habitat- type.

Sensitive Plants

No sensitive plant species were observed on the Ross Residence Project site, and none would be expected, given the highly disturbed nature of the property. Sensitive plants known from the vicinity are presented in Attachment A.

As mentioned previously, the site supports two small Torrey Pine trees and is shadowed by the canopy of four more. All of these trees are of horticultural origin and were clearly planted as evidenced by their configuration, Four are planted in a row set back from the curb, and the other two are planted on the neighbor's manufactured slope to the east. For this reason, they are not considered significant biological resources.

Sensitive Animals

No sensitive animals were detected during the site surveys.

A few species of sensitive, wide-ranging animals have a moderate probability to utilize this property on at least an occasional basis. These might include various sensitive bats or raptors that could fly over or roost onsite on occasion. No occupied habitat or raptor nests were detected, however. One or two species of locally-abundant but sensitive reptiles, such as Coronado Skink *(Eumeces skiltonianus interparietalis)* and others could occur here in low numbers. In any case, no sensitive animal populations would depend on the resources provided by this small property. Sensitive animals known from the vicinity are presented in Attachment A.

Narrow Endemics

The City of San Diego recognizes a variety of “narrow endemics” within the MSCP, including the following: San Diego Thorn-mint *(Acanthomintha ilicifolia)*, Shaw’s Agave *(Agave shawii)*, San Diego Ambrosia *(Ambrosia pumila),* Aphanisma *(Aphanisma blitoides),* Coastal Dunes Milk Vetch (*Astragalus tener* var. *titi)*, Short-Leaved Dudleya *(Dudleya brevifolia)*, Variegated Dudleya *(Dudleya variegata)*, Otay Tarplant (Hemizonia conjugens), Prostrate Navarretia (*Navarretia fossalis)*, Snake Cholla *(Opuntia serpentina)*, California Orcutt Grass *(Orcuttia californica)*, San Diego Mesa Mint *(Pogogyne abramsii)*, and Otay Mesa Mint *(Pogogyne nudiuscula)*. Most of these occur in habitats, such as vernal pools, maritime sage scrub, coastal dunes, etc., not found on this property. In any case, no narrow endemics are anticipated to occur on the subject property. Narrow endemics and other sensitive species known from the vicinity of this site are listed in Attachment A.

Attachment A lists sensitive plants and animals that are known from the area, including MSCP Covered, and State and Federally listed species. Species in Attachment A ranked as "high" probability are expected (at least occasionally); species ranked as "moderate" might or might not occur occasionally; species ranked as "low" are very unlikely to ever occur on or otherwise utilize the site.

Wildlife Corridors

Wildlife corridors are not present on the Ross Residence Project site. No significant impacts to wildlife movement would thus result from the development of this site, as homes are present on adjoining parcels to the east, south, and west. Furthermore, because the Ross Residence Project site is not located within the City's Urban Area MHPA, any effort at onsite habitat or corridor preservation would not be viable in the long term.

IMPACTS

The determination of the "significance" of project impacts, per the City's Biology Guidelines, is based on one or all of the following criteria (pg. 70, 8/09):

a. The site has been identified as part of the MHPA by the City's MSCP Subarea Plan.

b. The site supports or could support (e.g. in different seasons/rainfall conditions, etc.) Tier I, II, or IIIA & B vegetation communities (such as grassland, chaparral, coastal sage scrub, etc.). The CEQA determination of significant impacts may be based on what was on the site (e.g. if illegal grading or vegetation removal occurred, etc.), as appropriate.

c. The site contains, or comes within 100 feet of a natural or manufactured drainage (determine whether it is vegetated with wetland vegetation). The site occurs within the 100-year flood plain established by the Federal Emergency Management Agency (FEMA) or the Flood Plain Fringe (FPF)/ Flood Way (FW) zones.

d. The site does not support a vegetation community identified in Tables 2a, 2b or 3 (Tier I, II, IIIA or IIIB) of the Biology Guidelines (July 2002); however, wildlife species listed as threatened or endangered or other protected species may use the site (e.g. California least terns on dredge spoil, wildlife using agricultural land as a wildlife corridor, etc.).

Anticipated impacts (Table 1) were calculated by determining the acreage affected by the site development as proposed, including grading, landscaping, brush management, and related improvements.

Direct impacts (anticipated) entail the actual removal of biological features from the site due to clearing and grading. These direct impacts are considered permanent, because they result in a conversion of habitats to landscaped areas, structures, etc. Indirect impacts (not anticipated) are those effects on native habitats, plants, or animals resulting from project implementation that are not the direct result of grading or development. Examples of indirect impacts include introduction of exotic species, human intrusion, lighting, noise, and related "edge effects".

Direct Impacts

Development of the Ross Residence Project site as proposed will directly impact approximately 0.11 acre of the U/D /NNV along with the site's resident plants and animals, none of which are considered sensitive. These impacts are considered "less than significant" as defined by CEQA.

Indirect Impacts

Indirect impacts associated with site construction are also considered "less than significant", assuming the adoption of the MHPA adjacency measures described below. This is because all adjoining areas are developed, other than to the north. For this reason, the surrounding lands are already impacted by the edge effects of existing development. The presence of a large blanket of Ice Plant within the adjoining MHPA in TPSNR is an example of existing edge effects.

Brush Management

All Zone 1 Brush Management areas are included within the development footprint and outside of the MHPA. The project design includes a condition which states that "Brush Management Zone 1 requirements shall apply for all landscape areas of the entire property". Brush Management extending into the TPSNR is not permitted.

Environmentally Sensitive Lands

The Ross Residence Project site does not support Environmentally Sensitive Lands (ESL). The site does not support sensitive native vegetation types, sensitive native habitats, coastal bluffs, or any known biological resources essential to support sensitive species.

Compatibility with the MSCP and MHPA

The Ross Residence Project site is immediately adjacent to the City's MHPA (Figures 2 and 5) in the TPSNR. Due to proximity to the MHPA, the project must comply with the Land Use Adjacency Guidelines contained in Section 1.4.3 of the City's MSCP Subarea Plan. In particular, lighting, drainage, landscaping, grading, noise, and access must not adversely affect the MHPA. To that end, the following recommendations are provided to reduce potentially significant indirect impacts to the MHPA:

1. *Any necessary lighting shall be directed away from the MPHA and shielded as necessary to prevent light pollution*. The project has been designed to avoid lighting impacts into the TPSNR. Therefore, lighting impacts are not anticipated. Lighting shall follow Municipal Code §142.0740 and be outside of, and directed away/shielded from the MHPA boundary.
2. *Drainage from development-related hardscape surfaces shall be processed onsite, and no discharge of unprocessed materials shall be directed into the MHPA.* The project must comply with current stormwater regulations designed to preclude any hardscape runoff issues, such as erosion or siltation. To that end, best management practices will be utilized onsite to avoid, reduce, contain, and clean up toxic chemicals and polluted storm water run-off and prevent them from contaminating groundwater and off-site wetland and non-wetland waters of the U.S. Stormwater will be diverted into sedimentation basins, landscaped areas/bio- swales, or mechanical trapping devices. In addition, the velocity of stormwater released has been be dissipated by design (i.e. with rip rap in the within the approved development area only) prior to draining into the MHPA.
3. *Landscaping adjacent to the project site shall be designed to be consistent with native vegetation.* No prohibited species per the Municipal Code Landscape Standards - Section 1.3 shall be utilized anywhere onsite and no potentially invasive plant species shall be planted in or within 100 feet of the MHPA.
4. Grading associated with this project is minimal, as the project site is constrained by its small size and configuration. Because the project site is entirely within an unnatural habitat area, no grading impacts to

sensitive species or habitats are anticipated. Development monitoring will further ensure that all activities are restricted to the proposed project area, and that no grading extends into the MHPA/TPSNR.

5. Site access currently exists from Via Grimaldi, an improved city street. Access into the MHPA will not be facilitated by site development. Pedestrian and bicycle access into the MHPA currently exists across this vacant parcel, and development will block access into a closed area of the TPSNR. Temporary habitat protection fencing in proximity to the construction area will further ensure that all activities are restricted to the proposed project footprint.
6. Construction noise could affect migratory songbirds, raptors, and other avifauna associated with the MHPA. In order to avoid conflicts with the MHPA Adjacency Guidelines, the federal Migratory Bird Treaty Act (MBTA) and Sections 3503, 3503.5 and 3513 of the California Fish and Game Code, the project must not remove or disturb any potential nesting habitat during the bird breeding season, defined as between 1 January and 31 August of each year. This restriction can be waived by the City upon completion of a nesting bird survey. If no nesting survey is completed, "presence" will be assumed, and seasonal restrictions or noise abatement may be required.

CONCLUSIONS AND RECOMMENDATIONS

No specific habitat-based or species-based mitigation is required in order to reduce projects impacts to "less than significant". All impacts are considered "less than significant", from a local and regional perspective, pursuant to CEQA and the City's Biology Guidelines, assuming the adoption of the Land Use Adjacency Guidelines #1-#6 above.

The onsite vegetation is ranked as a Tier IV in the City of San Diego. Impacts to this Tier-type do not normally require habitat-based or species-based mitigation. No specific mitigation is recommended.

Table 1 (below) summarizes project-related impacts to onsite habitats and mitigation requirements per the City's Biology Guidelines.

Table 1. Impact/Mitigation Analysis - the Ross Residence Project

Habitat	Onsite Acreage	Impacted Acreage	Mitigation Ratio	Mitigation Required
Urban/Developed/Non-Native Vegetation Tier IV	0.11	0.11	n/a	none
Total	**0.11**	**0.11**	**—**	**none**

As stated above, the project is required to comply with the federal Migratory Bird Treaty Act. Therefore, in order to ensure project compliance with the Act and Sections 3503, 3503.5, and 3513 of the California Fish and Game Code, all site disturbance activities, including grading and clearing, should take place outside of the bird breeding season, defined as the period between 1 January and 31 August. This seasonal restriction may be waived by the City upon completion of a nesting bird survey and/or implementation of noise abatement measures. If no nesting survey is completed, active nesting will be assumed, and the project may be required to delay site disturbance activities until after the breeding season is over.

Please contact me if you have any questions or concerns.

Very truly yours,

Vince Scheidt
Certified Biological Consultant

Attachments: Bibliography
Report Preparer Qualifications
Table 2. Plants and Animals Observed
Figure 1. Project Location
Figure 2. Location of Project in Relation to MHPA
Figure 3. Recent Aerial Photograph
Figure 4. Biological Resources on Aerial Photograph
Figure 5. Biological Resources on Site Plan showing MHPA Boundary
Figure 6. Site Photographs - March 2016
Attachment A. Sensitive Species Known from Vicinity

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Vincent N. Scheidt — CERTIFIED BIOLOGICAL CONSULTANT

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B.S. Zoology, San Diego State University

Biological Consultant:

- *Baseline Biology Surveys*
- *Zoological Surveys and Inventories*
- *Botanical Surveys and Inventories*
- *Endangered Species Surveys*
- *Forensic Vegetation Surveys*
- *Focused Survey Coordination*
- *Technical Study Reports*
- *Revegetation Planning*
- *Habitat Management Planning*
- *Habitat Mapping*
- *Open Space Management*
- *Jurisdictional Wetland Delineations*

Applicable Experience:

- *Has extensive practical experience in various biologically-related projects in San Diego, Orange, Riverside, Imperial, San Bernardino and Los Angeles Counties. Additional biological studies in northern California.*

- *Has conducted focused surveys for numerous sensitive species of plants and animals over the last thirty years.*

- *Has prepared baseline biological surveys, habitat delineations, and natural community viability analyses on a continuous basis since 1980.*

- *Has conducted biological surveys for private individuals, corporations, partnerships, the military, and numerous public organizations throughout California.*

- *Has authored more than 2,400 biological technical reports and professional papers.*

In addition to extensive field experience, Mr. Scheidt authored the standard reference *"Status of the Indigenous Amphibians of San Diego County"* in 1980 under contract to the San Diego County Fish and Wildlife Committee and San Diego Herpetological Society. All taxa native to San Diego were reviewed and discussed with respect to current and historical distribution, endangerment, listing status at federal, state, and local levels. This text remains the definitive overall text on this group of organisms in San Diego County.

Completed studies include a 1995 vegetative analysis of the biota of the 4,350-acre Monte Vista Ranch property in Central San Diego County. This study defined seventeen discrete habitats occurring on this property. Preliminary definitions were prepared for each plant association. This habitat delineation will allow eventual species complex modeling and biologically-based conservation planning.

Another major project, prepared under contract to HDR Engineering in 2000-2002, involved comprehensive field surveying of a proposed 155 mile fiber-optic line through several southern California counties. Numerous sensitive species surveys were conducted as a part of this study, including Least Bell's Vireo, Arroyo Toad, Willow Flycatcher, Desert Tortoise, Flat-tailed Horned Lizard, and other directed surveys

A recent project, completed under contract to DC&E Planning in 2009-2011, involved biology studies associated with the City of National City's General Plan Update. Included in the scope of work were three project-specific studies for proposed city redevelopment projects. Comprehensive biology surveys were conducted as a part of this study, including floral and faunal inventories, habitat evaluations for sensitive species, and other directed surveys

Mr. Scheidt's professional affiliations include: Member, State Board of Directors; the California Native Plant Society (2008-2012), the San Diego Herpetological Society, and others.

Mr. Scheidt possesses federal Section 10(a) 1(a) Recovery Permit #TE788133 to allow focused field surveying for California Gnatcatcher and Quino Checkerspot Butterfly.

Table 2. Plants and Animals Observed - Ross Residence Project

Scientific Name	Common Name
Plants	
Bromus diandrus *	*Ripgut Brome*
Carpobrotus edulis *	*Hottentot Fig*
Chenopodium murale *	*Goosefoot*
Crassula argentea *	*Jade Plant*
Encelia californica	*California Encelia*
Eriogonum fasciculatum	*Flat-top Buckwheat*
Hordeum sp. *	*Wild Barley*
Lotus scoparius	*Deerweed*
Malosma laurina	*Laurel Sumac*
Marah macrocarpus	*Man Root*
Pinus torreyana	*Torrey Pine*
Raphanus sativus *	*Wild Radish*
Sonchus oleraceus *	*Sow Thistle*
Birds	
Carpodacus mexicanus	*Housefinch*
Mimus polyglottos	*Mockingbird*
Pipilo crissalis	*California Towhee*
Mammals	
Thomomys bottae	Valley Pocket Gopher
Reptiles	
Sceloporus occidentalis	Western Fence Lizard

* = non-native or non-indigenous taxon

Figure 1. Project Location – The Ross Residence Project
Portion of U.S.G.S. "Del Mar" 7.5' quadrangle

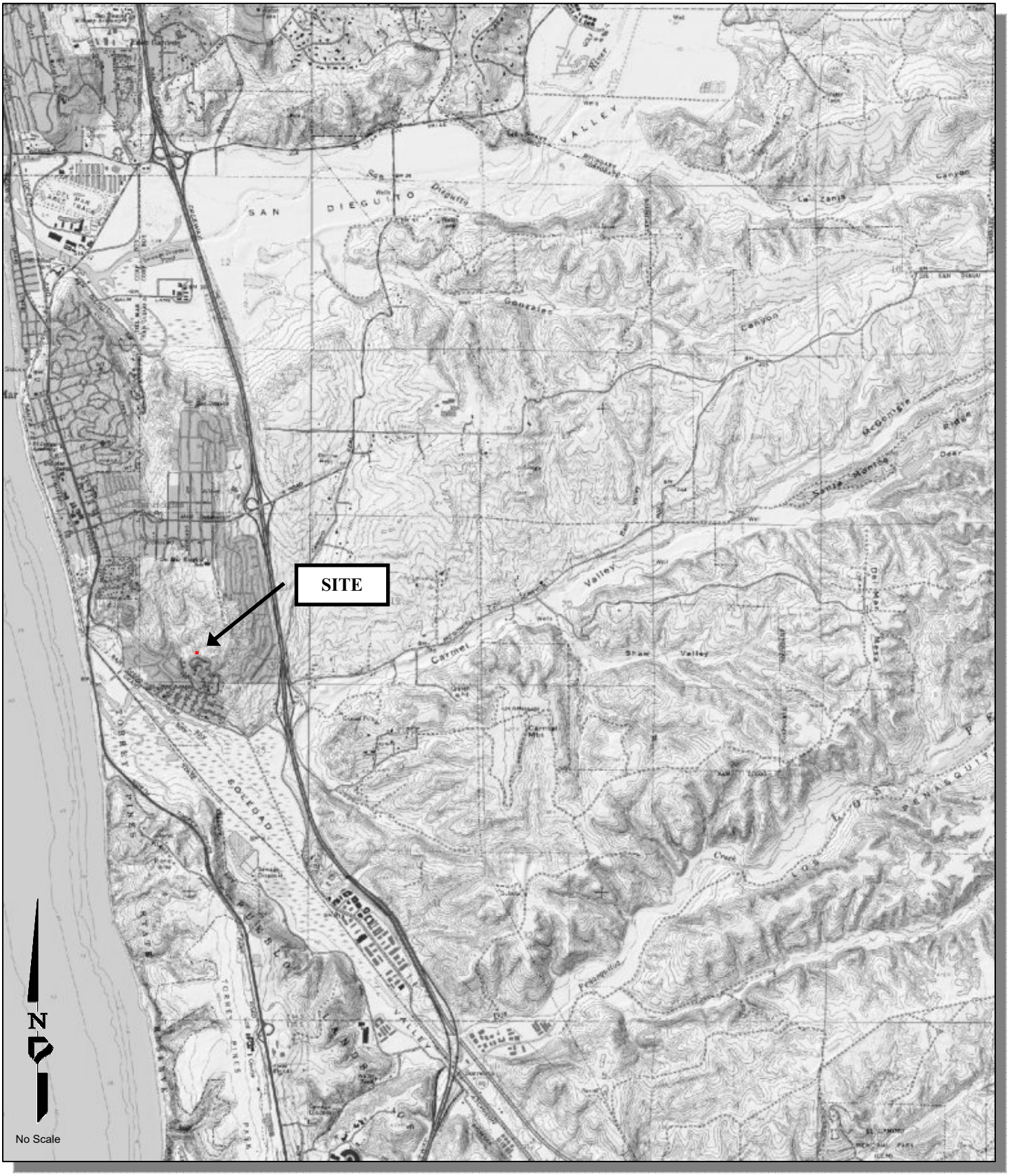

Figure 2. Location of Project in Relation to MHPA – The Ross Residence Project

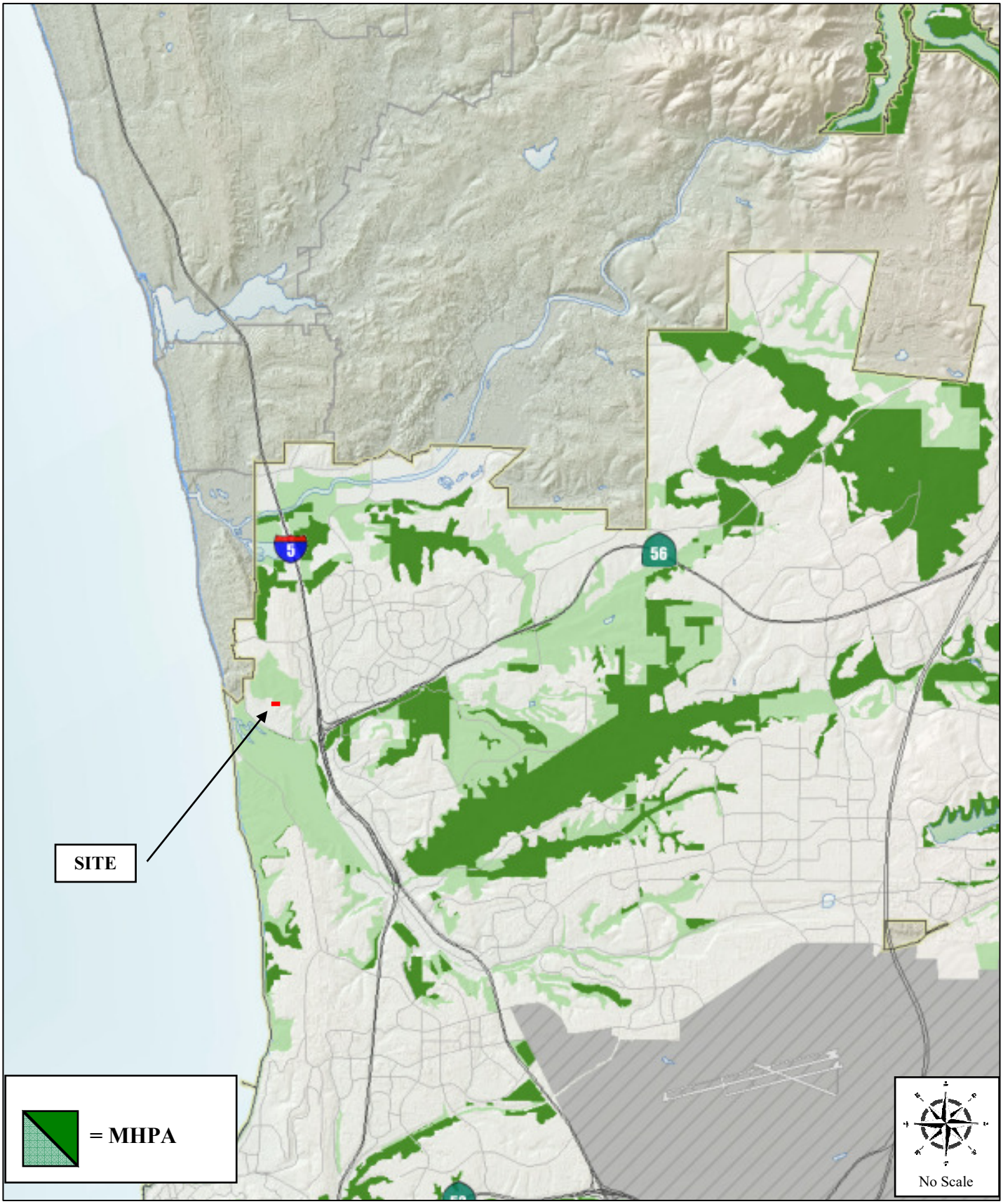

Figure 3. Recent Aerial Photo – The Ross Residence Project

Figure 4. Biological Resources on Aerial Photo – The Ross Residence Project

Figure 5. Biological Resources on Site Plan showing MHPA Boundary – The Ross Residence Project

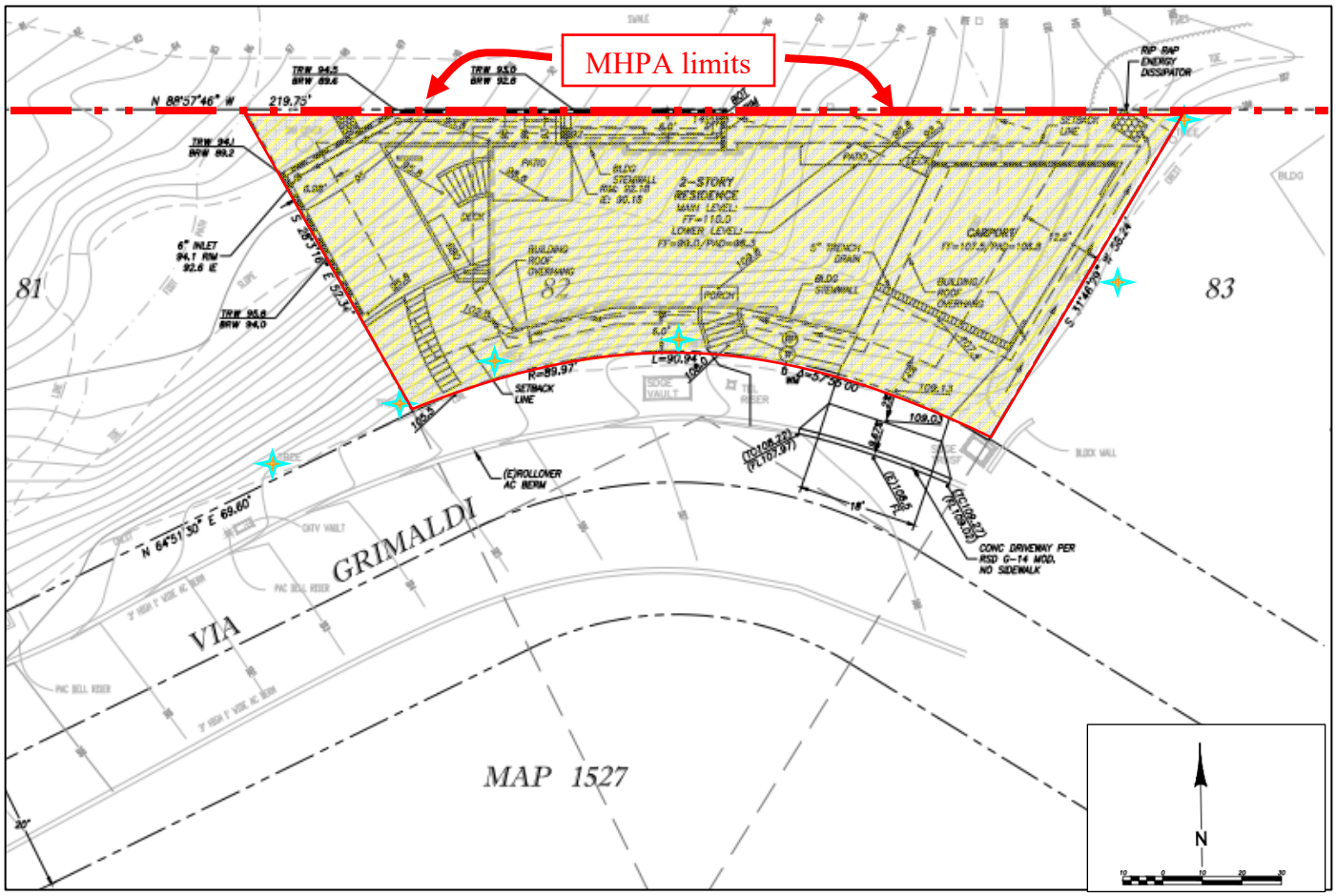

Figure 6. Site Photos - March 2016

Photo 1. Looking at NE corner from the shoulder of Via Grimaldi. Note Ice Plant, weeds, and lack of native species except for Torrey Pine branches from the a Torrey Pine growing on the road shoulder.

Photo 2. Looking SE from NW corner. Note predominance of Ice Plant.

Figure 6. Site Photos - March 2016

Photo 3. View of manufactured slope below Via Grimaldi, looking east.

Photo 4. View from NE corner looking SW.

Attachment A. Sensitive Species Known from the Vicinity – The Via Grimaldi Project

Scientific Name	*Common Name*	Federally Endangered	Federally Threatened	City "Narrow Endemic"	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Closed Cone Forest	Piñon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	**Probability of Occurrence**
Accipiter cooperii	Cooper's Hawk						✓	✓	✓													**M**
Accipiter striatus	Sharp-shinned Hawk				✓				✓		✓											**L**
Agave shawii	Shaw's Agave			✓	✓	✓																**L**
Aimophila ruficeps canescens	Rufous-crowned Sparrow				✓					✓												**L**
Anniella pulchra pulchra	Silvery Legless Lizard				✓		✓	✓												✓		**L**
Antrozous pallidus	Pallid Bat				✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓			**M**
Aphanisma blitoides	Aphanisma			✓																✓		**L**
Arctostaphylos glandulosa crassifolia	Del Mar Manzanita	✓				✓						✓										**L**
Astragalus tener var. *titi*	Coastal Dunes Milk-vetch			✓																✓		**L**
Atriplex pacifica	South Coast Saltbush				✓					✓		✓										**L**
Buteo lineatus	Red-shouldered Hawk							✓	✓													**M**
Calandrinia maritima	Seaside Calandrinia				✓							✓										**L**
Ceanothus verrucosus	Wart Stemmed Ceanothus					✓				✓												**L**
Charadrius alexandrinus nivosus	Western Snowy Plover		✓														✓			✓		**L**
Chorizanthe orcuttiana	Orcutt's Chorizanthe	✓				✓																**L**
Chorizanthe polygonoides longispina	Long-spined Spineflower					✓				✓												**L**
Cnemidophorus hyperythrus	Orange-rhroated Whiptail				✓	✓	✓	✓		✓												**M**
Cnemidophorus tigris multiscutatus	Coastal Western Whiptail					✓		✓	✓	✓												**L**
Coreopsis maritima	Sea Dahlia				✓	✓						✓										**L**
Corethrogyne filaginifolia linifolia	San Dieguito Sand Aster				✓	✓				✓		✓										**M**
Corynorhinus townsendii	Townsend's Big-eared Bat					✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓			**M**
Crotalus ruber ruber	Red Diamond Rattlesnake				✓	✓				✓			✓		✓							**L**
Danaus plexippus	Monarch Butterfly						✓		✓										✓			**M**
Diadophis punctatus similis	San Diego Ringneck Snake				✓	✓		✓	✓	✓	✓	✓										**M**
Dudleya brevifolia	Short-leaved Dudleya			✓		✓																**L**
Elanus caeruleus	Black-shouldered Kite						✓	✓														**M**
Eumeces skiltonianus interparietalis	Coronado Skink				✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓	✓		**M**
Eumops perotis californicus	Greater Western Mastiff Bat				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	**M**
Falco peregrinus anatum	American Peregrine Falcon	✓					✓							✓			✓				✓	**L**
Ferocactus viridescens	Coast Barrel Cactus				✓																	**L**
Harpagonella palmeri	Palmer's Grappling Hook				✓		✓			✓												**L**
Isocoma menziesii decumbens	Decumbent Goldenbush				✓					✓								✓				**M**
Lanius ludovicianus	Loggerhead Shrike				✓		✓	✓	✓						✓	✓						**M**
Lasiurus blossevillii	Western Red Bat							✓	✓		✓	✓							✓			**M**
Lepus californicus bennettii	SD Black-Tailed Jackrabbit				✓	✓	✓		✓	✓	✓	✓										**L**
Mucronea californica	California Spine Flower				✓	✓														✓		**L**
Myotis ciliolabrum	Small-Footed Myotis					✓		✓	✓	✓	✓	✓	✓			✓			✓			**M**
Myotis yumanensis	Yuma Myotis				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓		✓	**M**
Navarretia fossalis	Prostrate Navarretia			✓														✓				**L**
Nemacaulis denudata denudata	Coast Woolly Heads																			✓		**L**
Neotoma lepida intermedia	San Diego Desert Woodrat				✓			✓	✓	✓												**L**
Nyctinomops femorosaccus	Pocketed Free-Tailed Bat				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	**M**
Nyctinomops macrotis	Big Free-Tailed Bat				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	**M**
Odocoileus hemionus	Southern Mule Deer				✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓			**L**
Onychomys torridus ramona	Southern Grasshopper Mouse				✓	✓	✓			✓												**L**
Opuntia parryi var. *serpentina*	Snake Cholla			✓	✓	✓																**L**
Orcuttia californica	California Orcutt Grass																					**L**
Pandion haliaetus	Osprey																				✓	**L**
Passerculus sandwichensis beldingii	Belding's Savannah Sparrow	✓															✓					**L**

Attachment A. Sensitive Species Known from the Vicinity – The Via Grimaldi Project

Scientific Name	*Common Name*	Federally Endangered	Federally Threatened	City "Narrow Endemic"	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Closed Cone Forest	Piñon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	**Probability of Occurrence**
Perognathus longimembris pacificus	Pacific Pocket Mouse	✓			✓		✓													✓		**L**
Phacelia stellaris	Brand's Phacelia				✓															✓		**L**
Phrynosoma coronatum blainvillei	San Diego Coast Horned Lizard				✓	✓	✓	✓		✓	✓											**L**
Pinus torreyana torreyana	Torrey Pine											✓										**O**
Pogogyne abramsii	San Diego Mesa Mint			✓														✓				**L**
Polioptila californica californica	California Gnatcatcher		✓		✓																	**L**
Quercus dumosa	Nuttall's Scrub Oak					✓																**L**
Selaginella cinerascens	Mesa Club Moss				✓	✓				✓												**L**
Sterna antillarum browni	California Least Tern	✓															✓				✓	**L**
Thamnophis hammondii	Two-striped Garter Snake							✓						✓								**L**
Tyto alba	Common Barn-Owl							✓	✓													**M**

Probability of Occurrence Codes:
L – Low Probability; rare species in area, and no significant habitat (animals); *or* distinctive perennial that would not have been missed if present onsite (plants). **M** – Moderate Probability; could be expected to occur onsite on at least an occasional basis, based on habitat quality (animals); *or* could occur onsite, but very rare, and/or poorly known (plants). **H** – High Probability; nearly certain to occur onsite on a regular basis (animals), but cryptic; *or* ephemeral species known from the immediate vicinity, but seasonal in occurrence (plants). **O** – Observed; see report.

C. W. La Monte Company Inc.

Soil and Foundation Engineers

UPDATED GEOTECHNICAL REPORT
Proposed Ross Residence
13070 Via Grimaldi
San Diego, CA 92014
A.P.N. 301-061-48

Job No. 15 6610

November 16, 2015

PREPARED FOR:

Chuck Ross
4962 Concannon Court
San Diego, CA 92130

8265 Commercial Street #12 ♦ La Mesa, CA 91942 ♦ 619-462-9861 ♦ Fax 619 462-9859

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Soil and Foundation Engineers

8265 COMMERCIAL STREET #12 ■ LA MESA, California 91941
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November 16, 2015 Job No. 15 6610

TO: Chuck Ross
4962 Concannon Court
San Diego, CA 92130

SUBJECT: UPDATED GEOTECHNICAL REPORT
Proposed Ross Residence
13070 Via Grimaldi
San Diego, CA 92014
A.P.N. 301-061-48

REFERENCE: *Architectural Plans , Ross Residence, 13070 Via Grimaldi, San Diego, CA 92014*, by Hubbell & Hubbell, dated October 20, 2015

Report of Soils Investigation, Backus Residence, Via Grimaldi, San Diego, California, by C.W. La Monte Company, dated March 2000

In accordance with your request and our proposal dated October 24, 2015, we are providing an update to the above referenced geotechnical report. Due to the date and scope of work of the prior report, changes to the scope of the proposed project plus changes to the building codes and standard-of-care for the industry, we have compiled a new comprehensive updated report that will **completely replace** the referenced report. The new report provides the design recommendations required by the design team, as well as address current Building Code requirements.

Generally, the building site is underlain with compressible fills and alluvium that require mitigation. Therefore, a deep foundation system is recommended

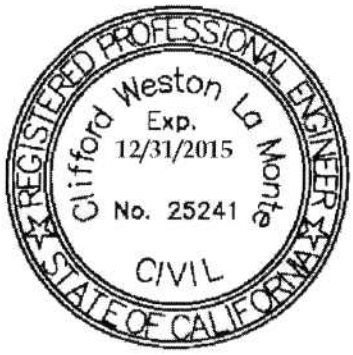
If you should have any questions after reviewing this report, please do not hesitate to contact our office. This opportunity to be of professional service is sincerely appreciated.

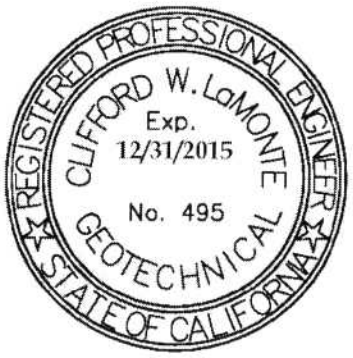
Respectfully submitted,

C.W. La Monte Company Inc.

Jerry Redolfi, Project Engineering Geologist

Clifford W. La Monte, R.C.E. 25241, G.E. 0495





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UPDATED GEOTECHNICAL REPORT
Proposed Ross Residence
13070 Via Grimaldi
San Diego, CA 92014
A.P.N. 301-061-48

PROJECT DESCRIPTION

The following report presents the results of a geotechnical investigation performed for the proposed project site, located at 13070 Via Grimaldi in the Del Mar area of the City of San Diego, California. Figure Number 1 (attached) provides a vicinity map showing the location of the property and area topography. The lot is vacant and approximately 4840 square feet in area. In general, the purpose of our investigation was to provide the foundation and grading recommendations for the proposed residential construction.

It is our understanding that the site is being developed to receive a single family residence with a detached garage. The proposed structure will be a maximum of two stories in height and will be of typical frame construction. We anticipate the structures will be founded on a combination of conventional shallow foundations and deep pier foundations with raised wooden and concrete slab-on-grade floors. Development of the site will utilize a cut and fill grading operation and will include minor cuts into the existing road fill slope and filling the lower elevations of the site. Retaining walls, up to 7 feet in height, will be used to retain cuts into the road fill.

To aid in the preparation of this report, we were provided with the referenced Plan Set. The attached Plot Plan and Geotechnical Map (Figure 2) and field geotechnical mapping was prepared using the Floor Plans from the plan set.

This report has been prepared for the exclusive use of the stated client and his design consultants for specific application to the project described herein. Should the project be changed in any way, the modified plans should be submitted to C.W. La Monte Company, Inc. for review to determine their conformance with our recommendations and to determine if any additional subsurface investigation, laboratory testing and/or recommendations are necessary. Our professional services have been performed, our findings obtained and our recommendations

prepared in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all other warranties, expressed or implied.

SCOPE OF WORK

The scope of this investigation was limited to: surface reconnaissance, research of readily available geotechnical literature pertinent to the site; subsurface exploration, laboratory testing, engineering and geologic analysis of the field and laboratory data and preparation of this report. More specifically, the intent of this investigation was to:

- Identify the subsurface conditions of the site to the depths influenced by the proposed grading and construction.

- Based on laboratory testing and our experience with similar sites in the area, identify the engineering properties of the various strata that may influence the proposed construction, including the allowable soil bearing pressures, expansive characteristics and settlement potential.

- Describe the general geology of the site including possible geologic factors that could have an effect on the site development, and provide seismic design parameters established in the latest edition of the California Building Code.

- Address potential construction difficulties that may be encountered due to soil conditions, groundwater, and provide recommendations concerning these problems.

- Provide mapped spectral acceleration parameters relative to the 2013 CBC

- Develop soil-engineering criteria for site grading.

- Recommend an appropriate foundation system for the type of structure anticipated and develop soil engineering design criteria for the recommended foundation designs.

- Present our opinions in this written report, which includes in addition to our findings and recommendations, a site plan showing the location of our subsurface explorations, logs of the test trenches and a summary of our laboratory test results.

It was not within our scope of work to evaluate the site for hazardous materials contamination.

SITE DESCRIPTION

The project site is located on the north side of Via Grimaldi in the Del Mar Area of the City of San Diego. The property is also bounded on the east by a single-family residence, on the west with a similar vacant lot and on the north by Torrey Pines State Park property. The lot is a vacant and irregular-shaped parcel of land approximately 4840 square feet in area. The property is identified as Assessor's Parcel Number 301-061-48. Refer to the attached Plot Plan and Geotechnical Map (Figure 2) a layout and topography of the property.

The approximate, southern half the property area is comprised of a north facing fill slope, descending from Via Grimaldi. The slope is a maximum of 15 feet in height and is sloped at an approximate 1.3:1 to 2:1 (horizontal to vertical) angle. A step cut slope into sandstone is located across the street. The northern half of the site encroaches onto a narrow alluvial channel, which consists of terrain sloping gently to the west. A west flowing, shallow arroyo is located off-site, but adjacent to the north property line. Actual survey elevations were not available at the time of our investigations. However, a review of area topographic maps indicates elevations roughly ranging from 180 to 200 feet MSL. Relative elevations are provided in the referenced plan set with an elevation differential across the site of about 21 feet (northwest corner low; east end high)

There were no existing structures on the site at the time of our investigation. However, a sewer manhole and easement encroaches onto the northwest corner of the property. The sewer line extends west from the manhole and is approximately 10 feet deep from top to bottom. Vegetation on the site consists of ice plant and light to moderate growth of wild grass, weeds and native shrubs.. Several Torrey Pines are located along the south and east property lines.

DESCRIPTION OF SITE GEOLOGY AND SUBSURFACE CONDITIONS

The site is underlain with Tertiary-aged sandstone, Quaternary-aged terrace deposits and "recent" alluvium. Also a sliver of fill encroaches onto the subject site. The encountered soil types are described individually below in order of increasing age. Also refer to the attached new Test Boring Logs (Figure Nos. 3A through 3E). For reference, the boring logs from the 2000 geotechnical investigation are included as Appendix "C". The original and new borings are located on the Plot Plan and Geotechnical Map, Figure No. 2. Geotechnical cross sections are attached as Figure No. 4A and 4B. A regional geologic map excerpt is included as Figure No. 5.

Artificial Fill (Qaf): As described previously, a road fill slope a maximum of 15 feet in height, descends onto the site from the northern edge of Via Grimaldi. This slope appears to consist of a sliver fill placed over alluvium and natural sandstone deposits. The fills consists of light brown, loose to dense, slightly silty sands.

Young Alluvium (Qya): The lower elevations of the site form a narrow "alluvial plane", which is underlain with alluvium capped with a thin veneer of fill, which is undifferentiated for the purposes of this report. The fill/alluvium was encountered to depths ranging 10 to 17.5 feet below the existing grade in the drainage course area of the site. The alluvium consists primarily of light brown, loose to medium dense, silty to slightly silty fine to medium sand with a little gravel.

Old Paralic Deposits (Qop): The alluvium is underlain with competent, old paralic deposits that were encountered to maximum depth of exploration of 20 feet. The encountered old paralic deposits consists primarily of light brown to orange brown, medium dense to dense, silty sand and clayey sand.

Torrey Sandstone: The Torrey Sandstone Formation forms the "bedding" for the southerly fill slope. The sandstone is also exposed in a near vertical cut slope located on the south side of Via Grimaldi, across from the subject site. The Torrey Sandstone consists of light brown to tan, dense to very dense, silty to slightly silty sand.

A review of *Geology of the San Diego 30' x 60' Quadrangle, California*, (compiled by Michael P. Kennedy and Siang S. Tan, 2005-2008) indicates the site is underlain entirely with the Torrey Sandstone. However, old paralic deposits (specifically Unit

6) are mapped nearby in the same drainage channel (see Figure No. 5) and actually encroach onto the drainage course area of the subject site.

Ground Water: No groundwater was encountered in our test excavations. However, it is anticipated that seasonal perched ground water could potentially develop at the alluvium-sandstone contact under the drainage course area of the site.

It should further, be kept in mind, that any required grading operations may change surface drainage patterns and/or reduce permeability's due to the densification of compacted soils. Such changes of surface and subsurface hydrologic conditions, plus irrigation of landscaping or significant increases in rainfall, may result in the appearance of minor amounts of surface or near-surface water at locations where none existed previously. The damage from such water is expected to be minor and cosmetic in nature, if good positive drainage is implemented at the completion of construction. Corrective action should be taken on a site-specific basis if, and when, it becomes necessary.

STORMWATER INFILTRATION

Our scope of work did not include infiltration testing, since the location of LID improvements have not been provided at this time. However, a preliminary evaluation includes the following conclusions:

Soil Conditions: According to the soil group map from *County of San Diego, BMP Sizing Calculator (website)*, the site is in an unclassified area. However, we would anticipate the alluvial area of the site will fall under Hydrologic Soil Groups (HSG) Group "A". Group "A" soils have a very good infiltration rate when thoroughly wet.

The infiltration rate of the Torrey Sandstone materials can vary depending on grain-size, density and cementation . Additional testing would be required to determine the infiltration rate of the sandstone.

Groundwater: We do not anticipate any limitations to surface bioretention systems, related to groundwater conditions. We anticipate groundwater levels

will exceed 15 feet below the existing grade, based on an evaluation of the area topography and geology.

Conclusion: LID systems that depend on infiltration should be appropriate for if installed in the undisturbed alluvial plane area of the site. We anticipate these alluvial sands will possess very good infiltration rates.

Any infiltration devices planned to be founded in the Torrey Sandstone require infiltration testing at site specific LID locations to verify suitability or feasibility.

Infiltration LID's should not be installed in filled ground.

TECTONIC SETTING

No major faults are known to traverse the subject site but it should be noted that much of Southern California, including the San Diego County area, is characterized by a series of Quaternary-age fault zones, which typically consist of several individual, en echelon faults that generally strike in a south easterly - northwesterly direction. Some of these fault zones (and the individual faults within the zones) are classified as active. According to the criteria of the California Division of Mines and Geology, active fault zones are those, which have shown conclusive evidence of faulting during the Holocene Epoch (the most recent 11,000 years). A local excerpt the 2010, *Fault Activity Map of California* is attached to this report as Figure No. 6.

A review of available geologic maps indicates that the Rose Canyon / Newport - Englewood Fault Zone is the nearest active fault and is located offshore about 4 kilometers west of the site. According to California Department of Conservation, Division of Mines and Geology, *Open-File Report 96-08 / U.S. Department of the Interior, U.S. Geological Survey Open-File Report 96-706*, a 7.1 magnitude earthquake would be the Mmax event along the Rose Canyon Rose Canyon / Newport -Englewood Fault Zone. The Fault Zone is considered a type "B" fault with a slip-rate of 1.5 mm/year. Other active fault zones in the region that could possibly affect the site include the Coronado Bank and San Clemente Fault Zones to the southwest and the Elsinore, Earthquake Valley, San Jacinto, and San Andreas Fault Zones to the northeast. However, a Maximum Magnitude Earthquake on the Rose Canyon -northeast is anticipated to generate ground accelerations on the site, greater than any of these other nearby fault zones.

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 defines active faults as those with evidence of displacement during the Holocene epoch (roughly the past 11,000 years). According to *Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones, of California, Southern Region (DMG CD 2000-003)*, by the California Department of Conservation, the site IS NOT located in or adjacent to an Alquist-Priolo Earthquake Fault Zone.

SEISMIC DESIGN PARAMETERS

This report includes an update to site the seismic parameters of the site to include design information relative to the 2013 edition of the California Building Code. We have determined the mapped spectral acceleration values for the site utilizing U.S. Seismic Design Maps, Version 3.1.0 (July 11, 2013) from the USGS website. The seismic design parameters are specific to the site and provide a solution for Section 1613 of the 2012 IBC (which uses USGS hazard data available in 2008).

The analysis included the following input parameters:

Design Code Reference Document: 2012 IBC

Site Soil Classification: Site Class C

Risk Category: I or II or III

Site Coordinates: 32.93686°N, 117.24981°W

The values generated by the *Design Map Report* are provided in the following table:

TABLE I

Site Coefficients and Spectral Response Acceleration Parameters

S_s	S_1	F_a	F_v	S_{ms}	S_{m1}	S_{ds}	S_{d1}
1.159	0.446	1.0	1.354	1.159	0.604	0.773	0.402

Application to the criteria in Table I for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if ever seismic shaking occurs. The primary goal of seismic design is to

protect life, not to avoid all damage, since such design may be economically prohibitive.

GEOLOGIC HAZARDS

General: No geologic hazards of sufficient magnitude to preclude development of the site as currently proposed are known to exist. In our professional opinion and to the best of our knowledge, the site is suitable for the proposed project.

Ground Shaking: A likely geologic hazard to affect the site is ground shaking resulting from movement along one of the major active fault zones mentioned above. Probable ground shaking levels at the site could range from slight to severe, depending on such factors as the magnitude of the seismic event and the distance to the epicenter. It is likely that the site will experience the effects of at least one moderate to large earthquake during the life of the proposed structure. Construction in accordance with the minimum requirements of the current building codes and local governing agencies should minimize potential damage due to seismic activity.

Landslide Potential and Slope Stability: Our scope of work did not include a detailed slope stability analysis for the hillside terrain. However, a review of the geologic hazards map indicates there are no known deep or suspected ancient landslides located on the site. However, as part of this investigation, we reviewed the publication, "*Landslide Hazards in the Northern Part of the San Diego Metropolitan Area*" by Tan and Giffen, 1995. This reference is a comprehensive study that classifies San Diego County into areas of relative landslide susceptibility. The subject site is located in an area classified as 3-1. The 3-1 is a general classification assigned to areas generally susceptible to slope movement. Slopes within the 3-1 classification are considered at or near their stability limits due to steep slopes and can be expected to fail locally when adversely modified. Sites Within this classification are located outside the boundaries of known landslides but may contain observably unstable slopes that may be underlain by weak materials and/or adverse geologic structure. It should be noted that that this reference, typically classifies most hillside terrain, (that is not underlain by landslides or landslide prone formations) within the 3 category.

No significant unretained cuts are planned for the proposed development and therefore the project is not anticipated to significantly impact the overall site

stability. The site is underlain with generally, massively bedded materials of the Torrey Sandstone Formation. Therefore, according to current geotechnical literature, the potential for deep-seated landsliding within the formational deposits is considered a low risk to the site. It should be noted that existing undocumented fill and slope wash materials draped over the face of the hillside could be subject to soil creep and shallow slope failure. However, the proposed improvements will be founded on stable soil and therefore, should not be significantly impacted by such surficial instability.

Also to consider, concentrations of surface water can result in rapid erosion of these slope materials and should be avoided.

Liquefaction: The materials at the site are not subject to significant liquefaction due to such factors as soil density, grain-size distribution, and groundwater conditions.

Soil Expansion: The foundation level materials at the site are considered to possess a very low expansion potential.

Flooding: The site is located outside the boundaries of both the 100-year and the 500-year floodplains according to the maps prepared by the Federal Emergency Management Agency.

Tsunamis and Seiches: Tsunamis are great sea waves produced by submarine earthquakes or volcanic eruptions. Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays or reservoirs. Based on the project's elevated location, the site is considered to possess a low risk potential from tsunamis or seiche activity.

CONCLUSIONS

In general, we found the subject property suitable for the proposed construction, provided the recommendations provided herein are followed. The most significant findings and geotechnical considerations that will influence site development are summarized below. Detailed recommendations for precede this section of the report.

- The major consideration when developing the property is the presence of the

loose fill and alluvial soils that overlie the site. The combined thickness of these materials may range from approximately 3 to 18 feet below the existing ground surface obtaining the maximum thickness in the alluvial plane area as encountered in Test Boring NB-2. These materials are unsuitable in there present condition to support a conventionally constructed building. The presence of the unsuitable fill soils and underlying alluvial deposits, together with the characteristics of the formational deposits, indicates that specially-designed foundations will most likely be necessary. In order to found the proposed residence on competent formational materials, a deep foundation system consisting of cast- in-place concrete piers and grade beams will likely be required. Where planned site grading will include the complete removal of the fill and colluvium, conventional shallow foundations, which bear upon competent formational materials, may also be utilized.

- As an alternative to a foundation system which bears entirely on the competent formational sandstone, a conventional shallow foundation system which is founded on properly recompacted fill soil would be suitable. This alternative would require the complete removal of all existing fill and alluvial materials, the benching of the slope at the base of the excavation, and the proper recompaction of the removed materials to a minimum of 90 percent the material's maximum dry density (based on ASTM test method D1557). **However, the configuration of the site, including topography and size, will likely cause great difficulties during such operations.** Further, required lateral removals of loose soil would be inhibited by property line constraints and would likely require grading to extend offsite (Typically, removals should extend laterally one-foot for every one-foot of removal depth; a 1:1 ratio). Also to consider an engineered, geogrid reinforced fill can be reconstructed to reduce the required lateral removals.

