Staff Report to the Zoning Administrator

Application Number: 121214

Applicant: Jeffrey Naess
Owner: Valentine Reyes, Trustee
APN: 043-152-16

Agenda Date: June 14, 2013
Agenda Item #: 3
Time: After 9:00 a.m.

Project Description: Proposal to recognize the construction of a deep pit stormwater percolation system approved under an Emergency Coastal Permit. Additionally, the proposal includes new construction of a 151-foot long shotcrete retaining wall, to a maximum height of 14 feet, to replace an existing wood retaining wall.

Location: Property located on the south side of Bayview Drive at 630 Bayview Dr.

Supervisoral District: 2nd District (District Supervisor: Zack Friend)

Permits Required: Coastal Development Permit

Technical Reviews Required: Soils and Geology Report Reviews

Staff Recommendation:

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 121214, based on the attached findings and conditions.

Exhibits

A.	Categorical Exemption (CEQA determination)	E.	Assessor's, Location, Zoning and General Plan Maps
B.	Findings	F.	Geotechnical and Geology Reports (excerpt)
C.	Conditions	G.	Comments & Correspondence
D.	Project plans		

Parcel Information

Parcel Size:	0.53 acres
Existing Land Use - Parcel:	Residential
Existing Land Use - Surrounding:	Residential

Project Access:	Bayview Drive
Planning Area:	Aptos
Land Use Designation:	R-1-6 (Single-family residential: 6,000 sq. ft. minimum parcel size)
Coastal Zone:	_X_ Inside __ Outside
Appealable to Calif. Coastal Comm.	_X_ Yes __ No

Environmental Information

Geologic Hazards:	Coastal bluff, instability addressed by proposed improvements
Soils:	N/A
Fire Hazard:	Not a mapped constraint
Slopes:	Steep slopes to be retained by proposed replacement retaining wall
Env. Sen. Habitat:	N/A
Grading:	Minimal grading proposed
Tree Removal:	No trees proposed to be removed
Scenic:	Potentially visible from beach/coastline; vegetative screening and use of natural colors to minimize visual impact
Drainage:	Existing drainage inadequate; proposed upgrades to improve conditions and reduce erosion
Archeology:	Not mapped/

Services Information

Urban/Rural Services Line:	_X_ Inside __ Outside
Water Supply:	Soquel Creek Water District
Sewage Disposal:	County Sanitation
Fire District:	Aptos-La Selva Fire Protection District
Drainage District:	Zone 6

History and Project Description

The subject parcel is located atop a coastal bluff on the south side of Bayview Drive. The parcel is developed with two single-family dwellings and is situated at a lower elevation than the adjacent roadway. There is no storm drain system within Bayview Drive. Uncontrolled stormwater runoff from the road, two residences, and concrete driveway has historically flowed over the bluff top, undermining a concrete patio, eroding the bluff top and destroying the existing wood retaining wall system below.

On August 27, 2012 an application was submitted for an Emergency Coastal Permit to construct a percolation system on the subject parcel. According to the Consulting Geotechnical and Coastal Engineer (Exhibit F), the two residences on the subject parcel will soon be in imminent danger of being undermined if the site drainage is not controlled. The Emergency Coastal Permit was approved and Building Permit #123079 was issued on 1/16/13, to authorize the construction of the percolation pit only.

A separate permit will be required to authorize the proposed replacement retaining wall.

The project site is located within the appeals jurisdiction of the Coastal Zone. Section 13.20.090 of the County Code states that Emergency Coastal Zone approvals may be granted at the discretion of the Planning Director for projects normally requiring a Coastal Zone Approval, which must be undertaken as emergency measures to prevent loss of or damage to life, health, or property. The work authorized under this approval has been limited to the activities required to construct the necessary drainage improvements.

Retaining Wall

In addition to the construction of the drainage pit, the consulting geotechnical engineer recommended the existing deteriorated wooden retaining system be replaced. The proposed shotcrete replacement wall is therefore included in this Coastal Permit as a component of the bluff stabilization at this site. The shotcrete wall is proposed to extend across the width of the subject lot in roughly the same location as the deteriorating 8-foot wood retaining wall. The wall would be tinted to a sand color and the project conditions of approval require revegetation of all disturbed areas to allow re-growth and to provide adequate screening. The landscape plan is required to be reviewed by Environmental Planning staff and the Project Planner prior to building permit issuance, to ensure that the planting will reduce the potential visual impact of the wall, while providing stability to the bluff.

In addition, a Maintenance Plan for the drainage system has been reviewed and accepted by the Stormwater Management Section of the Department