  If however, the existing fill and colluvium can be properly removed and recompacted as structural fill, a conventional shallow foundation may, depending upon the proposed structural loads, be suitable. If such remedial earthwork operations are planned, please contact this office so that we may obtain anticipated structure loads and provide you with additional recommendations.

- As described previously, existing fill slope descends from Via Grimaldi and form the south end of the property. The slope is composed of undocumented fill and is, therefore, not considered adequately to stable (to contemporary

standards). The existing slopes can be reconstructed by remedial grading, but would need to be reconstructed to a 2:1 (horizontal to vertical) inclination extending the toe-slope further to the north (from the existing location). Also grading may prove challenging due to utilities in the road shoulder plus a row of Torrey Pines along the top of slope.

Alternately, the City of San Diego will likely allow the existing fill slope to remain, undisturbed. However, an *Uncontrolled Embankment* document will likely be required in association with the property.

- The soil materials encountered at the above subject site possess a very low expansion potential (expansion index [EI] less than 20) as defined by ASTM D4829. Recommendations for heaving soils are not required.

- We anticipate the proposed structure will be founded entirely on competent formational deposits. Therefore, no significant transition (cut/fill) conditions are anticipated at the completion of grading.

EARTH WORK AND GRADING

Specification Guidelines

All grading should conform to the guidelines presented in this report, Sections 1804, J107, J108, J109 and J110S of the 2013 California Building Code, the minimum requirements of the City of San Diego, and the Standard Grading and Construction Specifications, Appendix "A", attached hereto, except where specifically superseded in the text of this report. Prior to grading, a representative of C.W. La Monte Company Inc. should be present at the preconstruction meeting to provide additional grading guidelines, if necessary, and to review the earthwork schedule.

Observation and testing by the soil engineer is essential during the grading operations. This allows the soil engineer to confirm the conditions anticipated by our investigation, to allow adjustments in design criteria to reflect the actual field conditions exposed, and to determine that the grading proceeds in general accordance with the recommendations contained herein

Fill Suitability

On-site excavated materials may be used as compacted fill material or backfill. The on-site materials are anticipated to posses a very low- to low-expansion potential.. Grading may generate oversize rock, which should be handled as discussed in the following report section. Any potential import soil sites should be evaluated and approved by the Geotechnical Consultant prior to importation at least two working days notice of a potential import source should be given to the Geotechnical Consultant so that appropriate testing can be accomplished. The type of material considered most desirable for import is a non-detrimentally expansive granular material with some silt or clay binder.

Site Preparation

Site preparation should begin with the removal of all vegetation and other deleterious materials from the portion of lot that will be graded and that will receive improvements. This should include all root balls from the trees removed and all significant root material. The resulting materials should be disposed of off-site. We anticipate the structure will be supported on a deep foundation extending into the underlying formational soil (without remedial grading), and no significant remedial grading is anticipated. As such, the specifications included in this report do not specify all remedial grading requirements. Should the scope of the project change to include remedial grading, we should be contacted to provide the necessary site preparation recommendations and grading specifications

Excavation Characteristics

The on-site alluvium and fill material is likely to be excavated with easy to moderate effort using large excavating equipment. However, any deep excavations into the Torrey Sandstone may be more challenging. No significant amounts oversize material is anticipated.

Compaction and Method of Filling

All structural fill placed at the site should be compacted to a relative compaction of at least 90 percent of its maximum dry density as determined by ASTM Laboratory Test D1557-91 guidelines. Fills should be placed at or slightly above optimum moisture content, in lifts six to eight inches thick, with each lift compacted by mechanical means. Fills should consist of approved earth material, free of trash or debris, roots, vegetation, or other materials determined to be unsuitable by our soil technicians or project geologist. All material should be free of rocks or lumps of soil in excess of twelve inches in maximum width. However, in the upper two feet of pad grade, no rocks or lumps of soil in excess of six inches should be allowed.

Utility trench backfill within five feet of the proposed structure and beneath all pavements and concrete flatwork should be compacted to a minimum of 90 percent of its maximum dry density. The upper one-foot of pavement subgrade and base material should be compacted to at least 95 percent relative density. All grading and fill placement should be performed in accordance with the local Grading Ordinance, the 2013 California Building Code, and the *Standard Grading and Construction Specifications*, attached hereto as Appendix A.

Manufactured Slope Construction

Any new and permanent cut and fill slopes should be constructed at an inclination of 2:1 or flatter (horizontal to vertical). Such slopes would be considered adequately stable.

Compaction of constructed fill slopes should be performed by back-rolling with a sheepsfoot compactor at vertical intervals of four feet or less as the fill is being placed, and track-walking the face of the slope when the slope is completed. As an alternative, the fill slopes may be overfilled by at least three feet and then cut back to the compacted core at the design line and grade.

Surface Drainage

Per Section 1804 of the California Building Code, in general, the ground immediately adjacent to foundations shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5-percent slope) for a minimum distance of 10 feet (3048 mm) measured perpendicular to the face of the wall. If physical obstructions or lot lines prohibit 10 feet (3048 mm) of horizontal

distance, a 5-percent slope shall be provided to an approved alternative method of diverting water away from the foundation. Swales used for this purpose shall be sloped a minimum of 2 percent where located within 10 feet (3048 mm) of the building foundation. Impervious surfaces within 10 feet (3048 mm) of the building foundation shall be sloped a minimum of 2 percent away from the building.

Exceptions are allowed where climatic or soil conditions warrant, the slope of the ground away from the building foundation shall be permitted to be reduced to not less than one unit vertical in 48 units horizontal (2-percent slope). The procedure used to establish the final ground level adjacent to the foundation shall account for additional settlement of the backfill.

Erosion Control

In addition, appropriate erosion-control measures shall be taken at all times during construction to prevent surface runoff waters from entering footing excavations, ponding on finished building pad or pavement areas, or running uncontrolled over the tops of newly-constructed cut or fill slopes. Appropriate Best Management Practice (BMP) erosion control devices should be provided in accordance with local and federal governing agencies.

Temporary Cut Slopes

Temporary cut slopes, up to 8 feet in height, are planned for the proposed retaining walls. We anticipate temporary slopes may be excavated at a minimum inclination of 1.0:1.0 (horizontal to vertical) In addition, a short vertical cut will be allowable at the base to accommodate the foundation excavation into formation. The stability of temporary slopes should be verified by the geotechnical consultant at the time of excavation.

No surcharge loads such as stockpiles, vehicles, etc. should be allowed within a distance from the top of temporary slopes equal to half the slope height. Further care should be taken not to undermine adjacent improvements by the placement of temporary excavations.

It should be noted that the contractor is solely responsible for designing and constructing stable, temporary excavations and may need to shore, slope, or bench the sides of trench excavations as required to maintain the stability of the

excavation sides where friable sands or loose soils are exposed. The contractor's "responsible person", as defined in the OSHA Construction Standards for Excavations, 29 CFR, Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety process. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. Actual safe slope angles should be verified by the geotechnical consultant at the time of excavation. Temporary cut slopes sloped at the recommended inclinations may not be feasible in some areas due to structure constraints. If such is the case, excavation shoring should be provided in such locations where undermining or other damage to adjacent structures and improvements is an issue.

Grading Plans Review

The finalized grading plans, if significantly different from the referenced plans, should be submitted to this office for review to ascertain that the recommendations provided in this report have been followed and that the assumptions utilized in its preparation are still valid. Additional or amended recommendations may be issued based on this review.

FOUNDATIONS

Due to presence of undocumented fill and compressible alluvium, the proposed structure shall be founded on deep foundation system that extends through the loose fill and slope wash and into dense formational bedrock materials. The new foundation should consist of a structurally designed pier and post foundation system supporting a structural beam. The concrete pier foundation system essentially bridges the structure over the loose soil section. Where cuts expose bedrock at or near the finish surface conventional foundations may be utilized in conjunction with the pier system. Specific foundation recommendations and design criteria are detailed in the below sections.

DEEP FOUNDATION SYSTEMS

GENERAL: Augered, cast-in-place concrete piers which are tied together with concrete reinforced grade beams, are considered suitable for support of the

structure loads of the proposed residence. Pier support will be afforded by end bearing within the dense to very dense formational materials.

MINIMUM PIER DIMENSIONS: All drilled, cast-in-place concrete piers should extend at least three feet into undisturbed, firm formational soils and have a minimum diameter of 24 inches. All piers should extend a minimum of five feet into the competent formational sandstone, and should be designed by the project structural engineer. Piers should also be reinforced in accordance with the recommendations of the project structural engineer. The reinforcing cage should extend the full height of the pier.

BEARING CAPACITY: Incorporating the minimum dimensions recommended, the cast-in-place concrete piers may be designed for an allowable downward axial bearing capacity of 5000 per square foot. This value may be increased by 800 psf for each additional foot of pier depth, up to a maximum allowable bearing capacity of 8000 per square foot.

LATERAL PIER CAPACITY: The passive pressure for the formational materials may be considered to be 350 pounds per square foot per foot of depth, up to a maximum value of 2,500 psf. These values may be assumed to act on an area equal to twice the pier diameter.

CLEANING OF PIER EXCAVATIONS: If 24-inch diameter piers are used, the cleaning of the bottom of the pier excavation may be performed by careful operations of the driller and back-spinning the drill auger under pressure or utilizing a clean-out plate. For larger diameter piers, hand cleaning may be required. This will be determined by the observation of a geologist or engineer from our staff during the excavation of the piers.

SHALLOW FOUNDATIONS

FOUNDATION DIMENSIONS: If planned site grading removes all fill and colluvial materials in areas to receive settlement-sensitive structure, new spread footings may be used for structural support provided they are embedded in undisturbed, competent formational sandstone. Refer to the attached cross sections.

Spread footings to support the structural loads of one and two-story portions of the residence should be embedded at least twelve to eighteen inches

(respectively) into the dense to very dense formational sandstone. It should be understood that based upon the observation of our field representative, deeper embedment depths may be necessary. Continuous footings to support one and two-story portions of the proposed residence should be at least twelve and fifteen inches in width (respectively), while isolated spread footing should be minimally dimensioned at twenty-four inches in width or diameter.

BEARING CAPACITY: Conventional spread footings which bear entirely in undisturbed formational deposits and with the above minimum dimensions may be designed for an allowable soil bearing pressure of 3,000 pounds per square foot (psf). This value may be increased 750 psf and 400 psf for each additional foot of footing depth and width, respectively, up to a maximum of 5000 psf. The bearing value may also be increased by one-third when considering temporary loads such as those due to wind or seismic loads.

FOOTING REINFORCING: Reinforcement requirements for new foundations should be provided by the project structural engineer. However, based on the existing soil conditions, we recommend that the minimum reinforcing for continuous footings consist of at least one No. 5 bar positioned three inches above the bottom of the footing and one No. 5 bar positioned two inches below the top of the footing.

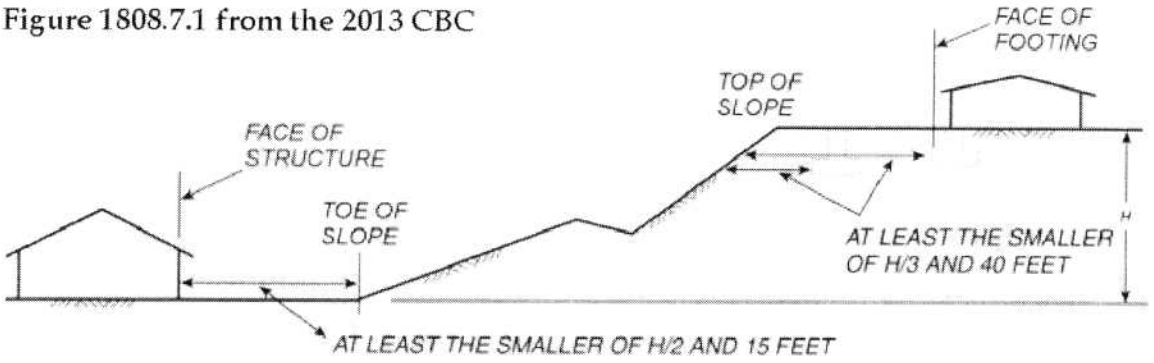
LATERAL LOAD RESISTANCE: Lateral loads against foundations may be resisted by friction between the bottom of the footing and the supporting soil, and by the passive pressure against the footing. The coefficient of friction between concrete and soil may be considered to be 0.40. The passive resistance may be considered to be equal to an equivalent fluid weight of 350 pounds per cubic foot. This assumes the footings are poured tight against undisturbed formational materials. The upper foot of soil should be neglected when calculating the passive resistance of the soil acting upon footings. If a combination of the passive pressure and friction is used, the friction value should be reduced by one-third.

Horizontal Distance of Footings from Slopes

According to Section 1808.7 (Foundation on or adjacent to slopes), of the 2013 California Building Code foundations on or adjacent to slope surfaces shall be

founded in firm material with an embedment and set back from the slope surface sufficient to provide vertical and lateral support for the foundation without detrimental settlement. Generally, setbacks should conform to Figure 1808A.7.1, which is reproduced below. Where the slope is steeper than 1 unit vertical in 1 unit horizontal (100-percent slope), the required setback shall be measured from an imaginary plane 45 degrees to the horizontal, projected upward from the toe of the slope.

Figure 1808.7.1 from the 2013 CBC



Foundation Excavation Observation

The general contractor is responsible for implementing the foundation recommendations in this report. All foundation excavations should be observed by the Geotechnical Consultant prior to placing reinforcing steel and formwork in order to verify compliance with the foundation recommendations presented herein. All footing excavations should be excavated neat, level and square. All loose or unsuitable material should be removed prior to the placement of concrete.

Foundation Plans Review

The finalized, foundation plans should be submitted to this office for review to ascertain that the recommendations provided in this report have been followed and that the assumptions utilized in its preparation are still valid. Additional or amended recommendations may be issued based on this review.

CONCRETE SLABS-ON-GRADE

Interior Floor Slabs

The minimum floor slab thickness should be 4 inches. The floor slabs should be reinforced with at least No. 3 bars placed at 18 inches on center each way. Slab reinforcing should be supported by chairs and be positioned at mid-height in the floor slab. This recommendation does not supersede the section required for structural considerations.

Exterior Concrete Flatwork

On-grade exterior concrete slabs for walks and patios should have a thickness of four inches and should be reinforced with at least No. 3 reinforcing bars placed at 24 inches on center each way. Exterior slab reinforcement should be placed approximately at mid-height of the slab. Reinforcement and control joints should be constructed in exterior concrete flatwork to reduce the potential for cracking and movement. Joints should be placed in exterior concrete flatwork to help control the location of shrinkage cracks. Spacing of control joints should be in accordance with the American Concrete Institute specifications. Where slabs abut foundations they should be doweled into the footings.

SLAB MOISTURE BARRIERS

A moisture barrier system is recommended beneath any new interior slab-on-grade floors with moisture sensitive floor coverings or coatings to help reduce the upward migration of moisture vapor from the underlying subgrade soil. A properly selected and installed vapor retarder is essential for long-term moisture resistance and can minimize the potential for flooring problems related to excessive moisture.

Interior floor slabs should be underlain by a minimum 10-mil thick moisture retarder product over a two-inch thick layer of clean sand (Please note, additional moisture reduction and/or prevention measures may be needed, depending on the performance requirements for future floor covering products). The moisture retarder product used should meet or exceed the performance standards dictated by ASTM E 1745 Class A material and be properly installed in accordance with ACI publication 302 (*Guide to Concrete Floor and Slab Construction*) and ASTM E1643

(*Standard Practice for Installation of Water Vapor Retarder Used in Contact with Earth or Granular Fill Under Concrete Slabs*). Ultimately, the design of the moisture retarder system and recommendations for concrete placement and curing are purview of the structural engineer, in consideration of the project requirements provided by the project architect and developer.

Moisture Retarders and Installation

Vapor retarder joints must have at least 6-inch-wide overlaps and be sealed with mastic or the manufacturer's recommended tape or compound. No heavy equipment, stakes or other puncturing instruments should be used on top of the liner before or during concrete placement. In actual practice, stakes are often driven through the retarder material, equipment is dragged or rolled across the retarder, overlapping or jointing is not properly implemented, etc. All these construction deficiencies reduce the retarders' effectiveness. It is the responsibility of the contractor to ensure that the moisture retarder is properly placed in accordance with the project plans and specifications and that the moisture retarder material is free of tears and punctures and is properly sealed prior to the placement of concrete.

Interior Slab Curing Time

Following placement of concrete floor slabs, sufficient drying time must be allowed prior to placement of floor coverings. Premature placement of floor coverings may result in degradation of adhesive materials and loosening of the finish floor materials. Prior to installation, standardized testing (calcium chloride test and/or relative humidity) should be performed to determine if the slab moisture emissions are within the limits recommended by the manufacturer of the specified floor-covering product.

DESIGN PARAMETERS FOR EARTH RETAINING STRUCTURES

The below foundation values are provided for conventional shallow foundations.

Passive Pressure: The **passive pressure** for the prevailing soil conditions may be considered to **be 350 pounds per square foot** per foot of depth. This pressure may be increased one-third for seismic loading. The **coefficient of friction** for concrete to soil may be assumed to be **0.4** for the resistance to lateral movement. When

combining frictional and passive resistance, the friction value should be reduced by one-third.

Soil Bearing Value

Conventional spread footings with the above minimum dimensions may be designed for an allowable soil bearing pressure of **2,500 pounds per square foot** for foundation bearing in compacted fill or firm natural ground.

Active Pressure for Retaining Walls

Active Pressure for Retaining Walls: Lateral pressures acting against masonry and cast-in-place concrete retaining walls can be calculated using soil equivalent fluid weight. The equivalent fluid weight value used for design depends on allowable wall movement. Walls that are free to rotate at least 0.5 percent of the wall height can be designed for the active equivalent fluid weight. Retaining walls that are restrained at the top (such as basement walls), or are sensitive to movement and tilting should be designed for the at-rest equivalent fluid weight.

Values given in the table below are in terms of equivalent fluid weight and assume a triangular distribution.

Table II
Equivalent Fluid Weights (efw) For Calculating Lateral Earth Pressures (Using "Select" Onsite Backfill)

Surface slope of Retained material Horizontal to vertical*	Cantilever equivalent Fluid weight *(active* pressure) (pcf)	Restrained equivalent Fluid weight *(at-rest* pressure) (pcf)
LEVEL 2 to 1	30 43	60 73

Pressures for Seismic Ground Motions: Using a K_h value of 0.13 the modified equivalent fluid pressure (EFP) due to earthquake ground motion **is 16 pcf.** This is

an inverted triangular distribution. The point of application of the resultant force of the seismic EFP is located at approximately 0.6H (H=Height of the retaining wall) above the base of the wall. The above seismic force should be used in addition to the "static" or at-rest earth pressure.

Vehicular Loads: In the case of vehicular loads coming closer than one-half the height of the wall, we recommend a live load surcharge pressure equal to not less than 2 feet of soil surcharge with an average unit weight of 125 pcf.

Waterproofing and Drainage

In general, retaining walls should be provided with a drainage system adequate to prevent the buildup of hydrostatic forces and waterproofed as specified by the project architect. **Also refer to American Concrete Institute ACI 515.R (A Guide to the Use of Waterproofing, Damp Proofing, Protective and Decorative Barriers Systems for Concrete).**

Positive drainage for retaining walls should consist of a vertical layer of permeable material positioned between the retaining wall and the soil backfill. Such permeable material may be composed of a composite drainage geosynthetic or a natural permeable material such as crushed rock or clean sand at least 12 inches thick and capped with at least 12 inches of backfill soil. The gravel should be wrapped in a geosynthetic filter fabric. Provisions should be made for the discharge of any accumulated groundwater. The selected drainage system should be provided with a perforated collection and discharge pipe placed along the bottom of the permeable material near the base of the wall. The drain pipe should discharge to a suitable drainage facility. A typical retaining wall detail is attached as Figure No. 7A. If lateral space (due to property line constraints) is insufficient to allow installation of the gravel-wrapped "burrito" drain, a geocomposite system may be used in lieu of the typical gravel and pipe subdrain system. TenCate's MiraDrain (and similar products) provide a "low-profile" drainage system that requires minimal lateral clearance for installation. See Figure No. 7B for a typical MiraDrain detail, which is provided by the manufacturer. MiraDRAIN and similar products may also be incorporated into a waterproofing system and provide a slab drainage system (Please note that supplemental manufacturer's details will be required to provide a waterproofed system).

Please note natural stone gravity walls do not require a subdrainage system unless specifically recommended by the design engineer (due the abundant openings between rocks).

Backfill

All backfill soils should be compacted to at least 90% relative compaction. The typical on-site clay (CH) materials **are not** suitable for retaining wall backfill. Soil with an expansion index (EI) of greater than 50 should not be used as backfill material behind retaining walls. The wall should not be backfilled until the masonry has reached an adequate strength.

LIMITATIONS

The recommendations presented in this report are contingent upon our review of final plans and specifications. Such plans and specifications should be made available to the Geotechnical Engineer and Engineering Geologist so that they may review and verify their compliance with this report and with California Building Code. It is recommended that C.W. La Monte Company Inc. be retained to provide soil engineering services during the construction operations. This is to verify compliance with the design concepts, specifications or recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to start of construction.

The recommendations and opinions expressed in this report reflect our best estimate of the project requirements based on an evaluation of the subsurface soil conditions encountered at the subsurface exploration locations and on the assumption that the soil conditions do not deviate appreciably from those encountered. It should be recognized that the performance of the foundations and/or cut and fill slopes may be influenced by undisclosed or unforeseen variations in the soil conditions that may occur in the intermediate and unexplored areas. Any unusual conditions not covered in this report that may be encountered during site development should be brought to the attention of the Geotechnical Engineer so that he may make modifications if necessary.

Our firm will not be responsible for the safety of personnel other than our own on the site; the safety of others is the responsibility of the Owner and Contractor. The Contractor should notify the Owner if he considers any of the recommended actions presented herein to be unsafe.

This office should be advised of any changes in the project scope or proposed site grading so that we may determine if the recommendations contained herein are

appropriate. It should be verified in writing if the recommendations are found to be appropriate for the proposed changes or our recommendations should be modified by a written addendum.

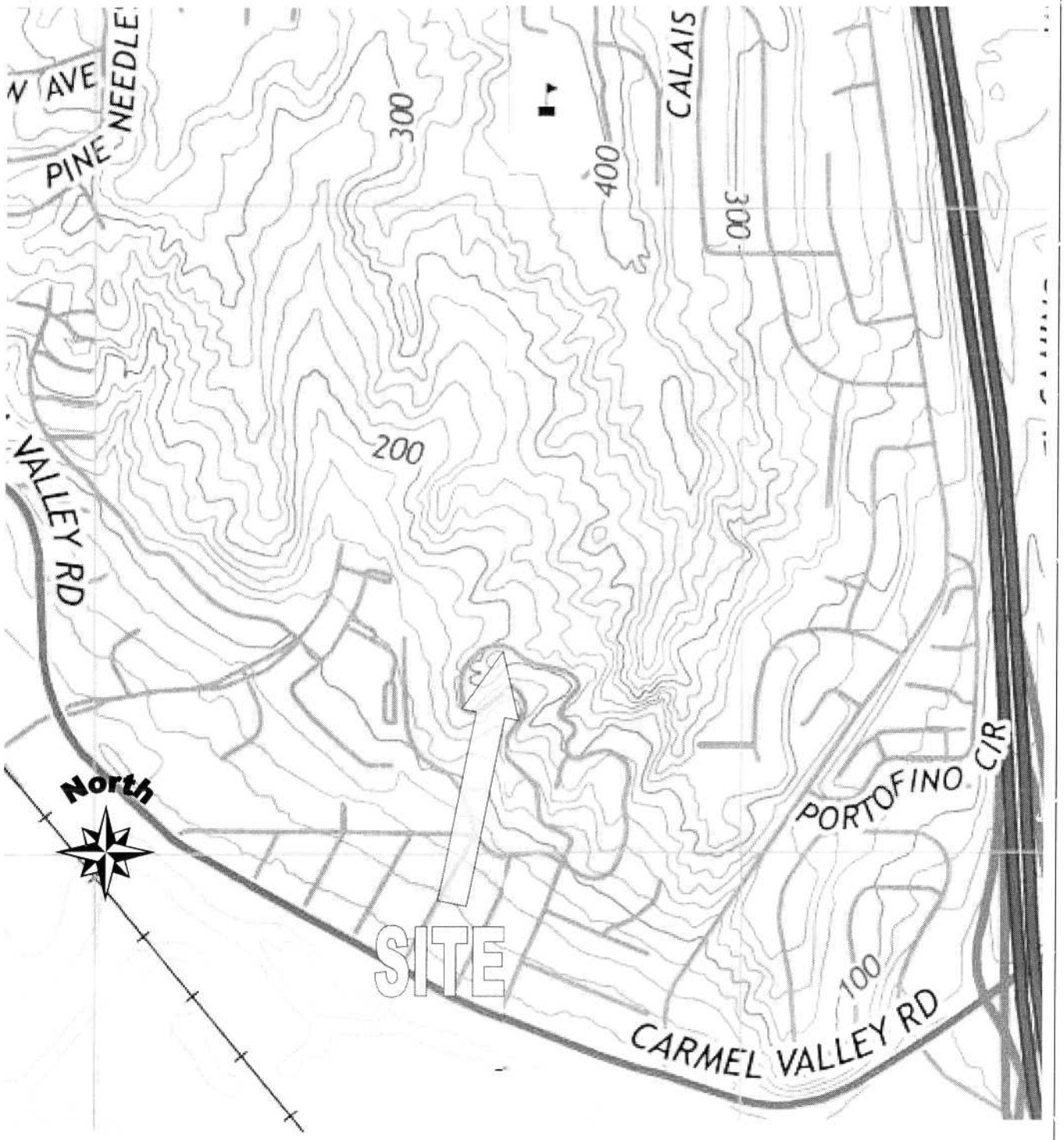
The findings of this report are valid as of this date. Changes in the condition of a property can occur, however, with the passage of time, whether they are due to natural processes or the work of man on this or adjacent properties. In addition, changes in the Standards-of-Practice and/or Government Codes may occur. Due to such changes, the findings of this report may be invalidated wholly or in part by changes beyond our control. Therefore, this report should not be relied upon after a period of two years without a review by us verifying the suitability of the conclusions and recommendations.

In the performance of our professional services, we comply with that level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions and in the same locality. The client recognizes that subsurface conditions may vary from those encountered at the locations where our borings, surveys, and explorations are made, and that our data, interpretations, and recommendations are based solely on the information obtained by us. We will be responsible for those data, interpretations, and recommendations, but shall not be responsible for the interpretations by others of the information developed. Our services consist of professional consultation and observation only, and no warranty of any kind whatsoever, express or implied, is made or intended in connection with the work performed or to be performed by us, or by our proposal for consulting or other services, or by our furnishing of oral or written reports or findings.

It is the responsibility of the stated client or their representatives to ensure that the information and recommendations contained herein are brought to the attention of the structural engineer and architect for the project and incorporated into the project's plans and specifications. It is further their responsibility to take the necessary measures to insure that the contractor and his subcontractors carry out such recommendations during construction.

The firm of C.W. La Monte Co. Inc. shall not be held responsible for changes to the physical condition of the property, such as addition of fill soils or changing drainage patterns, which occur subsequent to the issuance of this report.

SITE LOCATION AND TOPOGRAPHIC MAP



Excerpts from USGS Topographic Maps Del Mar and Del Mar OE-W Quadrangles, 7.5-Minute Series, 2015

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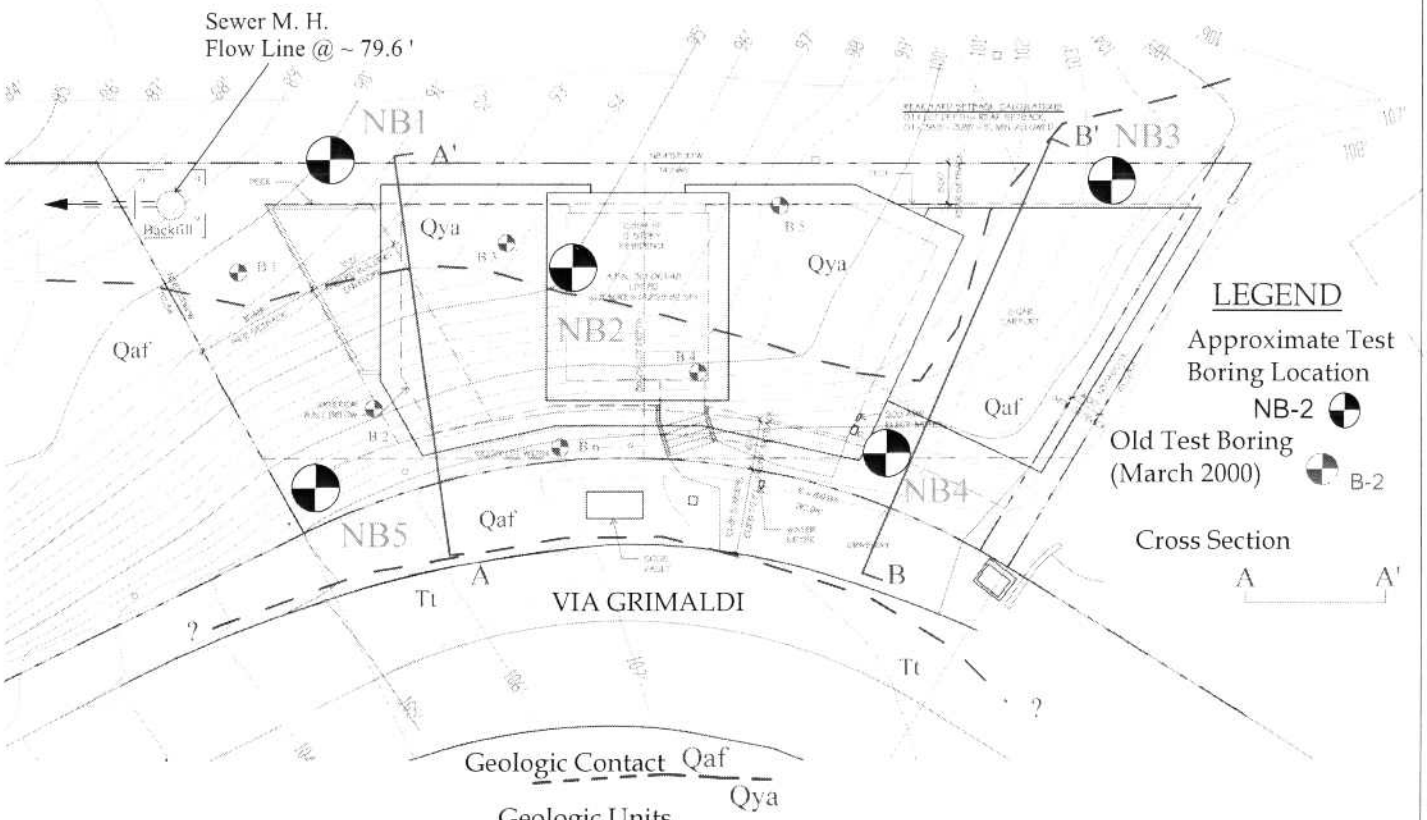
Soil and Foundation Engineers

Figure No. 1

PLOT PLAN (EXISTING SITE CONDITONS)



C. W. La Monte Company Inc.
Soil and Foundation Engineers

ROSS RESIDENCE
13070 VIA GRIMALDI
SAN DIEGO, CA 92014

Figure No. 2

Log of Test Boring No. NB-1

Surface Elevation: 89.5' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	BULK / DRIVEN SAMPLES	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
						ALLUVIUM (Qya)
					SM	Orange brown, light brown and brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand.
						Minor caving upper 1.5 feet
5						
10						
						OLD PARALIC DEPOSITS (Qop_6)
15					SM	Orange brown & light brown, medium dense to dense, slightly moist, silty, fine to medium sand.
						Excavation Bottom
						No Groundwater
20						

*Relative Elevation per plan

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Soil and Foundation Engineers

PROJECT: Proposed Ross Residence
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San Diego, CA 92014

FIGURE NO. 3 A

Log of Test Boring No. NB-2

Surface Elevation: 95' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	BULK / DRIVEN SAMPLES	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
						ALLUVIUM (Qya)
					SM	Orange brown, light brown and brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand.
5						Minor caving upper 1.5 feet
10						
15						**OLD PARALIC DEPOSITS (Qop_6)**
						Orange brown & light brown, medium dense to dense, slightly moist, silty sand and clayey sand.
					SM SC	No Groundwater
						Excavation Bottom
20						

* Relative Elevation per plan

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San Diego, CA 92014

FIGURE NO. 3 B

Log of Test Boring No. NB-3

Surface Elevation: 103.5' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	BULK / DRIVEN SAMPLES	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
						FILL (Qaf)
					SM	Light brown, dry, loose, silty, fine to medium sand.
						ALLUVIUM (Qya)
					SM	Orange brown, light brown and brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand.
5						
10						
						OLD PARALIC DEPOSITS (Qop_6)
					SM SC	Orange brown & light brown, medium dense to dense, slightly moist, silty sand and clayey sand.
15						**Excavation Bottom**
						No Groundwater
						*Relative Elevation per plan
20						

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San Diego, CA 92014

FIGURE NO. 3 C

Log of Test Boring No. NB-4

Surface Elevation: 107' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	BULK / DRIVEN SAMPLES	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
						FILL (Qaf)
					SM	Orange brown, light brown and brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand.
5						Minor caving upper 1 foot
						COLLUVIUM / ALLUVIUM
					SM	Dark brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand.
10						
						TORREY SANDSTONE (Tt)
					SM	Light brown, very dense, slightly moist, silty sandtone.
15						**Excavation Bottom**
						No Groundwater
						*Relative Elevation per plan
20						

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San Diego, CA 92014

FIGURE NO. 3 D

Log of Test Boring No. NB-5

Surface Elevation: 103' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	BULK / DRIVEN SAMPLES	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
					SM	**FILL (Qaf)** Light brown, slightly moist, loose to medium dense, silty, fine to medium sand.
5					SM	**TORREY SANDSTONE (Tt)** Light brown, very dense, slightly moist, silty sandtone.
						Excavation Bottom No Groundwater
10						*Relative Elevation per plan
15						
20						

C. W. La Monte Company Inc.
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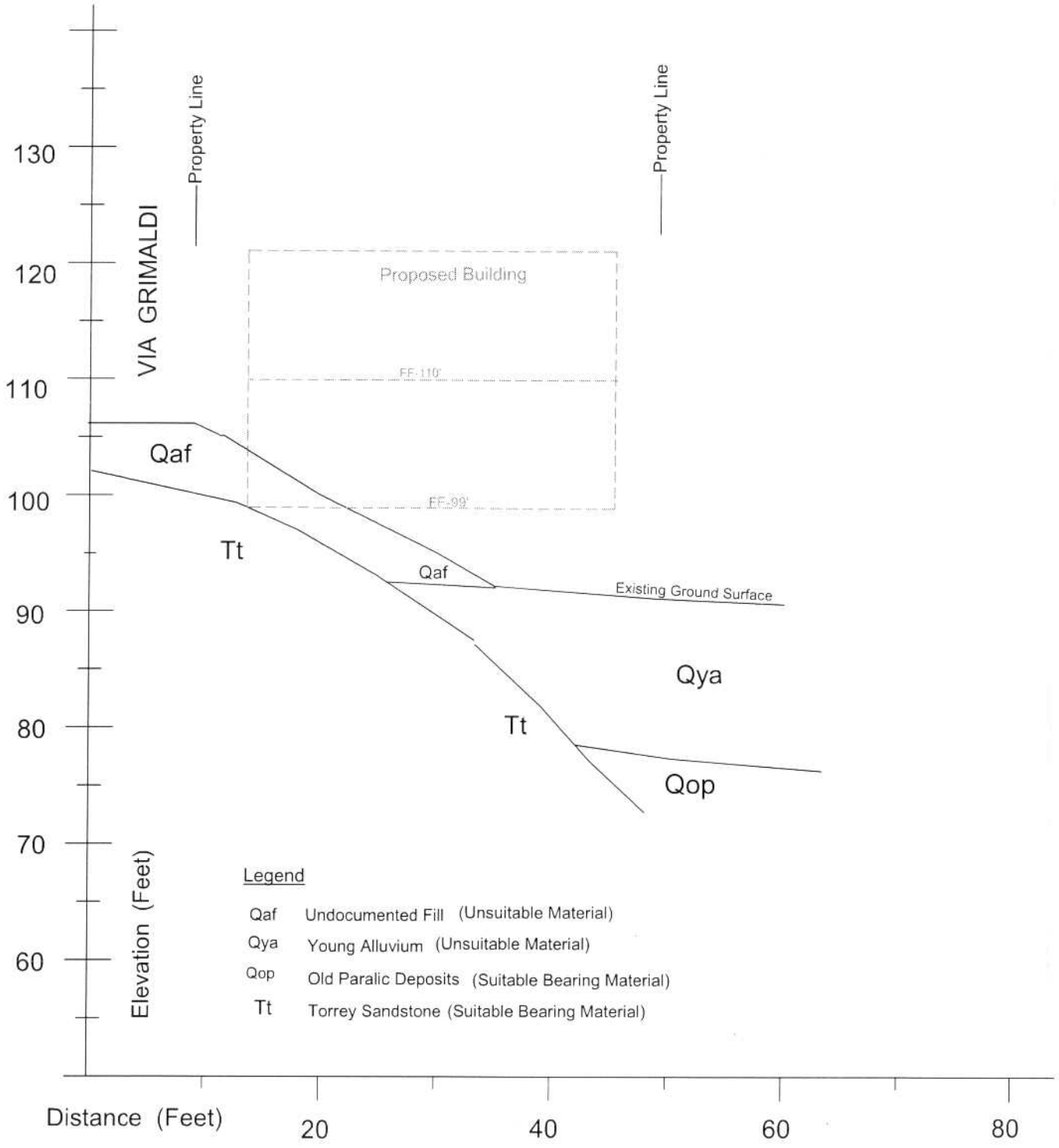
PROJECT: Proposed Ross Residence
13070 Via Grimaldi
San Diego, CA 92014

FIGURE NO. 3 E

CROSS SECTION A-A'



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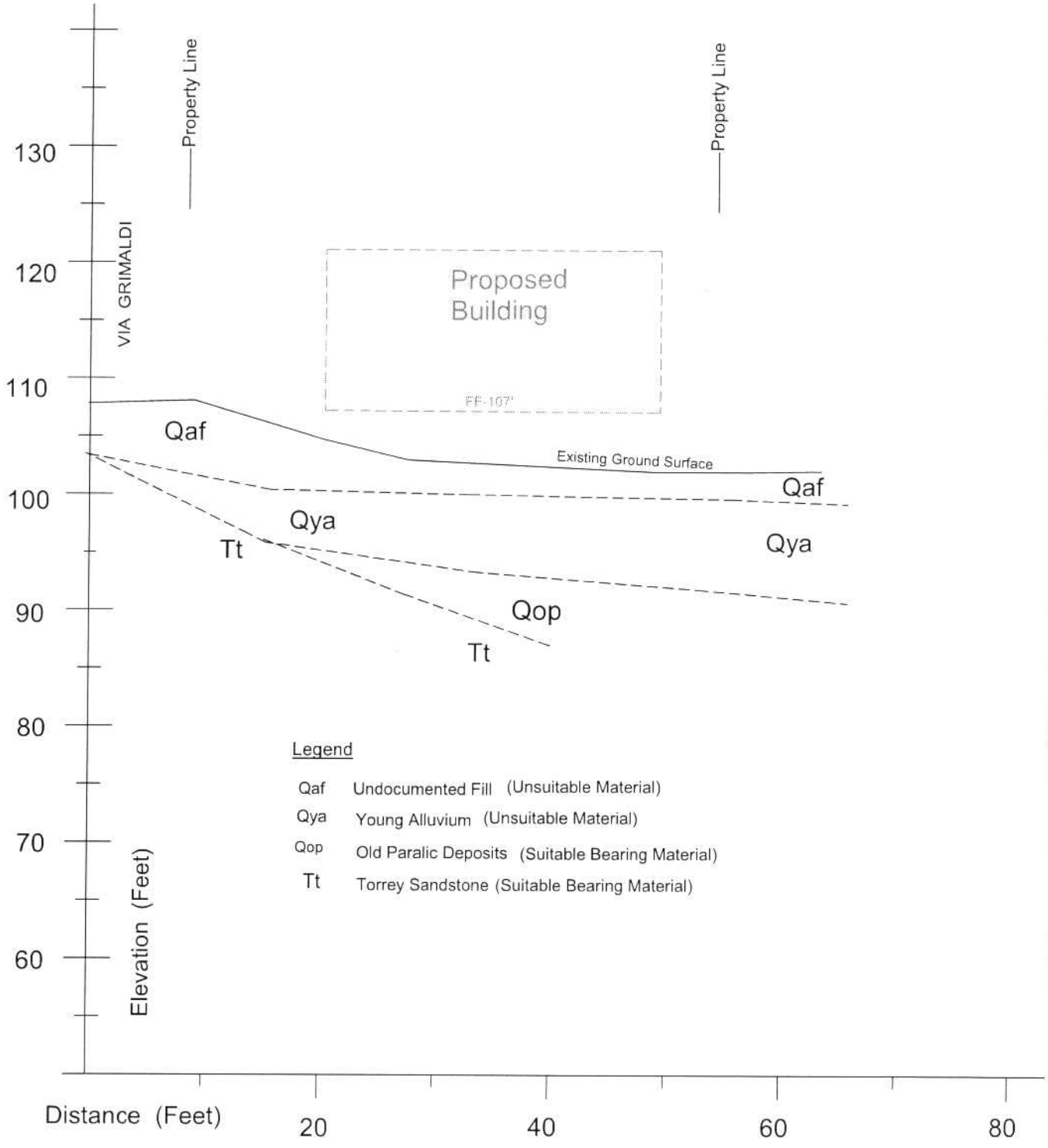
SAN DIEGO, CA 92014

FIGURE NO. 4 A

CROSS SECTION B-B'



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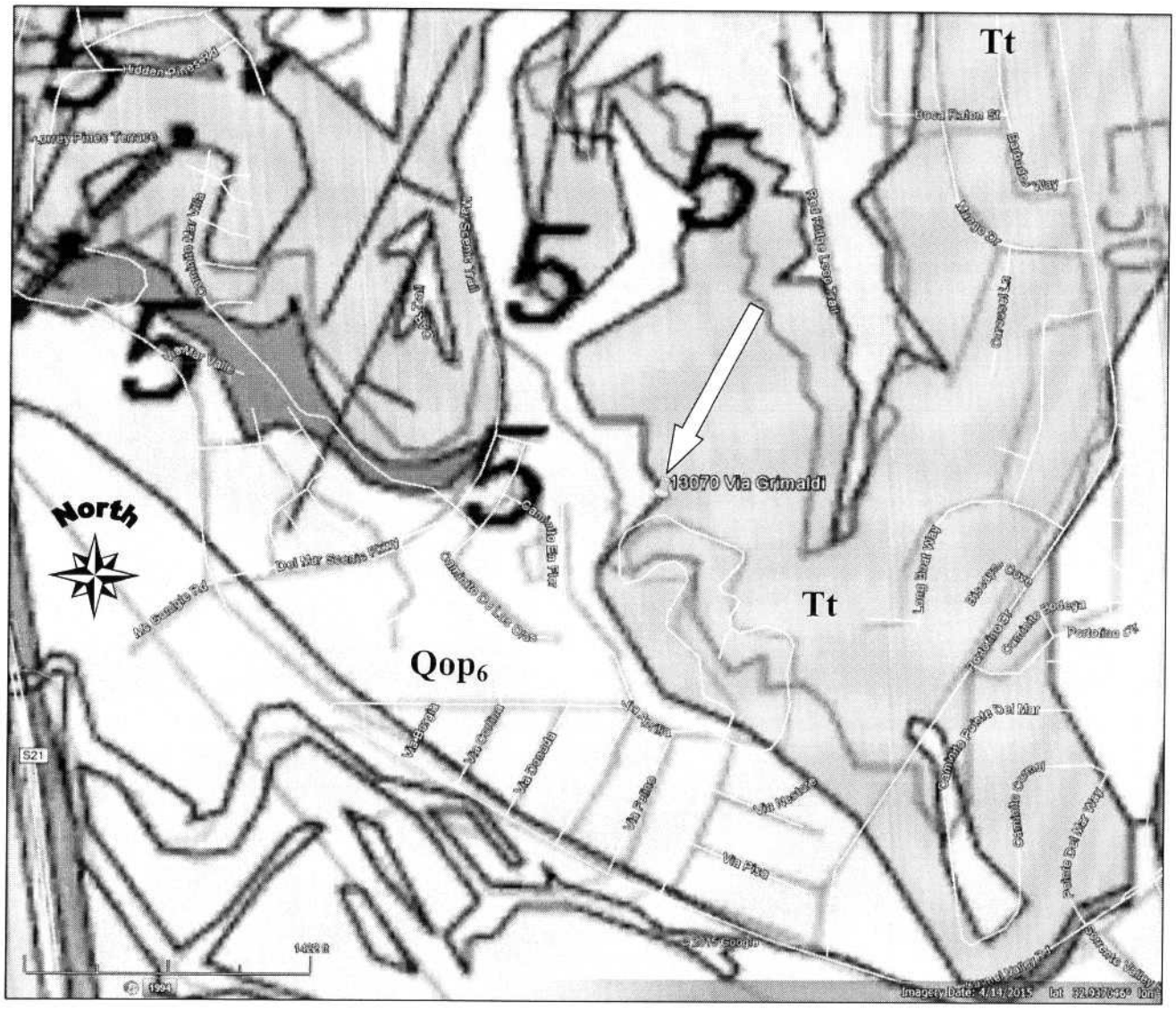
SAN DIEGO, CA 92014

FIGURE NO. 4 B

GEOLOGY MAP EXCERPT

13070 Via Gramaldi
Del Mar, CA



Excerpt from *Geology of the San Diego 30' x 60' Quadrangle, California, Compiled by Michael P. Kennedy and Siang S. Tan, 2005*

LEGEND (Localized)

Qop_6 = Old paralic deposits, Unit 6

Tt = Torrey Sandstone

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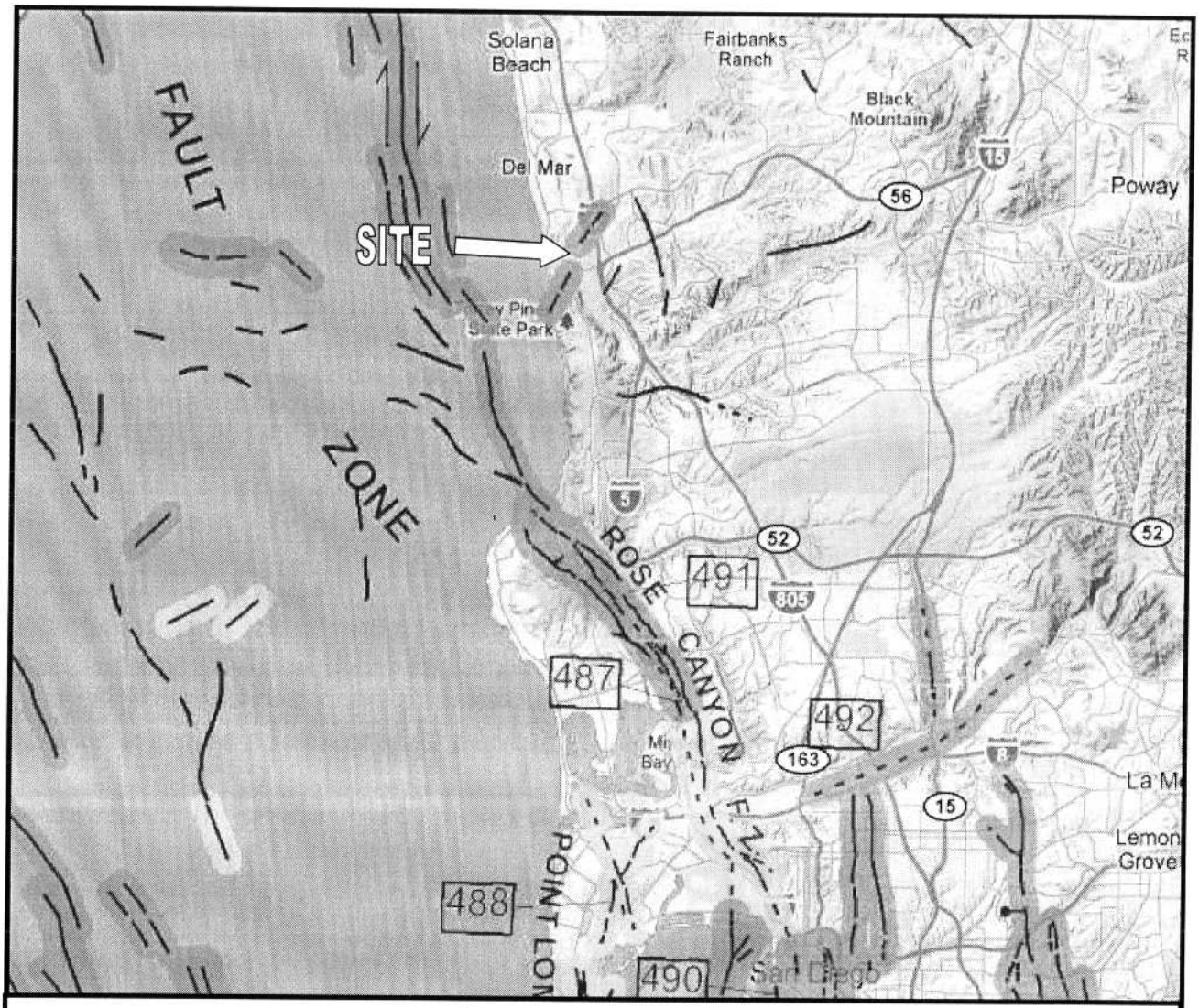
Figure No 5

Excerpt from: 2010 Fault Activity Map of California
California Geological Survey, Geologic Data Map No. 6



SUMMARY EXPLANATION

Fault traces on land are indicated by solid lines where well located, by dashed lines where approximately located or inferred, and by dotted lines where concealed by younger rocks or by lakes or bays. Fault traces are queried where continuation or existence is uncertain.

FAULT CLASSIFICATION COLOR CODE (Indicating Recency of Movement)

- Fault along which historic (last 200 years) displacement has occurred:
- Holocene fault displacement (during past 11,700 years) without historic record.
- Late Quaternary fault displacement (during past 700,000 years).
- Quaternary fault (Age undifferentiated)
- Pre-Quaternary fault (older that 1.6 million years) or fault without recognized Quaternary displacement.

Figure No. 6

Excerpt From Map 38 City of San Diego
SEISMIC SAFETY STUDY Geologic Hazards and Faults

13030 Via Gramaldi, Del Mar, CA

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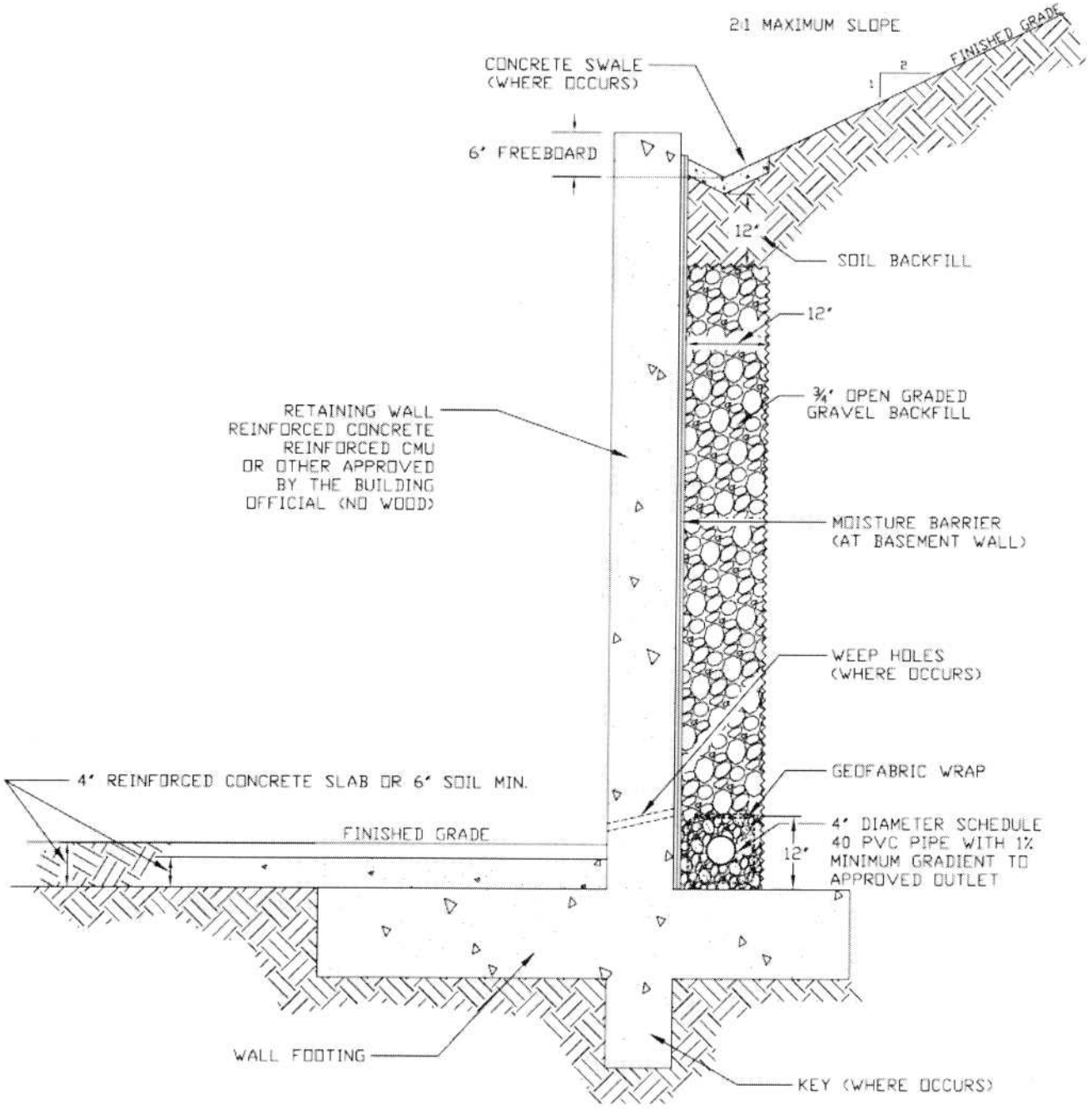
Figure No. 7

TYPICAL RETAINING WALL SECTION

(No Scale)



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Soil and Foundation Engineers

Figure No. 8A

Appendix "A"

Appendix "A"

A. The Soils Engineer and Engineering Geologist is the Owner's or Builders' representative on the Project. For

C. It is the Contractor's responsibility to prepare the ground surface to receive the fills to the satisfaction of the

D. It is also the Contractor's responsibility to have suitable and sufficient compaction equipment on the job site

E. A final report shall be issued by the Soils Engineer attesting to the Contractor's conformance with these

the Contractor's responsibility to notify the Soils Engineer when such areas are ready for inspection.

APPENDIX " B"

CAP CONSISTENCY CHECKLIST SUBMITTAL APPLICATION

- The Checklist is required only for projects subject to CEQA review.[2]
- If required, the Checklist must be included in the project submittal package. Application submittal procedures can be found in Chapter 11: Land Development Procedures of the City's Municipal Code.
- The requirements in the Checklist will be included in the project's conditions of approval.
- The applicant must provide an explanation of how the proposed project will implement the requirements described herein to the satisfaction of the Planning Department.

Application Information

Contact Information

Project No./Name: ROSS RESIDENCE

Property Address: VIA GRIMALDI (APN: 301-661-48-00)

Applicant Name/Co.: DREW HUBBELL

Contact Phone: 619 231 0446 Contact Email: drew@hubbellandhubbell.com

Was a consultant retained to complete this checklist? ☐ Yes ☒ No If Yes, complete the following

Consultant Name: _____ Contact Phone: _____

Company Name: _____ Contact Email: _____

Project Information

1. What is the size of the project (acres)? 0.11 ACRES
2. Identify all applicable proposed land uses:
   - ☒ Residential (indicate # of single-family units): 1 SINGLE FAMILY
   - ☐ Residential (indicate # of multi-family units): _____
   - ☐ Commercial (total square footage): _____
   - ☐ Industrial (total square footage): _____
   - ☐ Other (describe): _____
3. Is the project located in a Transit Priority Area? ☐ Yes ☒ No
4. Provide a brief description of the project proposed: NEW 2,895 SF HOUSE, 2-STORY, 617 SF CARPORT, 481 SF OF DECK

[2] Certain projects seeking ministerial approval may be required to complete the Checklist. For example, projects in a Community Plan Implementation Overlay Zone may be required to use the Checklist to qualify for ministerial level review. See Supplemental Development Regulations in the project's community plan to determine applicability.

CAP CONSISTENCY CHECKLIST QUESTIONS

Step 1: Land Use Consistency

The first step in determining CAP consistency for discretionary development projects is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the City to determine a project's consistency with the land use assumptions used in the CAP.

Step 1: Land Use Consistency		
Checklist Item (Check the appropriate box and provide explanation and supporting documentation for your answer)	Yes	No
1. Is the proposed project consistent with the existing General Plan and Community Plan land use and zoning designations?;[3] OR, 2. If the proposed project is not consistent with the existing land use plan and zoning designations, does the project include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations?; OR, 3. If the proposed project is not consistent with the existing land use plan and zoning designations, and includes a land use plan and/or zoning designation amendment that would result in an increase in GHG emissions when compared to the existing designations, would the project be located in a Transit Priority Area (TPA) and implement CAP Strategy 3 actions, as determined in Step 3 to the satisfaction of the Development Services Department?	☒	☐

If "***Yes***," proceed to Step 2 of the Checklist. For questions 2 and 3 above, provide estimated project emissions under both existing and proposed designation(s) for comparison. For question 3 above, complete Step 3.

If "***No***," in accordance with the City's Significance Determination Thresholds, the project's GHG impact is significant. The project must nonetheless incorporate each of the measures identified in Step 2 to mitigate cumulative GHG emissions impacts unless the decision maker finds that a measure is infeasible in accordance with CEQA Guidelines Section 15091. Proceed and complete Step 2 of the Checklist.

[3] This question may also be answered in the affirmative if the project is consistent with SANDAG Series 12 growth projections, which were used to determine the CAP projections, as determined by the Planning Department.

Step 2: CAP Strategies Consistency

The second step of the CAP consistency review is to review and evaluate a project's consistency with the applicable strategies and actions of the CAP. Step 2 only applies to development projects that involve permits that would require a certificate of occupancy from the Building Official or projects comprised of one and two family dwellings or townhouses as defined in the California Residential Code and their accessory structures.[4] All other development projects that would not require a certificate of occupancy from the Building Official shall implement Best Management Practices for construction activities as set forth in the Greenbook (for public projects).

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
Strategy 1: Energy & Water Efficient Buildings			
1. *Cool/Green Roofs.* • Would the project include roofing materials with a minimum 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under California Green Building Standards Code (Attachment A)?; OR • Would the project roof construction have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot as specified in the voluntary measures under California Green Building Standards Code?; OR • Would the project include a combination of the above two options? Check "N/A" only if the project does not include a roof component.	☒	☐	☐
2. *Plumbing fixtures and fittings* With respect to plumbing fixtures or fittings provided as part of the project, would those low-flow fixtures/appliances be consistent with each of the following: Residential buildings: • Kitchen faucets: maximum flow rate not to exceed 1.5 gallons per minute at 60 psi; • Standard dishwashers: 4.25 gallons per cycle; • Compact dishwashers: 3.5 gallons per cycle; and • Clothes washers: water factor of 6 gallons per cubic feet of drum capacity? Nonresidential buildings: • Plumbing fixtures and fittings that do not exceed the maximum flow rate specified in Table A5.303.2.3.1 (voluntary measures) of the California Green Building Standards Code (See Attachment A); and • Appliances and fixtures for commercial applications that meet the provisions of Section A5.303.3 (voluntary measures) of the California Green Building Standards Code (See Attachment A)? Check "N/A" only if the project does not include any plumbing fixtures or fittings.	☒	☐	☐

[4] Actions that are not subject to Step 2 would include, for example: 1) discretionary map actions that do not propose specific development, 2) permits allowing wireless communication facilities, 3) special events permits, 4) use permits that do not result in the expansion or enlargement of a building, and 5) non-building infrastructure projects such as roads and pipelines. Because such actions would not result in new occupancy buildings from which GHG emissions reductions could be achieved, the items contained in Step 2 would not be applicable.

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
Strategy 2: Clean & Renewable Energy			
3. *Energy Performance Standard / Renewable Energy* Is the project designed to have an energy budget that meets the following performance standards when compared to the Title 24, Part 6 Energy Budget for the Proposed Design Building as calculated by Compliance Software certified by the California Energy Commission (percent improvement over current code): • Low-rise residential – 15% improvement? • Nonresidential with indoor lighting OR mechanical systems, but not both – 5% improvement? • Nonresidential with both indoor lighting AND mechanical systems – 10% improvement?[5] The demand reduction may be provided through on-site renewable energy generation, such as solar, or by designing the project to have an energy budget that meets the above-mentioned performance standards, when compared to the Title 24, Part 6 Energy Budget for the Proposed Design Building (percent improvement over current code). Note: For Energy Budget calculations, high-rise residential and hotel/motel buildings are considered non-residential buildings. Check "N/A" only if the project does not contain any residential or non-residential buildings.	☒	☐	☐
Strategy 3: Bicycling, Walking, Transit & Land Use			
4. *Electric Vehicle Charging* • Single-family projects: Would the required parking serving each new single-family residence and each unit of a duplex be constructed with a listed cabinet, box or enclosure connected to a raceway linking the required parking space to the electrical service, to allow for the future installation of electric vehicle supply equipment to provide an electric vehicle charging station for use by the resident? • Multiple-family projects of 10 dwelling units or less: Would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official, to allow for the future installation of electric vehicle supply equipment to provide electric vehicle charging stations at such time as it is needed for use by residents? • Multiple-family projects of more than 10 dwelling units: Would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official? Of the total listed cabinets, boxes or enclosures provided, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use by residents?	☒	☐	☐

[5] CALGreen defines mechanical systems as equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
• Non-residential projects: If the project includes new commercial, industrial, or other uses with the building or land area, capacity, or numbers of employees listed in Attachment A, would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official? Of the total listed cabinets, boxes or enclosures provided, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use? Check "N/A" only if the project is does not include new commercial, industrial, or other uses with the building or land area, capacity, or numbers of employees listed in Attachment A.			
Strategy 3: Bicycling, Walking, Transit & Land Use (Complete this section if project includes non-residential or mixed uses)			
5. *Bicycle Parking Spaces* Would the project provide more short- and long-term bicycle parking spaces than required in the City's Municipal Code (Chapter 14, Article 2, Division 5)?[6] Check "N/A" only if the project is a residential project.	☐	☐	☒
6. *Shower facilities* If the project includes nonresidential development that would accommodate over 10 tenant occupants (employees), would the project include changing/shower facilities in accordance with the voluntary measures under the California Green Building Standards Code as shown in the table below? Check "N/A" only if the project is a residential project, or if it does not include nonresidential development that would accommodate over 10 tenant occupants (employees).	☐	☐	☒

Number of Tenant Occupants (Employees)	Shower/Changing Facilities Required	Two-tier (12" X 15" X 72") Personal Effects Lockers Required
0-10	0	0
11-50	1 shower stall	2
51-100	1 shower stall	3
101-200	1 shower stall	4
Over 200	1 shower stall plus 1 additional shower stall for each 200 additional tenant-occupants	1 two-tier locker plus 1 two-tier locker for each 50 additional tenant-occupants

[6] Non-portable bicycle corrals within 600 feet of project frontage can be counted towards the project's bicycle parking requirements.

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
7. *Designated Parking Spaces* If the project includes an employment use in a TPA, would the project provide designated parking for a combination of low-emitting, fuel-efficient, and carpool/vanpool vehicles in accordance with the following table? Number of Required Parking Spaces / Number of Designated Parking Spaces 0-9 / 0 10-25 / 2 26-50 / 4 51-75 / 6 76-100 / 9 101-150 / 11 151-200 / 18 201 and over / At least 10% of total This measure does not cover electric vehicles. See Question 4 for electric vehicle parking requirements. Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces. The required designated parking spaces are to be provided within the overall minimum parking requirement, not in addition to it. Check "N/A" only if the project is a residential project, or if it does not include an employment use in a TPA.	☐	☐	☒
8. *Transportation Demand Management Program* If the project would accommodate over 50 tenant-occupants (employees), would it include a transportation demand management program that would be applicable to existing tenants and future tenants that includes: At least one of the following components: • Parking cash out program • Parking management plan that includes charging employees market-rate for single-occupancy vehicle parking and providing reserved, discounted, or free spaces for registered carpools or vanpools • Unbundled parking whereby parking spaces would be leased or sold separately from the rental or purchase fees for the development for the life of the development And at least three of the following components: • Commitment to maintaining an employer network in the SANDAG iCommute program and promoting its RideMatcher service to tenants/employees • On-site carsharing vehicle(s) or bikesharing • Flexible or alternative work hours • Telework program • Transit, carpool, and vanpool subsidies	☐	☐	☒

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
• Pre-tax deduction for transit or vanpool fares and bicycle commute costs • Access to services that reduce the need to drive, such as cafes, commercial stores, banks, post offices, restaurants, gyms, or childcare, either onsite or within 1,320 feet (1/4 mile) of the structure/use? Check "N/A" only if the project is a residential project or if it would not accommodate over 50 tenant-occupants (employees).			

Step 3: Project CAP Conformance Evaluation (if applicable)

The third step of the CAP consistency review only applies if Step 1 is answered in the affirmative under option 3. The purpose of this step is to determine whether a project that is located in a TPA but that includes a land use plan and/or zoning designation amendment that would result in an increase in GHG emissions when compared to the existing designations, is nevertheless consistent with the assumptions in the CAP because it would implement CAP Strategy 3 actions. The following questions must each be answered in the affirmative and fully explained.

1. **Would the proposed project implement the General Plan's City of Villages strategy in an identified Transit Priority Area (TPA) that will result in an increase in the capacity for transit-supportive residential and/or employment densities?**
   Considerations for this question:
   - Does the proposed land use and zoning designation associated with the project provide capacity for transit-supportive residential densities within the TPA?
   - Is the project site suitable to accommodate mixed-use village development, as defined in the General Plan, within the TPA?
   - Does the land use and zoning associated with the project increase the capacity for transit-supportive employment intensities within the TPA?

2. **Would the proposed project implement the General Plan's Mobility Element in Transit Priority Areas to increase the use of transit?**
   Considerations for this question:
   - Does the proposed project support/incorporate identified transit routes and stops/stations?
   - Does the project include transit priority measures?

3. **Would the proposed project implement pedestrian improvements in Transit Priority Areas to increase walking opportunities?**
   Considerations for this question:
   - Does the proposed project circulation system provide multiple and direct pedestrian connections and accessibility to local activity centers (such as transit stations, schools, shopping centers, and libraries)?
   - Does the proposed project urban design include features for walkability to promote a transit supportive environment?

4. **Would the proposed project implement the City of San Diego's Bicycle Master Plan to increase bicycling opportunities?**
   Considerations for this question:
   - Does the proposed project circulation system include bicycle improvements consistent with the Bicycle Master Plan?
   - Does the overall project circulation system provide a balanced, multimodal, "complete streets" approach to accommodate mobility needs of all users?

5. **Would the proposed project incorporate implementation mechanisms that support Transit Oriented Development?**
   Considerations for this question:
   - Does the proposed project include new or expanded urban public spaces such as plazas, pocket parks, or urban greens in the TPA?
   - Does the land use and zoning associated with the proposed project increase the potential for jobs within the TPA?
   - Do the zoning/implementing regulations associated with the proposed project support the efficient use of parking through mechanisms such as: shared parking, parking districts, unbundled parking, reduced parking, paid or time-limited parking, etc.?

6. **Would the proposed project implement the Urban Forest Management Plan to increase urban tree canopy coverage?**
   Considerations for this question:
   - Does the proposed project provide at least three different species for the primary, secondary and accent trees in order to accommodate varying parkway widths?
   - Does the proposed project include policies or strategies for preserving existing trees?
   - Does the proposed project incorporate tree planting that will contribute to the City's 20% urban canopy tree coverage goal?

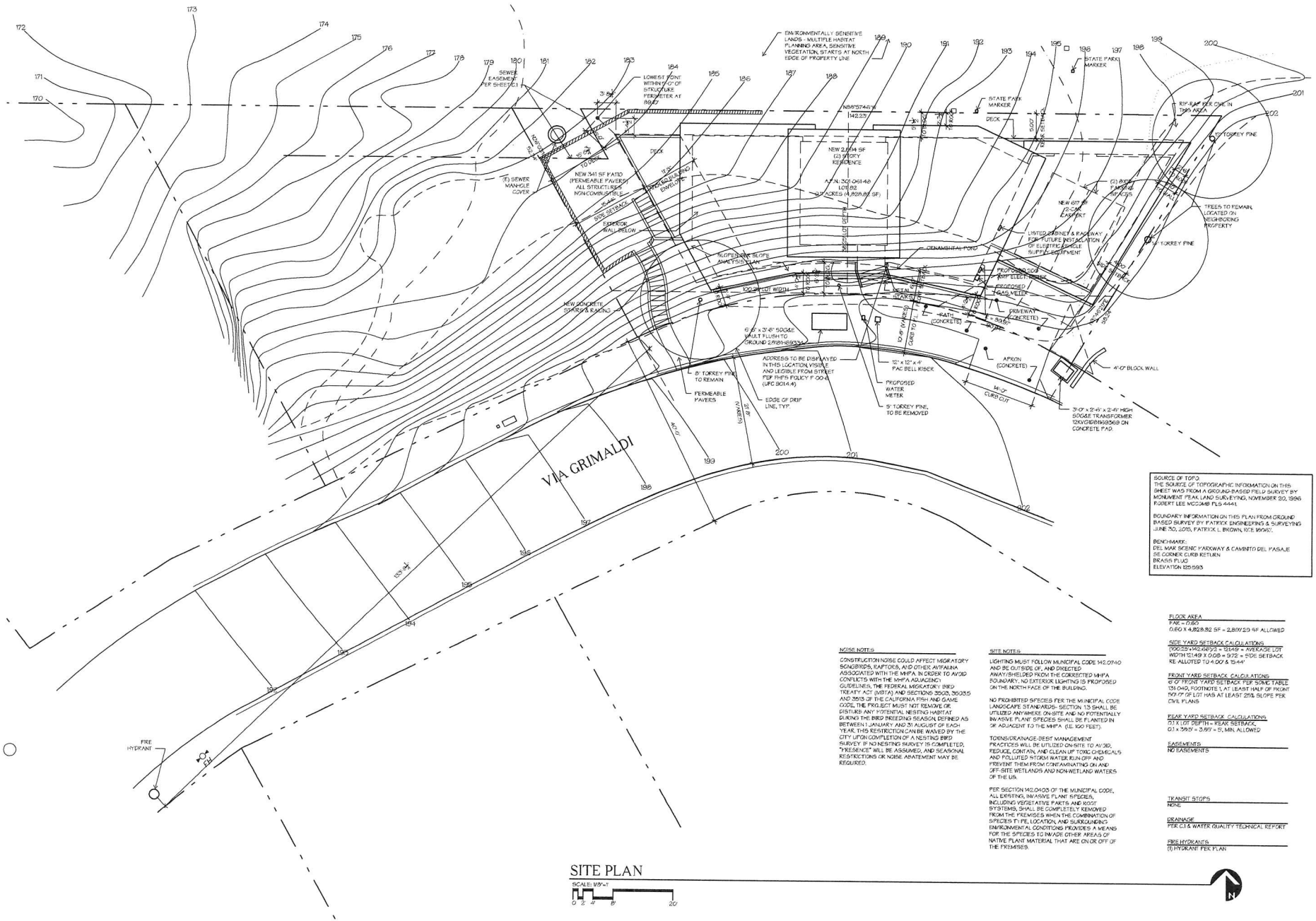
CAP CONSISTENCY CHECKLIST

Step 1 - Land Use Consistency:

1. Yes, the project is consistent with the existing General Plan and Community Plan as determined by reviewers from the City of San Diego.

Step 2 - CAP Strategies Consistency:

1. Yes, the house will have efficient metal roofing that meets the following: a minimum 3-year aged solar reflection and thermal emittance or a solar reflection index equal to or greater than the values specified in the voluntary measures under California Green Building Standards Code (Attachment A).
2. Yes, only low-flow plumbing fixtures will be installed in the project that meet the following standards: Kitchen faucets: maximum flow rate not to exceed 1.5 gallons per minute at 60 psi; Standard dishwashers: 4.25 gallons per cycle; Compact dishwashers: 3.5 gallons per cycle; and Clothes washers: water factor of 6 gallons per cubic feet of drum capacity.
3. Yes, the project will meet a 15% improvement over current code for low-rise residential as calculated by Compliance Software certified by the California Energy Commission.
4. Yes, the carport wall will have a listed cabinet connected to a raceway linking the required parking space to the electrical service, to allow for the future installation of electric vehicle supply equipment to provide an electric vehicle charging station for use by the resident.
5. This does not apply since the project is single family residential.
6. This does not apply since the project is single family residential.
7. This does not apply since the project is single family residential.
8. This does not apply since the project is single family residential.



SOURCE OF TOPO

THE SOURCE OF TOPOGRAPHIC INFORMATION ON THIS SHEET WAS FROM A GROUND-BASED FIELD SURVEY BY MONUMENT PEAK LAND SURVEYING, NOVEMBER 20, 1996 ROBERT LEE MCCOMB PLS 4441

BOUNDARY INFORMATION ON THIS PLAN FROM GROUND BASED SURVEY BY PATRICK ENGINEERING & SURVEYING JUNE 30, 2015, PATRICK L. BROWN, RCE 69067.

BENCHMARK:
DEL MAR SCENIC PARKWAY & CAMINITO DEL PASAJE
SE CORNER CURB RETURN
BRASS PLUG
ELEVATION 125.593

NOISE NOTES

CONSTRUCTION NOISE COULD AFFECT MIGRATORY SONGBIRDS, RAPTORS, AND OTHER AVIFAUNA ASSOCIATED WITH THE MHPA. IN ORDER TO AVOID CONFLICTS WITH THE MHPA ADJACENCY GUIDELINES, THE FEDERAL MIGRATORY BIRD TREATY ACT (MBTA) AND SECTIONS 3503, 3503.5 AND 3513 OF THE CALIFORNIA FISH AND GAME CODE, THE PROJECT MUST NOT REMOVE OR DISTURB ANY POTENTIAL NESTING HABITAT DURING THE BIRD BREEDING SEASON, DEFINED AS BETWEEN 1 JANUARY AND 31 AUGUST OF EACH YEAR. THIS RESTRICTION CAN BE WAIVED BY THE CITY UPON COMPLETION OF A NESTING BIRD SURVEY. IF NO NESTING SURVEY IS COMPLETED, "PRESENCE" WILL BE ASSUMED, AND SEASONAL RESTRICTIONS OR NOISE ABATEMENT MAY BE REQUIRED.

SITE NOTES

LIGHTING MUST FOLLOW MUNICIPAL CODE 142.0740 AND BE OUTSIDE OF, AND DIRECTED AWAY/SHIELDED FROM THE CORRESPONDING MHPA BOUNDARY. NO EXTERIOR LIGHTING IS PROPOSED ON THE NORTH FACE OF THE BUILDING.

NO PROHIBITED SPECIES PER THE MUNICIPAL CODE LANDSCAPE STANDARDS- SECTION 13 SHALL BE UTILIZED ANYWHERE ON-SITE AND NO POTENTIALLY INVASIVE PLANT SPECIES SHALL BE PLANTED IN OR ADJACENT TO THE MHPA (I.E. 100 FEET).

TOWN/DRAINAGE-BEST MANAGEMENT PRACTICES WILL BE UTILIZED ON-SITE TO AVOID, REDUCE, CONTAIN, AND CLEAN UP TOXIC CHEMICALS AND POLLUTED STORM WATER RUN-OFF AND PREVENT THEM FROM CONTAMINATING ON AND OFF-SITE WETLANDS AND NON-WETLAND WATERS OF THE US.

PER SECTION 142.0403 OF THE MUNICIPAL CODE, ALL EXISTING, INVASIVE PLANT SPECIES, INCLUDING VEGETATIVE PARTS AND ROOT SYSTEMS, SHALL BE COMPLETELY REMOVED FROM THE PREMISES WHEN THE COMBINATION OF SPECIES TYPE, LOCATION, AND SURROUNDING ENVIRONMENTAL CONDITIONS PROVIDES A MEANS FOR THE SPECIES TO INVADE OTHER AREAS OF NATIVE PLANT MATERIAL THAT ARE ON OR OFF OF THE PREMISES.

FLOOR AREA
FAR = 0.60
0.60 X 4,828.82 SF = 2,897.29 SF ALLOWED

SIDE YARD SETBACK CALCULATIONS
(100.28+142.68)/2 = 121.49 = AVERAGE LOT WIDTH
121.49 X 0.08 = 9.72 = SIDE SETBACK RE-ALLOTED TO 4.00' & 15.44'

FRONT YARD SETBACK CALCULATIONS
6'-0" FRONT YARD SETBACK PER SDMC TABLE 131-04D, FOOTNOTE 1, AT LEAST HALF OF FRONT 50'-0" OF LOT HAS AT LEAST 25% SLOPE PER CIVIL PLANS

REAR YARD SETBACK CALCULATIONS
0.1 X LOT DEPTH = REAR SETBACK
0.1 x 39.59' = 3.95' = 5', MIN. ALLOWED

EASEMENTS
NO EASEMENTS

TRANSIT STOPS
NONE

DRAINAGE
PER C1.1 & WATER QUALITY TECHNICAL REPORT

FIRE HYDRANTS
(1) HYDRANT PER PLAN

SITE PLAN
SCALE: 1/8"=1'
0 2 4 8 20

N

LICENSED ARCHITECT
JOHN LEE HUBBELL
No. C26104
REGISTERED DATE
STATE OF CALIFORNIA

ROSS RESIDENCE
VIA GRIMALDI
SAN DIEGO, CA 92014

HUBBELL & HUBBELL
1970 Sixth Avenue
San Diego, CA 92101
(619)231-0446 & (760)765-0171

Date: 10-24-16 Drawn: RB Job#: 1510

SP

The City of San Diego

PRIORITY DEVELOPMENT PROJECT (PDP) STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR

Project Name: Via Grimaldi CDP
PTS No. 460737

ENGINEER OF WORK:

Michael C. Kinnear, RCE 76785

Insert Civil Engineer's Name and PE Number Here
Provide Wet Signature and Stamp Above Line

PREPARED FOR:

Charles Ross
4962 Concannon Court
San Diego, CA 92130
(619) 246-8010

PREPARED BY:

COFFEY ENGINEERING, INC.

Coffey Engineering, Inc.
9666 Businesspark Ave., Suite 210
San Diego, CA 92131
(858) 831-0111

DATE:

7/1/16

Approved by: City of San Diego Date

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TABLE OF CONTENTS

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ACRONYMS

APN	Assessor's Parcel Number
ASBS	Area of Special Biological Significance
BMP	Best Management Practice
CEQA	California Environmental Quality Act
CGP	Construction General Permit
DCV	Design Capture Volume
DMA	Drainage Management Areas
ESA	Environmentally Sensitive Area
GLU	Geomorphic Landscape Unit
GW	Ground Water
HMP	Hydromodification Management Plan
HSG	Hydrologic Soil Group
HU	Harvest and Use
INF	Infiltration
LID	Low Impact Development
LUP	Linear Underground/Overhead Projects
MS4	Municipal Separate Storm Sewer System
N/A	Not Applicable
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
PDP	Priority Development Project
PE	Professional Engineer
POC	Pollutant of Concern
SC	Source Control
SD	Site Design
SDRWQCB	San Diego Regional Water Quality Control Board
SIC	Standard Industrial Classification
SWPPP	Stormwater Pollutant Protection Plan
SWQMP	Storm Water Quality Management Plan
TMDL	Total Maximum Daily Load
WMAA	Watershed Management Area Analysis
WPCP	Water Pollution Control Program
WQIP	Water Quality Improvement Plan

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CERTIFICATION PAGE

Project Name:
Permit Application Number:

I hereby declare that I am the Engineer in Responsible Charge of design of storm water BMPs for this project, and 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 the requirements of the Storm Water Standards, which is based on the requirements of SDRWQCB Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100 (MS4 Permit).

I have read and understand that the City Engineer has adopted minimum requirements for managing urban runoff, including storm water, from land development activities, as described in the Storm Water Standards. I certify that this PDP SWQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable source control and site design BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this PDP SWQMP by the City Engineer is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of storm water BMPs for this project, of my responsibilities for project design.

RCE 76785 Expiration Date 12/31/16

Engineer of Work's Signature, PE Number & Expiration Date

Michael C. Kinnear

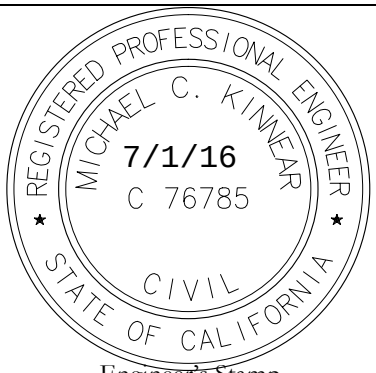
Print Name

Coffey Engineering, Inc.

Company

7/1/16

Date



Engineer's Stamp

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SUBMITTAL RECORD

Use this Table to keep a record of submittals of this PDP SWQMP. Each time the PDP SWQMP is re-submitted, provide the date and status of the project. In last column indicate changes that have been made or indicate if response to plan check comments is included. When applicable, insert response to plan check comments.

Submittal Number	Date	Project Status	Changes
1	7/1/16	☑ Preliminary Design/Planning/CEQA ☐ Final Design	Initial Submittal
2		☐ Preliminary Design/Planning/CEQA ☐ Final Design	
3		☐ Preliminary Design/Planning/CEQA ☐ Final Design	
4		☐ Preliminary Design/Planning/CEQA ☐ Final Design	

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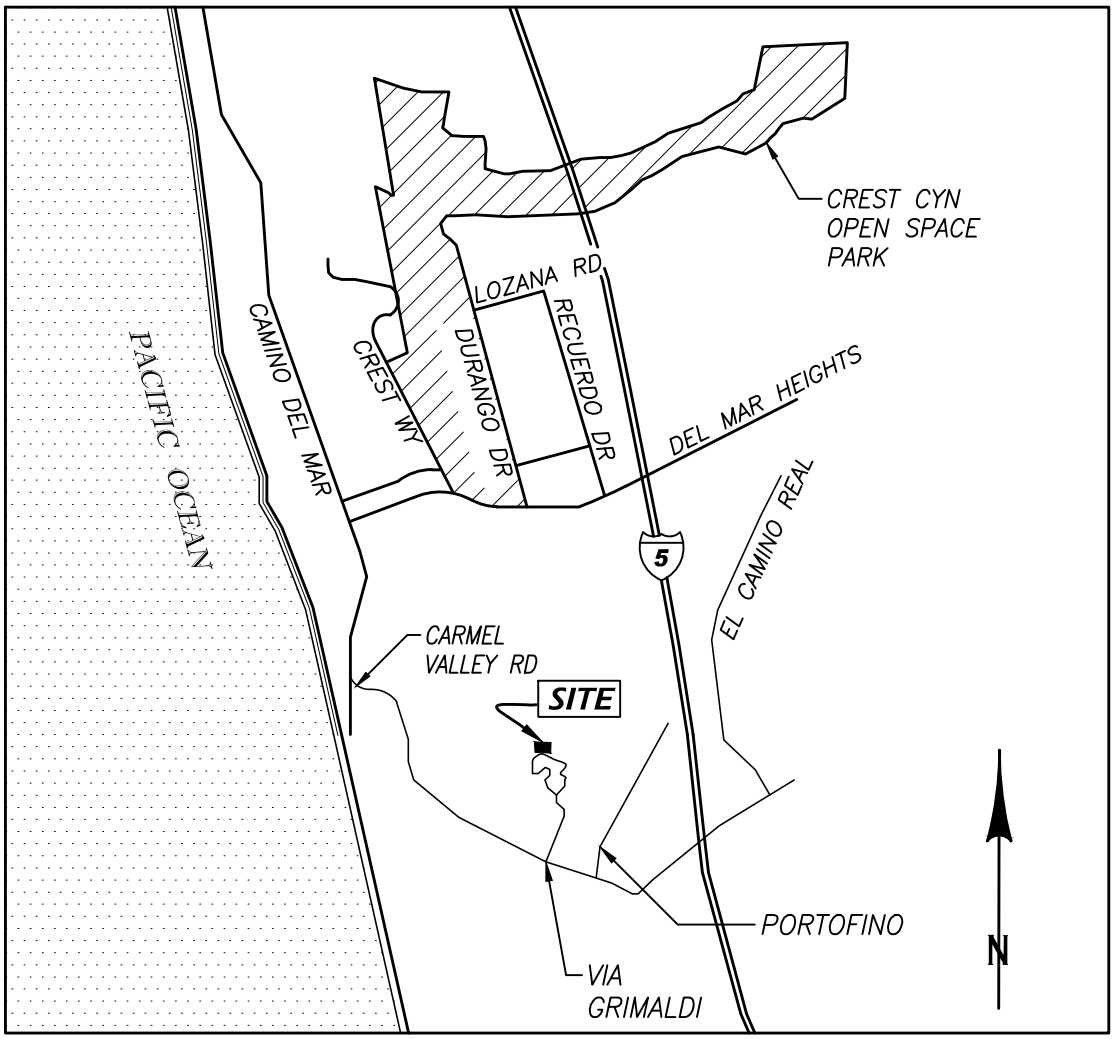
PROJECT VICINITY MAP

Project Name: Via Grimaldi CDP
Permit Application Number: PTS No. 460737



VICINITY MAP

THOMAS BROS. MAP 1207–H1
NO SCALE

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STORM WATER REQUIREMENTS APPLICABILITY CHECKLIST

Complete and attach DS-560 Form included in Appendix A.1

THE CITY OF SAN DIEGO

City of San Diego
Development Services
1222 First Ave., MD-302
San Diego, CA 92101
(619) 446-5000

Storm Water Requirements Applicability Checklist

FORM
DS-560
February
2016

Project Address:	Project Number *(for the City Use Only)*:
Via Grimaldi, San Diego, CA 92014	

SECTION 1. Construction Storm Water BMP Requirements:

All construction sites are required to implement construction BMPs in accordance with the performance standards in the Storm Water Standards Manual. Some sites are additionally required to obtain coverage under the State Construction General Permit (CGP)[1], which is administrated by the State Water Resources Control Board.

For all projects complete PART A: If project is required to submit a SWPPP or WPCP, continue to PART B.

PART A: Determine Construction Phase Storm Water Requirements.

1. Is the project subject to California's statewide General NPDES permit for Storm Water Discharges Associated with construction activities, also known as the State Construction General Permit (CGP)? (Typically projects with land disturbance greater than or equal to 1 acre.)

   ☐ Yes; SWPPP required, skip questions 2-4 ☐ No; next question

2. Does the project propose construction or demolition activity, including but not limited to, clearing, grading, grubbing, excavation, or any other activity that results in ground disturbance and contact with storm water runoff?

   ☑ Yes; WPCP required, skip questions 3-4 ☐ No; next question

3. Does the project propose routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility? (projects such as pipeline/utility replacement)

   ☐ Yes; WPCP required, skip question 4 ☐ No; next question

4. Does the project only include the following Permit types listed below?
   - Electrical Permit, Fire Alarm Permit, Fire Sprinkler Permit, Plumbing Permit, Sign Permit, Mechanical Permit, Spa Permit, Right of Way Permit for pot holing.
   - Individual Right of Way Permits that exclusively include one of the following activities and associated curb/ sidewalk repair: water services, sewer lateral, storm drain lateral, or dry utility service.
   - Right of Way Permits with a project footprint less than 150 linear feet that exclusively include only ONE of the following activities: curb ramp, sidewalk and driveway apron replacement, curb and gutter replacement, and retaining wall encroachments.

   ☐ Yes; no document required

Check one of the boxes to the right, and continue to PART B:

☐ If you checked "Yes" for question 1,
a SWPPP is REQUIRED. Continue to PART B

☑ If you checked "No" for question 1, and checked "Yes" for question 2 or 3,
a WPCP is REQUIRED. If the project processes less than 5,000 square feet of ground disturbance AND has less than a 5-foot elevation change over the entire project area, a Minor WPCP may be required instead. **Continue to PART B.**

☐ If you checked "No" for all question 1-3, and checked "Yes" for question 4
PART B **does not apply and no document is required. Continue to Section 2.**

[1]More information on the City's construction BMP requirements as well as CGP requirements can be found at: www.sandiego.gov/stormwater/regulations/swguide/constructing.shtml

PART B: Determine Construction Site Priority.

This prioritization must be completed within this form, noted on the plans, and included in the SWPPP or WPCP. The city reserves the right to adjust the priority of projects both before and after construction. Construction projects are assigned an inspection frequency based on if the project has a "high threat to water quality." The City has aligned the local definition of "high threat to water quality" to the risk. Determination approach of the State Construction General Permit (CGP). The CGP determines risk level based on project specific sediment risk and receiving water risk. Additional inspection is required for projects within the Areas of Special Biological Significance (ASBS) watershed. **NOTE:** The construction priority does **NOT** change construction BMP requirements that apply to projects; rather, it determines the frequency of inspections that will be conducted by city staff.

Complete PART B and continued to Section 2

1. ☐ **ASBS**
   a. Projects located in the ASBS watershed. A map of the ASBS watershed can he found here
   Click here for Map of ASBS Areas

2. ☐ **High Priority**
   a. Projects 1 acre or more determined to be Risk Level 2 or Risk Level 3 per the Construction General Permit and not located in the ASBS watershed.
   b. Projects 1 acre or more determined to be LUP Type 2 or LUP Type 3 per the Construction General Permit and not located in the ASBS watershed.

3. ☐ **Medium Priority**
   a. Projects 1 acre or more but not subject to an ASBS or high priority designation.
   b. Projects determined to be Risk Level 1 or LUP Type 1 per the Construction General Permit and not located in the ASBS watershed.

4. ☑ **Low Priority**
   a. Projects not subject to ASBS, high or medium priority designation.

SECTION 2. Permanent Storm Water BMP Requirements.

Additional information for determining the requirements is found in the Storm Water Standards Manual.

PART C: Determine if Not Subject to Permanent Storm Water Requirements.

Projects that are considered maintenance, or otherwise not categorized as "new development projects" or "redevelopment projects" according to the Storm Water Standards Manual are not subject to Permanent Storm Water BMPs.

If "yes" is checked for any number in Part C, proceed to Part F and check "Not Subject to Permanent Storm Water BMP Requirements".

If "no" is checked for all of the numbers in Part C continue to Part D.

1.	Does the project only include interior remodels and/or is the project entirely within an existing enclosed structure and does not have the potential to contact storm water?	☐Yes ☑No
2.	Does the project only include the construction of overhead or underground utilities without creating new impervious surfaces?	☐Yes ☑No
3.	Does the project fall under routine maintenance? Examples include, but are not limited to: roof or exterior structure surface replacement, resurfacing or reconfiguring surface parking lots, existing roadways, sidewalks, pedestrian ramps, or bike lanes on existing roads without expanding the impervious footprint, and routine replacement of damaged pavement (grinding, overlay, and pothole repair).	☐Yes ☑No

PART D: PDP Exempt Requirements.

PDP Exempt projects are required to implement site design and source control BMPs.

If "yes" was checked for any questions in Part D, continue to Part F and check the box labeled "PDP Exempt."
If "no" was checked for all questions in Part D, continue to Part E.

1. Does the project ONLY include new or retrofit sidewalks, bicycle lanes, or trails that:

   • Are designed and constructed to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas? Or;
   • Are designed and constructed to be hydraulically disconnected from paved streets and roads? Or;
   • Are designed and constructed with permeable pavements or surfaces in accordance with the Green Streets guidance in the City's Storm Water Standards manual?

   ☐Yes; PDP exempt requirements apply ☑No; next question

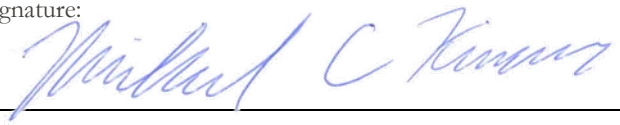
2. Does the project ONLY include retrofitting or redeveloping existing paved alleys, streets or roads designed and constructed in accordance with the Green Streets guidance in the City's Storm Water Standards Manual?

   ☐Yes; PDP exempt requirements apply ☑No; project not exempt. PDP requirements apply

PART E: Determine if Project is a Priority Development Project (PDP). Projects that match one of the definitions below are subject to additional requirements including preparation of a Storm Water Quality Management Plan (SWQMP).

If "yes" is checked for any number in PART E, continue to PART F and check the box labeled "Priority Development Project".
If "no" is checked for every number in PART E, continue to PART F and check the box labeled "Standard Project".

1.	**New Development that creates 10,000 square feet or more of impervious surfaces collectively over the project site.** This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.	☐Yes ☑No
2.	**Redevelopment project that creates and/or replaces 5,000 square feet or more of impervious surfaces on an existing site of 10,000 square feet or more of impervious surfaces.** This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.	☐Yes ☑No
3.	**New development or redevelopment of a restaurant.** Facilities that sell prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC 5812), and where the land development creates and/or replace 5,000 square feet or more of impervious surface.	☐Yes ☑No
4.	**New development or redevelopment on a hillside.** The project creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the project site) and where the development will grade on any natural slope that is twenty-five percent or greater.	☐Yes ☑No

Page 4 of 4 City of San Diego • Development Services Department • Storm Water Requirements Applicability Checklist		
5. **New development or redevelopment of a parking lot that creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the project site).**	☐Yes	☑No
6. **New development or redevelopment of streets, roads, highways, freeways, and driveways.** The project creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the project site).	☐Yes	☑No
7. **New development or redevelopment discharging directly to an Environmentally Sensitive Area.** The project creates and/or replaces 2,500 square feet of impervious surface (collectively over project site), and discharges directly to an Environmentally Sensitive Area (ESA). "Discharging- directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands).	☑Yes	☐No
8. **New development regardless of size or redevelopment projects that create and/or replace 5,000 square feet of impervious surface of a retail gasoline outlet.** The development project meets the following criteria: (a) 5,000 square feet or more or (b) has a projected Average Daily Traffic of 100 or more vehicles per day.	☐Yes	☑No
9. **New development regardless of size or redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface of an automotive repair shops.** Development projects categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.	☐Yes	☑No
10. **Other Pollutant Generating Project.** The project is not covered in the categories above, results in the disturbance of one or more acres of land and is expected to generate pollutants post construction, such as fertilizers and pesticides. This does not include projects creating less than 5,000 sf of impervious surface and where added landscaping does not require regular use of pesticides and fertilizers, such as slope stabilization using native plants. Calculation of the square footage of impervious surface need not include linear pathways that are for infrequent vehicle use, such as emergency maintenance access or bicycle pedestrian use, if they are built with pervious surfaces of if they sheet flow to surrounding pervious surfaces.	☐Yes	☑No
PART F: Select the appropriate category based on the outcomes of PART C through PART E.		
1. The project is **NOT SUBJECT TO PERMANENT STORM WATER REQUIREMENTS**.		☐
2. The project is a **STANDARD PROJECT**. Site design and source control BMP requirements apply. See the Storm Water Standards Manual for guidance.		☐
3. The project is **PDP EXEMPT**. Site design and source control BMP requirements apply. See the Storm Water Standards Manual for guidance.		☐
4. The project is a **PRIORITY DEVELOPMENT PROJECT**. Site design, source control, and structural pollutant control BMP requirements apply. See the Storm Water Standards Manual for guidance on determining if project requires hydromodification management.		☑
Name of Owner or Agent *(Please Print)*: Michael C. Kinnear, Coffey Engineering	Title: Design Engineer	
Signature: 	Date: 7/1/16	

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Applicability of Permanent, Post-Construction Storm Water BMP Requirements	Form I-1

Project Identification

Project Name: Via Grimaldi CDP

Permit Application Number: PTS No. 460737 | Date: 4/21/16

Determination of Requirements

The purpose of this form is to identify permanent, post-construction requirements that apply to the project. This form serves as a short summary of applicable requirements, in some cases referencing separate forms that will serve as the backup for the determination of requirements.

Answer each step below, starting with Step 1 and progressing through each step until reaching "Stop". Refer to Part 1 of Storm Water Standards sections and/or separate forms referenced in each step below.

Step	Answer	Progression
Step 1: Is the project a "development project"? See Section 1.3 of the BMP Design Manual (Part 1 of Storm Water Standards) for guidance.	☐ Yes	Go to Step 2.
	☐ No	Stop. Permanent BMP requirements do not apply. No SWQMP will be required. Provide discussion below.

Discussion / justification if the project is not a "development project" (e.g., the project includes only interior remodels within an existing building):

N/A

Step 2: Is the project a Standard Project, Priority Development Project (PDP), or exception to PDP definitions? To answer this item, see Section 1.4 of the BMP Design Manual (Part 1 of Storm Water Standards) in its entirety for guidance, AND complete Storm Water Requirements Applicability Checklist.	☐ Standard Project	Stop. Standard Project requirements apply.
	☑ PDP	PDP requirements apply, including PDP SWQMP. Go to Step 3.
	☐ PDP Exempt	Stop. Standard Project requirements apply. Provide discussion and list any additional requirements below.

Discussion / justification, and additional requirements for exceptions to PDP definitions, if applicable:

Form I-1 Page 2		
Step	Answer	Progression
Step 3. Is the project subject to earlier PDP requirements due to a prior lawful approval? See Section 1.10 of the BMP Design Manual (Part 1 of Storm Water Standards) for guidance.	☐ Yes	Consult the City Engineer to determine requirements. Provide discussion and identify requirements below. Go to Step 4.
	☑ No	BMP Design Manual PDP requirements apply. Go to Step 4.
Discussion / justification of prior lawful approval, and identify requirements (not required if prior lawful approval does not apply):		
Step 4. Do hydromodification control requirements apply? See Section 1.6 of the BMP Design Manual (Part 1 of Storm Water Standards) for guidance.	☑ Yes	PDP structural BMPs required for pollutant control (Chapter 5) and hydromodification control (Chapter 6). Go to Step 5.
	☐ No	Stop. PDP structural BMPs required for pollutant control (Chapter 5) only. Provide brief discussion of exemption to hydromodification control below.
Discussion / justification if hydromodification control requirements do not apply:		
Step 5. Does protection of critical coarse sediment yield areas apply? See Section 6.2 of the BMP Design Manual (Part 1 of Storm Water Standards) for guidance.	☐ Yes	Management measures required for protection of critical coarse sediment yield areas (Chapter 6.2). Stop.
	☑ No	Management measures not required for protection of critical coarse sediment yield areas. Provide brief discussion below. Stop.
Discussion / justification if protection of critical coarse sediment yield areas does not apply: No onsite or upstream CCSYA's.		

Site Information Checklist For PDPs	Form I-3B
Project Summary Information	
Project Name	Via Grimaldi CDP
Project Address	Via Grimaldi, Del Mar, CA 92014
Assessor's Parcel Number(s) (APN(s))	301-061-48
Permit Application Number	PTS No. 460737
Project Watershed	Select One: ☐ San Dieguito River ☑ Penasquitos ☐ Mission Bay ☐ San Diego River ☐ San Diego Bay ☐ Tijuana River
Hydrologic subarea name with Numeric Identifier up to two decimal places (9XX.XX)	Miramar Hydrologic Area (906.10)
Project Area (total area of Assessor's Parcel(s) associated with the project or total area of the right-of-way)	0.11 Acres (4,833 Square Feet)
Area to be disturbed by the project (Project Footprint)	0.11 Acres (4,833 Square Feet)
Project Proposed Impervious Area (subset of Project Footprint)	0.07 Acres (3,018 Square Feet)
Project Proposed Pervious Area (subset of Project Footprint)	0.04 Acres (1,815 Square Feet)
Note: Proposed Impervious Area + Proposed Pervious Area = Area to be Disturbed by the Project. This may be less than the Project Area.	
The proposed increase or decrease in impervious area in the proposed condition as compared to the pre-project condition.	Increase of 3,018 SQFT %

Form I-3B Page 2 of 11

Description of Existing Site Condition and Drainage Patterns

Current Status of the Site (select all that apply):
- ☐ Existing development
- ☐ Previously graded but not built out
- ☐ Agricultural or other non-impervious use
- ☑ Vacant, undeveloped/natural

Description / Additional Information:

Minor grading from development of local road

Existing Land Cover Includes (select all that apply):
- ☑ Vegetative Cover
- ☐ Non-Vegetated Pervious Areas
- ☐ Impervious Areas

Description / Additional Information:

Sparse natural vegetation

Underlying Soil belongs to Hydrologic Soil Group (select all that apply):
- ☐ NRCS Type A
- ☐ NRCS Type B
- ☐ NRCS Type C
- ☑ NRCS Type D

Assuming D given no geologic investigation

Approximate Depth to Groundwater (GW):
- ☐ GW Depth < 5 feet
- ☐ 5 feet < GW Depth < 10 feet
- ☐ 10 feet < GW Depth < 20 feet
- ☑ GW Depth > 20 feet

Existing Natural Hydrologic Features (select all that apply):
- ☐ Watercourses
- ☐ Seeps
- ☐ Springs
- ☐ Wetlands
- ☑ None

Description / Additional Information:

Form I-3B Page 3 of 11

Description of Existing Site Topography and Drainage:

How is storm water runoff conveyed from the site? At a minimum, this description should answer:

1. Whether existing drainage conveyance is natural or urban;
2. If runoff from offsite is conveyed through the site? If yes, quantification of all offsite drainage areas, design flows, and locations where offsite flows enter the project site and summarize how such flows are conveyed through the site;
3. Provide details regarding existing project site drainage conveyance network, including storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, and natural and constructed channels;
4. Identify all discharge locations from the existing project along with a summary of the conveyance system size and capacity for each of the discharge locations. Provide summary of the pre-project drainage areas and design flows to each of the existing runoff discharge locations.

Description / Additional Information:

The existing site can be categorized as natural sheet flow that flows northwest across the site towards a local canyon to the northwest. The site does not experience any off-site run-on. The existing drainage basin is 0.11 acres and experiences flows of 0.22 cfs during the 100 year storm.

Description of Proposed Site Development and Drainage Patterns

Project Description / Proposed Land Use and/or Activities:

The project proposes to develop a single family residence with associated hardscape and landscape features. The development will have an impervious footprint of approximately 3,018 ft2 (62.4% impervious)

List/describe proposed impervious features of the project (e.g., buildings, roadways, parking lots, courtyards, athletic courts, other impervious features):

Proposed impervious features consist of the house, sidewalks & walkways around the perimeter of the house, stairs leading from the street to the front door, stairs leading from the backyard to the street.

List/describe proposed pervious features of the project (e.g., landscape areas):

The pervious features of the site consist of landscaping adjacent to the house and walkways as well as pervious paver patio.

Does the project include grading and changes to site topography?

☑ Yes

☐ No

Description / Additional Information:

The existing site slopes from east to west. The project proposes to level the site onto three tiers for use as a parking area, pad for the home, and a back yard area. These level areas will be attained through the use of retaining and stem walls.

Does the project include changes to site drainage (e.g., installation of new storm water conveyance systems)?

☑ Yes

☐ No

If yes, provide details regarding the proposed project site drainage conveyance network, including storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, natural and constructed channels, and the method for conveying offsite flows through or around the proposed project site. Identify all discharge locations from the proposed project site along with a summary of the conveyance system size and capacity for each of the discharge locations. Provide a summary of pre and post-project drainage areas and design flows to each of the runoff discharge locations. Reference the drainage study for detailed calculations.

Description / Additional Information:

No current storm drain provisions exist within the site. All run off currently sheet flows to The canyon to the northwest.

The proposed drainage pattern consists of three drainage basins. The upper basin consists of a small sliver of the eastern property line and directs runoff around the site and into the local canyon to the northwest. the major development basin consists of Drainage from the driveway, single family residence, and associated hardscape. Storm flows will be pitched to the surrounding landscaping before sheet flowing to a biofiltration system on the north edge of the site. After being treated, the storm water will be drained to the lower basin via a PVC drain line. The lower basin is a small remnant of the site that will be undeveloped and release via sheet flow to the local canyon to the northwest.

Identify whether any of the following features, activities, and/or pollutant source areas will be present (select all that apply):

- ☑ On-site storm drain inlets
- ☐ Interior floor drains and elevator shaft sump pumps
- ☐ Interior parking garages
- ☐ Need for future indoor & structural pest control
- ☑ Landscape/Outdoor Pesticide Use
- ☐ Pools, spas, ponds, decorative fountains, and other water features
- ☐ Food service
- ☐ Refuse areas
- ☐ Industrial processes
- ☐ Outdoor storage of equipment or materials
- ☐ Vehicle and Equipment Cleaning
- ☐ Vehicle/Equipment Repair and Maintenance
- ☐ Fuel Dispensing Areas
- ☐ Loading Docks
- ☐ Fire Sprinkler Test Water
- ☑ Miscellaneous Drain or Wash Water
- ☐ Plazas, sidewalks, and parking lots
- ☐ Large Trash Generating Facilities
- ☐ Animal Facilities
- ☐ Plant Nurseries and Garden Centers
- ☐ Automotive-related Uses

Description / Additional Information:

Proposed site use is for a single family residence.

Identification and Narrative of Receiving Water

Narrative describing flow path from discharge location(s), through urban storm conveyance system, to receiving creeks, rivers, and lagoons and ultimate discharge location to Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable)

The Upper and lower basin will remain undeveloped and continue to drain to the canyon to the northwest
the developed portion of the lot will drain from the bioretention facility to an underground storage facility and then will be pumped to the street. Site storm flows will commingle with other stormwater and drain south along Via Grimaldi until it reaches a public storm drain inlet. The stormwater once in the public drainage system will travel to the Los Penasquitos Lagoon and then into the Pacific Ocean.

Provide a summary of all beneficial uses of receiving waters downstream of the project discharge locations.

See next page.

Identify all ASBS (areas of special biological significance) receiving waters downstream of the project discharge locations.

None.

Provide distance from project outfall location to impaired or sensitive receiving waters.

The Los Penasquitos Lagoon is approximately 0.33 miles to the south of the site.

Summarize information regarding the proximity of the permanent, post-construction storm water BMPs to the City's Multi-Habitat Planning Area and environmentally sensitive lands

The entire site lies within the City's Environmentally Sensitive Lands area. The MHPA area borders the site to the north but does not envelope any area or the site.

Beneficial Uses of Receiving Water

Reservoirs & Lakes	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH	REC1	REC2	WARM	COLD	WILD	RARE	POW		
Miramar Reservoir	6.10	●		●				●	●	●		●		●		
Ground Water	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	FRESH	GWR									
Miramar Reservoir	6.10	●	●	●												
Coastal Waters	Hydrologic Unit Basin Number	IND	NAV	REC 1	REC 2	COMM	BIOL	EST	WILD	RARE	MAR	AQUA	MIGR	SPWN	WARM	SHELL
Pacific Ocean		●	●	●	●	●	●		●	●	●	●	●	●		●
Los Penasquitos Lagoon	6.10			●	●	●	●	●	●	●	●		●	●		●
Inland Surface Waters	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH	POW	REC1	REC2	BIOL	WARM	COLD	WILD	RARE	SPWN
Soledad Canyon	6.10	+	●	●					○	●		●	●	●		
Carol Canyon	6.10	+	●	●					○	●		●	●	●	●	
Los Penasquitos Creek	6.10	+	●	●					○	●	●	●		●		
Unnamed Tributary	6.10	+	●	●					○	●		●		●	●	
Carmel Valley	6.10	+	●	●					○	●		●		●		
Deer Canyon	6.10	+	●	●					○	●		●		●		
McGonigle Canyon	6.10	+	●	●					○	●		●		●		
Bell Valley	6.10	+	●	●					○	●		●		●		
Shaw Valley	6.10	+	●	●					○	●		●		●		

+ Excepted from Municipal ● Existing Beneficial Use ○ Potential Beneficial Use

Form I-3B Page 8 of 11		
Identification of Receiving Water Pollutants of Concern		
List any 303(d) impaired water bodies within the path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable), identify the pollutant(s)/stressor(s) causing impairment, and identify any TMDLs and/or Highest Priority Pollutants from the WQIP for the impaired water bodies:		
303(d) Impaired Water Body	Pollutant(s)/Stressor(s)	TMDLs/ WQIP Highest Priority Pollutant
Los Penasquitos Lagoon	Sedimentation Siltation	Req. Status 5A-Comp. 2019
Los Penasquitos River Mouth	Total Coliform	Req. Status 5A-Comp. 2019

Identification of Project Site Pollutants*			
*Identification of project site pollutants is only required if flow-thru treatment BMPs are implemented onsite in lieu of retention or biofiltration BMPs (note the project must also participate in an alternative compliance program unless prior lawful approval to meet earlier PDP requirements is demonstrated) Identify pollutants anticipated from the project site based on all proposed use(s) of the site (see BMP Design Manual (Part 1 of Storm Water Standards) Appendix B.6):			
Pollutant	Not Applicable to the Project Site	Anticipated from the Project Site	Also a Receiving Water Pollutant of Concern
Sediment	X		
Nutrients	X		
Heavy Metals	X		
Organic Compounds	X		
Trash & Debris	X		
Oxygen Demanding Substances	X		
Oil & Grease	X		
Bacteria & Viruses	X		
Pesticides	X		

Hydromodification Management Requirements

Do hydromodification management requirements apply (see Section 1.6 of the BMP Design Manual)?

☑ Yes, hydromodification management flow control structural BMPs required.

☐ No, the project will discharge runoff directly to existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

☐ No, the project will discharge runoff directly to conveyance channels whose bed and bank are concrete-lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

☐ No, the project will discharge runoff directly to an area identified as appropriate for an exemption by the WMAA for the watershed in which the project resides.

Description / Additional Information (to be provided if a 'No' answer has been selected above):

Critical Coarse Sediment Yield Areas*

*This Section only required if hydromodification management requirements apply

Based on Section 6.2 and Appendix H does CCSYA exist on the project footprint or in the upstream area draining through the project footprint?

☐ Yes

☑ No

Discussion / Additional Information:

Form I-3B Page 10 of 11

Flow Control for Post-Project Runoff*

*This Section only required if hydromodification management requirements apply

List and describe point(s) of compliance (POCs) for flow control for hydromodification management (see Section 6.3.1). For each POC, provide a POC identification name or number correlating to the project's HMP Exhibit and a receiving channel identification name or number correlating to the project's HMP Exhibit.

There is only one Point of Compliance, labeled 'POC 1' on the HMP Exhibit. This point is the discharge point of the outflow pipe from the onsite underground storage area.

Has a geomorphic assessment been performed for the receiving channel(s)?

- ☑ No, the low flow threshold is 0.1Q2 (default low flow threshold)
- ☐ Yes, the result is the low flow threshold is 0.1Q2
- ☐ Yes, the result is the low flow threshold is 0.3Q2
- ☐ Yes, the result is the low flow threshold is 0.5Q2

If a geomorphic assessment has been performed, provide title, date, and preparer:

Discussion / Additional Information: (optional)

Form I-3B Page 11 of 11
Other Site Requirements and Constraints
When applicable, list other site requirements or constraints that will influence storm water management design, such as zoning requirements including setbacks and open space, or local codes governing minimum street width, sidewalk construction, allowable pavement types, and drainage requirements. None.
Optional Additional Information or Continuation of Previous Sections As Needed
This space provided for additional information or continuation of information from previous sections as needed.

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Source Control BMP Checklist for All Development Projects	Form I-4

Source Control BMPs

All development projects must implement source control BMPs SC-1 through SC-6 where applicable and feasible. See Chapter 4 and Appendix E of the BMP Design Manual (Part 1 of the Storm Water Standards) for information to implement source control BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the source control BMP as described in Chapter 4 and/or Appendix E of the BMP Design Manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification may be provided.

Source Control Requirement	Applied?		
SC-1 Prevention of Illicit Discharges into the MS4	☑ Yes	☐ No	☐ N/A
Discussion / justification if SC-1 not implemented:			
SC-2 Storm Drain Stenciling or Signage	☑ Yes	☐ No	☐ N/A
Discussion / justification if SC-2 not implemented:			
SC-3 Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☐ Yes	☐ No	☑ N/A
Discussion / justification if SC-3 not implemented: Project is a single family residence no outdoor material storage proposed			
SC-4 Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☐ Yes	☐ No	☑ N/A
Discussion / justification if SC-4 not implemented: Project is a single family residence no outdoor work areas proposed			
SC-5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☑ Yes	☐ No	☐ N/A
Discussion / justification if SC-5 not implemented:			

Form I-4 Page 2 of 2			
Source Control Requirement	Applied?		
SC-6 Additional BMPs Based on Potential Sources of Runoff Pollutants (must answer for each source listed below)			
On-site storm drain inlets	☑ Yes	☐ No	☐ N/A
Interior floor drains and elevator shaft sump pumps	☐ Yes	☐ No	☑ N/A
Interior parking garages	☐ Yes	☐ No	☑ N/A
Need for future indoor & structural pest control	☐ Yes	☐ No	☑ N/A
Landscape/Outdoor Pesticide Use	☑ Yes	☐ No	☐ N/A
Pools, spas, ponds, decorative fountains, and other water features	☐ Yes	☐ No	☑ N/A
Food service	☐ Yes	☐ No	☑ N/A
Refuse areas	☐ Yes	☐ No	☑ N/A
Industrial processes	☐ Yes	☐ No	☑ N/A
Outdoor storage of equipment or materials	☐ Yes	☐ No	☑ N/A
Vehicle/Equipment Repair and Maintenance	☐ Yes	☐ No	☑ N/A
Fuel Dispensing Areas	☐ Yes	☐ No	☑ N/A
Loading Docks	☐ Yes	☐ No	☑ N/A
Fire Sprinkler Test Water	☐ Yes	☐ No	☑ N/A
Miscellaneous Drain or Wash Water	☑ Yes	☐ No	☐ N/A
Plazas, sidewalks, and parking lots	☐ Yes	☐ No	☑ N/A
SC-6A: Large Trash Generating Facilities	☐ Yes	☐ No	☑ N/A
SC-6B: Animal Facilities	☐ Yes	☐ No	☑ N/A
SC-6C: Plant Nurseries and Garden Centers	☐ Yes	☐ No	☑ N/A
SC-6D: Automotive-related Uses	☐ Yes	☐ No	☑ N/A
Discussion / justification if SC-6 not implemented. Clearly identify which sources of runoff pollutants are discussed. Justification must be provided for <u>all</u> "No" answers shown above.			

Site Design BMP Checklist for All Development Projects	Form I-5

Site Design BMPs

All development projects must implement site design BMPs SD-1 through SD-8 where applicable and feasible. See Chapter 4 and Appendix E of the BMP Design Manual (Part 1 of Storm Water Standards) for information to implement site design BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the site design BMP as described in Chapter 4 and/or Appendix E of the BMP Design Manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification may be provided.

A site map with implemented site design BMPs must be included at the end of this checklist.

Site Design Requirement	Applied?		
SD-1 Maintain Natural Drainage Pathways and Hydrologic Features	☐ Yes	☐ No	☑ N/A
Discussion / justification if SD-1 not implemented: No natural drainage pathways within the site.			
1-1 Are existing natural drainage pathways and hydrologic features mapped on the site map?	☐ Yes	☐ No	
1-2 Are trees implemented? If yes, are they shown on the site map?	☐ Yes	☐ No	
1-3 Implemented trees meet the design criteria in SD-1 Fact Sheet (e.g. soil volume, maximum credit, etc.)?	☐ Yes	☐ No	
1-4 Is tree credit volume calculated using Appendix B.2.2.1 and SD-1 Fact Sheet in Appendix E?	☐ Yes	☐ No	
SD-2 Have natural areas, soils and vegetation been conserved?	☐ Yes	☑ No	☐ N/A
Discussion / justification if SD-2 not implemented: Size of the lot combined with planned use did not present many opportunities to preserve natural areas. Very little existing onsite vegetation to preserve.			

Site Design Requirement	Applied?		
SD-3 Minimize Impervious Area	☑ Yes	☐ No	☐ N/A
Discussion / justification if SD-3 not implemented: Pervious pavers to be used for outdoor patio area.			
SD-4 Minimize Soil Compaction	☑ Yes	☐ No	☐ N/A
Discussion / justification if SD-4 not implemented: Soil compaction to be minimized in planned landscape areas.			
SD-5 Impervious Area Dispersion	☑ Yes	☐ No	☐ N/A
Discussion / justification if SD-5 not implemented: Walkways and sidewalks within site are pitched to landscape areas. Drains are not installed in hardscape.			
5-1 Is the pervious area receiving runon from impervious area identified on the site map?	☑ Yes	☐ No	
5-2 Does the pervious area satisfy the design criteria in SD-5 Fact Sheet in Appendix E (e.g. maximum slope, minimum length, etc.)	☑ Yes	☐ No	
5-3 Is impervious area dispersion credit volume calculated using Appendix B.2.1.1 and SD-5 Fact Sheet in Appendix E?	☐ Yes	☑ No	

Form I-5 Page 3 of 4			
Site Design Requirement	Applied?		
SD-6 Runoff Collection	☑ Yes	☐ No	☐ N/A
Discussion / justification if SD-6 not implemented: Green roof not implemented. Permeable pavement implemented.			
6a-1 Are green roofs implemented in accordance with design criteria in SD-6A Fact Sheet? If yes, are they shown on the site map?	☐ Yes	☑ No	
6a-2 Is green roof credit volume calculated using Appendix B.2.1.2 and SD-6A Fact Sheet in Appendix E?	☐ Yes	☑ No	
6b-1 Are permeable pavements implemented in accordance with design criteria in SD-6B Fact Sheet? If yes, are they shown on the site map?	☐ Yes	☑ No	
6b-2 Is permeable pavement credit volume calculated using Appendix B.2.1.3 and SD-6B Fact Sheet in Appendix E?	☐ Yes	☑ No	
SD-7 Landscaping with Native or Drought Tolerant Species	☑ Yes	☐ No	☐ N/A
Discussion / justification if SD-7 not implemented:			
SD-8 Harvesting and Using Precipitation	☐ Yes	☑ No	☐ N/A
Discussion / justification if SD-8 not implemented: Storm water will be detained on-site within the biofiltration area and undergound storage area, however water collected will not be harvested for future use.			
8-1 Are rain barrels implemented in accordance with design criteria in SD-8 Fact Sheet? If yes, are they shown on the site map?	☐ Yes	☑ No	
8-2 Is rain barrel credit volume calculated using Appendix B.2.2.2 and SD-8 Fact Sheet in Appendix E?	☐ Yes	☑ No	

Form I-5 Page 4 of 4
Insert Site Map with all site design BMPs identified:

Summary of PDP Structural BMPs	Form I-6

PDP Structural BMPs

All PDPs must implement structural BMPs for storm water pollutant control (see Chapter 5 of the BMP Design Manual, Part 1 of Storm Water Standards). Selection of PDP structural BMPs for storm water pollutant control must be based on the selection process described in Chapter 5. PDPs subject to hydromodification management requirements must also implement structural BMPs for flow control for hydromodification management (see Chapter 6 of the BMP Design Manual). Both storm water pollutant control and flow control for hydromodification management can be achieved within the same structural BMP(s).

PDP structural BMPs must be verified by the City at the completion of construction. This includes requiring the project owner or project owner's representative to certify construction of the structural BMPs (complete Form DS-563). PDP structural BMPs must be maintained into perpetuity (see Chapter 7 of the BMP Design Manual).

Use this form to provide narrative description of the general strategy for structural BMP implementation at the project site in the box below. Then complete the PDP structural BMP summary information sheet (page 3 of this form) for each structural BMP within the project (copy the BMP summary information page as many times as needed to provide summary information for each individual structural BMP).

Describe the general strategy for structural BMP implementation at the site. This information must describe how the steps for selecting and designing storm water pollutant control BMPs presented in Section 5.1 of the BMP Design Manual were followed, and the results (type of BMPs selected). For projects requiring hydromodification flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate.

To address the primary and secondary pollutants of concern, those being sedimentation/siltation & total coliform, structural BMP treatment control options were evaluated for required pollutant removal efficiency for the pollutants of concern. A biofiltration facility was selected which meets the required removal efficiency for all anticipated pollutants from the project.

Runoff from the flat graded area which will contain the house and majority of the landscaping & hardscape will be collected by area drains and will be directed to a single biofiltration area located at the northern border of the site. A perforated underdrain will be incorporated into the base layers of the planter that will allow runoff to filter through the engineered soil layer before discharging from the biofiltration area through a 6" PVC drain discharging to the underground storage area which will then perform hydromodification for the developed project. After water has been detained and released at a low flow threshold stormwater will flow unto a pump system that drains to a curb outlet at the street (see plan sheet C.1 – Grading & Drainage Plan reproduced in Appendix A). An 18"x18" inlet will also be incorporated into the biofiltration area for overflow control.

The hydromodification component (underground storage area) was sized utilizing the design guidelines of Section G.2 based on the pre-development condition. The Water Quality component (biofiltration) was sized utilizing the design guidelines of Section B

(Continue on page 2 as necessary.)

Form I-6 Page 2 of X
(Page reserved for continuation of description of general strategy for structural BMP implementation at the site)
(Continued from page 1)

Form I-6 Page 3 of X (Copy as many as needed)
Structural BMP Summary Information
Structural BMP ID No. IMP 1
Construction Plan Sheet No. Sheet C.1
Type of structural BMP: ○ Retention by harvest and use (HU-1) ○ Retention by infiltration basin (INF-1) ○ Retention by bioretention (INF-2) ○ Retention by permeable pavement (INF-3) ○ Partial retention by biofiltration with partial retention (PR-1) ◉ Biofiltration (BF-1) ○ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide (BMP type/description in discussion section below) ○ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ○ Flow-thru treatment control with alternative compliance (provide BMP type/description in ○ Detention pond or vault for hydromodification management ○ Other (describe in discussion section below)
Purpose: ◉ Pollutant control only ○ Hydromodification control only ○ Combined pollutant control and hydromodification control ○ Pre-treatment/forebay for another structural BMP ○ Other (describe in discussion section below)

Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification form DS-563	
Who will be the final owner of this BMP?	The property owner(s) in perpetuity. Current owner is Sue A. Sessa
Who will maintain this BMP into perpetuity?	The property owner(s).
What is the funding mechanism for maintenance?	Funding provided by private property owner(s).

Form I-6 Page 4 of X (Copy as many as needed)
Structural BMP ID No.
Construction Plan Sheet No.
Discussion (as needed):

Form I-6 Page 3 of X (Copy as many as needed)	
Structural BMP Summary Information	
Structural BMP ID No. Underground Storage No. 1	
Construction Plan Sheet No. Sheet C.1	
Type of structural BMP: ○ Retention by harvest and use (HU-1) ○ Retention by infiltration basin (INF-1) ○ Retention by bioretention (INF-2) ○ Retention by permeable pavement (INF-3) ○ Partial retention by biofiltration with partial retention (PR-1) ○ Biofiltration (BF-1) ○ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide (BMP type/description in discussion section below) ○ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ○ Flow-thru treatment control with alternative compliance (provide BMP type/description in ◉ Detention pond or vault for hydromodification management ○ Other (describe in discussion section below)	
Purpose: ○ Pollutant control only ◉ Hydromodification control only ○ Combined pollutant control and hydromodification control ○ Pre-treatment/forebay for another structural BMP ○ Other (describe in discussion section below)	
Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification form DS-563	
Who will be the final owner of this BMP?	The property owner(s) in perpetuity. Current owner is Sue A. Sessa
Who will maintain this BMP into perpetuity?	The property owner(s).
What is the funding mechanism for maintenance?	Funding provided by private property owner(s).

Form I-6 Page 4 of X (Copy as many as needed)
Structural BMP ID No.
Construction Plan Sheet No.
Discussion (as needed):

THE CITY OF SAN DIEGO City of San Diego **Development Services** 1222 First Ave., MD-302 San Diego, CA 92101 (619) 446-5000	**Permanent BMP Construction** **Self Certification Form**	FORM DS-563 February 2016

Date Prepared:	Project No.:
Project Applicant:	Phone:
Project Address:	
Project Engineer:	Phone:

The purpose of this form is to verify that the site improvements for the project, identified above, have been constructed in conformance with the approved Storm Water Quality Management Plan (SWQMP) documents and drawings.

This form must be completed by the engineer and submitted prior to final inspection of the construction permit. Completion and submittal of this form is required for all new development and redevelopment projects in order to comply with the City's Storm Water ordinances and NDPES Permit Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100. Final inspection for occupancy and/or release of grading or public improvement bonds may be delayed if this form is not submitted and approved by the City of San Diego.

CERTIFICATION:

As the professional in responsible charge for the design of the above project, I certify that I have inspected all constructed Low Impact Development (LID) site design, source control and structural BMP's required per the approved SWQMP and Construction Permit No. _____; and that said BMP's have been constructed in compliance with the approved plans and all applicable specifications, permits, ordinances and Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100 of the San Diego Regional Water Quality Control Board.

I understand that this BMP certification statement does not constitute an operation and maintenance verification.

Signature: _____

Date of Signature: _____

Printed Name: _____

Title: _____

Phone No. _____

Engineer's Stamp

DS-563 (01-16)

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ATTACHMENT 1
BACKUP FOR PDP POLLUTANT CONTROL BMPS

This is the cover sheet for Attachment 1.

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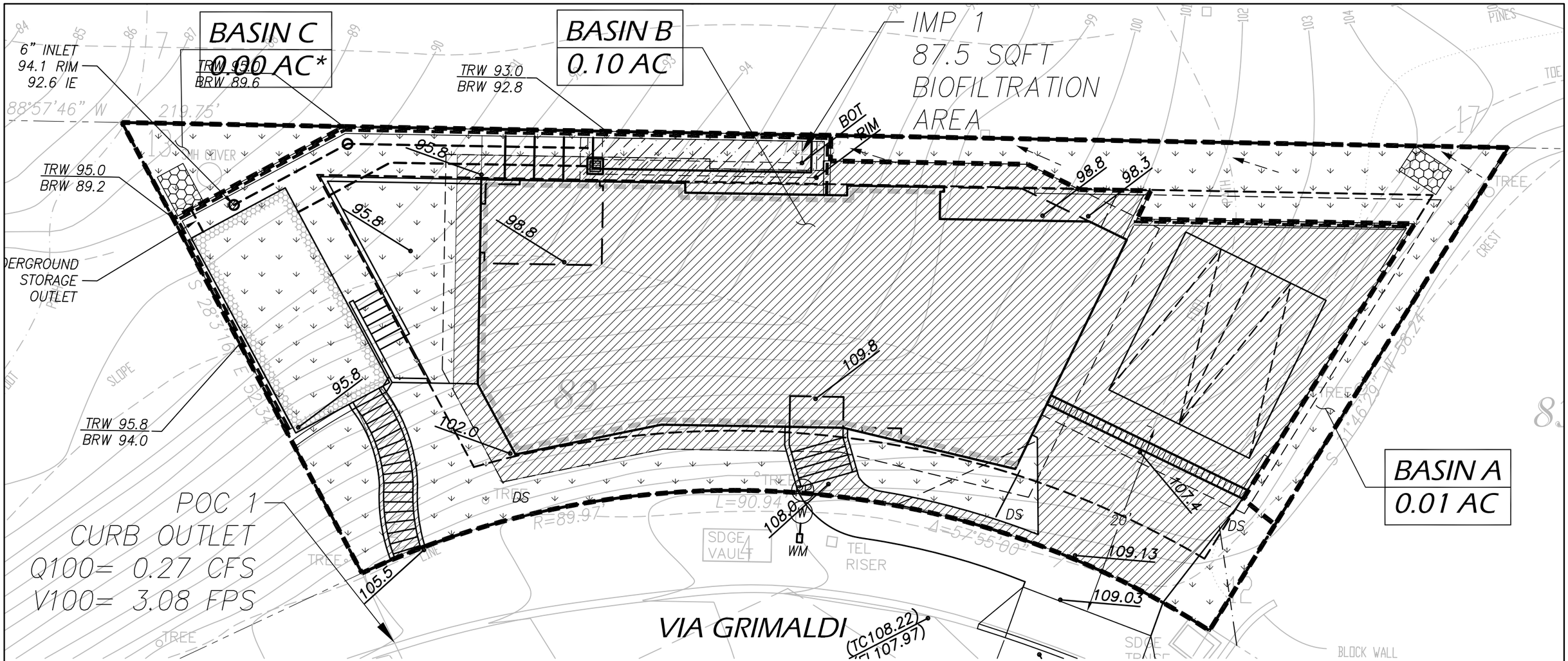
Indicate which Items are Included:

Attachment Sequence	Contents	Checklist
Attachment 1a	DMA Exhibit (Required) See DMA Exhibit Checklist.	☑ Included
Attachment 1b	Tabular Summary of DMAs Showing DMA ID matching DMA Exhibit, DMA Area, and DMA Type (Required)* *Provide table in this Attachment OR on DMA Exhibit in Attachment 1a	☑ Included on DMA Exhibit in Attachment 1a ☐ Included as Attachment 1b, separate from DMA Exhibit
Attachment 1c	Form I-7, Harvest and Use Feasibility Screening Checklist (Required unless the entire project will use infiltration BMPs) Refer to Appendix B.3-1 of the BMP Design Manual to complete Form I-7.	☑ Included ☐ Not included because the entire project will use infiltration BMPs
Attachment 1d	Form I-8, Categorization of Infiltration Feasibility Condition (Required unless the project will use harvest and use BMPs) Refer to Appendices C and D of the BMP Design Manual to complete Form I-8.	☑ Included ☐ Not included because the entire project will use harvest and use BMPs
Attachment 1e	Pollutant Control BMP Design Worksheets / Calculations (Required) Refer to Appendices B and E of the BMP Design Manual for structural pollutant control BMP design guidelines and site design credit calculations	☑ Included

Use this checklist to ensure the required information has been included on the DMA Exhibit:

The DMA Exhibit must identify:

- ☑ Underlying hydrologic soil group
- ☑ Approximate depth to groundwater
- ☑ Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
- ☑ Critical coarse sediment yield areas to be protected
- ☑ Existing topography and impervious areas
- ☑ Existing and proposed site drainage network and connections to drainage offsite
- ☑ Proposed grading
- ☑ Proposed impervious features
- ☑ Proposed design features and surface treatments used to minimize imperviousness
- ☑ Drainage management area (DMA) boundaries, DMA ID numbers, and DMA areas (square footage or acreage), and DMA type (i.e., drains to BMP, self-retaining, or self-mitigating)
- ☑ Potential pollutant source areas and corresponding required source controls (see Chapter 4, Appendix E.1, and Form I-3B)
- ☑ Structural BMPs (identify location, type of BMP, and size/detail)



BASIN A:

PERVIOUS AREA: 529.06 SQFT

BASIN B:

IMPERVIOUS AREA: 3,017.74 SQFT

PERVIOUS AREA: 1,174.82 SQFT

BASIN C:

PERVIOUS AREA: 111.21 SQFT

N

5 0 5 10 15

SCALE: 1"=10'

BASIN A: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 529.06 SQFT = 0.01AC

BASIN B: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 4,192.56 SQFT = 0.10AC

BASIN C: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 111.21 SQFT = 0.00AC*

*ACTUAL ACREAGE VALUE ROUNDS TO 0.00 AT THE NEAREST HUNDREDTH

SITE CHARACTERISTICS:

HYDROLOGIC SOILS GROUP:	D*
APPROXIMATE DEPTH TO GROUND WATER:	>15'
CRITICAL COARSE SEDIMENT YIELD AREAS:	NONE

*SITE HYDROLOGIC SOILS POTENTIALLY MAY BE CLASS A DETERMINATION WILL BE MADE AFTER A FULL GEOLOGIC AND GROUND WATER INVESTIGATION IS PERFORMED

DRAINAGE MAP - (P)
DRAINAGE MANAGEMENT AREAS

<table>
<tr><th>Harvest and Use Feasibility Checklist</th><th>Form I-7</th></tr>
<tr><td colspan="2">1. Is there a demand for harvested water (check all that apply) at the project site that is reliably present during the wet season?
☐ Toilet and urinal flushing
☐ Landscape irrigation
☑ Other: None</td></tr>
<tr><td colspan="2">2. If there is a demand; estimate the anticipated average wet season demand over a period of 36 hours. Guidance for planning level demand calculations for toilet/urinal flushing and landscape irrigation is provided in Section B.3.2.
[Provide a summary of calculations here]</td></tr>
<tr><td colspan="2">3. Calculate the DCV using worksheet B-2.1.
DCV = _____ (cubic feet)</td></tr>
<tr><td>3a. Is the 36 hour demand greater than or equal to the DCV?
☐ Yes / ☐ No ⇨
⇩</td><td>3b. Is the 36 hour demand greater than 0.25DCV but less than the full DCV?
☐ Yes / ☐ No ⇨
⇩</td><td>3c. Is the 36 hour demand less than 0.25DCV?
☐ Yes
⇩</td></tr>
<tr><td>Harvest and use appears to be feasible. Conduct more detailed evaluation and sizing calculations to confirm that DCV can be used at an adequate rate to meet drawdown criteria.</td><td>Harvest and use may be feasible. Conduct more detailed evaluation and sizing calculations to determine feasibility. Harvest and use may only be able to be used for a portion of the site, or (optionally) the storage may need to be upsized to meet long term capture targets while draining in longer than 36 hours.</td><td>Harvest and use is considered to be infeasible.</td></tr>
<tr><td colspan="2">Is harvest and use feasible based on further evaluation?
☐ Yes, refer to Appendix E to select and size harvest and use BMPs.
☑ No, select alternate BMPs.</td></tr>
</table>

Categorization of Infiltration Feasibility Condition	**Form I-8**

Part 1 - Full Infiltration Feasibility Screening Criteria
Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
1	Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		✔

Provide basis:

Potentially Hydrologic soil group A based on NRCS maps. Shall be evaluated with further geotechnical & groundwater investigation. Project has been designed to biofilter 1.5 times the DCV. Applicant understands that during the ministerial review for a building permit, project must perform and report a complete feasibility analysis for infiltration with respect to geotechnical and groundwater conditions.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

2	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.		✔

Provide basis:

Potentially Hydrologic soil group A based on NRCS maps. Shall be evaluated with further geotechnical & groundwater investigation. Project has been designed to biofilter 1.5 times the DCV. Applicant understands that during the ministerial review for a building permit, project must perform and report a complete feasibility analysis for infiltration with respect to geotechnical and groundwater conditions.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

Form I-8 Page 2 of 4			
Criteria	Screening Question	Yes	No
3	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.		✔
Provide basis: Potentially Hydrologic soil group A based on NRCS maps. Shall be evaluated with further geotechnical & groundwater investigation. Project has been designed to biofilter 1.5 times the DCV. Applicant understands that during the ministerial review for a building permit, project must perform and report a complete feasibility analysis for infiltration with respect to geotechnical and groundwater conditions. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
4	Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.		✔
Provide basis: Potentially Hydrologic soil group A based on NRCS maps. Shall be evaluated with further geotechnical & groundwater investigation. Project has been designed to biofilter 1.5 times the DCV. Applicant understands that during the ministerial review for a building permit, project must perform and report a complete feasibility analysis for infiltration with respect to geotechnical and groundwater conditions. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
Part 1 Result*	If all answers to rows 1 - 4 are "Yes" a full infiltration design is potentially feasible. The feasibility screening category is Full Infiltration If any answer from row 1-4 is "No", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2		NO

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City Engineer to substantiate findings

Form I-8 Page 3 of 4			
Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?			
Criteria	Screening Question	Yes	No
5	Do soil and geologic conditions allow for infiltration in any appreciable rate or volume? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	☐	✔
Provide basis: Potentially Hydrologic soil group A based on NRCS maps. Shall be evaluated with further geotechnical & groundwater investigation. Project has been designed to biofilter 1.5 times the DCV. Applicant understands that during the ministerial review for a building permit, project must perform and report a complete feasibility analysis for infiltration with respect to geotechnical and groundwater conditions. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
6	Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	☐	✔
Provide basis: Potentially Hydrologic soil group A based on NRCS maps. Shall be evaluated with further geotechnical & groundwater investigation. Project has been designed to biofilter 1.5 times the DCV. Applicant understands that during the ministerial review for a building permit, project must perform and report a complete feasibility analysis for infiltration with respect to geotechnical and groundwater conditions. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			

Form I-8 Page 4 of 4			
Criteria	Screening Question	Yes	No
7	Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.		✔
Provide basis: Potentially Hydrologic soil group A based on NRCS maps. Shall be evaluated with further geotechnical & groundwater investigation. Project has been designed to biofilter 1.5 times the DCV. Applicant understands that during the ministerial review for a building permit, project must perform and report a complete feasibility analysis for infiltration with respect to geotechnical and groundwater conditions. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
8	Can infiltration be allowed without violating downstream water rights? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.		✔
Provide basis: Potentially Hydrologic soil group A based on NRCS maps. Shall be evaluated with further geotechnical & groundwater investigation. Project has been designed to biofilter 1.5 times the DCV. Applicant understands that during the ministerial review for a building permit, project must perform and report a complete feasibility analysis for infiltration with respect to geotechnical and groundwater conditions. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
Part 2 Result*	If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is Partial Infiltration. If any answer from row 5-8 is no, then infiltration of any volume is considered to be infeasible within the drainage area. The feasibility screening category is No Infiltration.		NO

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City Engineer to substantiate findings


117° 15' 2" W
117° 14' 58" W
476570
476580
476590
476600
476610
476620
476630
476640
476650
476660
32° 56' 14" N
32° 56' 12" N
3644360
3644350
3644340
3644330
3644320
3644310
CsD
TeF
Via Grimaldi
Map Scale: 1:434 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 5 10 20 30
Feet
0 20 40 80 120
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California
Survey Area Data: Version 9, Sep 17, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 3, 2014—Nov 22, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — San Diego County Area, California (CA638)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
CsD	Corralitos loamy sand, 9 to 15 percent slopes	A	0.1	31.2%
TeF	Terrace escarpments		0.3	68.8%
Totals for Area of Interest			**0.4**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Higher

Worksheet B.2-1 DCV

Design Capture Volume		Worksheet B.2-1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.48	inches
2	Area tributary to BMP (s)	A=	0.1	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.68	unitless
4	Trees Credit Volume	TCV=	0	cubic-feet
5	Rain barrels Credit Volume	RCV=	0	cubic-feet
6	Calculate DCV = (3630 x C x d x A) – TCV - RCV	DCV=	118.48	cubic-feet

Worksheet B.5-1: Simple Sizing Method for Biofiltration BMPs

Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1 (Page 1 of 2)	
1	Remaining DCV after implementing retention BMPs	118.48	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0	in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36	hours
4	Depth of runoff that can be infiltrated [Line 2 x Line 3]	0	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain [Line 4/ Line 5]	0	inches
7	Assumed surface area of the biofiltration BMP	87.5	sq-ft
8	Media retained pore storage	0.1	in/in
9	Volume retained by BMP [[Line 4 + (Line 12 x Line 8)]/12] x Line 7	13.125	cubic-feet
10	DCV that requires biofiltration [Line 1 – Line 9]	105.36	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	6	inches
12	Media Thickness [18 inches minimum], also add mulch layer thickness to this line for sizing calculations	18	inches
13	Aggregate Storage above underdrain invert (12 inches typical) – use 0 inches for sizing if the aggregate is not over the entire bottom surface area	23	inches
14	Freely drained pore storage	0.2	in/in
15	Media filtration rate to be used for sizing (5 in/hr. with no outlet control; if the filtration rate is controlled by the outlet use the outlet controlled rate which will be less than 5 in/hr.)	5	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6	hours
17	Depth filtered during storm [Line 15 x Line 16]	30	inches
18	Depth of Detention Storage [Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5)]	9.60	inches
19	Total Depth Treated [Line 17 + Line 18]	39.6	inches

Note: Line 7 is used to estimate the amount of volume retained by the BMP. Update assumed surface area in Line 7 until its equivalent to the required biofiltration footprint (either Line 21 or Line 23)

Worksheet B.5-1: Simple Sizing Method for Biofiltration BMPs (continued)

Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1 (Page 2 of 2)	
Option 1 – Biofilter 1.5 times the DCV			
20	Required biofiltered volume [1.5 x Line 10]	158.04	cubic-feet
21	Required Footprint [Line 20/ Line 19] x 12	47.89	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume [0.75 x Line 10]	79.02	cubic-feet
23	Required Footprint [Line 22/ Line 18] x 12	98.77	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	4192.56	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	.68	
26	BMP Footprint Sizing Factor (Default 0.03 or an alternative minimum footprint sizing factor from Worksheet B.5-2, Line 11)	0.03	
27	Minimum BMP Footprint [Line 24 x Line 25 x Line 26]	85.53	sq-ft
28	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 27)	85.53	sq-ft
Check for Volume Reduction [Not applicable for No Infiltration Condition]			
29	Calculate the fraction of DCV retained in the BMP [Line 9/Line 1]		unitless
30	Minimum required fraction of DCV retained for partial infiltration condition	0.375	unitless
31	Is the retained DCV ≥ 0.375? If the answer is no increase the footprint sizing factor in Line 26 until the answer is yes for this criterion.	☐ Yes ☐ No	

Note:

1. Line 7 is used to estimate the amount of volume retained by the BMP. Update assumed surface area in Line 7 until its equivalent to the required biofiltration footprint (either Line 21 or Line 23)
2. The DCV fraction of 0.375 is based on a 40% average annual percent capture and a 36-hour drawdown time.
3. The increase in footprint for volume reduction can be optimized using the approach presented in Appendix B.5.2. The optimized footprint cannot be smaller than the alternative minimum footprint sizing factor from Worksheet B.5-2.
4. If the proposed biofiltration BMP footprint is smaller than the alternative minimum footprint sizing factor from Worksheet B.5-2, but satisfies Option 1 or Option 2 sizing, it is considered a compact biofiltration BMP and may be allowed at the discretion of the City Engineer, if it meets the requirements in Appendix F.

ATTACHMENT 2
BACKUP FOR PDP HYDROMODIFICATION CONTROL MEASURES

This is the cover sheet for Attachment 2.

☐ Mark this box if this attachment is empty because the project is exempt from PDP hydromodification management requirements.

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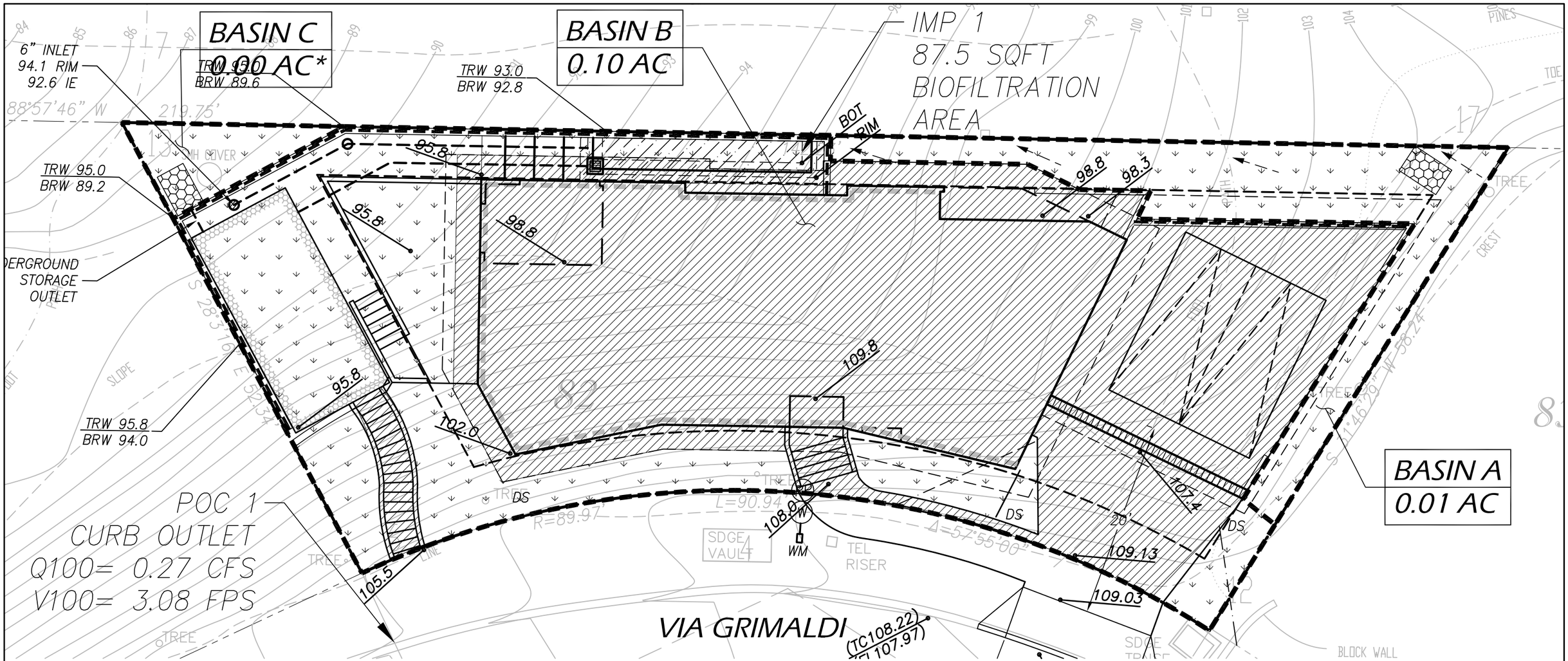
Indicate which Items are Included:

Attachment Sequence	Contents	Checklist
Attachment 2a	Hydromodification Management Exhibit (Required)	☑ Included See Hydromodification Management Exhibit Checklist.
Attachment 2b	Management of Critical Coarse Sediment Yield Areas (WMAA Exhibit is required, additional analyses are optional) See Section 6.2 of the BMP Design Manual.	☑ Exhibit showing project drainage boundaries marked on WMAA Critical Coarse Sediment Yield Area Map (Required) Optional analyses for Critical Coarse Sediment Yield Area Determination ☐ 6.2.1 Verification of Geomorphic Landscape Units Onsite ☐ 6.2.2 Downstream Systems Sensitivity to Coarse Sediment ☐ 6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite
Attachment 2c	Geomorphic Assessment of Receiving Channels (Optional) See Section 6.3.4 of the BMP Design Manual.	○ Not Performed ○ Included ◉ Submitted as separate stand-alone document
Attachment 2d	Flow Control Facility Design and Structural BMP Drawdown Calculations (Required) Overflow Design Summary for each structural BMP See Chapter 6 and Appendix G of the BMP Design Manual	○ Included ◉ Submitted as separate stand-alone document
Attachment 2e	Vector Control Plan (Required when structural BMPs will not drain in 96 hours)	○ Included ◉ Not required because BMPs will drain in less than 96 hours

Use this checklist to ensure the required information has been included on the Hydromodification Management Exhibit:

The Hydromodification Management Exhibit must identify:

- ☑ Underlying hydrologic soil group
- ☑ Approximate depth to groundwater
- ☑ Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
- ☑ Critical coarse sediment yield areas to be protected
- ☑ Existing topography
- ☑ Existing and proposed site drainage network and connections to drainage offsite
- ☑ Proposed grading
- ☑ Proposed impervious features
- ☑ Proposed design features and surface treatments used to minimize imperviousness
- ☑ Point(s) of Compliance (POC) for Hydromodification Management
- ☑ Existing and proposed drainage boundary and drainage area to each POC (when necessary, create separate exhibits for pre-development and post-project conditions)
- ☑ Structural BMPs for hydromodification management (identify location, type of BMP, and size/detail)



BASIN A:

PERVIOUS AREA: 529.06 SQFT

BASIN B:

IMPERVIOUS AREA: 3,017.74 SQFT

PERVIOUS AREA: 1,174.82 SQFT

BASIN C:

PERVIOUS AREA: 111.21 SQFT

N

5 0 5 10 15

SCALE: 1"=10'

BASIN A: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 529.06 SQFT = 0.01AC

BASIN B: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 4,192.56 SQFT = 0.10AC

BASIN C: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 111.21 SQFT = 0.00AC*

*ACTUAL ACREAGE VALUE ROUNDS TO 0.00 AT THE NEAREST HUNDREDTH

SITE CHARACTERISTICS:

HYDROLOGIC SOILS GROUP:	D*
APPROXIMATE DEPTH TO GROUND WATER:	>15'
CRITICAL COARSE SEDIMENT YIELD AREAS:	NONE

*SITE HYDROLOGIC SOILS POTENTIALLY MAY BE CLASS A DETERMINATION WILL BE MADE AFTER A FULL GEOLOGIC AND GROUND WATER INVESTIGATION IS PERFORMED

DRAINAGE MAP - (P)
DRAINAGE MANAGEMENT AREAS

Via Grimaldi CDP – Critical Course Sediment Yield Areas Map

Site Information			
Project Name:	Via Grimaldi CDP	Hydrologic Unit:	906.1
Project Applicant:	Charles Ross	Rain Guage:	Oceanside
Jurisdiction	San Diego	Total Project Area:	4832.83
APN:	301-061-48	Low Flow Threshold:	0.1Q2
BMP Name:	IMP 1	BMP Type:	Cistern

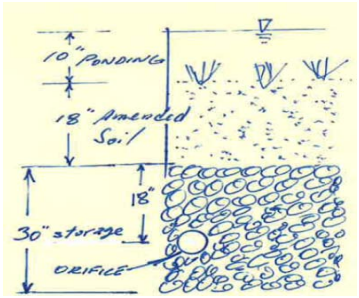
Areas Draining to BMP						Sizing Factors			Min. BMP Size		
DMA Name	Area (sf)	Soil Type	Slope	Post Project Surface Type	Runoff Factor (From Table G.2-1)	Surface Area	Surface Volume	Subsurface Volume	Surface Area (sf)	Surface Volume (CF)	Subsurface Volume (cf)
Basin B	2038.8	A	Low	Roofs	1	N/A	0.16	N/A	N/A	326.21	N/A
Basin B	978.94	A	Low	Concrete	1	N/A	0.16	N/A	N/A	156.63	N/A
Basin B	1174.82	A	Low	Landscape	0.1	N/A	0.16	N/A	N/A	18.80	N/A
Total DMA Area	4192.56							Minimum BMP Size*	N/A	501.64	N/A
								Proposed BMP Size*	N/A	542	N/A

(1) $Q=C_d \times A \times (2gH)^{0.5}$ Orifice Discharge Equation

(2) $A= [0.1Q_2 \times A_{DMA}]/C_d \times (2gH)^{0.5}$ Orifice Area Equation (for 0.1Q2 as lower limit threshold)

Cd = 0.6 dimensionless g = 32.2 ft/s2 H = 5.75 ft

Q_2s provided (see 2012 Methodology, Page 1-30, Sec. 1.6, Table 1-6)



Dimentional Analysis indicates a factor of 144 is required:
in2 = {(ft3/sec x acre)x(acre of DMA)/[(ft/sec2)xft]^0.5} x 144 in2/ft2

	Rain Gage	Soil Type	Cover	Slope	Q2 Sizing Factor	DMA Area (ac)	Lower Limit of Q2	**Orifice Area (in2)**
DMA B (B.1+B.2)	Oceanside	D	Scrub	Moderate	0.212	0.1	0.1	**0.03**

0.03	**0.18**
Tot. Orifice Area	**Orifice Dia**

Table 1-6. Unit Runoff Ratios

Rain Gauge	Soil	Cover	Slope	Q_2 (cfs/acre)	Q_{10} (cfs/ac)
Oceanside	D	Scrub	Moderate	0.212	0.455

Drawdown Time

Orifice Dia. (ft)	Orifice Dia. (in)	Surface Area (A_{SF})	Void Space (%)	Proposed Storage Volume (V_S)	Drawdown Time (hours)
0.015	0.18	234.0	40.3	542	87.14
void space* = V_S / (A_{SF} x D_S)		40.3%	*assumes vertical side slopes		

Depth of Water in Vault Area (D_S)	Q (ft^3/sec)	∆Vol (ft^3)	∆Time (sec)	∆Time (min)	∆Time (hours)
5.75	0.003400551	0			
5.6667	0.003375819	7.86	2319.38	38.65	0.64
5.5833	0.003350905	7.86	2336.50	38.94	0.64
5.5000	0.003325804	7.86	2354.00	39.23	0.65
5.4167	0.003300513	7.86	2371.90	39.53	0.65
5.3333	0.003275026	7.86	2390.22	39.83	0.66
5.2500	0.003249339	7.86	2408.97	40.14	0.66
5.1667	0.003223447	7.86	2428.16	40.46	0.67
5.0833	0.003197346	7.86	2447.82	40.79	0.67
5.0000	0.00317103	7.86	2467.97	41.13	0.68
4.9167	0.003144494	7.86	2488.62	41.47	0.69
4.8333	0.003117731	7.86	2509.81	41.83	0.69
4.7500	0.003090738	7.86	2531.54	42.19	0.7
4.6667	0.003063506	7.86	2553.84	42.56	0.7
4.5833	0.00303603	7.86	2576.75	42.94	0.71
4.5000	0.003008303	7.86	2600.28	43.33	0.72
4.4167	0.002980318	7.86	2624.47	43.74	0.72
4.3333	0.002952068	7.86	2649.35	44.15	0.73
4.2500	0.002923545	7.86	2674.95	44.58	0.74
4.1667	0.002894741	7.86	2701.31	45.02	0.75
4.0833	0.002865647	7.86	2728.46	45.47	0.75
4.0000	0.002836255	7.86	2756.44	45.94	0.76
3.9167	0.002806556	7.86	2785.31	46.42	0.77
3.8333	0.002776538	7.86	2815.10	46.91	0.78
3.7500	0.002746192	7.86	2845.87	47.43	0.79
3.6667	0.002715508	7.86	2877.67	47.96	0.79
3.5833	0.002684472	7.86	2910.56	48.5	0.8
3.5000	0.002653074	7.86	2944.61	49.07	0.81
3.4167	0.002621299	7.86	2979.88	49.66	0.82
3.3333	0.002589135	7.86	3016.44	50.27	0.83
3.2500	0.002556566	7.86	3054.39	50.9	0.84
3.1667	0.002523577	7.86	3093.81	51.56	0.85
3.0833	0.00249015	7.86	3134.79	52.24	0.87
3.0000	0.002456269	7.86	3177.44	52.95	0.88
2.9167	0.002421914	7.86	3221.89	53.69	0.89
2.8333	0.002387065	7.86	3268.26	54.47	0.9
2.7500	0.002351699	7.86	3316.68	55.27	0.92
2.6667	0.002315793	7.86	3367.33	56.12	0.93

2.5833	0.002279321	7.86	3420.37	57	0.95
2.5000	0.002242257	7.86	3475.99	57.93	0.96
2.4167	0.002204569	7.86	3534.43	58.9	0.98
2.3333	0.002166226	7.86	3595.91	59.93	0.99
2.2500	0.002127192	7.86	3660.72	61.01	1.01
2.1667	0.002087427	7.86	3729.16	62.15	1.03
2.0833	0.002046891	7.86	3801.59	63.35	1.05
2.0000	0.002005535	7.86	3878.41	64.64	1.07
1.9167	0.001963309	7.86	3960.09	66	1.1
1.8333	0.001920154	7.86	4047.16	67.45	1.12
1.7500	0.001876007	7.86	4140.23	69	1.15
1.6667	0.001830795	7.86	4240.04	70.66	1.17
1.5833	0.001784438	7.86	4347.43	72.45	1.2
1.5000	0.001736845	7.86	4463.43	74.39	1.23
1.4167	0.00168791	7.86	4589.23	76.48	1.27
1.3333	0.001637513	7.86	4726.31	78.77	1.31
1.2500	0.001585515	7.86	4876.47	81.27	1.35
1.1667	0.001531753	7.86	5041.91	84.03	1.4
1.0833	0.001476034	7.86	5225.43	87.09	1.45
1.0000	0.001418128	7.86	5430.58	90.5	1.5
0.9167	0.001357754	7.86	5661.98	94.36	1.57
0.8333	0.001294568	7.86	5925.75	98.76	1.64
0.7500	0.001228135	7.86	6230.22	103.83	1.73
0.6667	0.001157896	7.86	6587.08	109.78	1.82
0.5833	0.001083113	7.86	7013.35	116.88	1.94
0.5000	0.001002768	7.86	7534.94	125.58	2.09
0.4167	0.000915397	7.86	8193.76	136.56	2.27
0.3333	0.000818756	7.86	9063.20	151.05	2.51
0.2500	0.000709064	7.86	10287.20	171.45	2.85
0.1667	0.000578948	7.86	12202.52	203.37	3.38
0.0833	0.000409378	7.86	15902.64	265.04	4.41
0.0008	4.09378E-05	7.78	34553.13	575.88	9.59
	Total Vol.	**542.16**		**Total Hours**	**87.14**

ATTACHMENT 3
STRUCTURAL BMP MAINTENANCE INFORMATION

This is the cover sheet for Attachment 3.

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Indicate which Items are Included:

Attachment Sequence	Contents	Checklist
Attachment 3a	Structural BMP Maintenance Thresholds and Actions (Required)	☑ Included See Structural BMP Maintenance Information Checklist.
Attachment 3b	Maintenance Agreement (Form DS-3247) (when applicable)	○ Included ◉ Not Applicable

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Use this checklist to ensure the required information has been included in the Structural BMP Maintenance Information Attachment:

Preliminary Design / Planning / CEQA level submittal:

- Attachment 3a must identify:
  - ☐ Typical maintenance indicators and actions for proposed structural BMP(s) based on Section 7.7 of the BMP Design Manual
- Attachment 3b is not required for preliminary design / planning / CEQA level submittal.

Final Design level submittal:

Attachment 3a must identify:

- ☑ Specific maintenance indicators and actions for proposed structural BMP(s). This shall be based on Section 7.7 of the BMP Design Manual and enhanced to reflect actual proposed components of the structural BMP(s)
- ☑ How to access the structural BMP(s) to inspect and perform maintenance
- ☑ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
- ☐ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
- ☐ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
- ☑ When applicable, frequency of bioretention soil media replacement.
- ☑ Recommended equipment to perform maintenance
- ☐ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management

Attachment 3b: For private entity operation and maintenance, Attachment 3b must include a Storm Water Management and Discharge Control Maintenance Agreement (Form DS-3247). The following information must be included in the exhibits attached to the maintenance agreement:

- ☑ Vicinity map
- ☐ Site design BMPs for which DCV reduction is claimed for meeting the pollutant control obligations.
- ☑ BMP and HMP location and dimensions
- ☑ BMP and HMP specifications/cross section/model
- ☑ Maintenance recommendations and frequency
- ☑ LID features such as (permeable paver and LS location, dim, SF).

ATTACHMENT 3A

Maintenance Plan

Via Grimaldi

Treatment BMP Maintenance Plan for Vegetated BMPs

Typical Maintenance Indicator(s) for Vegetated BMPs	Maintenance Activities
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.
Overgrown vegetation	Mow or trim as appropriate, but not less than the design height of the vegetation per original plans when applicable (e.g. a vegetated swale may require a minimum vegetation height).
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the City Engineer shall be contacted prior to any additional repairs or reconstruction.
Standing water in vegetated swales	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, loosening or replacing top soil to allow for better infiltration, or minor re-grading for proper drainage. If the issue is not corrected by restoring the BMP to the original plan and grade, the City Engineer shall be contacted prior to any additional repairs or reconstruction.
Standing water in bioretention, biofiltration with partial retention, or biofiltration areas, or flow-through planter boxes for longer than 96 hours following a storm event*	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains (where applicable), or repairing/replacing clogged or compacted soils.
Obstructed inlet or outlet structure	Clear obstructions.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.
*These BMPs typically include a surface ponding layer as part of their function which may take 96 hours to drain following a storm event.	

- **Access of Structural BMPs for Inspection and Maintenance**

    - The Bio-filtration BMP consists of a vegetated area 460 ft^2 that will be 1.4' deep. A 2'x2' concrete inlet will be installed within the BMP with its rim elevated 0.7' above the surface. The total depth of the inlet will be 2.95'.
    - The inlet should be visible from the surface and can be accessed through the grate.
        - The 2.95' depth should not require a ladder to access the full extent of the inlet.
    - The bioretention basin is accessible from the back yard of the private residence.

- **Maintenance Thresholds**

    - Any grasses within the biofiltration area shall be cut when in excess of 4" tall.
    - Debris & sediment shall be cleared from the basin when 2" have accumulated.
    - Any amount sediment or debris accumulation observed within the overflow inlet shall be removed when seen.
    - During routine landscape maintenance activities, if bare areas or erosion are observed they shall be re-seeded.
    - If standing water is observed for longer than 24-hours the soil media shall be inspected for clogging and cleaned.

- **Bioretention Soil Media Replacement**

    - Soil media within the bioretention area shall be replaced when the filtration rate drops below 5"/hour if regular maintenance cannot restore this rate.

- **Recommended Maintenance Equipment**

    - Equipment needed for maintenance will typically include those needed for routine landscape maintenance:

        - Hand Shovels
        - Wheel barrows
        - Lawn mower
        - Hedge clippers
        - Other

- **Inspection & Maintenance for Underground Storage**

    - Isolator Row and Port Inspection
        - Ports
            - Remove/open lids on inline drain
            - Remove and clean pretreatment filters
            - Using flashlight and measurement rod take measurement of sediment depth and record

        - If sediment is at or above 3" proceed to cleaning steps
    - Isolator Rows
        - Remove cover from structure at upstream end of isolator row
        - Using flashlight inspect down isolator row through outlet pipe
        - If sediment is at or above 3" proceed to cleaning steps
- Cleaning isolator row with jetvac process *IF REQUIRED*
    - A fixed culvert cleaning nozzle with rear facing spread of 45" or more is preferred
    - Apply multiple passes of jetvac until backflush water is clean
    - Vacuum structure sump as required
- Replace all covers, grates, filters, and lids; record observations and actions
- Inspect and clean basins and manholes upstream of StormTech system

- **Notes for Underground Storage**
    - Inspect every 6 months during the first year of operation. Adjust the inspection interval based on previous observations of sediment accumulation and high water elevations
    - Conduct jetting and vactoring annually or when inspection shows that the maintenance is necessary

- **Special Training**

    - Maintenance and inspection activities required are typical for routine landscape maintenance. No special training required.

THE CITY OF SAN DIEGO

RECORDING REQUESTED BY:
THE CITY OF SAN DIEGO
AND WHEN RECORDED MAIL TO:

Charles Ross

4962 Concannon Ct

San Diego, CA 92130

(THIS SPACE IS FOR RECORDER'S USE ONLY)

STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT

APPROVAL NUMBER:	ASSESSORS PARCEL NUMBER:	PROJECT NUMBER:
	301-061-48	460737

This agreement is made by and between the City of San Diego, a municipal corporation [City] and Ross Charles & Gail Family Trust 04-40-08, the owner or duly authorized representative of the owner [Property Owner] of property located at 301-061-48

(PROPERTY ADDRESS)

and more particularly described as: Lot 82 BLK 12 of Map 1527 Del Mar Terrace

(LEGAL DESCRIPTION OF PROPERTY)

in the City of San Diego, County of San Diego, State of California.

Property Owner is required pursuant to the City of San Diego Municipal Code, Chapter 4, Article 3, Division 3, Chapter 14, Article 2, Division 2, and the Land Development Manual, Storm Water Standards to enter into a Storm Water Management and Discharge Control Maintenance Agreement [Maintenance Agreement] for the installation and maintenance of Permanent Storm Water Best Management Practices [Permanent Storm Water BMP's] prior to the issuance of construction permits. The Maintenance Agreement is intended to ensure the establishment and maintenance of Permanent Storm Water BMP's onsite, as described in the attached exhibit(s), the project's Water Quality Technical Report [WQTR] and Grading and/or Improvement Plan Drawing No(s), or Building Plan Project No(s): 460737.

Property Owner wishes to obtain a building or engineering permit according to the Grading and/or Improvement Plan Drawing No(s) or Building Plan Project No(s): 460737.

Continued on Page 2

NOW, THEREFORE, the parties agree as follows:

1. Property Owner shall have prepared, or if qualified, shall prepare an Operation and Maintenance Procedure [OMP] for Permanent Storm Water BMP's, satisfactory to the City, according to the attached exhibit(s), consistent with the Grading and/or Improvement Plan Drawing No(s), or Building Plan Project No(s): 460737.

2. Property Owner shall install, maintain and repair or replace all Permanent Storm Water BMP's within their property, according to the OMP guidelines as described in the attached exhibit(s), the project's WQTR and Grading and/or Improvement Plan Drawing No(s), or Building Plan Project No(s) 460737.

3. Property Owner shall maintain operation and maintenance records for at least five (5) years. These records shall be made available to the City for inspection upon request at any time.

This Maintenance Agreement shall commence upon execution of this document by all parties named hereon, and shall run with the land.

Executed by the City of San Diego and by Property Owner in San Diego, California.

See Attached Exhibit(s): A, B, C

_____
(Owner Signature)

_____
(Print Name and Title)

_____
(Company/Organization Name)

_____
(Date)

THE CITY OF SAN DIEGO

_____
Engineer Signature)

_____
(Print Name)

_____
(Date)

NOTE: ALL SIGNATURES MUST INCLUDE NOTARY ACKNOWLEDGMENTS PER CIVIL CODE SEC. 1180 ET.SEQ.

Reset Button Page 2

EXHIBIT 'A'

LEGEND:

PROPERTY LINE — N45°45'45"W

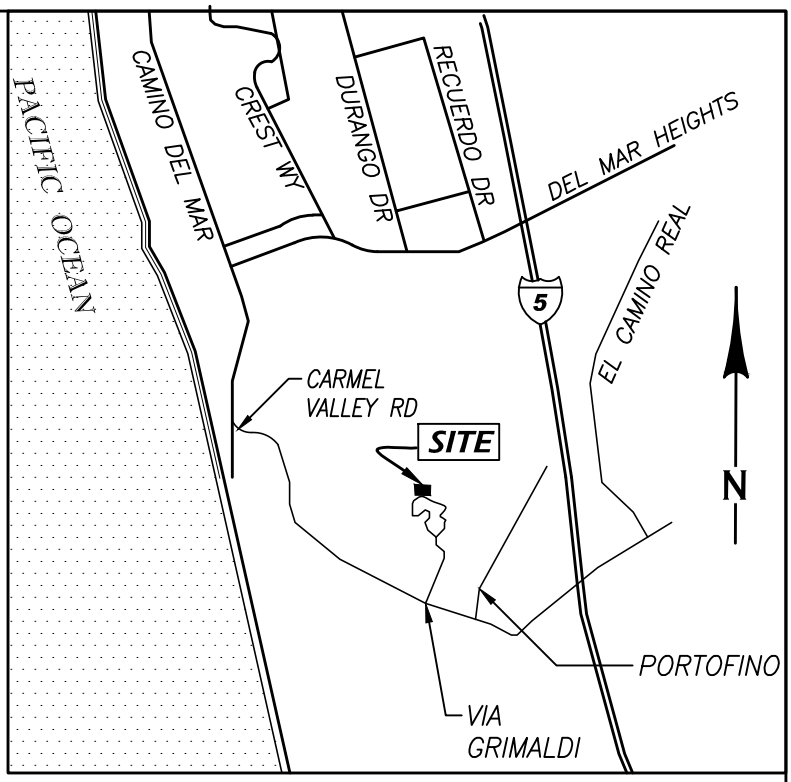
CENTER LINE — ℄

ROW — R/W

STORM WATER BMP:

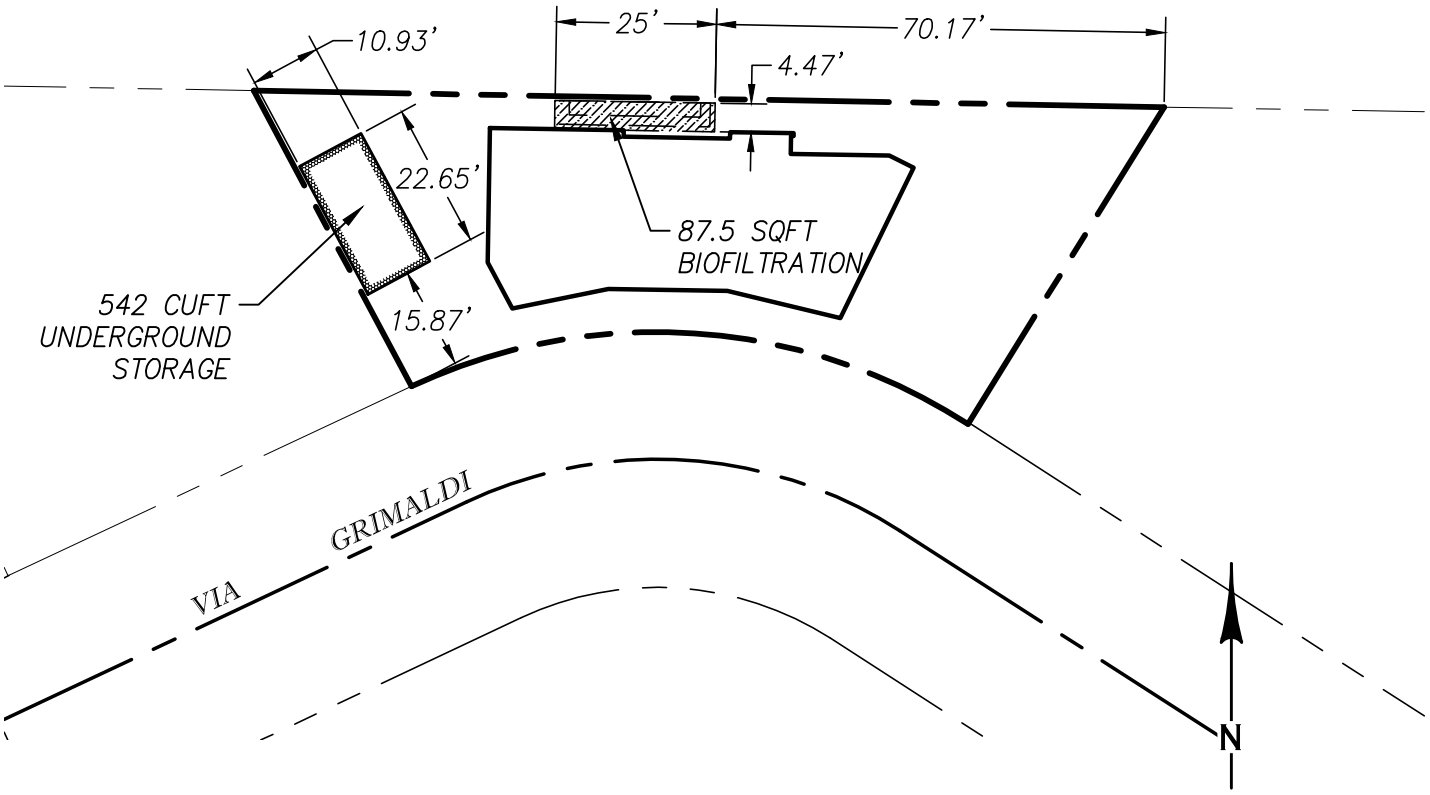
BIOFILTRATION AREA

UNDERGROUND STORAGE



VICINITY MAP

THOMAS BROS. MAP 1207–H1
NO SCALE

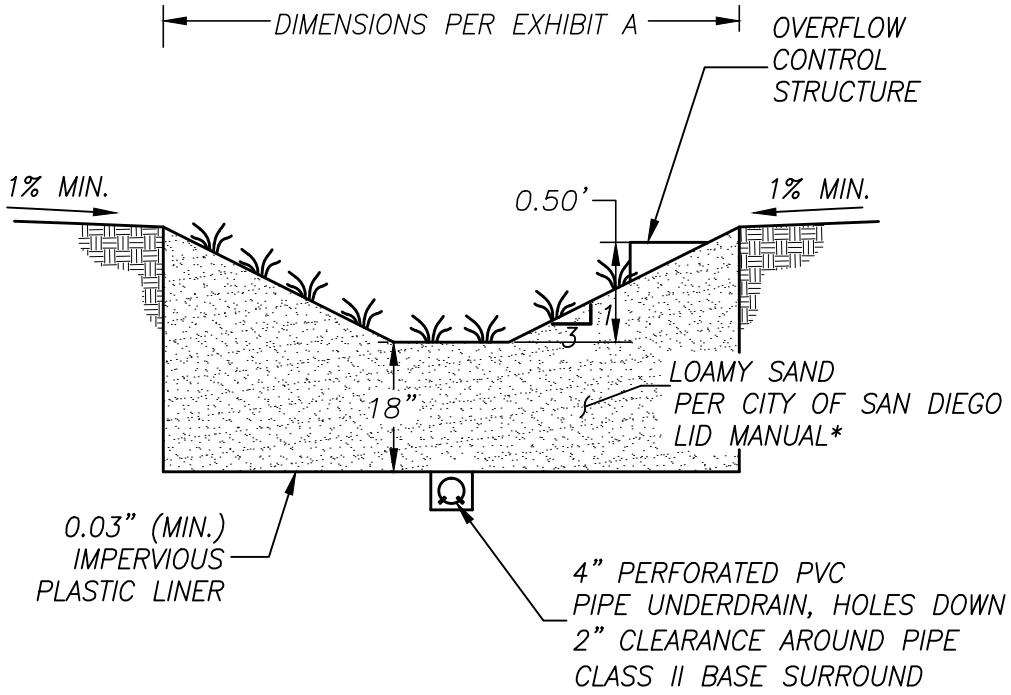


SCALE 1"=30'

COFFEY ENGINEERING, INC.

Via Grimaldi
Del Mar, CA. 92014
301–061–48

EXHIBIT 'B'



DETAIL 'B' -BIOFILTRATION AREA (IMP '1')

TYPICAL SECTION

NOT TO SCALE

* SOIL MEDIA CONSISTS OF 85% WASHED COURSE SAND, 10% FINES (RANGE: 8–12%; 8% = 2 IN/HR INFILTRATION RATE, 12% = 1 IN/HR INFILTRATION RATE), AND 5% ORGANIC MATTER. FOR ADDITIONAL STANDARDS SEE SAN DIEGO LOW IMPACT DEVELOPMENT DESIGN MANUAL SECTION 1.2.4.2 SOIL MEDIA MUST MAINTAIN A MINIMUM INFILTRATION RATE OF 5 IN/HR

COFFEY ENGINEERING, INC.

EXHIBIT 'C' Via Grimaldi • Del Mar, CA. 92014 • 301-061-48

POST-CONSTRUCTION PERMANENT BMP OPERATION & MAINTENANCE PROCEDURE DETAILS

STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT APPROVAL NO.:

O&M RESPONSIBLE PARTY DESIGNEE: PROPERTY OWNER

BMP DESCRIPTION	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE METHOD	QUANTITY	SHEET NUMBER(S)
SITE DESIGN					
DISPERSE RUNOFF TO ADJACENT LANDSCAPING	WEEKLY	MONTHLY	CLEAR EXCESS VEGETATION/DEBRIS	WHOLE SITE	C.1
NATIVE OR DROUGHT TOLERANT VEGETATION	WEEKLY	MONTHLY	REPLACE DYING/DEAD VEGETATION	WHOLE SITE	C.1
SOURCE CONTROL					
PREVENTION OF ILLICIT DISCHARGES	WEEKLY	MONTHLY	REPLACE/REPAIR DAMAGED COMPONENTS	WHOLE SITE	C.1
INTEGRATED PEST MANAGEMENT PRACTICES	WEEKLY	MONTHLY	REMOVE NON-PEST RESISTANT VEGETATION (WEEDS)	WHOLE SITE	C.1
STORM DRAIN INLET STAMPING	MONTHLY	MONTHLY	CLEAN OR REPLACE STAMPING AS NEEDED	3 EA.	C.1
TREATMENT CONTROL					
BIOFILTRATION AREA	WEEKLY	ANNUALLY	CLEAR EXCESS VEGETATION/DEBRIS	1 EA.	C.1
HMP FACILITY					
UNDERGOUND STORAGE	BIANNUALLY	ANNUALLY	CLEAR SEDIMENT/DEBRIS	1 EA.	C.1
OUTFLOW ORIFICE	BIANNUALLY	ANNUALLY	CLEAR SEDIMENT/DEBRIS	1 EA.	C.1

ATTACHMENT 4
COPY OF PLAN SHEETS SHOWING PERMANENT STORM WATER BMPS

This is the cover sheet for Attachment 4.

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Use this checklist to ensure the required information has been included on the plans:

The plans must identify:

- ☑ Structural BMP(s) with ID numbers matching Form I-6 Summary of PDP Structural BMPs
- ☑ The grading and drainage design shown on the plans must be consistent with the delineation of DMAs shown on the DMA exhibit
- ☑ Details and specifications for construction of structural BMP(s)
- ☑ Signage indicating the location and boundary of structural BMP(s) as required by the City Engineer
- ☑ How to access the structural BMP(s) to inspect and perform maintenance
- ☑ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
- ☐ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
- ☑ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
- ☑ Recommended equipment to perform maintenance
- ☑ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management
- ☑ Include landscaping plan sheets showing vegetation requirements for vegetated structural BMP(s)
- ☑ All BMPs must be fully dimensioned on the plans
- ☐ When proprietary BMPs are used, site specific cross section with outflow, inflow and model number shall be provided. Broucher photocopies are not allowed.

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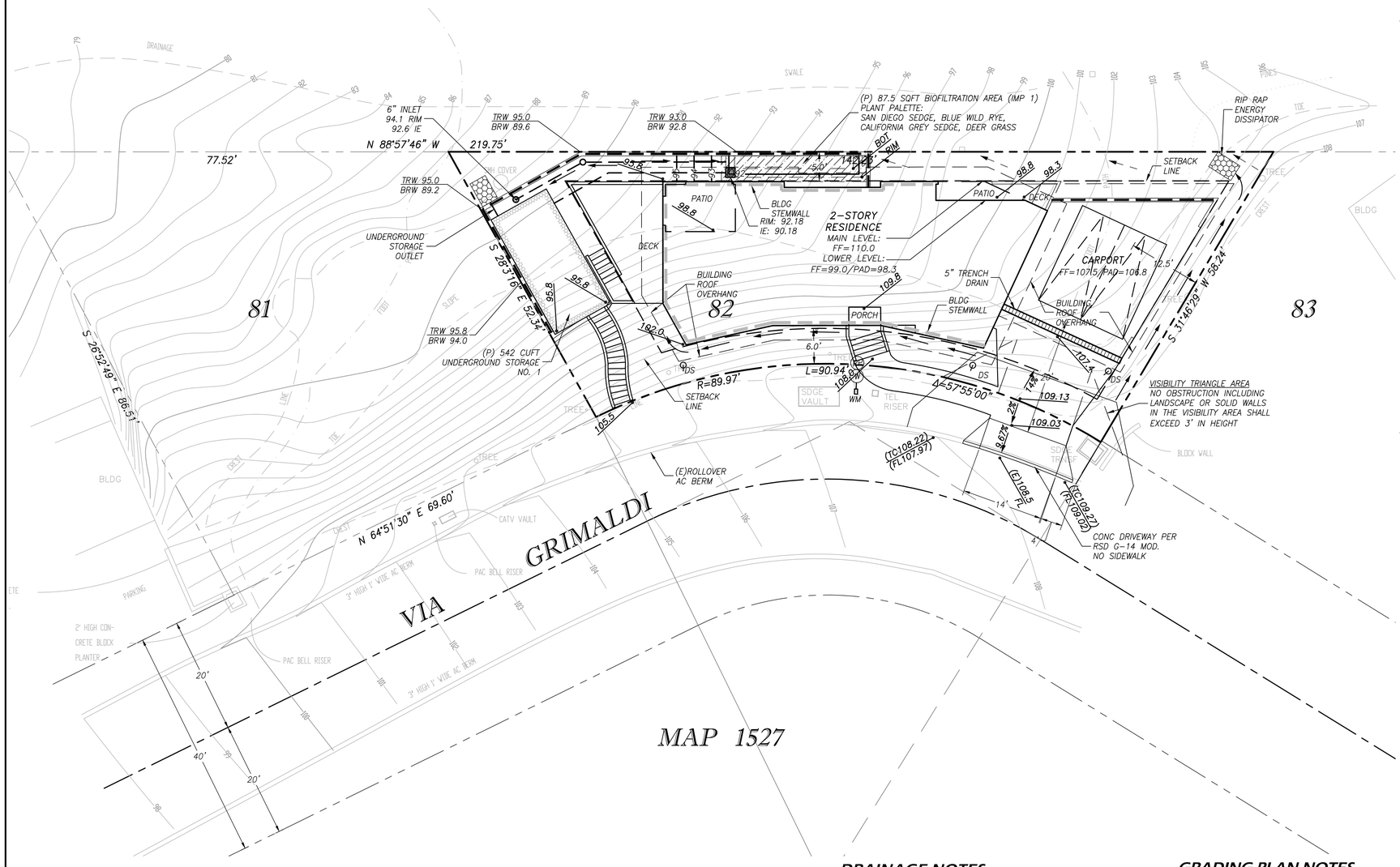

LEGEND

DESCRIPTION	STD DWG	SYMBOL
PROPERTY LINE		N45°45'45"W
PROPERTY LINE – OFFSITE		
STREET CENTERLINE		℄
EX CONTOUR		90
PR CONTOUR		90
PR SPOT ELEVATION		100.00
PR DRAINAGE SWALE OR DIRECTION OF FLOW		
BUILDING FOOTPRINT		
PR CMU RETAINING WALL		
PR FREE STANDING WALL		
PR HARDSCAPE DRAIN	(NDS OR EQ)	
PR LANDSCAPE DRAIN	(NDS OR EQ)	
PR CLEANOUT	(NDS OR EQ)	
PR PVC DRAIN LINE	SDR-35 SCH 40	
PR TRENCH DRAIN	(NDS OR EQ)	
PR RIP RAP		
PR 1" WATER SERVICE w/RP BACKFLOW PREVENTION ASSY		W RP
EX TREE CANOPY/ BRUSH LINE		

ABBREVIATIONS

BLDG	BUILDING	F; FL	FLOW LINE
BRW	BOTTOM OF RETAINING WALL GRADE	H	HEIGHT
℄	CENTER LINE	HP	HIGH POINT
CB	CATCH BASIN	IE	INVERT ELEVATION
CMU	CONCRETE MASONRY UNIT	(P); PR	PROPOSED
CO	CLEANOUT	SMH	SEWER MANHOLE
(E); EX	EXISTING	TRW	TOP OF RETAINING WALL GRADE
FF	FINISH FLOOR	WM	WATER METER

N

10 0 10 20 30

SCALE: 1"=10'

POST-CONSTRUCTION PERMANENT BMP OPERATION & MAINTENANCE PROCEDURE DETAILS

STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT APPROVAL NO.:

O&M RESPONSIBLE PARTY DESIGNEE: PROPERTY OWNER

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BIOFILTRATION AREA	WEEKLY	ANNUALLY	CLEAR EXCESS VEGETATION/DEBRIS	1 EA.	C.1
HMP FACILITY					
UNDERGOUND STORAGE	BIANNUALLY	ANNUALLY	CLEAR SEDIMENT/DEBRIS	1 EA.	C.1
OUTFLOW ORIFICE	BIANNUALLY	ANNUALLY	CLEAR SEDIMENT/DEBRIS	1 EA.	C.1

DRAINAGE NOTES

1. ALL MAIN DRAIN LINES SHOWN TO BE 6" PVC @ 1% MINIMUM SLOPE UNLESS OTHERWISE NOTED.
2. ALL CATCH BASIN LEADS TO BE 4" PVC @ 2% MINIMUM SLOPE UNLESS OTHERWISE NOTED.
3. HARDSCAPE GRADES TO BE 1% MINIMUM TO DRAINS AND AWAY FROM STRUCTURE.
4. SOFTSCAPE GRADES TO BE 2% MINIMUM TO DRAINS (1% WHERE FLOW IS CONCENTRATED) AND 2% MINIMUM AWAY FROM STRUCTURE.
5. SOIL COVER ABOVE DRAIN LINES SHALL BE 12" MINIMUM UNLESS OTHERWISE NOTED.
6. NOTIFY CIVIL ENGINEER IF ANY NON-DRAINING SUMP CONDITIONS BECOME APPARANT DURING CONSTRUCTION.
5. THIS PROJECT WILL NOT DISCHARGE ANY INCREASE IN STORMWATER RUN-OFF ONTO EXISTING HILLSIDE AREAS
6. AT THE STORMWATER DISCHARGE LOCATIONS, SUITABLE ENERGY DISSIPATERS ARE TO BE INSTALLED TO REDUCE THE DISCHARGE TO NON-ERODIBLE VELOCITIES
7. NO UNMITIGATED ADDITIONAL RUN-OFF IS PROPOSED FOR DISCHARGE LOCATIONS

GRADING PLAN NOTES

1. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, THE APPLICANT SHALL INCORPORATE ANY CONSTRUCTION BEST MANAGEMENT PRACTICES NECESSARY TO COMPLY WITH CHAPTER 14, ARTICLE 2, DIVISION 1 (GRADING REGULATIONS) OF THE SAN DIEGO MUNICIPAL CODE, INTO THE CONSTRUCTION PLANS OR SPECIFICATIONS.
2. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, THE APPLICANT SHALL SUBMIT A WATER POLLUTION CONTROL PLAN (WPCP). THE WPCP SHALL BE PREPARED IN ACCORDANCE WITH THE GUIDELINES IN APPENDIX E OF THE CITY'S STORM WATER STANDARDS.
3. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, THE OWNER/PERMITTEE SHALL ENTER INTO A MAINTENANCE AGREEMENT FOR THE ONGOING PERMANENT BMP MAINTENANCE, SATISFACTORY TO THE CITY ENGINEER.
4. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, AN EMRA WILL BE NECESSARY FOR ANY PRIVATE IMPROVEMENTS WITHIN THE PUBLIC RIGHT OF WAY.
5. ALL GRADED, DISTURBED OR ERODED AREAS THAT WILL NOT BE PERMANENTLY PAVED OR COVERED BY STRUCTURES SHALL BE PERMANENTLY REVEGETATED AND IRRIGATED AS SHOWN IN TABLE 142-04F AND IN ACCORDANCE WITH THE STANDARDS IN THE SAN DIEGO MUNICIPAN CODE, SECTION 142.0411. ALL REQUIRED REVEGETATION AND EROSION CONTROL SHALL BE COMPLETED WITHIN 90 CALENDAR DAYS OF THE COMPLETION OF GRADING OR DISTURBANCE.

GRADING TABULATIONS

TOTAL AMOUNT OF SITE TO BE GRADED:	0.1 ACRE	% OF TOTAL SITE:	76.6%
AMOUNT OF CUT:	295 CUBIC YARDS	MAXIMUM DEPTH OF CUT:	2.5 FEET
AMOUNT OF FILL:	39 CUBIC YARDS	MAXIMUM DEPTH OF FILL:	5.8 FEET
MAXIMUM HEIGHT OF FILL SLOPE(S):	2.0 FEET	SLOPE RATIO:	N/A
MAXIMUM HEIGHT OF CUT SLOPE(S):	N/A FEET	SLOPE RATIO:	N/A
AMOUNT OF IMPORT/ EXPORT SOIL:	256 CUBIC YARDS		
RETAINING/ CRIB WALLS:	LENGTH 256 FEET	MAXIMUM HEIGHT:	6.5 FEET

SOURCE OF TOPO:

THE SOURCE OF TOPOGRAPHIC INFORMATION ON THIS PLAN WAS FROM A GROUND-BASED FIELD SURVEY BY MONUMENT PEAK LAND SURVEYING, NOVEMBER 20,1996, ROBERT LEE McCOMB, PLS 4441. BOUNDARY INFORMATION ON THIS PLAN FROM GROUND BASED SURVEY BY PATRICK ENGINEERING & SURVEYING JUNE 30, 2015, PATRICK L. BROWN, RCE 18067.

EASEMENTS

THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS MAY BE PRESENT ON THE SUBJECT PROPERTY.

NOTES:

1. THIS GRADING PLAN IS BASED ON A TOPOGRAPHIC SURVEY, NOT A BOUNDARY SURVEY OR RECORD OF SURVEY. THE PROPERTY LINES DEPICTED ON THIS PLAN ARE GENERATED FROM EXISTING PUBLIC RECORD MAPS, DRAWINGS, OR DESCRIPTIONS. THE PROPERTY LINES AND/OR EASEMENTS SHOWN HEREON HAVE BEEN INCLUDED TO REPRESENT THEIR APPROXIMATE LOCATIONS RELATIVE TO THE TOPOGRAPHIC FEATURES.
2. THE LOCATIONS OF UTILITIES, IF ANY, SHOWN ON THIS PLAN ARE GENERATED FROM RECORDS PROVIDED BY UTILITY/GOVERNING AGENCIES AND/OR FIELD DATA COLLECTED DURING THE SURVEY. THE PLOTTING OF UTILITIES ON THIS PLAN DOES NOT CONSTITUTE A GUARANTEE OF THEIR LOCATION, DEPTH, SIZE, OR TYPE.

COFFEY ENGINEERING, INC.
10660 SCRIPPS RANCH BLVD. SUITE 102, SAN DIEGO, CA 92131 PH (858)831-0111 FAX (858)831-0179

REGISTERED PROFESSIONAL ENGINEER JOHN S. COFFEY No. 44116 EXP. 6/30/16 CIVIL STATE OF CALIFORNIA

PRELIMINARY

ROSS RESIDENCE

13000 Blk Via Grimaldi
Del Mar, CA 92014

DRAWN BY: MK
CHECKED BY: JC

ORIGINAL 11/6/15
REVISION 1
REVISION 2
REVISION 3
REVISION 4
REVISION 5

GRADING PLAN

SCALE: 1" = 10'

C.1

SHT 1 OF 2 SHTS

ATTACHMENT 5
DRAINAGE REPORT

Attach project's drainage report. Refer to Drainage Design Manual to determine the reporting requirements.

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COFFEY ENGINEERING, INC.

Preliminary Drainage Study

Ross Residence
Via Grimaldi, Del Mar, CA. 92014
APN 301-061-48

Prepared For:
Charles Ross
and
The City of San Diego

April 22, 2016

10660 Scripps Ranch Blvd, Suite 102 San Diego, CA 92131 Phone: (858) 831-0111 Fax: (858) 831-0179

Table of Contents

Appendix

1. **Existing Conditions**

The site is located in San Diego, 0.6 miles north west of the I-5/SR-56 interchange. The approximately 0.1 acre lot is currently undeveloped.

The site lies approximately 2,500 feet west of the I-5 and 3,800 feet east of the Pacific Ocean, with a general drainage pattern that flows from east to west through the site.

See Drainage Map – (E) in the appendix for existing conditions.

2. **Proposed Project**

The project proposes to develop a single family residence with associated hardscape and landscape features. The development will have an impervious footprint of approximately 3,018 ft^2 (62.4% impervious), this is an increase of 62.4% from the existing impervious footprint of 0 ft^2 (0% impervious). The proposed development is not part of a larger master development. The site qualifies as a priority development project due to its location in a Water Quality Sensitive Area and its creation of 2,500 SF or more of impervious area. The project developer is Charles Ross.

See Drainage Map – (P) in the appendix for proposed conditions.

The project proposes to release storm water runoff to the Torrey Pines State Natural Reserve. Flows will be dissipated through the use of adequately sized rip-rap energy dissipaters. The project has been presented to the California State Department of Parks & Recreation and has been approved in its current form (See State approval in Appendix).

3. **Purpose and Scope of Report**

In addition to addressing any general drainage concerns for the property, this report will evaluate the pre-construction hydrologic conditions and compare them to post-construction to determine the required detention/flow attenuation. The runoff quantities were calculated using a 100-year storm, see isopluvial maps attached in the appendix of this report.

The following will be evaluated:

- Pre-construction flows: Basins X (see Drainage Map – (E))
- Post Construction flows: Basins A, B, & C (see Drainage Map – (P))
- General site conditions/observations pertaining to drainage.

4. **Method of Calculations**

The Rational Method, as defined by the City of San Diego Drainage Design Manual (1984), will be used to calculate storm water flow rates. Where noted, the following calculations were used to determine flow properties:

<u>Rainfall Characteristics</u>

$Q = C * I * A$, where

Q = Flow rate (ft^3/sec)
C = Runoff coefficient
I = Rainfall intensity (in/hr)
A = Area (acres)

$I = 7.44 * P_6 * D^{-0.645}$, where

I = Rainfall intensity (in/hr)
P_6 = Adjusted 6-hour precipitation (inches)
D = Storm duration (min), equal to T_c for time-of-concentration storms

Tc = Ti+Tt+Tp (time-of-concentration), where
Ti=Over land initial time.
Tt=Travel time on natural watersheds.
Tp=Travel time on drainage structures (pipes, brow ditch, gutter etc.)

$Ti = 1.8(1.1-C) D^{0.50} / (s^{0.33})$ (Overland initial time of concentration formula),where

D= Watercourse Distance (feet)(see table 3-2 for the max. overland flow length)
s = Slope (%)
C= Runoff Coefficient
Ti=Initial time of concentration (min.)

$T_t = (11.9*L^3 / \Delta H)^{0.385}$ (formula for travel time for natural watersheds), where

T_c = Time of Concentration or Travel time (hours)
L = Length of watercourse (miles)
ΔH = Change in effective slope height (ft)

<u>Pipe and Open Channel Flow Characteristics</u>

$V = 1/n * R^{2/3} * S^{1/2}$ (from Manning), where

V = Average cross-sectional velocity (ft/sec)
n = Manning roughness coefficient
R = Hydraulic radius (ft)
S = Slope of water surface (ft height/ft length)

$p/\gamma + V^2/2g + z_1 + h_L = p/\gamma + V^2/2g + z_2$ (from Bernoulli), where

p = pressure (lbs/ft^2)
γ = density (lbs/ft^3)
V = velocity (ft/sec)

g = gravity (ft/sec/sec)
z = height of fluid (ft)
h_L = head loss (ft)

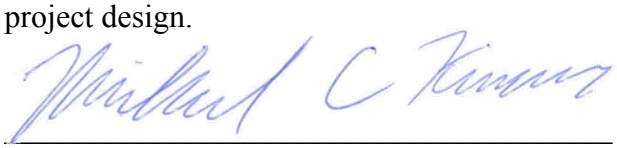
5. **Results and Conclusions:**

During the 100 year storm the site will experience a flow of 0.27 CFS. This is 0.05 CFS greater than the existing 100 year storm flow of 0.22 CFS this increase can be attributed to the development of the site including the residence and associated hardscape. This increase will be mitigated through hydromodification measures and does not present any adverse impacts. The project in question is not subject to regulations as set forth in CWA 401/404

6. **Declaration of Responsible Charge**

I hereby declare that I am the Civil 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 design.

I understand that the check of project drawings and specifications by the City of San Diego is confined to a review only and does not relieve me, as Engineer of Work, of my responsibilities for project design.

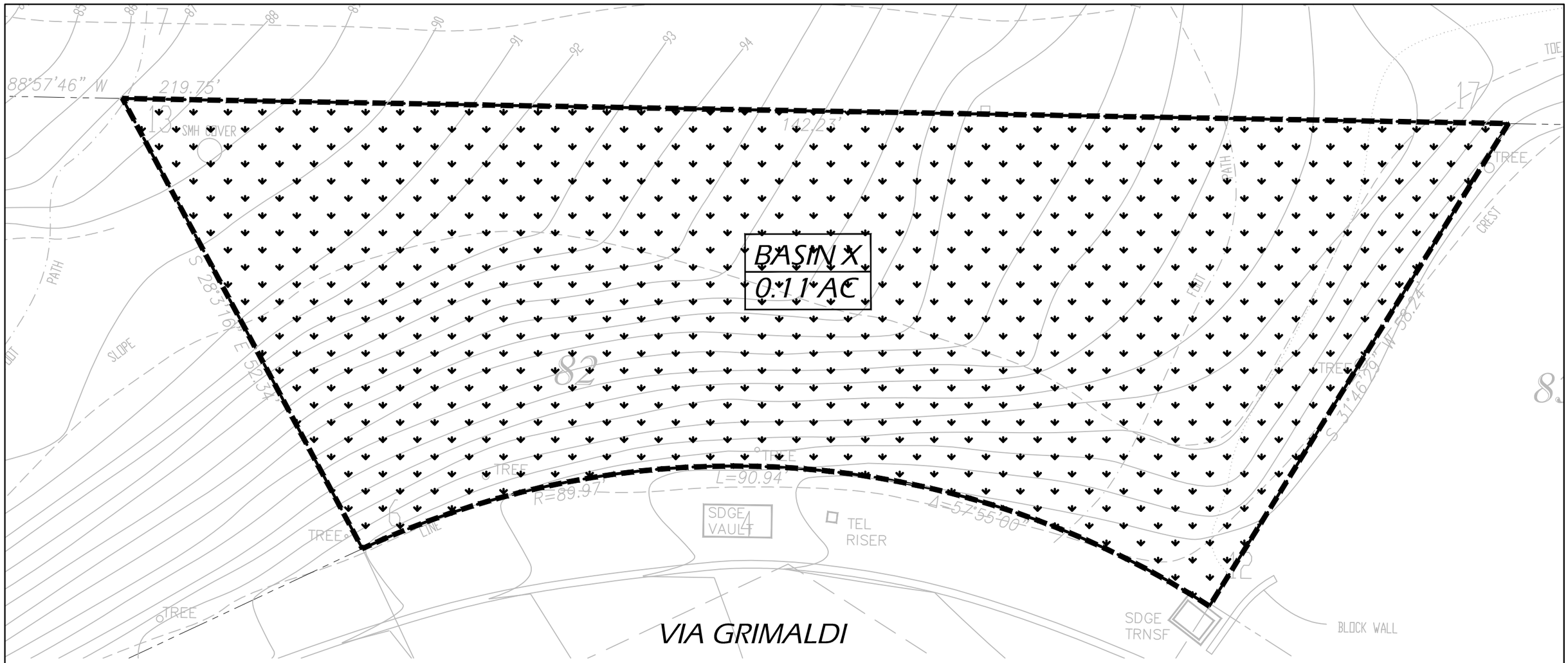


7/1/16

Michael Kinnear
RCE 76785
Exp. 12-31-16

Date

Appendix



N

5 0 5 10 15

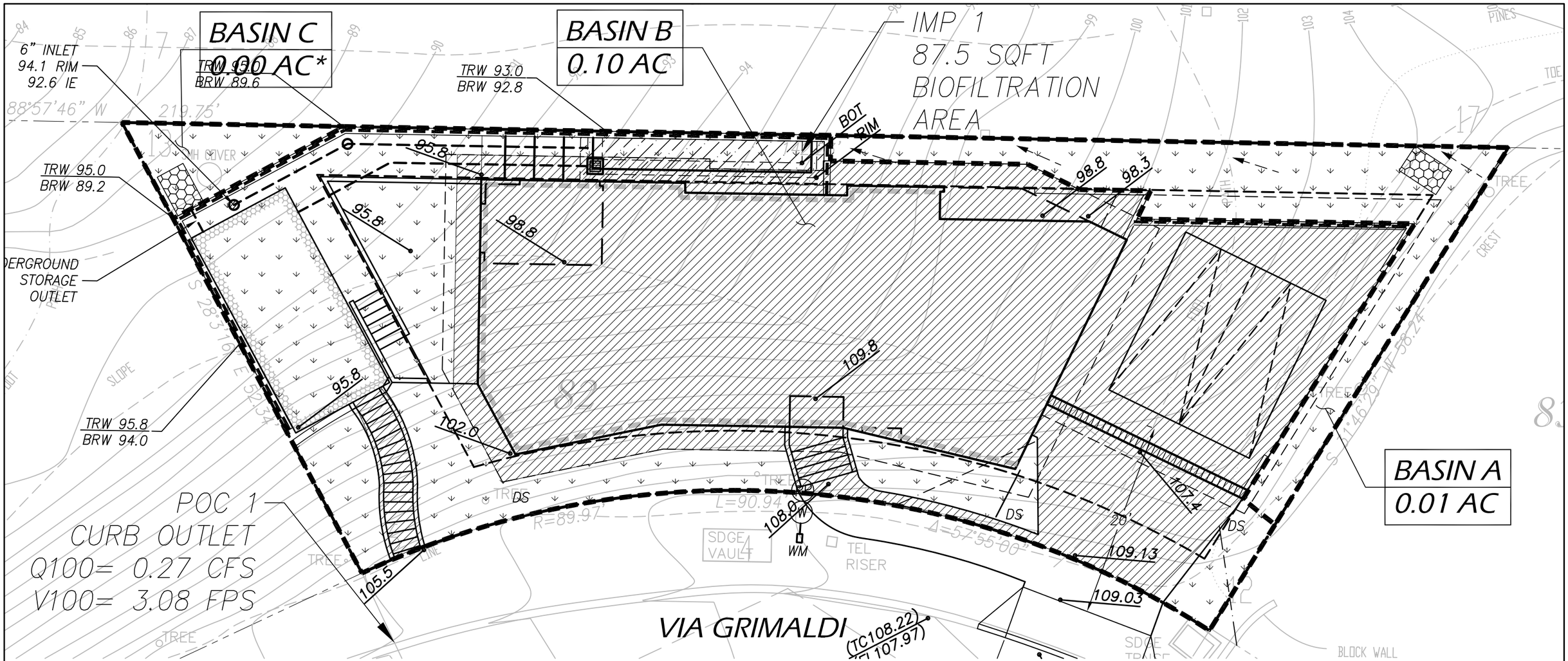
SCALE: 1"=10'

BASIN X: STEEP TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.45
TOTAL AREA: 4,832.83 SQFT = 0.11AC

IMPERVIOUS AREA: 0 SQFT

PERVIOUS AREA: 4,832.83 SQFT

DRAINAGE MAP - (E)
DRAINAGE MANAGEMENT AREAS



BASIN A:

PERVIOUS AREA: 529.06 SQFT

BASIN B:

IMPERVIOUS AREA: 3,017.74 SQFT

PERVIOUS AREA: 1,174.82 SQFT

BASIN C:

PERVIOUS AREA: 111.21 SQFT

N

5 0 5 10 15

SCALE: 1"=10'

BASIN A: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 529.06 SQFT = 0.01AC

BASIN B: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 4,192.56 SQFT = 0.10AC

BASIN C: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 111.21 SQFT = 0.00AC*

*ACTUAL ACREAGE VALUE ROUNDS TO 0.00 AT THE NEAREST HUNDREDTH

SITE CHARACTERISTICS:

HYDROLOGIC SOILS GROUP:	D*
APPROXIMATE DEPTH TO GROUND WATER:	>15'
CRITICAL COARSE SEDIMENT YIELD AREAS:	NONE

*SITE HYDROLOGIC SOILS POTENTIALLY MAY BE CLASS A DETERMINATION WILL BE MADE AFTER A FULL GEOLOGIC AND GROUND WATER INVESTIGATION IS PERFORMED

DRAINAGE MAP - (P)
DRAINAGE MANAGEMENT AREAS

Water Quality Event

Table B - Pre Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
X	0.45	5.00	0.20	0.11	**0.01**	X	Sheet-flow to street
				Sum =	0.01		

Table B - Post Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
A	0.55	5.00	0.20	0.01	**0.00**	A	Divert Off-site
B	0.55	5.00	0.20	0.10	**0.01**	B	Residence
C	0.55	5.00	0.20	0.00	**0.00**	C	Remainder
				Sum =	0.01		

2 Year Storm

Table B - Pre Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
X	0.45	5.00	2.40	0.11	**0.12**	X	Sheet-flow to street
				Sum =	0.12		

Table B - Post Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
A	0.55	5.00	2.40	0.01	**0.01**	A	Divert Off-site
B	0.55	5.00	2.40	0.10	**0.13**	B	Residence
C	0.55	5.00	2.40	0.00	**0.00**	C	Remainder
				Sum =	0.15		

10 Year Storm

Table B - Pre Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
X	0.45	5.00	3.40	0.11	**0.17**	X	Sheet-flow to street
				Sum =	0.17		

Table B - Post Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
A	0.55	5.00	3.40	0.01	**0.02**	A	Divert Off-site
B	0.55	5.00	3.40	0.10	**0.19**	B	Residence
C	0.55	5.00	3.40	0.00	**0.00**	C	Remainder
				Sum =	0.21		

100 Year Storm

Table B - Pre Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
X	0.45	5.00	4.40	0.11	**0.22**	X	Sheet-flow to street
				Sum =	0.22		

Table B - Post Construction Flow Conditions						Table B - Hydraulics of Proposed Structures	
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
A	0.55	5.00	4.40	0.01	**0.02**	A	Divert Off-site
B	0.55	5.00	4.40	0.10	**0.24**	B	Residence
C	0.55	5.00	4.40	0.00	**0.00**	C	Remainder
				Sum =	0.27		

TABLE 2

RUNOFF COEFFICIENTS (RATIONAL METHOD)

DEVELOPED AREAS (URBAN)

Land Use	Coefficient, C Soil Type (1)
	D
Residential:	
Single Family	.55
Multi-Units	.70
Mobile Homes	.65
Rural (lots greater than 1/2 acre)	.45
Commercial (2) 80% Impervious	.85
Industrial (2) 90% Impervious	.95

NOTES:

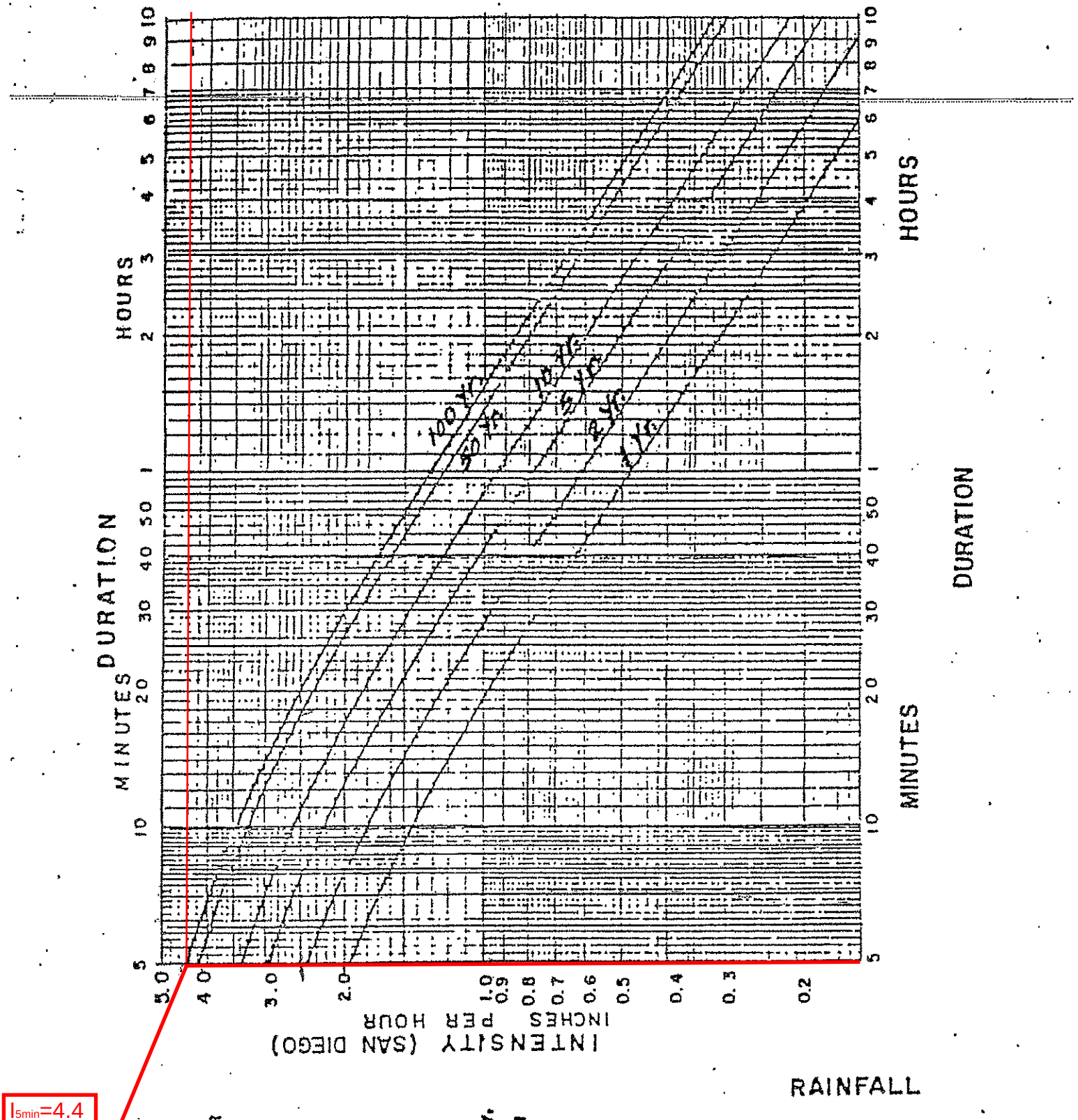
(1) Type D soil to be used for all areas.

(2) Where actual conditions deviate significantly from the tabulated imperviousness values of 80% or 90%, the values given for coefficient C, may be revised by multiplying 80% or 90% by the ratio of actual imperviousness to the tabulated imperviousness. However, in no case shall the final coefficient be less than 0.50. For example: Consider commercial property on D soil.

Actual imperviousness = 50%

Tabulated imperviousness = 80%

Revised C = $\frac{50}{80}$ x 0.85 = 0.53



I_{5min}=4.4

ELEV.	FACTOR
0–1500	1.00
1500–3000	1.25
3000–4000	1.42
4000–5000	1.60
5000–6000	1.70
DESERT	1.25

To obtain correct intensity, multiply intensity on chart by factor for design elevation.

RAINFALL

INTENSITY – DURATION – FREQUEN

CURVES

for

COUNTY OF SAN DIEGO

APPENDIX

ATTACHMENT 6
GEOTECHNICAL AND GROUNDWATER INVESTIGATION REPORT

Attach project's geotechnical and groundwater investigation report. Refer to Appendix C.4 to determine the reporting requirements.

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C. W. La Monte Company Inc.

Soil and Foundation Engineers

UPDATED GEOTECHNICAL REPORT
Proposed Ross Residence
13070 Via Grimaldi
San Diego, CA 92014
A.P.N. 301-061-48

Job No. 15 6610

November 16, 2015

PREPARED FOR:

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November 16, 2015 Job No. 15 6610

TO: Chuck Ross
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San Diego, CA 92130

SUBJECT: **UPDATED GEOTECHNICAL REPORT**
Proposed Ross Residence
13070 Via Grimaldi
San Diego, CA 92014
A.P.N. 301-061-48

REFERENCE: *Architectural Plans , Ross Residence, 13070 Via Grimaldi, San Diego, CA 92014*, by Hubbell & Hubbell, dated October 20, 2015

Report of Soils Investigation, Backus Residence, Via Grimaldi, San Diego, California, by C.W. La Monte Company, dated March 2000

In accordance with your request and our proposal dated October 24, 2015, we are providing an update to the above referenced geotechnical report. Due to the date and scope of work of the prior report, changes to the scope of the proposed project plus changes to the building codes and standard-of-care for the industry, we have compiled a new comprehensive updated report that will **completely replace** the referenced report. The new report provides the design recommendations required by the design team, as well as address current Building Code requirements.

Generally, the building site is underlain with compressible fills and alluvium that require mitigation. Therefore, a deep foundation system is recommended

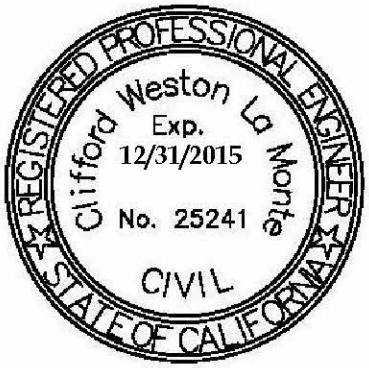
If you should have any questions after reviewing this report, please do not hesitate to contact our office. This opportunity to be of professional service is sincerely appreciated.

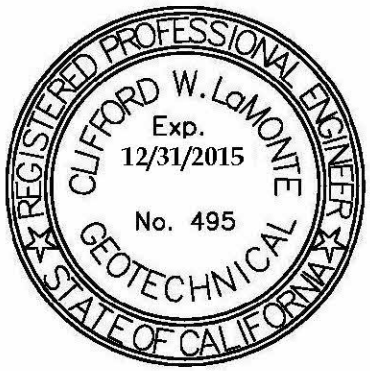
Respectfully submitted,

C.W. La Monte Company Inc.

Jerry Redolfi, Project Engineering Geologist

Clifford W. La Monte, R.C.E. 25241, G.E. 0495





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UPDATED GEOTECHNICAL REPORT
Proposed Ross Residence
13070 Via Grimaldi
San Diego, CA 92014
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PROJECT DESCRIPTION

The following report presents the results of a geotechnical investigation performed for the proposed project site, located at 13070 Via Grimaldi in the Del Mar area of the City of San Diego, California. Figure Number 1 (attached) provides a vicinity map showing the location of the property and area topography. The lot is vacant and approximately 4840 square feet in area. In general, the purpose of our investigation was to provide the foundation and grading recommendations for the proposed residential construction.

It is our understanding that the site is being developed to receive a single family residence with a detached garage. The proposed structure will be a maximum of two stories in height and will be of typical frame construction. We anticipate the structures will be founded on a combination of conventional shallow foundations and deep pier foundations with raised wooden and concrete slab-on-grade floors. Development of the site will utilize a cut and fill grading operation and will include minor cuts into the existing road fill slope and filling the lower elevations of the site. Retaining walls, up to 7 feet in height, will be used to retain cuts into the road fill.

To aid in the preparation of this report, we were provided with the referenced Plan Set. The attached Plot Plan and Geotechnical Map (Figure 2) and field geotechnical mapping was prepared using the Floor Plans from the plan set.

This report has been prepared for the exclusive use of the stated client and his design consultants for specific application to the project described herein. Should the project be changed in any way, the modified plans should be submitted to C.W. La Monte Company, Inc. for review to determine their conformance with our recommendations and to determine if any additional subsurface investigation, laboratory testing and/or recommendations are necessary. Our professional services have been performed, our findings obtained and our recommendations

prepared in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all other warranties, expressed or implied.

SCOPE OF WORK

The scope of this investigation was limited to: surface reconnaissance, research of readily available geotechnical literature pertinent to the site; subsurface exploration, laboratory testing, engineering and geologic analysis of the field and laboratory data and preparation of this report. More specifically, the intent of this investigation was to:

- Identify the subsurface conditions of the site to the depths influenced by the proposed grading and construction.

- Based on laboratory testing and our experience with similar sites in the area, identify the engineering properties of the various strata that may influence the proposed construction, including the allowable soil bearing pressures, expansive characteristics and settlement potential.

- Describe the general geology of the site including possible geologic factors that could have an effect on the site development, and provide seismic design parameters established in the latest edition of the California Building Code.

- Address potential construction difficulties that may be encountered due to soil conditions, groundwater, and provide recommendations concerning these problems.

- Provide mapped spectral acceleration parameters relative to the 2013 CBC

- Develop soil-engineering criteria for site grading.

- Recommend an appropriate foundation system for the type of structure anticipated and develop soil engineering design criteria for the recommended foundation designs.

- Present our opinions in this written report, which includes in addition to our findings and recommendations, a site plan showing the location of our subsurface explorations, logs of the test trenches and a summary of our laboratory test results.

It was not within our scope of work to evaluate the site for hazardous materials contamination.

SITE DESCRIPTION

The project site is located on the north side of Via Grimaldi in the Del Mar Area of the City of San Diego. The property is also bounded on the east by a single-family residence, on the west with a similar vacant lot and on the north by Torrey Pines State Park property. The lot is a vacant and irregular-shaped parcel of land approximately 4840 square feet in area. The property is identified as Assessor's Parcel Number 301-061-48. Refer to the attached Plot Plan and Geotechnical Map (Figure 2) a layout and topography of the property.

The approximate, southern half the property area is comprised of a north facing fill slope, descending from Via Grimaldi. The slope is a maximum of 15 feet in height and is sloped at an approximate 1.3:1 to 2:1 (horizontal to vertical) angle. A step cut slope into sandstone is located across the street. The northern half of the site encroaches onto a narrow alluvial channel, which consists of terrain sloping gently to the west. A west flowing, shallow arroyo is located off-site, but adjacent to the north property line. Actual survey elevations were not available at the time of our investigations. However, a review of area topographic maps indicates elevations roughly ranging from 180 to 200 feet MSL. Relative elevations are provided in the referenced plan set with an elevation differential across the site of about 21 feet (northwest corner low; east end high)

There were no existing structures on the site at the time of our investigation. However, a sewer manhole and easement encroaches onto the northwest corner of the property. The sewer line extends west from the manhole and is approximately 10 feet deep from top to bottom. Vegetation on the site consists of ice plant and light to moderate growth of wild grass, weeds and native shrubs.. Several Torrey Pines are located along the south and east property lines.

DESCRIPTION OF SITE GEOLOGY AND SUBSURFACE CONDITIONS

The site is underlain with Tertiary-aged sandstone, Quaternary-aged terrace deposits and "recent" alluvium. Also a sliver of fill encroaches onto the subject site. The encountered soil types are described individually below in order of increasing age. Also refer to the attached new Test Boring Logs (Figure Nos. 3A through 3E). For reference, the boring logs from the 2000 geotechnical investigation are included as Appendix "C". The original and new borings are located on the Plot Plan and Geotechnical Map, Figure No. 2. Geotechnical cross sections are attached as Figure No. 4A and 4B. A regional geologic map excerpt is included as Figure No. 5.

Artificial Fill (Qaf): As described previously, a road fill slope a maximum of 15 feet in height, descends onto the site from the northern edge of Via Grimaldi. This slope appears to consist of a sliver fill placed over alluvium and natural sandstone deposits. The fills consists of light brown, loose to dense, slightly silty sands.

Young Alluvium (Qya): The lower elevations of the site form a narrow "alluvial plane", which is underlain with alluvium capped with a thin veneer of fill, which is undifferentiated for the purposes of this report. The fill/alluvium was encountered to depths ranging 10 to 17.5 feet below the existing grade in the drainage course area of the site. The alluvium consists primarily of light brown, loose to medium dense, silty to slightly silty fine to medium sand with a little gravel.

Old Paralic Deposits (Qop): The alluvium is underlain with competent, old paralic deposits that were encountered to maximum depth of exploration of 20 feet. The encountered old paralic deposits consists primarily of light brown to orange brown, medium dense to dense, silty sand and clayey sand.

Torrey Sandstone: The Torrey Sandstone Formation forms the "bedding" for the southerly fill slope. The sandstone is also exposed in a near vertical cut slope located on the south side of Via Grimaldi, across from the subject site. The Torrey Sandstone consists of light brown to tan, dense to very dense, silty to slightly silty sand.

A review of *Geology of the San Diego 30' x 60' Quadrangle, California*, (compiled by Michael P. Kennedy and Siang S. Tan, 2005-2008) indicates the site is underlain entirely with the Torrey Sandstone. However, old paralic deposits (specifically Unit

6) are mapped nearby in the same drainage channel (see Figure No. 5) and actually encroach onto the drainage course area of the subject site.

Ground Water: No groundwater was encountered in our test excavations. However, it is anticipated that seasonal perched ground water could potentially develop at the alluvium-sandstone contact under the drainage course area of the site.

It should further, be kept in mind, that any required grading operations may change surface drainage patterns and/or reduce permeability's due to the densification of compacted soils. Such changes of surface and subsurface hydrologic conditions, plus irrigation of landscaping or significant increases in rainfall, may result in the appearance of minor amounts of surface or near-surface water at locations where none existed previously. The damage from such water is expected to be minor and cosmetic in nature, if good positive drainage is implemented at the completion of construction. Corrective action should be taken on a site-specific basis if, and when, it becomes necessary.

STORMWATER INFILTRATION

Our scope of work did not include infiltration testing, since the location of LID improvements have not been provided at this time. However, a preliminary evaluation includes the following conclusions:

Soil Conditions: According to the soil group map from *County of San Diego, BMP Sizing Calculator (website)*, the site is in an unclassified area. However, we would anticipate the alluvial area of the site will fall under Hydrologic Soil Groups (HSG) Group "A". Group "A" soils have a very good infiltration rate when thoroughly wet.

The infiltration rate of the Torrey Sandstone materials can vary depending on grain-size, density and cementation . Additional testing would be required to determine the infiltration rate of the sandstone.

Groundwater: We do not anticipate any limitations to surface bioretention systems, related to groundwater conditions. We anticipate groundwater levels

will exceed 15 feet below the existing grade, based on an evaluation of the area topography and geology.

Conclusion: LID systems that depend on infiltration should be appropriate for if installed in the undisturbed alluvial plane area of the site. We anticipate these alluvial sands will possess very good infiltration rates.

Any infiltration devices planned to be founded in the Torrey Sandstone require infiltration testing at site specific LID locations to verify suitability or feasibility.

Infiltration LID's should not be installed in filled ground.

TECTONIC SETTING

No major faults are known to traverse the subject site but it should be noted that much of Southern California, including the San Diego County area, is characterized by a series of Quaternary-age fault zones, which typically consist of several individual, en echelon faults that generally strike in a south easterly – northwesterly direction. Some of these fault zones (and the individual faults within the zones) are classified as active. According to the criteria of the California Division of Mines and Geology, active fault zones are those, which have shown conclusive evidence of faulting during the Holocene Epoch (the most recent 11,000 years). A local excerpt the 2010, *Fault Activity Map of California* is attached to this report as Figure No. 6.

A review of available geologic maps indicates that the Rose Canyon / Newport - Englewood Fault Zone is the nearest active fault and is located offshore about 4 kilometers west of the site. According to California Department of Conservation, Division of Mines and Geology, *Open-File Report 96-08 / U.S. Department of the Interior, U.S. Geological Survey Open-File Report 96-706*, a 7.1 magnitude earthquake would be the Mmax event along the Rose Canyon Rose Canyon / Newport -Englewood Fault Zone. The Fault Zone is considered a type "B" fault with a slip-rate of 1.5 mm/year. Other active fault zones in the region that could possibly affect the site include the Coronado Bank and San Clemente Fault Zones to the southwest and the Elsinore, Earthquake Valley, San Jacinto, and San Andreas Fault Zones to the northeast. However, a Maximum Magnitude Earthquake on the Rose Canyon –northeast is anticipated to generate ground accelerations on the site, greater than any of these other nearby fault zones.

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 defines active faults as those with evidence of displacement during the Holocene epoch (roughly the past 11,000 years). According to *Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones, of California, Southern Region (DMG CD 2000-003)*, by the California Department of Conservation, the site IS NOT located in or adjacent to an Alquist-Priolo Earthquake Fault Zone.

SEISMIC DESIGN PARAMETERS

This report includes an update to site the seismic parameters of the site to include design information relative to the 2013 edition of the California Building Code. We have determined the mapped spectral acceleration values for the site utilizing U.S. Seismic Design Maps, Version 3.1.0 (July 11, 2013) from the USGS website. The seismic design parameters are specific to the site and provide a solution for Section 1613 of the 2012 IBC (which uses USGS hazard data available in 2008).

The analysis included the following input parameters:

Design Code Reference Document: 2012 IBC

Site Soil Classification: Site Class C

Risk Category: I or II or III

Site Coordinates: 32.93686°N, 117.24981°W

The values generated by the *Design Map Report* are provided in the following table:

TABLE I

Site Coefficients and Spectral Response Acceleration Parameters

S_s	S_1	F_a	F_v	S_{ms}	S_{m1}	S_{ds}	S_{d1}
1.159	0.446	1.0	1.354	1.159	0.604	0.773	0.402

Application to the criteria in Table I for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if ever seismic shaking occurs. The primary goal of seismic design is to

protect life, not to avoid all damage, since such design may be economically prohibitive.

GEOLOGIC HAZARDS

General: No geologic hazards of sufficient magnitude to preclude development of the site as currently proposed are known to exist. In our professional opinion and to the best of our knowledge, the site is suitable for the proposed project.

Ground Shaking: A likely geologic hazard to affect the site is ground shaking resulting from movement along one of the major active fault zones mentioned above. Probable ground shaking levels at the site could range from slight to severe, depending on such factors as the magnitude of the seismic event and the distance to the epicenter. It is likely that the site will experience the effects of at least one moderate to large earthquake during the life of the proposed structure. Construction in accordance with the minimum requirements of the current building codes and local governing agencies should minimize potential damage due to seismic activity.

Landslide Potential and Slope Stability: Our scope of work did not include a detailed slope stability analysis for the hillside terrain. However, a review of the geologic hazards map indicates there are no known deep or suspected ancient landslides located on the site. However, as part of this investigation, we reviewed the publication, "*Landslide Hazards in the Northern Part of the San Diego Metropolitan Area*" by Tan and Giffen, 1995. This reference is a comprehensive study that classifies San Diego County into areas of relative landslide susceptibility. The subject site is located in an area classified as 3-1. The 3-1 is a general classification assigned to areas generally susceptible to slope movement. Slopes within the 3-1 classification are considered at or near their stability limits due to steep slopes and can be expected to fail locally when adversely modified. Sites Within this classification are located outside the boundaries of known landslides but may contain observably unstable slopes that may be underlain by weak materials and/or adverse geologic structure. It should be noted that that this reference, typically classifies most hillside terrain, (that is not underlain by landslides or landslide prone formations) within the 3 category.

No significant unretained cuts are planned for the proposed development and therefore the project is not anticipated to significantly impact the overall site

stability. The site is underlain with generally, massively bedded materials of the Torrey Sandstone Formation. Therefore, according to current geotechnical literature, the potential for deep-seated landsliding within the formational deposits is considered a low risk to the site. It should be noted that existing undocumented fill and slope wash materials draped over the face of the hillside could be subject to soil creep and shallow slope failure. However, the proposed improvements will be founded on stable soil and therefore, should not be significantly impacted by such surficial instability.

Also to consider, concentrations of surface water can result in rapid erosion of these slope materials and should be avoided.

Liquefaction: The materials at the site are not subject to significant liquefaction due to such factors as soil density, grain-size distribution, and groundwater conditions.

Soil Expansion: The foundation level materials at the site are considered to possess a very low expansion potential.

Flooding: The site is located outside the boundaries of both the 100-year and the 500-year floodplains according to the maps prepared by the Federal Emergency Management Agency.

Tsunamis and Seiches: Tsunamis are great sea waves produced by submarine earthquakes or volcanic eruptions. Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays or reservoirs. Based on the project's elevated location, the site is considered to possess a low risk potential from tsunamis or seiche activity.

CONCLUSIONS

In general, we found the subject property suitable for the proposed construction, provided the recommendations provided herein are followed. The most significant findings and geotechnical considerations that will influence site development are summarized below. Detailed recommendations for precede this section of the report.

- The major consideration when developing the property is the presence of the

loose fill and alluvial soils that overlie the site. The combined thickness of these materials may range from approximately 3 to 18 feet below the existing ground surface obtaining the maximum thickness in the alluvial plane area as encountered in Test Boring NB-2. These materials are unsuitable in there present condition to support a conventionally constructed building. The presence of the unsuitable fill soils and underlying alluvial deposits, together with the characteristics of the formational deposits, indicates that specially-designed foundations will most likely be necessary. In order to found the proposed residence on competent formational materials, a deep foundation system consisting of cast- in-place concrete piers and grade beams will likely be required. Where planned site grading will include the complete removal of the fill and colluvium, conventional shallow foundations, which bear upon competent formational materials, may also be utilized.

- As an alternative to a foundation system which bears entirely on the competent formational sandstone, a conventional shallow foundation system which is founded on properly recompacted fill soil would be suitable. This alternative would require the complete removal of all existing fill and alluvial materials, the benching of the slope at the base of the excavation, and the proper recompaction of the removed materials to a minimum of 90 percent the material's maximum dry density (based on ASTM test method D1557). **However, the configuration of the site, including topography and size, will likely cause great difficulties during such operations.** Further, required lateral removals of loose soil would be inhibited by property line constraints and would likely require grading to extend offsite (Typically, removals should extend laterally one-foot for every one-foot of removal depth; a 1:1 ratio). Also to consider an engineered, geogrid reinforced fill can be reconstructed to reduce the required lateral removals.

  If however, the existing fill and colluvium can be properly removed and recompacted as structural fill, a conventional shallow foundation may, depending upon the proposed structural loads, be suitable. If such remedial earthwork operations are planned, please contact this office so that we may obtain anticipated structure loads and provide you with additional recommendations.

- As described previously, existing fill slope descends from Via Grimaldi and form the south end of the property. The slope is composed of undocumented fill and is, therefore, not considered adequately to stable (to contemporary

standards). The existing slopes can be reconstructed by remedial grading, but would need to be reconstructed to a 2:1 (horizontal to vertical) inclination extending the toe-slope further to the north (from the existing location). Also grading may prove challenging due to utilities in the road shoulder plus a row of Torrey Pines along the top of slope.

Alternately, the City of San Diego will likely allow the existing fill slope to remain, undisturbed. However, an *Uncontrolled Embankment* document will likely be required in association with the property.

- The soil materials encountered at the above subject site possess a very low expansion potential (expansion index [EI] less than 20) as defined by ASTM D4829. Recommendations for heaving soils are not required.

- We anticipate the proposed structure will be founded entirely on competent formational deposits. Therefore, no significant transition (cut/fill) conditions are anticipated at the completion of grading.

EARTH WORK AND GRADING

Specification Guidelines

All grading should conform to the guidelines presented in this report, Sections 1804, J107, J108, J109 and J110S of the 2013 California Building Code, the minimum requirements of the City of San Diego, and the Standard Grading and Construction Specifications, Appendix "A", attached hereto, except where specifically superseded in the text of this report. Prior to grading, a representative of C.W. La Monte Company Inc. should be present at the preconstruction meeting to provide additional grading guidelines, if necessary, and to review the earthwork schedule.

Observation and testing by the soil engineer is essential during the grading operations. This allows the soil engineer to confirm the conditions anticipated by our investigation, to allow adjustments in design criteria to reflect the actual field conditions exposed, and to determine that the grading proceeds in general accordance with the recommendations contained herein

Fill Suitability

On-site excavated materials may be used as compacted fill material or backfill. The on-site materials are anticipated to posses a very low- to low-expansion potential.. Grading may generate oversize rock, which should be handled as discussed in the following report section. Any potential import soil sites should be evaluated and approved by the Geotechnical Consultant prior to importation at least two working days notice of a potential import source should be given to the Geotechnical Consultant so that appropriate testing can be accomplished. The type of material considered most desirable for import is a non-detrimentally expansive granular material with some silt or clay binder.

Site Preparation

Site preparation should begin with the removal of all vegetation and other deleterious materials from the portion of lot that will be graded and that will receive improvements. This should include all root balls from the trees removed and all significant root material. The resulting materials should be disposed of off-site. We anticipate the structure will be supported on a deep foundation extending into the underlying formational soil (without remedial grading), and no significant remedial grading is anticipated. As such, the specifications included in this report do not specify all remedial grading requirements. Should the scope of the project change to include remedial grading, we should be contacted to provide the necessary site preparation recommendations and grading specifications

Excavation Characteristics

The on-site alluvium and fill material is likely to be excavated with easy to moderate effort using large excavating equipment. However, any deep excavations into the Torrey Sandstone may be more challenging. No significant amounts oversize material is anticipated.

Compaction and Method of Filling

All structural fill placed at the site should be compacted to a relative compaction of at least 90 percent of its maximum dry density as determined by ASTM Laboratory Test D1557-91 guidelines. Fills should be placed at or slightly above optimum moisture content, in lifts six to eight inches thick, with each lift compacted by mechanical means. Fills should consist of approved earth material, free of trash or debris, roots, vegetation, or other materials determined to be unsuitable by our soil technicians or project geologist. All material should be free of rocks or lumps of soil in excess of twelve inches in maximum width. However, in the upper two feet of pad grade, no rocks or lumps of soil in excess of six inches should be allowed.

Utility trench backfill within five feet of the proposed structure and beneath all pavements and concrete flatwork should be compacted to a minimum of 90 percent of its maximum dry density. The upper one-foot of pavement subgrade and base material should be compacted to at least 95 percent relative density. All grading and fill placement should be performed in accordance with the local Grading Ordinance, the 2013 California Building Code, and the *Standard Grading and Construction Specifications,* attached hereto as Appendix A.

Manufactured Slope Construction

Any new and permanent cut and fill slopes should be constructed at an inclination of 2:1 or flatter (horizontal to vertical). Such slopes would be considered adequately stable.

Compaction of constructed fill slopes should be performed by back-rolling with a sheepsfoot compactor at vertical intervals of four feet or less as the fill is being placed, and track-walking the face of the slope when the slope is completed. As an alternative, the fill slopes may be overfilled by at least three feet and then cut back to the compacted core at the design line and grade.

Surface Drainage

Per Section 1804 of the California Building Code, in general, the ground immediately adjacent to foundations shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5-percent slope) for a minimum distance of 10 feet (3048 mm) measured perpendicular to the face of the wall. If physical obstructions or lot lines prohibit 10 feet (3048 mm) of horizontal

distance, a 5-percent slope shall be provided to an approved alternative method of diverting water away from the foundation. Swales used for this purpose shall be sloped a minimum of 2 percent where located within 10 feet (3048 mm) of the building foundation. Impervious surfaces within 10 feet (3048 mm) of the building foundation shall be sloped a minimum of 2 percent away from the building.

Exceptions are allowed where climatic or soil conditions warrant, the slope of the ground away from the building foundation shall be permitted to be reduced to not less than one unit vertical in 48 units horizontal (2-percent slope). The procedure used to establish the final ground level adjacent to the foundation shall account for additional settlement of the backfill.

Erosion Control

In addition, appropriate erosion-control measures shall be taken at all times during construction to prevent surface runoff waters from entering footing excavations, ponding on finished building pad or pavement areas, or running uncontrolled over the tops of newly-constructed cut or fill slopes. Appropriate Best Management Practice (BMP) erosion control devices should be provided in accordance with local and federal governing agencies.

Temporary Cut Slopes

Temporary cut slopes, up to 8 feet in height, are planned for the proposed retaining walls. We anticipate temporary slopes may be excavated at a minimum inclination of 1.0:1.0 (horizontal to vertical) In addition, a short vertical cut will be allowable at the base to accommodate the foundation excavation into formation. The stability of temporary slopes should be verified by the geotechnical consultant at the time of excavation.

No surcharge loads such as stockpiles, vehicles, etc. should be allowed within a distance from the top of temporary slopes equal to half the slope height. Further care should be taken not to undermine adjacent improvements by the placement of temporary excavations.

It should be noted that the contractor is solely responsible for designing and constructing stable, temporary excavations and may need to shore, slope, or bench the sides of trench excavations as required to maintain the stability of the

excavation sides where friable sands or loose soils are exposed. The contractor's "responsible person", as defined in the OSHA Construction Standards for Excavations, 29 CFR, Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety process. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. Actual safe slope angles should be verified by the geotechnical consultant at the time of excavation. Temporary cut slopes sloped at the recommended inclinations may not be feasible in some areas due to structure constraints. If such is the case, excavation shoring should be provided in such locations where undermining or other damage to adjacent structures and improvements is an issue.

Grading Plans Review

The finalized grading plans, if significantly different from the referenced plans, should be submitted to this office for review to ascertain that the recommendations provided in this report have been followed and that the assumptions utilized in its preparation are still valid. Additional or amended recommendations may be issued based on this review.

FOUNDATIONS

Due to presence of undocumented fill and compressible alluvium, the proposed structure shall be founded on deep foundation system that extends through the loose fill and slope wash and into dense formational bedrock materials. The new foundation should consist of a structurally designed pier and post foundation system supporting a structural beam. The concrete pier foundation system essentially bridges the structure over the loose soil section. Where cuts expose bedrock at or near the finish surface conventional foundations may be utilized in conjunction with the pier system. Specific foundation recommendations and design criteria are detailed in the below sections.

DEEP FOUNDATION SYSTEMS

GENERAL: Augered, cast-in-place concrete piers which are tied together with concrete reinforced grade beams, are considered suitable for support of the

structure loads of the proposed residence. Pier support will be afforded by end bearing within the dense to very dense formational materials.

MINIMUM PIER DIMENSIONS: All drilled, cast-in-place concrete piers should extend at least three feet into undisturbed, firm formational soils and have a minimum diameter of 24 inches. All piers should extend a minimum of five feet into the competent formational sandstone, and should be designed by the project structural engineer. Piers should also be reinforced in accordance with the recommendations of the project structural engineer. The reinforcing cage should extend the full height of the pier.

BEARING CAPACITY: Incorporating the minimum dimensions recommended, the cast-in-place concrete piers may be designed for an allowable downward axial bearing capacity of 5000 per square foot. This value may be increased by 800 psf for each additional foot of pier depth, up to a maximum allowable bearing capacity of 8000 per square foot.

LATERAL PIER CAPACITY: The passive pressure for the formational materials may be considered to be 350 pounds per square foot per foot of depth, up to a maximum value of 2,500 psf. These values may be assumed to act on an area equal to twice the pier diameter.

CLEANING OF PIER EXCAVATIONS: If 24-inch diameter piers are used, the cleaning of the bottom of the pier excavation may be performed by careful operations of the driller and back-spinning the drill auger under pressure or utilizing a clean-out plate. For larger diameter piers, hand cleaning may be required. This will be determined by the observation of a geologist or engineer from our staff during the excavation of the piers.

SHALLOW FOUNDATIONS

FOUNDATION DIMENSIONS: If planned site grading removes all fill and colluvial materials in areas to receive settlement-sensitive structure, new spread footings may be used for structural support provided they are embedded in undisturbed, competent formational sandstone. Refer to the attached cross sections.

Spread footings to support the structural loads of one and two-story portions of the residence should be embedded at least twelve to eighteen inches

(respectively) into the dense to very dense formational sandstone. It should be understood that based upon the observation of our field representative, deeper embedment depths may be necessary. Continuous footings to support one and two-story portions of the proposed residence should be at least twelve and fifteen inches in width (respectively), while isolated spread footing should be minimally dimensioned at twenty-four inches in width or diameter.

BEARING CAPACITY: Conventional spread footings which bear entirely in undisturbed formational deposits and with the above minimum dimensions may be designed for an allowable soil bearing pressure of 3,000 pounds per square foot (psf). This value may be increased 750 psf and 400 psf for each additional foot of footing depth and width, respectively, up to a maximum of 5000 psf. The bearing value may also be increased by one-third when considering temporary loads such as those due to wind or seismic loads.

FOOTING REINFORCING: Reinforcement requirements for new foundations should be provided by the project structural engineer. However, based on the existing soil conditions, we recommend that the minimum reinforcing for continuous footings consist of at least one No. 5 bar positioned three inches above the bottom of the footing and one No. 5 bar positioned two inches below the top of the footing.

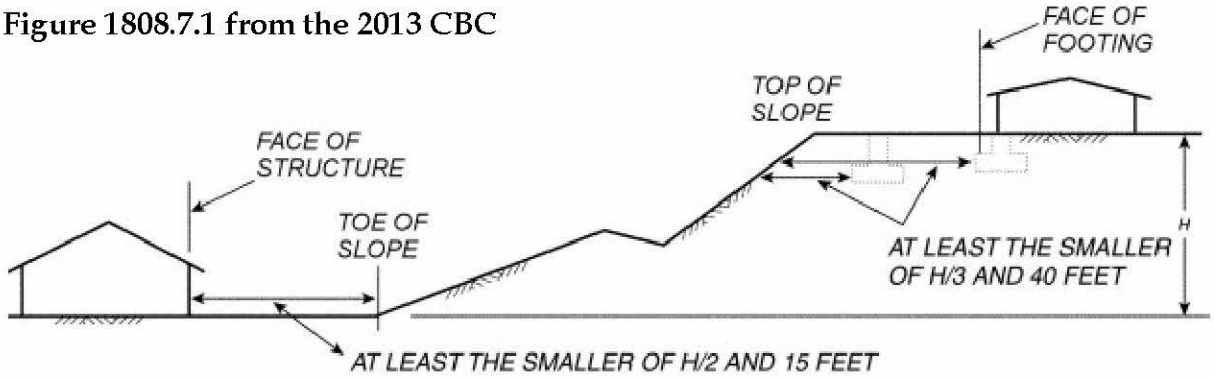
LATERAL LOAD RESISTANCE: Lateral loads against foundations may be resisted by friction between the bottom of the footing and the supporting soil, and by the passive pressure against the footing. The coefficient of friction between concrete and soil may be considered to be 0.40. The passive resistance may be considered to be equal to an equivalent fluid weight of 350 pounds per cubic foot. This assumes the footings are poured tight against undisturbed formational materials. The upper foot of soil should be neglected when calculating the passive resistance of the soil acting upon footings. If a combination of the passive pressure and friction is used, the friction value should be reduced by one-third.

Horizontal Distance of Footings from Slopes

According to Section 1808.7 (Foundation on or adjacent to slopes), of the 2013 California Building Code foundations on or adjacent to slope surfaces shall be

founded in firm material with an embedment and set back from the slope surface sufficient to provide vertical and lateral support for the foundation without detrimental settlement. Generally, setbacks should conform to Figure 1808*A*.7.1, which is reproduced below. Where the slope is steeper than 1 unit vertical in 1 unit horizontal (100-percent slope), the required setback shall be measured from an imaginary plane 45 degrees to the horizontal, projected upward from the toe of the slope.

Figure 1808.7.1 from the 2013 CBC



Foundation Excavation Observation

The general contractor is responsible for implementing the foundation recommendations in this report. All foundation excavations should be observed by the Geotechnical Consultant prior to placing reinforcing steel and formwork in order to verify compliance with the foundation recommendations presented herein. All footing excavations should be excavated neat, level and square. All loose or unsuitable material should be removed prior to the placement of concrete.

Foundation Plans Review

The finalized, foundation plans should be submitted to this office for review to ascertain that the recommendations provided in this report have been followed and that the assumptions utilized in its preparation are still valid. Additional or amended recommendations may be issued based on this review.

CONCRETE SLABS-ON-GRADE

Interior Floor Slabs

The minimum floor slab thickness should be 4 inches. The floor slabs should be reinforced with at least No. 3 bars placed at 18 inches on center each way. Slab reinforcing should be supported by chairs and be positioned at mid-height in the floor slab. This recommendation does not supersede the section required for structural considerations.

Exterior Concrete Flatwork

On-grade exterior concrete slabs for walks and patios should have a thickness of four inches and should be reinforced with at least No. 3 reinforcing bars placed at 24 inches on center each way. Exterior slab reinforcement should be placed approximately at mid-height of the slab. Reinforcement and control joints should be constructed in exterior concrete flatwork to reduce the potential for cracking and movement. Joints should be placed in exterior concrete flatwork to help control the location of shrinkage cracks. Spacing of control joints should be in accordance with the American Concrete Institute specifications. Where slabs abut foundations they should be doweled into the footings.

SLAB MOISTURE BARRIERS

A moisture barrier system is recommended beneath any new interior slab-on-grade floors with moisture sensitive floor coverings or coatings to help reduce the upward migration of moisture vapor from the underlying subgrade soil. A properly selected and installed vapor retarder is essential for long-term moisture resistance and can minimize the potential for flooring problems related to excessive moisture.

Interior floor slabs should be underlain by a minimum 10-mil thick moisture retarder product over a two-inch thick layer of clean sand (Please note, additional moisture reduction and/or prevention measures may be needed, depending on the performance requirements for future floor covering products). The moisture retarder product used should meet or exceed the performance standards dictated by ASTM E 1745 Class A material and be properly installed in accordance with ACI publication 302 (*Guide to Concrete Floor and Slab Construction*) and ASTM E1643

(*Standard Practice for Installation of Water Vapor Retarder Used in Contact with Earth or Granular Fill Under Concrete Slabs).* Ultimately, the design of the moisture retarder system and recommendations for concrete placement and curing are purview of the structural engineer, in consideration of the project requirements provided by the project architect and developer.

Moisture Retarders and Installation

Vapor retarder joints must have at least 6-inch-wide overlaps and be sealed with mastic or the manufacturer's recommended tape or compound. No heavy equipment, stakes or other puncturing instruments should be used on top of the liner before or during concrete placement. In actual practice, stakes are often driven through the retarder material, equipment is dragged or rolled across the retarder, overlapping or jointing is not properly implemented, etc. All these construction deficiencies reduce the retarders' effectiveness. It is the responsibility of the contractor to ensure that the moisture retarder is properly placed in accordance with the project plans and specifications and that the moisture retarder material is free of tears and punctures and is properly sealed prior to the placement of concrete.

Interior Slab Curing Time

Following placement of concrete floor slabs, sufficient drying time must be allowed prior to placement of floor coverings. Premature placement of floor coverings may result in degradation of adhesive materials and loosening of the finish floor materials. Prior to installation, standardized testing (calcium chloride test and/or relative humidity) should be performed to determine if the slab moisture emissions are within the limits recommended by the manufacturer of the specified floor-covering product.

DESIGN PARAMETERS FOR EARTH RETAINING STRUCTURES

The below foundation values are provided for conventional shallow foundations.

Passive Pressure: The **passive pressure** for the prevailing soil conditions may be considered to **be 350 pounds per square foot** per foot of depth. This pressure may be increased one-third for seismic loading. The **coefficient of friction** for concrete to soil may be assumed to be **0.4** for the resistance to lateral movement. When

combining frictional and passive resistance, the friction value should be reduced by one-third.

Soil Bearing Value

Conventional spread footings with the above minimum dimensions may be designed for an allowable soil bearing pressure of **2,500 pounds per square foot** for foundation bearing in compacted fill or firm natural ground.

Active Pressure for Retaining Walls

Active Pressure for Retaining Walls: Lateral pressures acting against masonry and cast-in-place concrete retaining walls can be calculated using soil equivalent fluid weight. The equivalent fluid weight value used for design depends on allowable wall movement. Walls that are free to rotate at least 0.5 percent of the wall height can be designed for the active equivalent fluid weight. Retaining walls that are restrained at the top (such as basement walls), or are sensitive to movement and tilting should be designed for the at-rest equivalent fluid weight.

Values given in the table below are in terms of equivalent fluid weight and assume a triangular distribution.

Table II
Equivalent Fluid Weights (efw) For Calculating Lateral Earth Pressures
(Using "Select" Onsite Backfill)

Surface slope of Retained material Horizontal to vertical*	Cantilever equivalent Fluid weight *(active* pressure) (pcf)	Restrained equivalent Fluid weight *(at-rest* pressure) (pcf)
LEVEL	30	60
2 to 1	43	73

Pressures for Seismic Ground Motions: Using a K_h value of 0.13 the modified equivalent fluid pressure (EFP) due to earthquake ground motion **is 16 pcf**. This is

an inverted triangular distribution. The point of application of the resultant force of the seismic EFP is located at approximately 0.6H (H=Height of the retaining wall) above the base of the wall. The above seismic force should be used in addition to the "static" or at-rest earth pressure.

Vehicular Loads: In the case of vehicular loads coming closer than one-half the height of the wall, we recommend a live load surcharge pressure equal to not less than 2 feet of soil surcharge with an average unit weight of 125 pcf.

Waterproofing and Drainage

In general, retaining walls should be provided with a drainage system adequate to prevent the buildup of hydrostatic forces and waterproofed as specified by the project architect. **Also refer to American Concrete Institute ACI 515.R (A Guide to the Use of Waterproofing, Damp Proofing, Protective and Decorative Barriers Systems for Concrete).**

Positive drainage for retaining walls should consist of a vertical layer of permeable material positioned between the retaining wall and the soil backfill. Such permeable material may be composed of a composite drainage geosynthetic or a natural permeable material such as crushed rock or clean sand at least 12 inches thick and capped with at least 12 inches of backfill soil. The gravel should be wrapped in a geosynthetic filter fabric. Provisions should be made for the discharge of any accumulated groundwater. The selected drainage system should be provided with a perforated collection and discharge pipe placed along the bottom of the permeable material near the base of the wall. The drain pipe should discharge to a suitable drainage facility. A typical retaining wall detail is attached as Figure No. 7A. If lateral space (due to property line constraints) is insufficient to allow installation of the gravel-wrapped "burrito" drain, a geocomposite system may be used in lieu of the typical gravel and pipe subdrain system. TenCate's MiraDrain (and similar products) provide a "low-profile" drainage system that requires minimal lateral clearance for installation. See Figure No. 7B for a typical MiraDrain detail, which is provided by the manufacturer. MiraDRAIN and similar products may also be incorporated into a waterproofing system and provide a slab drainage system (Please note that supplemental manufacturer's details will be required to provide a waterproofed system).

Please note natural stone gravity walls do not require a subdrainage system unless specifically recommended by the design engineer (due the abundant openings between rocks).

Backfill

All backfill soils should be compacted to at least 90% relative compaction. The typical on-site clay (CH) materials **are not** suitable for retaining wall backfill. Soil with an expansion index (EI) of greater than 50 should not be used as backfill material behind retaining walls. The wall should not be backfilled until the masonry has reached an adequate strength.

LIMITATIONS

The recommendations presented in this report are contingent upon our review of final plans and specifications. Such plans and specifications should be made available to the Geotechnical Engineer and Engineering Geologist so that they may review and verify their compliance with this report and with California Building Code. It is recommended that C.W. La Monte Company Inc. be retained to provide soil engineering services during the construction operations. This is to verify compliance with the design concepts, specifications or recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to start of construction.

The recommendations and opinions expressed in this report reflect our best estimate of the project requirements based on an evaluation of the subsurface soil conditions encountered at the subsurface exploration locations and on the assumption that the soil conditions do not deviate appreciably from those encountered. It should be recognized that the performance of the foundations and/or cut and fill slopes may be influenced by undisclosed or unforeseen variations in the soil conditions that may occur in the intermediate and unexplored areas. Any unusual conditions not covered in this report that may be encountered during site development should be brought to the attention of the Geotechnical Engineer so that he may make modifications if necessary.

Our firm will not be responsible for the safety of personnel other than our own on the site; the safety of others is the responsibility of the Owner and Contractor. The Contractor should notify the Owner if he considers any of the recommended actions presented herein to be unsafe.

This office should be advised of any changes in the project scope or proposed site grading so that we may determine if the recommendations contained herein are

appropriate. It should be verified in writing if the recommendations are found to be appropriate for the proposed changes or our recommendations should be modified by a written addendum.

The findings of this report are valid as of this date. Changes in the condition of a property can occur, however, with the passage of time, whether they are due to natural processes or the work of man on this or adjacent properties. In addition, changes in the Standards-of-Practice and/or Government Codes may occur. Due to such changes, the findings of this report may be invalidated wholly or in part by changes beyond our control. Therefore, this report should not be relied upon after a period of two years without a review by us verifying the suitability of the conclusions and recommendations.

In the performance of our professional services, we comply with that level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions and in the same locality. The client recognizes that subsurface conditions may vary from those encountered at the locations where our borings, surveys, and explorations are made, and that our data, interpretations, and recommendations are based solely on the information obtained by us. We will be responsible for those data, interpretations, and recommendations, but shall not be responsible for the interpretations by others of the information developed. Our services consist of professional consultation and observation only, and no warranty of any kind whatsoever, express or implied, is made or intended in connection with the work performed or to be performed by us, or by our proposal for consulting or other services, or by our furnishing of oral or written reports or findings.

It is the responsibility of the stated client or their representatives to ensure that the information and recommendations contained herein are brought to the attention of the structural engineer and architect for the project and incorporated into the project's plans and specifications. It is further their responsibility to take the necessary measures to insure that the contractor and his subcontractors carry out such recommendations during construction.

The firm of C.W. La Monte Co. Inc. shall not be held responsible for changes to the physical condition of the property, such as addition of fill soils or changing drainage patterns, which occur subsequent to the issuance of this report.

SITE LOCATION AND TOPOGRAPHIC MAP

Excerpts from USGS Topographic Maps Del Mar and Del Mar OE-W Quadrangles, 7.5-Minute Series, 2015

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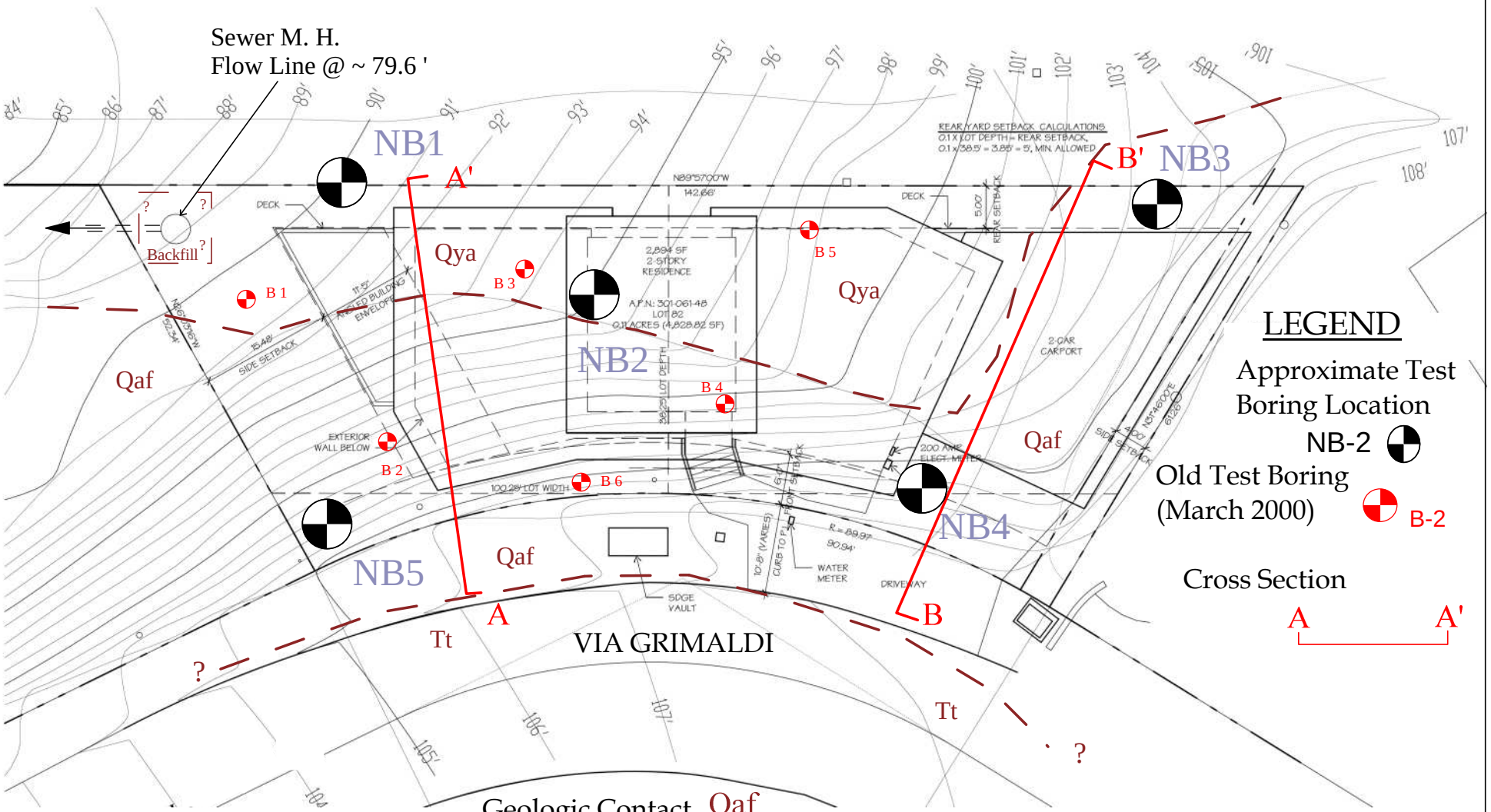
Soil and Foundation Engineers

Figure No. 1

PLOT PLAN (EXISTING SITE CONDITONS)



C. W. La Monte Company Inc.
Soil and Foundation Engineers

ROSS RESIDENCE
13070 VIA GRIMALDI
SAN DIEGO, CA 92014

Figure No. 2

Log of Test Boring No. NB-1

Surface Elevation: 89.5' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	SAMPLES BULK	SAMPLES DRIVEN	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
5						SM	**ALLUVIUM (Qya)** Orange brown, light brown and brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand. Minor caving upper 1.5 feet
10							
15						SM	**OLD PARALIC DEPOSITS (Qop_6)** Orange brown & light brown, medium dense to dense, slightly moist, silty, fine to medium sand.
20							**Excavation Bottom** No Groundwater *Relative Elevation per plan

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FIGURE NO. 3 A

Log of Test Boring No. NB-2

Surface Elevation: 95' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	SAMPLES BULK	SAMPLES DRIVEN	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
5						SM	**ALLUVIUM (Qya)** Orange brown, light brown and brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand. Minor caving upper 1.5 feet
10							
15							**OLD PARALIC DEPOSITS (Qop_6)** Orange brown & light brown, medium dense to dense, slightly moist, silty sand and clayey sand.
						SM SC	No Groundwater
20							**Excavation Bottom**

* Relative Elevation per plan

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FIGURE NO. 3B

Log of Test Boring No. NB-3

Surface Elevation: 103.5' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	SAMPLES BULK	SAMPLES DRIVEN	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
						SM	**FILL (Qaf)** Light brown, dry, loose, silty, fine to medium sand.
5						SM	**ALLUVIUM (Qya)** Orange brown, light brown and brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand.
10						SM SC	**OLD PARALIC DEPOSITS (Qop_6)** Orange brown & light brown, medium dense to dense, slightly moist, silty sand and clayey sand.
15							**Excavation Bottom** No Groundwater *Relative Elevation per plan
20							

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San Diego, CA 92014

FIGURE NO. 3 C

Log of Test Boring No. NB-4

Surface Elevation: 107' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	SAMPLES BULK	SAMPLES DRIVEN	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
5						SM	**FILL (Qaf)** Orange brown, light brown and brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand. Minor caving upper 1 foot
10						SM	**COLLUVIUM / ALLUVIUM** Dark brown, slightly moist, loose to medium dense, slightly silty, fine to medium sand.
15						SM	**TORREY SANDSTONE (Tt)** Light brown, very dense, slightly moist, silty sandtone.
20							**Excavation Bottom** No Groundwater *Relative Elevation per plan

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PROJECT: Proposed Ross Residence
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San Diego, CA 92014

FIGURE NO. 3 D

Log of Test Boring No. NB-5

Surface Elevation: 103' * **Date:** 11/3/2015 **Logged By:** JBR
Drilling Method: 4" Dia. Hand Auger
Sampling Methods: 2.5" I.D. California Sampler (CA)

DEPTH (feet)	SAMPLES BULK	SAMPLES DRIVEN	BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (PCF)	CLASSIFICATION U.S.C.S	DESCRIPTION OF SUBSURFACE CONDITIONS
						SM	**FILL (Qaf)** Light brown, slightly moist, loose to medium dense, silty, fine to medium sand.
5						SM	**TORREY SANDSTONE (Tt)** Light brown, very dense, slightly moist, silty sandtone.
10							**Excavation Bottom** No Groundwater *Relative Elevation per plan
15							
20							

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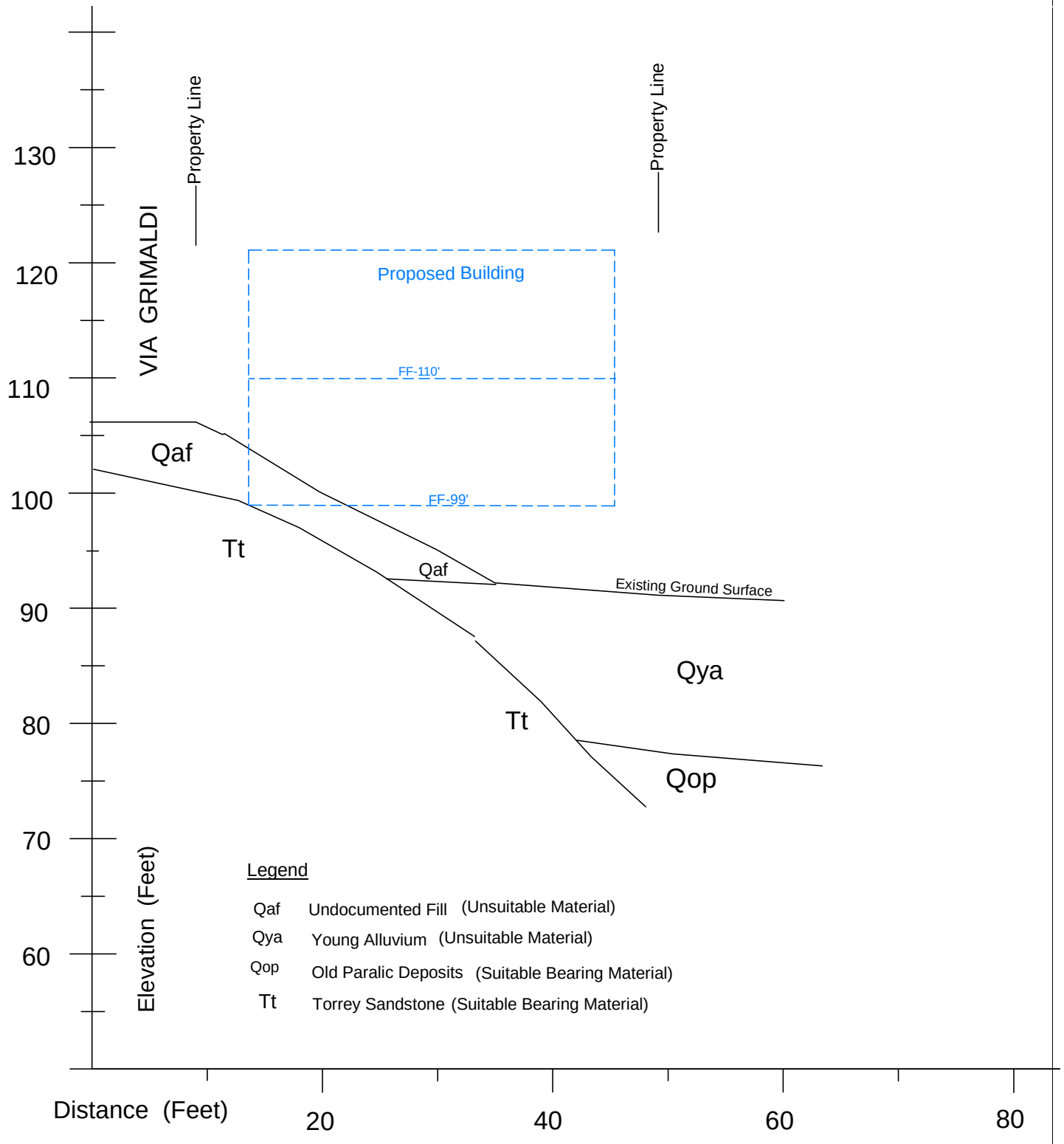
13070 Via Grimaldi
San Diego, CA 92014

FIGURE NO. 3 E

CROSS SECTION A-A'



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SAN DIEGO, CA 92014

FIGURE NO. 4 A

CROSS SECTION B-B'

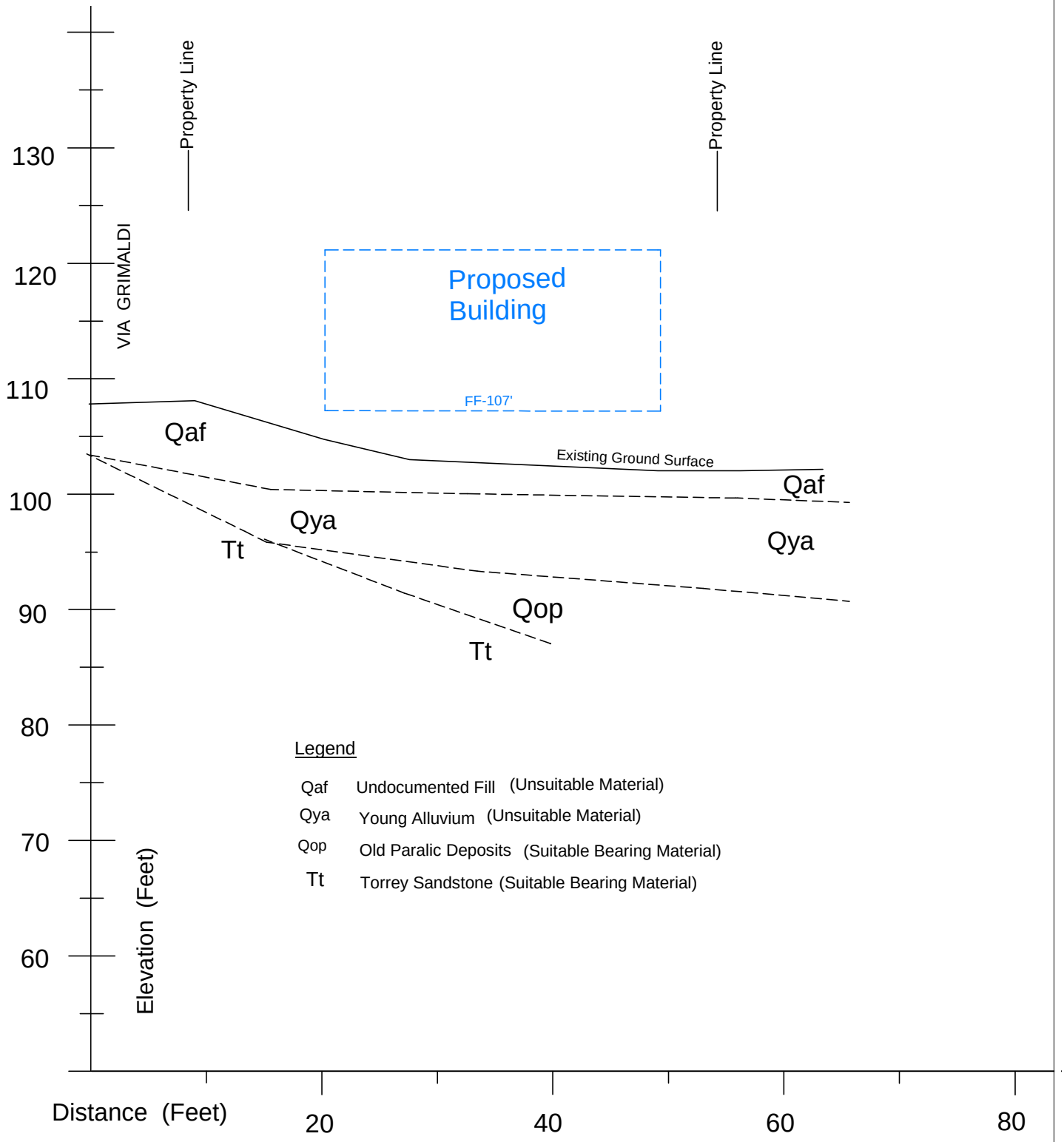

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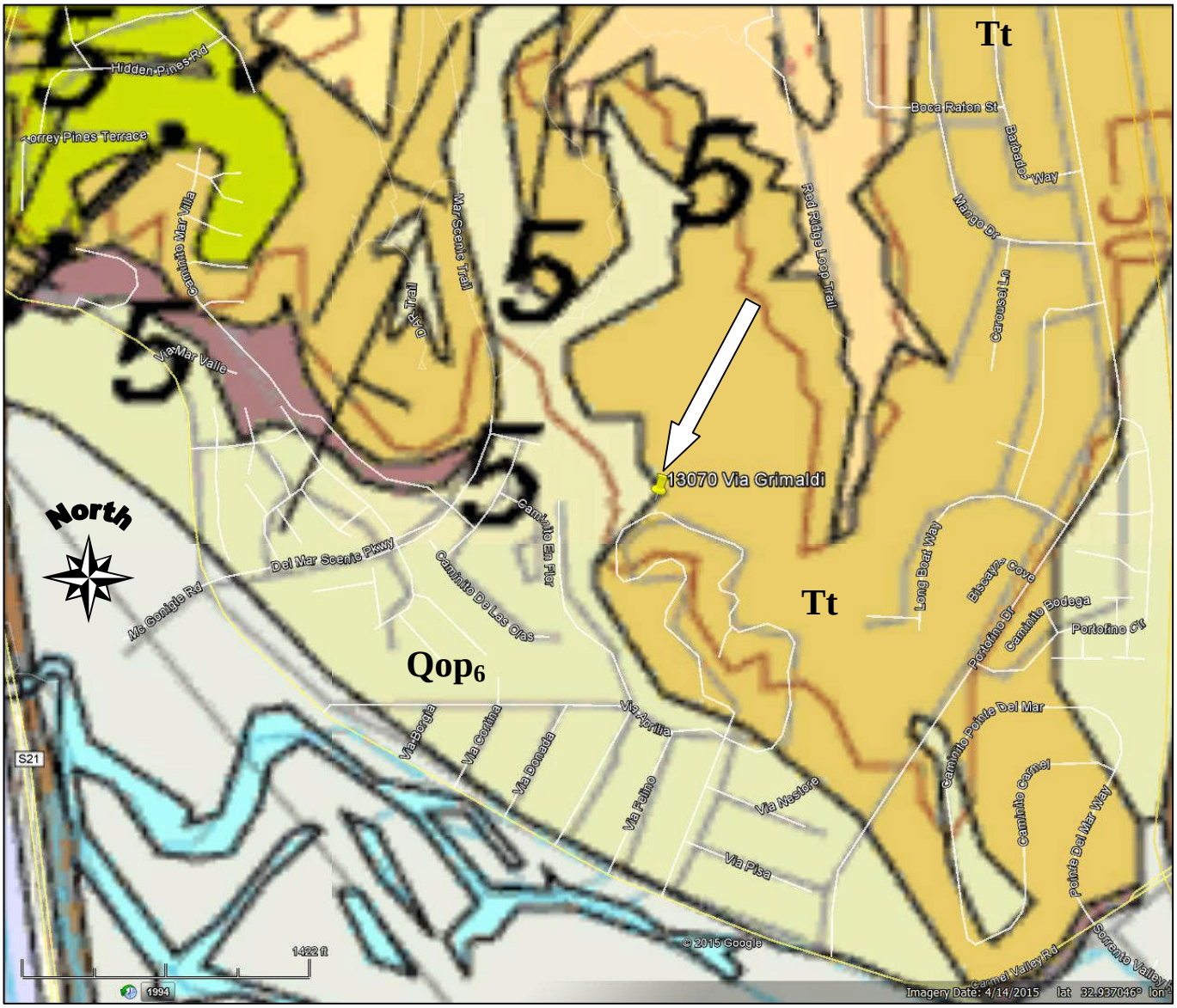
FIGURE NO. 4 B

GEOLOGY MAP EXCERPT

13070 Via Gramaldi
Del Mar, CA



Excerpt from *Geology of the San Diego 30′ x 60′ Quadrangle, California, Compiled by Michael P. Kennedy and Siang S. Tan, 2005*

LEGEND (Localized)

Qop_6 = Old paralic deposits, Unit 6

Tt = Torrey Sandstone

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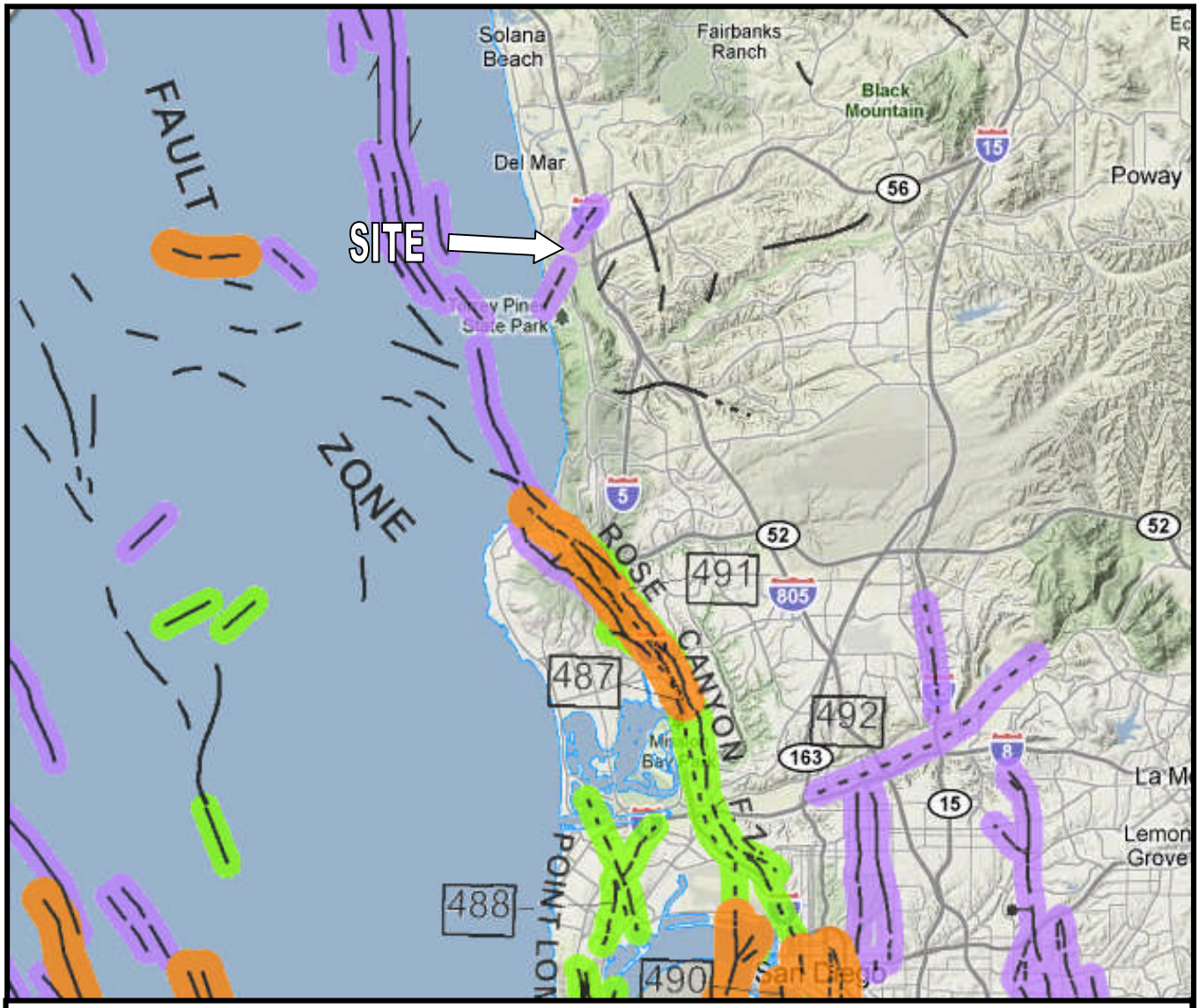
Figure No 5

Excerpt from: 2010 Fault Activity Map of California
California Geological Survey, Geologic Data Map No. 6



SUMMARY EXPLANATION

Fault traces on land are indicated by solid lines where well located, by dashed lines where approximately located or inferred, and by dotted lines where concealed by younger rocks or by lakes or bays. Fault traces are queried where continuation or existence is uncertain.

FAULT CLASSIFICATION COLOR CODE (Indicating Recency of Movement)

Fault along which historic (last 200 years) displacement has occurred:

Holocene fault displacement (during past 11,700 years) without historic record.

Late Quaternary fault displacement (during past 700,000 years).

Quaternary fault (Age undifferentiated)

Pre-Quaternary fault (older that 1.6 million years) or fault without recognized Quaternary displacement.

Figure No. 6

Excerpt From Map 38 City of San Diego
SEISMIC SAFETY STUDY Geologic Hazards and Faults

13030 Via Gramaldi, Del Mar, CA

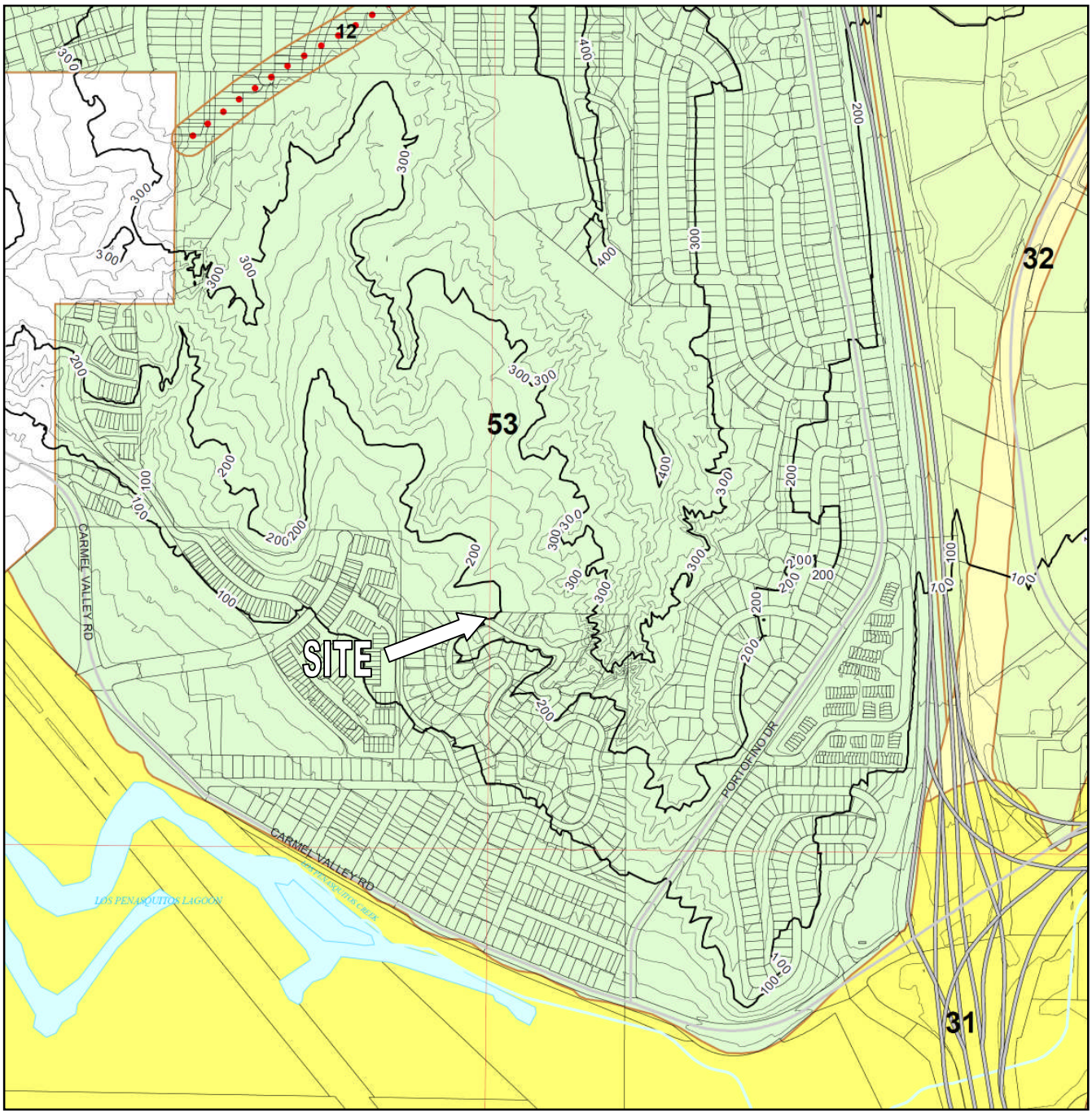


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Figure No. 7

TYPICAL RETAINING WALL SECTION

(No Scale)

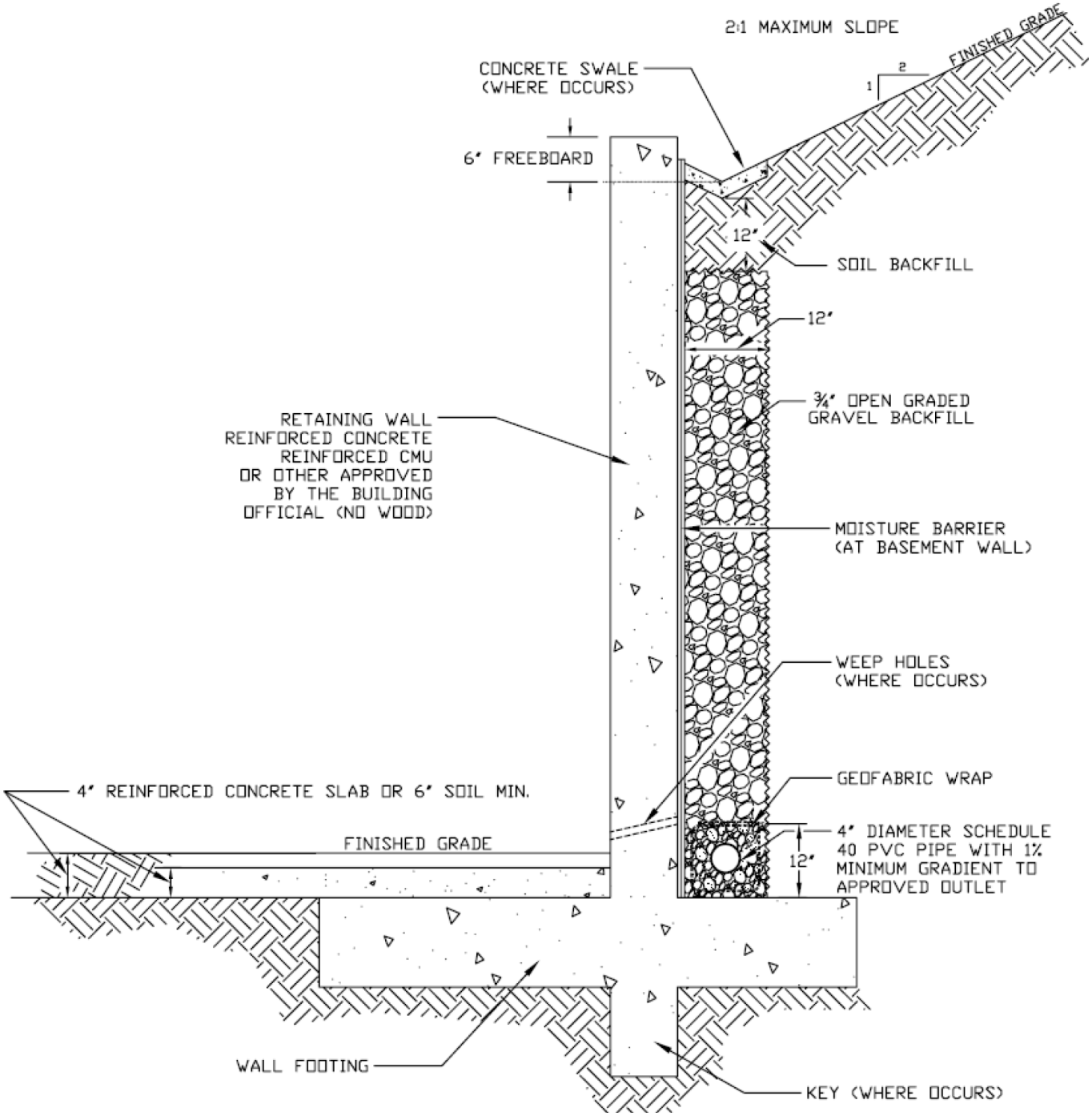

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Figure No. 8A

Appendix “A”

STANDARD GRADING AND CONSTRUCTION SPECIFICATIONS

Appendix "A"

STANDARD GRADING AND CONSTRUCTION SPECIFICATIONS

These specifications present the usual and minimum requirements for projects on which C.W. La Monte Company is the geotechnical consultant. No deviation from these specifications will be allowed, except where specifically superseded in the preliminary geology and soils report or in other written communication signed by the Soils Engineer or Engineering Geologist of record.

GENERAL

A. The Soils Engineer and Engineering Geologist is the Owner's or Builders' representative on the Project. For the purpose of these specifications, participation by the Soils Engineer includes that observation performed by any person or persons employed by, and responsible to, the licensed Civil Engineer signing the soils reports.

B. All clearing, site preparation, or earthwork performed on the project shall be conducted by the Contractor under the supervision of the Soils Engineer.

C. It is the Contractor's responsibility to prepare the ground surface to receive the fills to the satisfaction of the Soils Engineer and to place, spread, mix, water, and compact the fill in accordance with the specifications of the Soils Engineer. The Contractor shall also remove all material considered unsatisfactory by the Soils Engineer.

D. It is also the Contractor's responsibility to have suitable and sufficient compaction equipment on the job site to handle the amount of fill being placed. If necessary, excavation equipment will be shut down to permit completion of compaction. Sufficient watering apparatus will also be provided by the Contractor, with due consideration for the fill material, rate of placement, and time of year.

E. A final report shall be issued by the Soils Engineer attesting to the Contractor's conformance with these specifications.

SITE PREPARATION

A. All vegetation and deleterious material shall be disposed of off site. This removal shall be concluded prior to placing fill.

B. Soil, alluvium, or bedrock materials determined by the Soils Engineer, as being unsuitable for placement in compacted fills shall be removed from the site. The Soils Engineer must approve any material incorporated as a part of a compacted fill.

C. After the ground surface to receive fill has been cleared, it shall be scarified, disced, or bladed by the Contractor until it is uniform and free from ruts, hollows, hummocks, or other uneven features which may prevent uniform compaction.

   The scarified ground surface shall then be brought to optimum moisture, mixed as required, and compacted as specified. If the scarified zone is greater than 12 inches in depth, the excess shall be removed and placed in lifts restricted to 6 inches.

   Prior to placing fill, the ground surface to receive fill shall be inspected, tested as necessary, and approved by the Soils Engineer.

D. Any underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipe lines, or others are to be removed or treated in a manner prescribed by the Soils Engineer and /or governing agency.

E. In order to provide uniform bearing conditions in cut-fill transition lots and where cut lots are partially in soil, colluvium, or un-weathered bedrock materials, the bedrock portion of the lot extending a minimum of 3 feet outside of building lines shall be over excavated a minimum of 3 feet and replaced with compacted fill.

COMPACTED FILLS

A. Any material imported or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable by the Soils Engineer. Roots, tree branches, and other matter missed during clearing shall be removed from the fill as directed by the Soils Engineer.

B. Rock fragments less than 6 inches in diameter may be utilized in the fill, provided:

1. They are not placed in concentrated pockets.
2. There is a sufficient percentage of fine-grained material to surround the rocks.
3. The Soils Engineer shall supervise the distribution of rocks.

C. Rocks greater than 6 inches in diameter shall be taken off site, or placed in accordance with the recommendations of the Soils Engineer in areas designated as suitable for rock disposal.

D. Material that is spongy, subject to decay or otherwise considered unsuitable should not be used in the compacted fill.

E. Representative samples of material to be utilized as compacted fill shall be analyzed by the laboratory of the Soils Engineer to determine their physical properties. If any material other than that previously tested is encountered during grading, the appropriate analysis of this material shall be conducted by the Soils Engineer as soon as possible.

F. Material used in the compaction process shall be evenly spread, watered processed, and compacted in thin lifts not to exceed 6 inches in thickness to obtain a uniformly dense layer. The fill shall be placed and compacted on a horizontal plane, unless otherwise approved by the Soils Engineer.

G. If the moisture content or relative density varies from that required by the Soils Engineer, the Contractor should re-work the fill until the Soils Engineer approves it.

H. Each layer shall be compacted to 90 percent of the maximum density in compliance with the testing method specified by the controlling governmental agency. (In general, ASTM D-1557-91, the five-layer method will be used.)

If compaction to a lesser percentage is authorized by the controlling governmental agency because of a specific land use or expansive soils condition, the area to receive fill compacted to less than 90 percent shall either be delineated on the grading plan or appropriate reference made to the area in the soils report.

H. All fills shall be keyed and benched through all topsoil, colluvium, alluvium or creep material, into sound bedrock or firm material except where the slope receiving fill exceeds a ratio of five horizontal to one vertical, in accordance with the recommendations of the Soils Engineer.

I. The key for hillside fills should be a minimum of 15 feet in width and within bedrock or similar materials, unless otherwise specified in the soil report.

K. Subdrainage devices shall be constructed in compliance with the ordinances of the controlling governmental agency, or with the recommendations of the Soils Engineer or Engineering Geologist.

L. The contractor will be required to obtain a minimum relative compaction of 90 percent out to the finish slope face of fill slopes, buttresses, and stabilization fills. This may be achieved by either overbuilding the slope and cutting back to the compacted core, or by direct compaction of the slope face with suitable equipment, or by any other procedure which produces the required compaction.

M. All fill slopes should be planted or protected from erosion or by other methods specified in the soils report.

N. Fill-over-cut slopes shall be properly keyed through topsoil, colluvium or creep material into rock or firm materials, and the transition shall be stripped of all soil prior to placing fill.

CUT SLOPES

A. The Engineering Geologist shall inspect all cut slopes at vertical intervals not exceeding 10 feet.

B. If any conditions not anticipated in the preliminary report such as perched water, seepage, lenticular or confined strata of a potentially adverse nature, unfavorably inclined bedding, joints or fault planes are encountered during grading, these conditions shall be analyzed by the Engineering Geologist and Soils Engineer, and recommendations shall be made to treat these problems.

C. Cut slopes that face in the same direction as the prevailing drainage shall be protected from slope wash by a non-erodible interceptor swale placed at the top of the slope.

Unless otherwise specified in the soils and geological report, no cut slopes shall be excavated higher or steeper than that allowed by the ordinances of controlling governmental agencies.

Drainage terraces shall be constructed in compliance with the ordinances of controlling governmental agencies, or with the recommendations of the Soils Engineer or Engineering Geologist.

GRADING CONTROL

A. Observation of the fill placement shall be provided by the Soils Engineer during the progress of grading.

B. In general, density tests should be made at intervals not exceeding 2 feet of fill height or every 500 cubic yards of fill placement. This criteria will vary, depending on soil conditions and the size of the job. In any event, an adequate number of field density tests shall be made to verily that the required compaction is being achieved.

C. Density tests may also be conducted on the surface material to receive fills as determined by the Soils Engineer.

D. All clean-outs, processed ground to receive fill, key excavations, subdrains, and rock disposals must be inspected and approved by the Soils Engineer or Engineering Geologist prior to placing any fill. It shall be the Contractor's responsibility to notify the Soils Engineer when such areas are ready for inspection.

CONSTRUCTION CONSIDERATIONS

A. The Contractor shall provide necessary erosion control measures, during grading and prior to the completion and construction of permanent drainage controls.

B. Upon completion of grading and termination of inspections by the Soils Engineer, no further filling or excavating, including that necessary for footings, foundations, large tree wells, retaining walls, or other features shall be performed without the approval of the Soils Engineer or Engineering Geologist.

C. Care shall be taken by the Contractor during final grading to preserve any berms, drainage terraces, interceptor swales, or other devices of permanent nature on or adjacent to the property.

D. In the event that temporary ramps or pads are constructed of uncontrolled fill soils during a future grading operation, the location and extent of the loose fill soils shall be noted by the on-site representative of a qualified soil engineering firm. These materials shall be removed and properly recompacted prior to completion of grading operations.

E. Where not superseded by specific recommendations presented in this report, trenches, excavations, and temporary slopes at the subject site shall be constructed in accordance with section 1541 of Title 8, Construction Safety Orders, issued by OSHA.

APPENDIX " B"
UNIFIED SOIL CLASSIFICATION CHART

SOI L DESC RI PTI ON

I . COARSE GRAINED: More than half of material is larger than No. 200 sieve size.

GRAVELS: More than half of coarse fraction is larger than No. 4 sieve size but smaller than 3".

	GROUP SYMBOL	TYPICAL NAMES
CLEAN GRAVELS	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
	GP	Poorly graded gravels, gravel sand mixtures, little or no fines
GRAVELS WITH FINES (Appreciable amount of fines)	GM	Silty gravels, poorly graded gravel- sand-silt mixtures
	GC	Clayey gravels, poorly graded gravel sand, clay mixtures.

SANDS: More than half of coarse fraction is smaller than No. 4 sieve size

CLEAN SANDS	SW	Well graded sand, gravelly sands, little or no fines
	SP	Poorly graded sands, gravelly sands, little or no fines
SANDS WITH FINES (Appreciable amount of fines	SM	Silty sands, poorly graded sand and silty mixtures.
	SC	Clayey sands, poorly graded sand and clay **mixtures**

II. FINE GRAINED: More than half of material is smaller than No. 200 sieve size

SILTS AND CLAYS	ML	Inorganic silts and very fine sands, rock flour, sandy silt - or clayey-silt with slight plasticity.
Liquid Limit Less than 50	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	OL	Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silt
Liquid Limit greater than 50	CH	Inorganic clays of high plasticity, fat clays.
	OH	Organic clays of medium to high plasticity.
HIGHLY ORGANIC SOILS	PT	Peat and other highly organic soils.

COFFEY ENGINEERING, INC.

Water Quality Technical Report

Ross Residence
Via Grimaldi, Del Mar, CA. 92014
APN 301-061-48

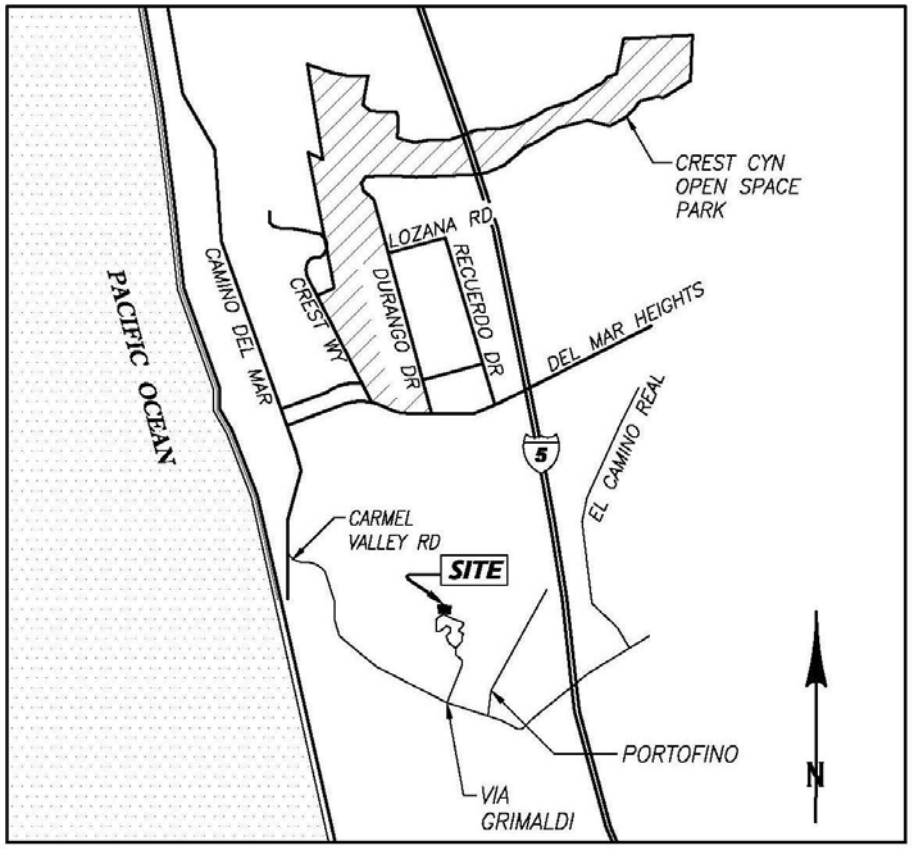
Prepared For:
Charles Ross
and
The City of San Diego

Original: December 7, 2015

10660 Scripps Ranch Blvd, Suite 102 San Diego, CA 92131 Phone: (858)831-0111 Fax: (858)831-0179

Table of Contents

1.0 Vicinity Map



VICINITY MAP

THOMAS BROS. MAP 1207–H1
NO SCALE

2.0 Project Description

The site is located in San Diego, 0.6 miles northwest of the I-5/SR-56 interchange. The approximately 0.1 acre lot is currently undeveloped. The project proposes to develop a single family residence with associated hardscape and landscape features. The development will have an impervious footprint of approximately 3,018 ft² (62.4% impervious), this is an increase of 62.4% from the existing impervious footprint of 0 ft² (0% impervious). The proposed development is not part of a larger master development. The site qualifies as a priority development project due to its location in a Water Quality Sensitive Area and its creation of 2,500 SF or more of impervious area. The project developer is Charles Ross (619.246.8010, chuck@fiestadereyes.com).

The site lies approximately 2,500 feet west of the I-5 and 3,800 feet east of the Pacific Ocean, with a general drainage pattern that flows from east to west through the site.

The existing drainage pattern consists of one drainage basin (Basin X). Basin X consists of the undeveloped site. Storm water sheet flows east across the site where it is deposited into a local canyon to the northwest. During the 100 year storm the site will experience flows of 0.22 CFS. Refer to Drainage Map – Existing Conditions found in Appendix D of this report for the pre-construction basin map.

The proposed drainage pattern consists of three drainage basins. Basin A consists of a small sliver of the eastern property line and directs offsite run-on around the site and into the local canyon to the northwest. Basin B consists of Drainage from the driveway, single family residence, and associated hardscape. Storm flows will be pitched to the surrounding landscaping before sheet flowing to a biofiltration system on the north edge of the site. After being treated, the storm water will be drained to Basin C via a PVC drain line. Basin C is a small remnant of the site that will be undeveloped and release via sheet flow to the local canyon to the northwest.

During the 100 year storm the proposed site will experience a flow of 0.27 CFS. Refer to Drainage Map – Proposed Conditions found in Appendix D of this report for the post-construction basin map.

Approximately 98% of the site will experience some level of re-development during the construction process. After construction the site will be split into three distinct drainage basins with each basin mimicking the general drainage pattern of the existing condition. Refer to Drainage Map – Proposed Conditions found in Appendix A of this report for the post-construction basin map.

2.1 Flow Path Description

Storm water runoff from the site will flow northwest down a local canyon until it reaches a public storm drain inlet at Via Esperia 500 feet west of the project. The stormwater once in the public drainage system will travel to the Los Penasquitos Lagoon and then into the Pacific Ocean.

3.0 Pollutants and Conditions of Concern

The proposed construction most closely falls under the general project category of *Detached Residential Housing Development*. The following pollutants are listed as anticipated pollutants generated from this type of development:

- Sediment
- Nutrients
- Trash & Debris
- Oxygen Demanding Substances
- Oil & Grease

- Bacteria & Viruses
- Pesticides

(per Section 4.1.5, table 4-1 of the City of San Diego-Storm Water Standards Manual, January 2012)

The subject site is located in Calwater watershed 906.10 (San Diego region 9, Penasquitos Hydrologic Unit 06, Miramar Reservoir HA 10). The following table lists the bodies of water on the CWA section 303(d) list within this watershed:

Name	Pollutant Stressor
Los Penasquitos Creek	Enterococcus Fecal Coliform Selenium Total Dissolved Solids Total Nitrogen as N Toxicity
Los Penasquitos Lagoon	Sedimentation/Siltation
Miramar Reservoir	Total Nitrogen as N
Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Penasquitos River Mouth	Total Coliform
Soledad Canyon	Sediment Toxicity Selenium

Required Pollutant Removal Efficiency

Name	High	Medium
Sediment	X	
Nutrients	X	
Trash & Debris		X
Oxygen Demanding Substances		X
Oil & Grease		X
Bacteria & Viruses	X	
Pesticides		X

The nearest impacted area for this watershed would be Los Penasquitos Lagoon, approximately 2,000 feet to the South (see the CWA 303(d) list for a complete listing of impacted areas for this watershed).

Beneficial Uses of Receiving Water

Reservoirs & Lakes	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH	REC1	REC2	WARM	COLD	WILD	RARE	POW		
Miramar Reservoir	6.10	●		●				●	●	●		●		●		
Ground Water	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	FRESH	GWR									
Miramar Reservoir	6.10	●	●	●												
Coastal Waters	Hydrologic Unit Basin Number	IND	NAV	REC 1	REC 2	COMM	BIOL	EST	WILD	RARE	MAR	AQUA	MIGR	SPWN	WARM	SHELL
Pacific Ocean		●	●	●	●	●	●		●	●	●	●	●	●		●
Los Penasquitos Lagoon	6.10			●	●	●	●	●	●	●	●		●	●		●
Inland Surface Waters	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH	POW	REC1	REC2	BIOL	WARM	COLD	WILD	RARE	SPWN
Soledad Canyon	6.10	+	●	●					○	●		●	●	●		
Carol Canyon	6.10	+	●	●					○	●		●	●	●	●	
Los Penasquitos Creek	6.10	+	●	●					○	●	●	●		●		
Unnamed Tributary	6.10	+	●	●					○	●		●		●	●	
Carmel Valley	6.10	+	●	●					○	●		●		●		
Deer Canyon	6.10	+	●	●					○	●		●		●		
McGonigle Canyon	6.10	+	●	●					○	●		●		●		
Bell Valley	6.10	+	●	●					○	●		●		●		
Shaw Valley	6.10	+	●	●					○	●		●		●		

+ Excepted from Municipal ● Existing Beneficial Use ○ Potential Beneficial Use

Structural BMP devices were chosen based on a multifaceted approach. First any device that did not treat for bacteria and viruses, sediment, and nutrients with a high efficiency was removed. The remaining devices were infiltration basins, bio-retention facilities, cistern plus bio-retention, vault plus bio-retention, self retaining areas, dry wells, constructed wetlands, and flow through planter boxes. Second any device that would require a large footprint was removed due to site constraints. The remaining devices were bio-retention facilities, vault plus bio-retention, dry wells, and flow through planter boxes. Devices that required large underground structures were removed due to construction constraints. The remaining devices were bio-retention facilities and flow through planter boxes. Due to the site location and proximity to natural slopes flow-through planter boxes were chosen as the most appropriate for the site.

Table 4-3. Structural BMP Treatment Control Selection Matrix

BMP	LID	HMP Control	Sediment	Nutrients	Trash	Metals	Bacteria	Oils and Grease	Organics
Infiltration Basin	Y	Y	H	H	H	H	H	H	H
Bioretention Basin	Y	Y	H	M	H	H	H	H	H
Cistern Plus Bioretention	Y	Y	H	M	H	H	H	H	H
Vault plus Bioretention	Y	Y	H	M	H	H	H	H	H
Self-retaining Area	Y	Y	H	H	H	H	H	H	H
Dry Wells	Y	Y	H	H	H	H	H	H	H
Constructed Wetlands	Y	Y	H	M	H	H	H	H	H
Extended Detention Basin	Y	Y	M	L	H	M	M	M	M
Vegetated Swale	Y	N	M	L	L	M	L	M	M
Vegetated Buffer Strips	Y	N	H	L	M	H	L	H	M
Flow-Through Planter Boxes	Y	Y	H	M	H	H	H	H	H
Vortex Separator or Wet Vault	N	N	M	L	M	L	L	L	L
Media Filter	N	N	H	L	H	H	M	H	H

H High removal efficiency
M Medium removal efficiency
L Low removal efficiency

4.0 Types of BMPs

4.1 Site Design/Low Impact Development BMPs

- Optimize the Site Layout - The proposed project will take advantage of the site's current drainage patterns and grading will be kept to a minimum. The majority of the earthwork will involve the grading to accommodate the new residence and new landscape and hardscape.
- Minimize Impervious Footprint – Proposed hardscape will be limited, extensive landscaping will be installed throughout the site.
- Disperse Runoff to Adjacent Landscaping – Runoff will be directed to landscaping. Hardscapes will be pitched to landscape wherever possible. Flows will travel through landscaped areas and a biofiltration facility before being released from the site.
- Construction Considerations - Soil compaction shall be minimized in landscaped areas. Soil amendments will be used to enhance and support continued vegetative growth.
- Install energy dissipaters – An energy dissipater will be installed after the PVC drain line that releases from basin B.
- Vegetated disturbed soils with either native or drought tolerant vegetation – Landscaping of disturbed soils will be implemented.
- Convey runoff safely away from tops of slopes – sheet flow and area drains will be utilized to safely convey storm water on-site.

LID BMP's Not Used:

- Stabilize permanent channel crossings – no channels or crossings within project.
- Design and Implementation of Pervious Surfaces – Hardscape will consist of impervious materials, only pervious surfaces are landscape areas.

4.2 Source Control BMPs

- (4.2.6) Efficient Irrigation - The irrigation system will be designed with sensitivity to each landscape area's water requirements (per CASQA BMP SD-12).
- (4.2.7) Trash Storage - Trash containers will have attached lids to prevent trash contact with storm water (per CASQA BMP SD-32).
- (4.2.8) Materials Storage – In the event that any landscaping or construction or any other material that could contaminate rainwater is stored onsite they will be stored in such a way as to eliminate contact with storm water. This includes but is not limited to: storing material above ground on palettes, using plastic covers, and employing secondary containment as needed (per CASQA BMP SD-34).
- (4.2.10) Employ integrated pest management principles – Plants in landscaped areas will be chosen to prevent pests (either native or pest-resistant plants) to reduce the need for pesticide use.

- (4.2.11)Provide concrete stamping on storm water inlets and catch basins – Generally site drainage is managed through the use of small area drains - however in the event a catch basin or storm drain inlet is utilized, stamping or signage notifying of a direct connection to the storm drain will be employed.
- (4.2.12) Design fire sprinkler system to discharge to sanitary sewer – If fire sprinkler system will be incorporated into the units all interior drains will be connected to the sanitary sewer per the California Building Code.
- (4.2.13) Manage Air Conditioning Condensate – Air conditioning condensate shall be directed to adjacent landscaping.
- (4.2.14) Use Non-Toxic Roofing Materials Where Feasible – The roof will be constructed with a non-toxic material. Metallic roofing will not be used.
- (4.2.15) Other Source Control Requirements – Site shall be stabilized with landscaping wherever possible. Pet wastes (if any) shall be collected and disposed of in proper waste containers (trash cans).

  *Numbers in parenthesis represent section within the City of San Diego Storm Water Standards Manual, Jan. 2012.

Source Control BMP's Not Used:

- (4.2.1) Maintenance Bays - Project is a single family residence, no maintenance bays are proposed.
- (4.2.2) Vehicle and Equipment Wash Areas - Project is a single family residence, no wash areas are proposed.
- (4.2.3) Outdoor Processing Areas - Project is a single family residence, no outdoor processing areas are proposed.
- (4.2.4) Retail and Non-Retail Fueling Areas - Project is a single family residence, no fueling areas are proposed.
- (4.2.5) Steep Hillside Landscaping – No steep hillsides on site.
- (4.2.9) Design Loading Docks to Reduce Pollutant Contribution – Project is a single family residence, no loading docks are proposed.

  *Numbers in parenthesis represent sections within the City of San Diego Storm Water Standards Manual, Jan. 2012.

4.4 Treatment Control BMPs

Treatment will only be required in one of the three new basins (Basin B). Basin A includes a small portion of the site to the east that accepts offsite run-on and directs it to the north around the development area. This basin will include no new impervious surfaces therefore it will not require water quality treatment. Basin B includes the new residence, driveway, and associated hardscape. Drainage will be conveyed via sheetflow and minor landscape drains to a biofiltration basin along the northern edge of

the site. Calculations show that Basin B requires a treatment facility with a surface area of 85.53 ft^2 and a total biofiltered volume of 158.04 ft^3. The provided biofiltration surface area will be 87.5 sqft with a biofiltered volume of 288.65 ft^3. Ultimately Basin B storm water will be drained to basin C and released to an energy dissipater before discharging to the local canyon to the north with a flow rate of 0.24 CFS (100 Year Storm Conditions). Sizing calculations are included in Appendix B. Basin C includes a small portion of the site in the northwest corner that will remain undeveloped. This basin will include no impervious surfaces therefore it will not require water quality treatment.

Maintenance Conditions

In general, the financial and physical responsibility for BMP maintenance will be the property's owners, successors and/or assigns, in perpetuity. The large majority of these costs should fall within the typical responsibilities for landscape maintenance on the site.

Regarding the biofiltration basin, maintenance generally consists of routine periodic maintenance that is required of any landscape area. Routine maintenance should include a biannual health evaluation of the vegetation and subsequent removal of dead or diseased vegetation. Routine inspection for standing water and corrective measures to restore proper infiltration rates are necessary to prevent creating mosquito and other vector habitats. Should the infiltration rate drop below the minimum required by the City of San Diego Storm Water Standards Manual replacement of the engineered soil mix may be required.

5.0 Hydromodification Compliance

This project qualifies for exemption from hydromodification as it is not located in a potential critical coarse sediment yield area (PCCSYA). The implementation of a biofiltration basin will be used in order to treat the site drainage, but is not necessary to comply with hydromodification mitigation measures. The PCCSYA map is included in appendix C.

6.0 Buffer Measures

The proposed biofiltration basin and landscaping will act as buffer zones in order to protect any natural water bodies.

7.0 Declaration of Responsible Charge

This Water Quality Technical Report (WQTR) has been prepared under the direction of the following Registered Civil Engineer. The Registered Civil Engineer (Engineer) attests to the technical information contained herein and the engineering data upon which the following design, recommendations, conclusions, and decisions are based. The selection, sizing, and design of stormwater treatment and other control measures in this report meet the requirements of Regional Water Quality Control Board Order R9-2007-0001 and subsequent amendments.

12/7/15

Michael Kinnear
RCE 76785
Exp. 12-31-16

Date

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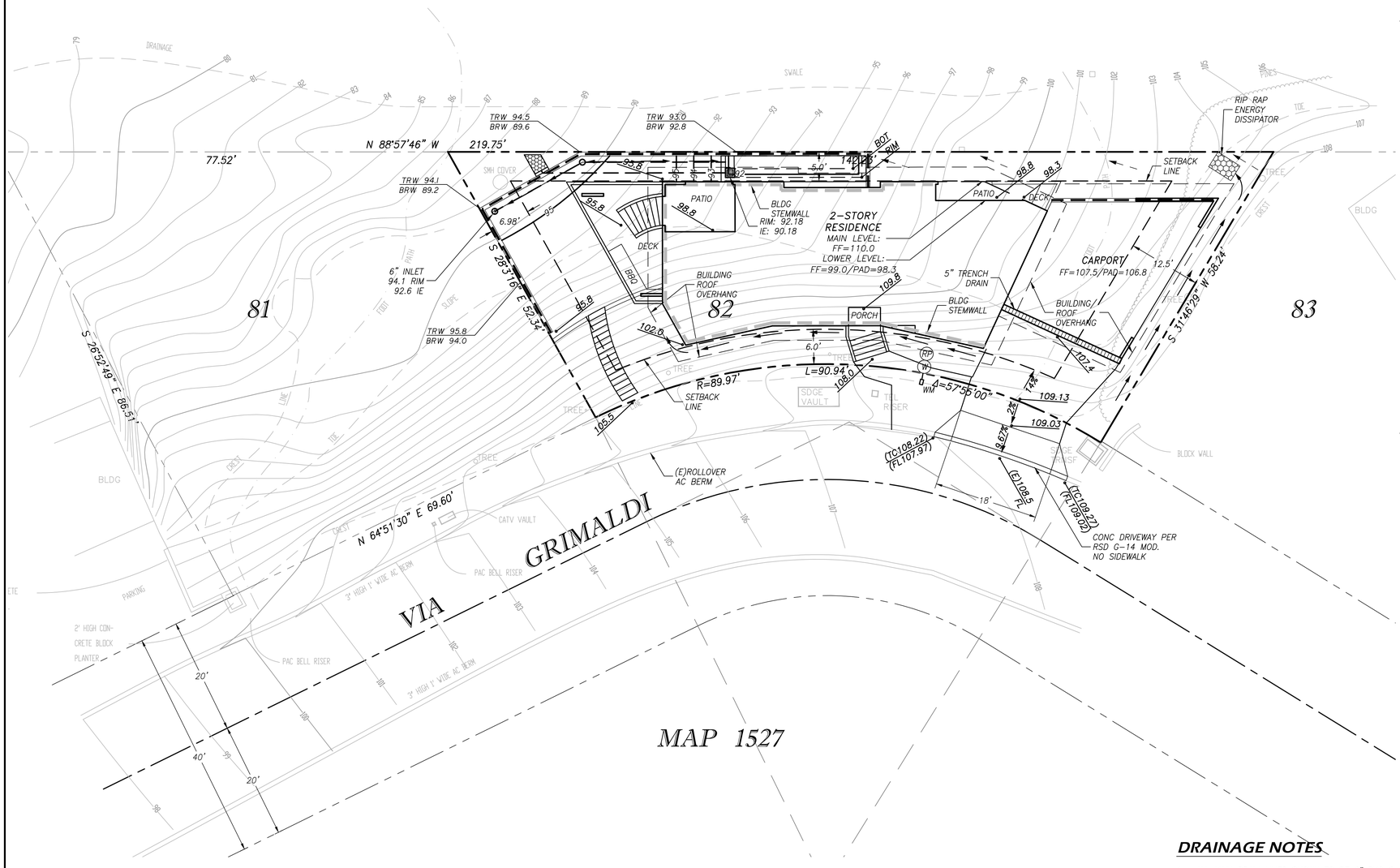
Appendix A-Site Map



LEGEND

DESCRIPTION	STD DWG	SYMBOL
PROPERTY LINE		N45°45'45"W
PROPERTY LINE – OFFSITE		
STREET CENTERLINE		℄
EX CONTOUR		90
PR CONTOUR		90
PR SPOT ELEVATION		100.00
PR DRAINAGE SWALE OR DIRECTION OF FLOW		
BUILDING FOOTPRINT		
PR CMU RETAINING WALL		
PR FREE STANDING WALL		
PR HARDSCAPE DRAIN	(NDS OR EQ)	
PR LANDSCAPE DRAIN	(NDS OR EQ)	
PR CLEANOUT	(NDS OR EQ)	
PR PVC DRAIN LINE	SDR-35 SCH 40	
PR TRENCH DRAIN	(NDS OR EQ)	
PR RIP RAP		
PR 1" WATER SERVICE w/RP BACKFLOW PREVENTION ASSY		W RP
EX TREE CANOPY/ BRUSH LINE		

ABBREVIATIONS

BLDG	BUILDING	℄; FL	FLOW LINE
BRW	BOTTOM OF RETAINING WALL GRADE	H	HEIGHT
℄	CENTER LINE	HP	HIGH POINT
CB	CATCH BASIN	IE	INVERT ELEVATION
CMU	CONCRETE MASONRY UNIT	(P); PR	PROPOSED
CO	CLEANOUT	SMH	SEWER MANHOLE
(E); EX	EXISTING	TRW	TOP OF RETAINING WALL GRADE
FF	FINISH FLOOR	WM	WATER METER

N

10 0 10 20 30

SCALE: 1"=10'

GRADING TABULATIONS

TOTAL AMOUNT OF SITE TO BE GRADED:	0.1 ACRE	% OF TOTAL SITE:	76.6%
AMOUNT OF CUT:	0.000 CUBIC YARDS	MAXIMUM DEPTH OF CUT:	7.0 FEET
AMOUNT OF FILL:	0.000 CUBIC YARDS	MAXIMUM DEPTH OF FILL:	5.0 FEET
MAXIMUM HEIGHT OF FILL SLOPE(S):	2.0 FEET	SLOPE RATIO:	2:1
MAXIMUM HEIGHT OF CUT SLOPE(S):	N/A FEET	SLOPE RATIO:	N/A
AMOUNT OF IMPORT/ EXPORT SOIL:	2,000 CUBIC YARDS		
RETAINING/ CRIB WALLS:	LENGTH 99 FEET	MAXIMUM HEIGHT:	4.9 FEET

DRAINAGE NOTES

1. ALL MAIN DRAIN LINES SHOWN TO BE 6" PVC @ 1% MINIMUM SLOPE UNLESS OTHERWISE NOTED.
2. ALL CATCH BASIN LEADS TO BE 4" PVC @ 2% MINIMUM SLOPE UNLESS OTHERWISE NOTED.
3. HARDSCAPE GRADES TO BE 1% MINIMUM TO DRAINS AND AWAY FROM STRUCTURE.
4. SOFTSCAPE GRADES TO BE 2% MINIMUM TO DRAINS (1% WHERE FLOW IS CONCENTRATED) AND 2% MINIMUM AWAY FROM STRUCTURE.
5. SOIL COVER ABOVE DRAIN LINES SHALL BE 12" MINIMUM UNLESS OTHERWISE NOTED.
6. NOTIFY CIVIL ENGINEER IF ANY NON-DRAINING SUMP CONDITIONS BECOME APPARANT DURING CONSTRUCTION.

GRADING PLAN NOTES

1. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, THE APPLICANT SHALL INCORPORATE ANY CONSTRUCTION BEST MANAGEMENT PRACTICES NECESSARY TO COMPLY WITH CHAPTER 14, ARTICLE 2, DIVISION 1 (GRADING REGULATIONS) OF THE SAN DIEGO MUNICIPAL CODE, INTO THE CONSTRUCTION PLANS OR SPECIFICATIONS.
2. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, THE APPLICANT SHALL SUBMIT A WATER POLLUTION CONTROL PLAN (WPCP). THE WPCP SHALL BE PREPARED IN ACCORDANCE WITH THE GUIDELINES IN APPENDIX E OF THE CITY'S STORM WATER STANDARDS.
3. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, THE OWNER/PERMITTEE SHALL ENTER INTO A MAINTENANCE AGREEMENT FOR THE ONGOING PERMANENT BMP MAINTENANCE, SATISFACTORY TO THE CITY ENGINEER.
4. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT, AN EMRA WILL BE NECESSARY FOR ANY PRIVATE IMPROVEMENTS WITHIN THE PUBLIC RIGHT OF WAY.

SOURCE OF TOPO:

THE SOURCE OF TOPOGRAPHIC INFORMATION ON THIS PLAN WAS FROM A GROUND-BASED FIELD SURVEY BY MONUMENT PEAK LAND SURVEYING, NOVEMBER 20,1996, ROBERT LEE McCOMB, PLS 4441. BOUNDARY INFORMATION ON THIS PLAN FROM GROUND BASED SURVEY BY PATRICK ENGINEERING & SURVEYING JUNE 30, 2015, PATRICK L. BROWN, RCE 18067.

EASEMENTS

THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS MAY BE PRESENT ON THE SUBJECT PROPERTY.

NOTES:

1. THIS GRADING PLAN IS BASED ON A TOPOGRAPHIC SURVEY, NOT A BOUNDARY SURVEY OR RECORD OF SURVEY. THE PROPERTY LINES DEPICTED ON THIS PLAN ARE GENERATED FROM EXISTING PUBLIC RECORD MAPS, DRAWINGS, OR DESCRIPTIONS. THE PROPERTY LINES AND/OR EASEMENTS SHOWN HEREON HAVE BEEN INCLUDED TO REPRESENT THEIR APPROXIMATE LOCATIONS RELATIVE TO THE TOPOGRAPHIC FEATURES.
2. THE LOCATIONS OF UTILITIES, IF ANY, SHOWN ON THIS PLAN ARE GENERATED FROM RECORDS PROVIDED BY UTILITY/GOVERNING AGENCIES AND/OR FIELD DATA COLLECTED DURING THE SURVEY. THE PLOTTING OF UTILITIES ON THIS PLAN DOES NOT CONSTITUTE A GUARANTEE OF THEIR LOCATION, DEPTH, SIZE, OR TYPE.

COFFEY ENGINEERING, INC.
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REGISTERED PROFESSIONAL ENGINEER JOHN S. COFFEY No. 44176 EXP. 6/30/16 CIVIL STATE OF CALIFORNIA

PRELIMINARY

ROSS RESIDENCE

13000 Blk Via Grimaldi
Del Mar, CA 92014

DRAWN BY: MK
CHECKED BY: JC

ORIGINAL 11/6/15
REVISION 1
REVISION 2
REVISION 3
REVISION 4
REVISION 5

GRADING PLAN

SCALE: 1" = 10'

C.1

SHT 1 OF 1 SHTS

Appendix B-Calculations

Design Capture Volume		Worksheet B.2-1		
1	85th Percentile 24-hr storm depth from Figure b.1-1	d =	0.48	inches
2	Area tributary to BMP (s)	A =	0.1	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C =	0.68	unitless
4	Street trees volume reduction	TCV =	0	cubic-feet
5	Rain barrels volume reduction	RCV =	0	cubic-feet
6	Calculated DCV = (360 x C x d x A) - TCV - RCV	DCV =	118.48	cubic-feet

Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1	
1	Remaining DCV after implementing retention BMPs	118.48	cubic-feet
Partial Retantion			
2	Infiltration from Worksheet D.5-1 if partial infiltration is feasible	0	in / hr
3	Allowable drawdown time for aggregate storage below underdrain	36	hours
4	Depth of runoff that can be infiltrated [Line 2 x Line 3]	0	inches
5	Aggregate pore space	0.4	in / in
6	Required depth of gravel below the underdrain [Line 4 / Line 5]	0	inches
7	Assumed surface area of the biofiltration BMP	87.5	sq-ft
8	Media retained pore space	0.1	in / in
9	Volume retained by BMP [[Line 4 + (Line 12 x Line 8)]/12] x Line 7	13.125	cubic-feet
10	DCV that requires biofiltration [Line 1 - Line 9]	105.36	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inches minimum, 12 inches maximum]	6	inches
12	Media Thickness [18 inches minimum]	18	inches
13	Aggregate Storage above underdrain invert (12 inches typical) - use 0 inches for sizing if the aggegate is not over the entire bottom surface area	0	inches
14	Media available pore space	0.2	in / in
15	Media filtration rate to be used for sizing	5	in / hr
Baseline Calculations			
16	Allowable Routing Time for sizing	6	hours
17	Depth filtered during storm [Line 15 x Line 16]	30	inches
18	Depth of Detention Storage [Line 11+ (Line 12 x Line 14) + (Line 13 x Line 5)]	9.60	inches
19	Total Depth Treated [Line 17 + Line 18]	39.6	inches
Option 1 - Biofilter 1.5 times the DCV			
20	Required biofiltered volume [1.5 x Line 10]	158.04	cubic-feet
21	Required Footprint [Line 20 / Line 19] x 12	47.89	sq-ft
Option 2 - Store 0.75 of the remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume [0.75 x Line 10]	79.02	cubic-feet
23	Required Footprint [Line 22 / Line 18] x 12	98.77	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	4192.56	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.68	
26	Minimum BMP Footprint [Line 24 x Line 25 x 0.03]	85.53	sq-ft
27	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 26)	85.53	sq-ft

Note: Line 7 is used to estimate the amount of volume retained by the BMP. Update assumed surface area in line 7 until its equivalent to the required biofiltration footprint (either Line 21 or Line 23)

Proposed Condition DMA Summary

Basin A: Total Area: 529.06 ft^2
Impervious Area: 0 ft^2
Pervious Area: 529.06 ft^2

Basin B: Total Area: 4,192.56 ft^2
Impervious Area: 3,017.74 ft^2
Pervious Area: 1,174.82 ft^2

Basin C: Total Area: 111.21 ft^2
Impervious Area: 0 ft^2
Pervious Area: 111.21 ft^2

Total Site: Total Area: 4832.83 ft^2
Impervious Area: 3,017.74 ft^2
Pervious Area: 1,815.09 ft^2

Treatment Methods

Self-Treating Areas:
Basin A
Basin C

IMP Devices
IMP Device 1 (87.5 ft^2 biofiltration basin)
Basin B

	Required Surface Area	Proposed Surface Area
Basin B	85.83	87.5

	Required Biofiltered Volume	Proposed Biofiltered Volume
Basin B	158.04	288.65

Appendix C-Supplemental Documents

Legend

- Watershed Boundaries
- Municipal Boundaries
- Rivers & Streams
- Regional WMAA Streams
- Potential Critical Coarse Sediment Yield Areas

S.D. COUNTY
San Dieguito River
Lusardi Creek
LAKE RAMONA
RESERVOIR
LAKE POWAY
S.D. COUNTY
POWAY
Rattlesnake Creek
SAN DIEGUITO LAGOON
DEL MAR
Poway Creek
LOS PENASQUITOS LAGOON
Los Penasquitos Creek
SAN DIEGO
MIRAMAR RESERVOIR
SAN VICENTE RESERVOIR
Carroll Canyon Creek
Rose Creek
Sycamore Creek
SANTEE RECREATIO LAKES
San Diego River

Aerial Imagery Source: DigitalGlobe, 06/2012

Miles 0 25 50 100 150

NORTH

Potential Critical Coarse Sediment Yield Areas

Los Penasquitos Watershed - HU 906.00, 94 mi2

Exhibit Date: Sept. 8, 2014

Geosyntec consultants

RICK ENGINEERING COMPANY

City of San Diego
Development Services
1222 First Ave., MS-302
San Diego, CA 92101
(619) 446-5000

Storm Water Requirements Applicability Checklist

FORM DS-560
JANUARY 2011

Project Address:	Project Number *(for City Use Only):*
6372 Inman Street	

SECTION 1. Permanent Storm Water BMP Requirements:
Additional information for determining the requirements is found in the Storm Water Standards Manual.

Part A: Determine if Exempt from Permanent Storm Water BMP Requirements.
Projects that are considered maintenance, or are otherwise not categorized as "development projects" or "redevelopment projects" according to the Storm Water Standards manual are not required to install permanent storm water BMPs. **If "Yes" is checked for any line in Part A, proceed to Part C and check the box labeled "Exempt Project." If "No" is checked for all of the lines, continue to Part B.**

1.	The project is not a Development Project as defined in the Storm Water Standards Manual: for example habitat restoration projects, and construction inside an existing building.	☐ Yes ☑ No
2.	The project is only the construction of underground or overhead linear utilities.	☐ Yes ☑ No
3.	The project qualifies as routine maintenance (replaces or renews existing surface materials because of failed or deteriorating condition). This includes roof replacement, pavement spot repairs and resurfacing treatments such as asphalt overlay or slurry seal, and replacement of damaged pavement.	☐ Yes ☑ No
4.	The project only installs sidewalks, bike lanes, or pedestrian ramps on an existing road, and does not change sheet flow condition to a concentrated flow condition.	☐ Yes ☑ No

Part B: Determine if Subject to Priority Development Project Requirements.
Projects that match one of the definitions below are subject to additional requirements including preparation of a Water Quality Technical Report.
If "Yes" is checked for any line in Part B, proceed to Part C and check the box labeled "Priority Development Project." If "No" is checked for all of the lines, continue to Part C and check the box labeled "Standard Development Project."

1.	**Residential development of 10 or more units.**	☐ Yes ☑ No
2.	**Commercial development and similar non-residential development greater than one acre.** Hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; and other light industrial facilities.	☐ Yes ☑ No
3.	**Heavy industrial development greater than one acre.** Manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas.	☐ Yes ☑ No
4.	**Automotive repair shop.** Facilities categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.	☐ Yes ☑ No
5.	**Restaurant.** Facilities that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), and where the land area for development is greater than 5,000 square feet.	☐ Yes ☑ No
6.	**Hillside development greater than 5,000 square feet.** Development that creates 5,000 square feet of impervious surface and is located in an area with known erosive soil conditions and where the development will grade on any natural slope that is twenty-five percent or greater.	☐ Yes ☑ No
7.	**Water Quality Sensitive Area.** Development located within, directly adjacent to, or discharging directly to a Water Quality Sensitive Area (as depicted in Appendix C) in which the project either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" is defined as being situated within 200 feet of the Water Quality Sensitive Area. "Discharging directly to" is defined as outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.	☑ Yes ☐ No
8.	**Parking lot with a minimum area of 5,000 square feet or a minimum of 15 parking spaces** and potential exposure to urban runoff (unless it meets the exclusion for parking lot reconfiguration on line 11).	☐ Yes ☑ No

9.	**Street, road, highway, or freeway.** New paved surface in excess of 5,000 square feet used for the transportation of automobiles, trucks, motorcycles, and other vehicles (unless it meets the exclusion for road reconfiguration on line 11).	☐ Yes ☑ No
10.	**Retail Gasoline Outlet (RGO)** that is: (a) 5,000 square feet or more or (b) has a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.	☐ Yes ☑ No
11.	**Significant Redevelopment**; project installs and/or replaces 5,000 square feet or more of impervious surface and the existing site meets at least one of the categories above. The project is not considered Significant Redevelopment if reconfiguring an existing road or parking lot without a change to the footprint of an existing developed road or parking lot. The existing footprint is defined as the outside curb or the outside edge of pavement when there is no curb.	☑ Yes ☐ No
12.	**Other Pollutant Generating Project.** Any other project not covered in the categories above, that disturbs one acre or more and is not excluded by the criteria below.	☐ Yes ☑ No

Projects creating less than 5,000 sf of impervious surface and where added landscaping does not require regular use of pesticides and fertilizers, such as slope stabilization using native plants. Calculation of the square footage of impervious surface need not include linear pathways that are for infrequent vehicle use, such as emergency maintenance access or bicycle pedestrian use, if they are built with pervious surfaces or if they sheet flow to surrounding pervious surfaces.

Part C: Select the appropriate category based on the outcome of Parts A & B.

1.	If "Yes" is checked for any line in Part A, then check this box. Continue to Section 2.	☐ Exempt Project
2.	If "No" is checked for all lines in Part A, and Part B, then check this box. Continue to Section 2.	☐ Standard Development Project
3.	If "No" is checked for all lines in Part A, and "Yes" is checked for at least one of the lines in Part B, then check this box. Continue to Section 2. See the Storm Water Standards Manual for guidance on determining if Hydromodification Management Plan requirements apply.	☑ Priority Development Project

SECTION 2. Construction Storm Water BMP Requirements:
For all projects, complete Part D. If "Yes" is checked for any line in Part D, then continue to Part E.

Part D: Determine Construction Phase Storm Water Requirements.

1.	Is the project subject to California's statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities? (See State Water Resources Control Board Order No. 2009-0009-DWQ for rules on enrollment)	☐ Yes ☑ No
2.	Does the project propose grading or soil disturbance?	☑ Yes ☐ No
3.	Would storm water or urban runoff have the potential to contact any portion of the construction area, including washing and staging areas?	☑ Yes ☐ No
4.	Would the project use any construction materials that could negatively affect water quality if discharged from the site (such as, paints, solvents, concrete, and stucco)?	☑ Yes ☐ No
5.	Check this box if "Yes" is checked for line 1. Continue to Part E.	☐ SWPPP Required
6.	Check this box if "No" is checked for line 1, and "Yes is checked for any line 2-4. Continue to Part E.	☑ WPCP Required
7.	Check this box if "No" is checked for all lines 1-4. Part E does not apply.	☐ No Document Required

Part E: Determine Construction Site Priority

This prioritization must be completed with this form, noted on the plans, and included in the SWPPP or WPCP. The City reserves the right to adjust the priority of the projects both before and during construction. [Note: The construction priority does NOT change construction BMP requirements that apply to projects; rather, it determines the frequency of inspections that will be conducted by City staff.]

☐ 1. **High Priority**
- a) Projects where the site is 50 acres or more and grading will occur during the wet season
- b) Projects 1 acre or more and tributary to an impaired water body for sediment (e.g., Peñasquitos watershed)
- c) Projects 1 acre or more within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within a Water Quality Sensitive Area.
- d) Projects subject to phased grading or advanced treatment requirements.

☐ **2 Medium Priority**. Projects 1 acre or more but not subject to a high priority designation.

☑ **3 Low Priority.** Projects requiring a Water Pollution Control Plan but not subject to a medium or high priority designation.

Name of Owner or Agent *(Please Print):* Michael Kinnear	Title: Design Engineer
Signature:	Date:

Reset Button Page 2

THE CITY OF SAN DIEGO

RECORDING REQUESTED BY:
THE CITY OF SAN DIEGO
AND WHEN RECORDED MAIL TO:

Chuck Ross

4962 Concannon Ct

San Diego, CA 92130

(THIS SPACE IS FOR RECORDER'S USE ONLY)

STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT

APPROVAL NUMBER:	ASSESSORS PARCEL NUMBER:	PROJECT NUMBER:
	301-061-48	

This agreement is made by and between the City of San Diego, a municipal corporation [City] and Ross Charles & Gail Family Trust 04-40-08, the owner or duly authorized representative of the owner [Property Owner] of property located at 301-061-48

(PROPERTY ADDRESS)

and more particularly described as: Lot 82 BLK 12 of Map 1527 Del Mar Terrace

(LEGAL DESCRIPTION OF PROPERTY)

in the City of San Diego, County of San Diego, State of California.

Property Owner is required pursuant to the City of San Diego Municipal Code, Chapter 4, Article 3, Division 3, Chapter 14, Article 2, Division 2, and the Land Development Manual, Storm Water Standards to enter into a Storm Water Management and Discharge Control Maintenance Agreement [Maintenance Agreement] for the installation and maintenance of Permanent Storm Water Best Management Practices [Permanent Storm Water BMP's] prior to the issuance of construction permits. The Maintenance Agreement is intended to ensure the establishment and maintenance of Permanent Storm Water BMP's onsite, as described in the attached exhibit(s), the project's Water Quality Technical Report [WQTR] and Grading and/or Improvement Plan Drawing No(s), or Building Plan Project No(s): _____.

Property Owner wishes to obtain a building or engineering permit according to the Grading and/or Improvement Plan Drawing No(s) or Building Plan Project No(s): _____.

Continued on Page 2

NOW, THEREFORE, the parties agree as follows:

1. Property Owner shall have prepared, or if qualified, shall prepare an Operation and Maintenance Procedure [OMP] for Permanent Storm Water BMP's, satisfactory to the City, according to the attached exhibit(s), consistent with the Grading and/or Improvement Plan Drawing No(s), or Building Plan Project No(s): _____.

2. Property Owner shall install, maintain and repair or replace all Permanent Storm Water BMP's within their property, according to the OMP guidelines as described in the attached exhibit(s), the project's WQTR and Grading and/or Improvement Plan Drawing No(s), or Building Plan Project No(s) _____.

3. Property Owner shall maintain operation and maintenance records for at least five (5) years. These records shall be made available to the City for inspection upon request at any time.

This Maintenance Agreement shall commence upon execution of this document by all parties named hereon, and shall run with the land.

Executed by the City of San Diego and by Property Owner in San Diego, California.

See Attached Exhibit(s): _____

_____
(Owner Signature)

_____
(Print Name and Title)

_____
(Company/Organization Name)

_____
(Date)

THE CITY OF SAN DIEGO

_____
Engineer Signature)

_____
(Print Name)

_____
(Date)

NOTE: ALL SIGNATURES MUST INCLUDE NOTARY ACKNOWLEDGMENTS PER CIVIL CODE SEC. 1180 ET.SEQ.

Reset Button Page 2

THE CITY OF SAN DIEGO
City of San Diego
Development Services
1222 First Ave., MS-501
San Diego, CA 92101
(619) 236-5500

Permanent BMP Construction

Self Certification Form

FORM
DS-563
FEBRUARY 2013

Date Prepared:	Project No.:
Project Applicant:	Phone:
Project Address:	
Project Engineer:	Phone:

The purpose of this form is to verify that the site improvements for the project, identified above, have been constructed in conformance with the approved Standard Urban Storm Water Mitigation Plan (SUSMP) documents and drawings.

This form must be completed by the engineer and submitted prior to final inspection of the construction permit. Completion and submittal of this form is required for all new development and redevelopment projects in order to comply with the City's Storm Water ordinances and NDPES Permit Order No. R9-2007-0001. Final inspection for occupancy and/or release of grading or public improvement bonds may be delayed if this form is not submitted and approved by the City of San Diego.

CERTIFICATION:
As the professional in responsible charge for the design of the above project, I certify that I have inspected all constructed Low Impact Development (LID) site design, source control and treatment control BMP's required per the approved SUSMP and Construction Permit No. _____; and that said BMP's have been constructed in compliance with the approved plans and all applicable specifications, permits, ordinances and Order No. R9-2007-0001 of the San Diego Regional Water Quality Control Board.

I understand that this BMP certification statement does not constitute an operation and maintenance verification.

Signature: _____

Date of Signature: _____

Printed Name: _____

Title: _____

Phone No. _____

Clear Form

Engineer's Stamp

Appendix D-Hydrology Study

COFFEY ENGINEERING, INC.

Preliminary Drainage Study

Ross Residence
Via Grimaldi, Del Mar, CA. 92014
APN 301-061-48

Prepared For:
Charles Ross
and
The City of San Diego

December 7, 2015

10660 Scripps Ranch Blvd, Suite 102 San Diego, CA 92131 Phone: (858) 831-0111 Fax: (858) 831-0179

Table of Contents

Appendix

1. **Existing Conditions**

The site is located in San Diego, 0.6 miles north west of the I-5/SR-56 interchange. The approximately 0.1 acre lot is currently undeveloped.

The site lies approximately 2,500 feet west of the I-5 and 3,800 feet east of the Pacific Ocean, with a general drainage pattern that flows from east to west through the site.

See Drainage Map – (E) in the appendix for existing conditions.

2. **Proposed Project**

The project proposes to develop a single family residence with associated hardscape and landscape features. The development will have an impervious footprint of approximately 3,018 ft^2 (62.4% impervious), this is an increase of 62.4% from the existing impervious footprint of 0 ft^2 (0% impervious). The proposed development is not part of a larger master development. The site qualifies as a priority development project due to its location in a Water Quality Sensitive Area and its creation of 2,500 SF or more of impervious area. The project developer is Charles Ross.

See Drainage Map – (P) in the appendix for proposed conditions.

3. **Purpose and Scope of Report**

In addition to addressing any general drainage concerns for the property, this report will evaluate the pre-construction hydrologic conditions and compare them to post-construction to determine the required detention/flow attenuation. The runoff quantities were calculated using a 100-year storm, see isopluvial maps attached in the appendix of this report.

The following will be evaluated:

- Pre-construction flows: Basins X (see Drainage Map – (E))
- Post Construction flows: Basins A, B, & C (see Drainage Map – (P))
- General site conditions/observations pertaining to drainage.

4. **Method of Calculations**

The Rational Method, as defined by the City of San Diego Drainage Design Manual (1984), will be used to calculate storm water flow rates. Where noted, the following calculations were used to determine flow properties:

<u>Rainfall Characteristics</u>

$Q = C * I * A$, where

Q = Flow rate (ft^3/sec)
C = Runoff coefficient

I = Rainfall intensity (in/hr)
A = Area (acres)

$I = 7.44 * P_6 * D^{-0.645}$, where

I = Rainfall intensity (in/hr)
P_6 = Adjusted 6-hour precipitation (inches)
D = Storm duration (min), equal to T_c for time-of-concentration storms

Tc = Ti+Tt+Tp (time-of-concentration), where
Ti=Over land initial time.
Tt=Travel time on natural watersheds.
Tp=Travel time on drainage structures (pipes, brow ditch, gutter etc.)

$Ti = 1.8(1.1-C)\, D^{0.50} / (\, s^{0.33}\,)$ (Overland initial time of concentration formula),where

D= Watercourse Distance (feet)(see table 3-2 for the max. overland flow length)
s = Slope (%)
C= Runoff Coefficient
Ti=Initial time of concentration (min.)

$T_t = (11.9*L^3 \,/\, \Delta H)^{0.385}$ (formula for travel time for natural watersheds), where

T_c = Time of Concentration or Travel time (hours)
L = Length of watercourse (miles)
ΔH = Change in effective slope height (ft)

<u>Pipe and Open Channel Flow Characteristics</u>

$V = 1/n * R^{2/3} * S^{1/2}$ (from Manning), where

V = Average cross-sectional velocity (ft/sec)
n = Manning roughness coefficient
R = Hydraulic radius (ft)
S = Slope of water surface (ft height/ft length)

$p/\gamma + V^2/2g + z_1 + h_L = p/\gamma + V^2/2g + z_2$ (from Bernoulli), where

p = pressure (lbs/ft^2)
γ = density (lbs/ft^3)
V = velocity (ft/sec)
g = gravity (ft/sec/sec)
z = height of fluid (ft)
h_L = head loss (ft)

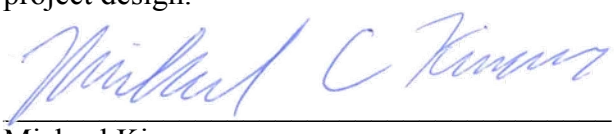
5. **Results and Conclusions:**

During the 100 year storm the site will experience a flow of 0.27 CFS. This is 0.05 CFS greater than the existing 100 year storm flow of 0.22 CFS this increase can be attributed to the development of the site including the residence and associated hardscape.

6. **Declaration of Responsible Charge**

I hereby declare that I am the Civil 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 design.

I understand that the check of project drawings and specifications by the City of San Diego is confined to a review only and does not relieve me, as Engineer of Work, of my responsibilities for project design.

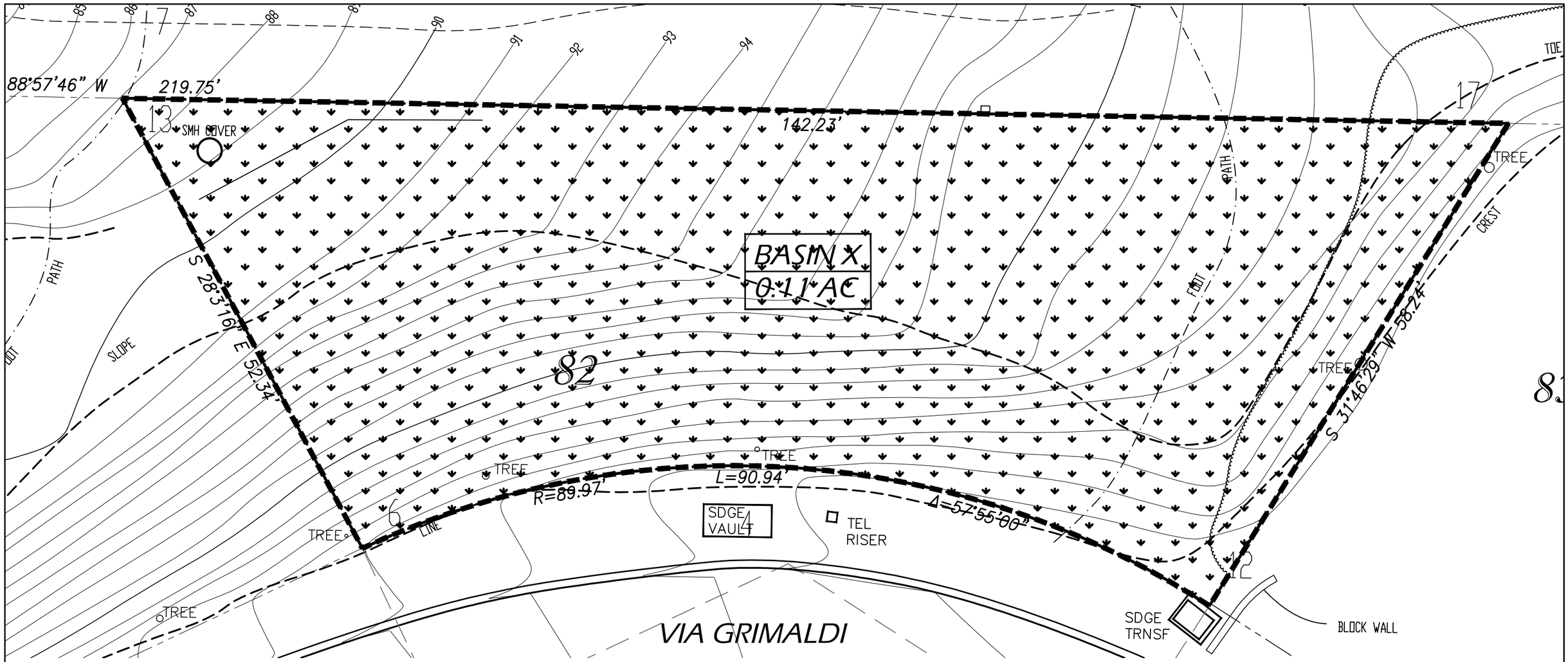


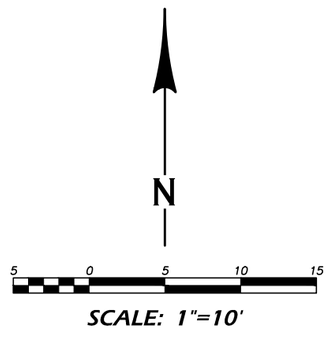
12/7/15

Michael Kinnear
RCE 76785
Exp. 12-31-16

Date

Appendix



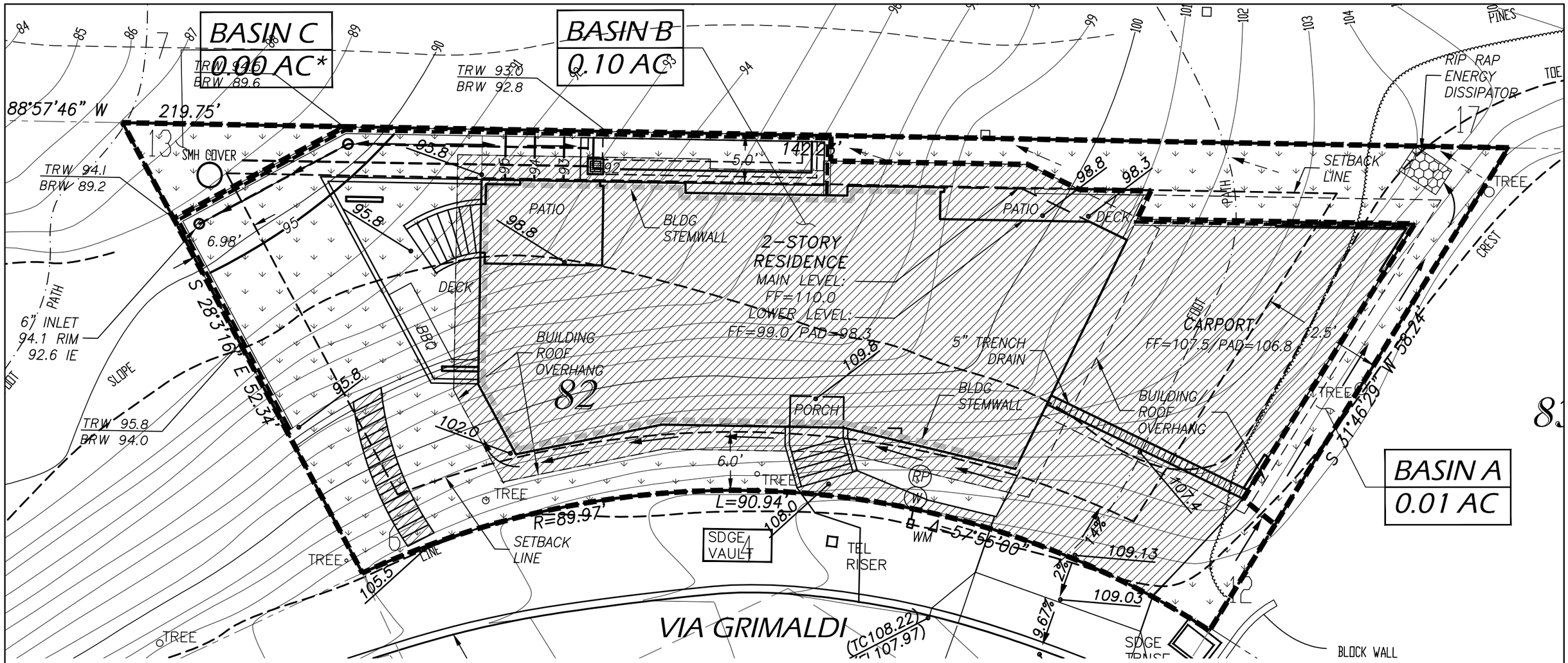


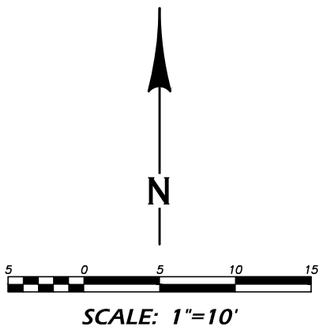
BASIN X: STEEP TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.45
TOTAL AREA: 4,832.83 SQFT = 0.11AC

IMPERVIOUS AREA: 0 SQFT

PERVIOUS AREA: 4,832.83 SQFT

DRAINAGE MAP - (E)
DRAINAGE MANAGEMENT AREAS





BASIN A: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 529.06 SQFT = 0.01AC

BASIN B: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 4,192.56 SQFT = 0.10AC

BASIN C: FLAT TERRAIN, SOIL TYPE D
RUNOFF COEFFICIENT: 0.55
TOTAL AREA: 111.21 SQFT = 0.00AC*
*ACTUAL ACREAGE VALUE ROUNDS TO 0.00 AT THE NEAREST HUNDREDTH

BASIN B:

IMPERVIOUS AREA: 3,017.74 SQFT

PERVIOUS AREA: 1,174.82 SQFT

DRAINAGE MAP - (P)
DRAINAGE MANAGEMENT AREAS

Water Quality Event

Table B - Pre Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
X	0.45	5.00	0.20	0.11	**0.01**	X	Sheet-flow to street
				Sum =	0.01		

Table B - Post Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
A	0.55	5.00	0.20	0.01	**0.00**	A	Divert Off-site
B	0.55	5.00	0.20	0.10	**0.01**	B	Residence
C	0.55	5.00	0.20	0.00	**0.00**	C	Remainder
				Sum =	0.01		

2 Year Storm

Table B - Pre Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
X	0.45	5.00	2.40	0.11	**0.12**	X	Sheet-flow to street
				Sum =	0.12		

Table B - Post Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
A	0.55	5.00	2.40	0.01	**0.01**	A	Divert Off-site
B	0.55	5.00	2.40	0.10	**0.13**	B	Residence
C	0.55	5.00	2.40	0.00	**0.00**	C	Remainder
				Sum =	0.15		

10 Year Storm

Table B - Pre Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
X	0.45	5.00	3.40	0.11	**0.17**	X	Sheet-flow to street
				Sum =	0.17		

Table B - Post Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
A	0.55	5.00	3.40	0.01	**0.02**	A	Divert Off-site
B	0.55	5.00	3.40	0.10	**0.19**	B	Residence
C	0.55	5.00	3.40	0.00	**0.00**	C	Remainder
				Sum =	0.21		

100 Year Storm

Table B - Pre Construction Flow Conditions							
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
X	0.45	5.00	4.40	0.11	**0.22**	X	Sheet-flow to street
				Sum =	0.22		

Table B - Post Construction Flow Conditions						Table B - Hydraulics of Proposed Structures	
		Summary					
Flow ID (Basin)	Runoff Coefficient, C	(5 min minimum) Total time-of-concentration, T_c (min)	Rainfall Intensity, I (in/hr)	Basin Area, A (acres)	**Q (cfs)**	Flow ID (Basin)	Flow Description
A	0.55	5.00	4.40	0.01	**0.02**	A	Divert Off-site
B	0.55	5.00	4.40	0.10	**0.24**	B	Residence
C	0.55	5.00	4.40	0.00	**0.00**	C	Remainder
				Sum =	0.27		

TABLE 2

RUNOFF COEFFICIENTS (RATIONAL METHOD)

DEVELOPED AREAS (URBAN)

Land Use	Coefficient, C Soil Type (1)
	D
Residential:	
Single Family	.55
Multi-Units	.70
Mobile Homes	.65
Rural (lots greater than 1/2 acre)	.45
Commercial (2) 80% Impervious	.85
Industrial (2) 90% Impervious	.95

NOTES:

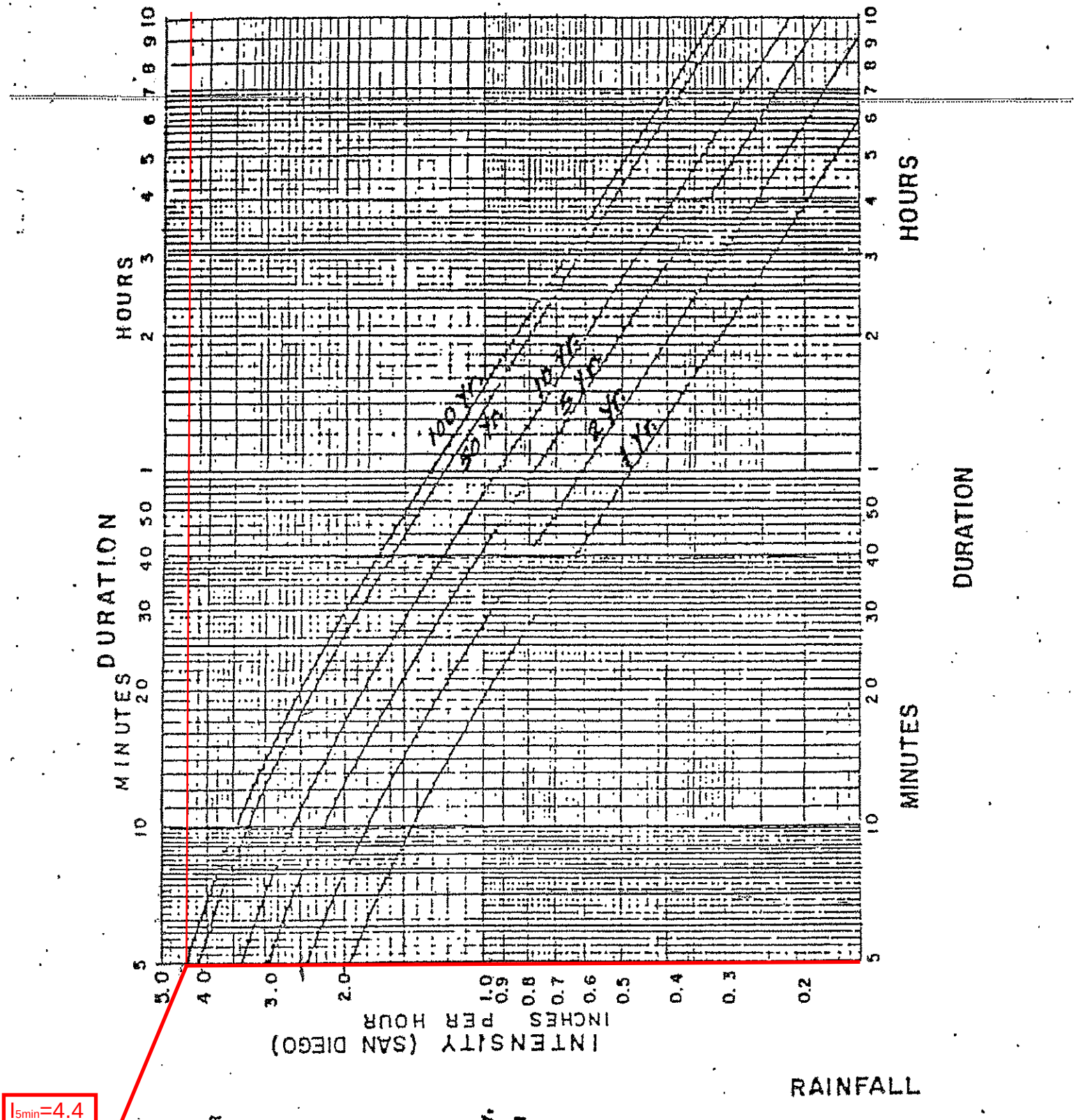
(1) Type D soil to be used for all areas.

(2) Where actual conditions deviate significantly from the tabulated imperviousness values of 80% or 90%, the values given for coefficient C, may be revised by multiplying 80% or 90% by the ratio of actual imperviousness to the tabulated imperviousness. However, in no case shall the final coefficient be less than 0.50. For example: Consider commercial property on D soil.

Actual imperviousness = 50%

Tabulated imperviousness = 80%

Revised C = $\frac{50}{80}$ x 0.85 = 0.53



I_{5min}=4.4

ELEV.	FACTOR
0–1500	1.00
1500–3000	1.25
3000–4000	1.42
4000–5000	1.60
5000–6000	1.70
DESERT	1.25

To obtain correct intensity, multiply intensity on chart by factor for design elevation.

RAINFALL

INTENSITY – DURATION – FREQUEN

CURVES

for

COUNTY OF SAN DIEGO

APPENDIX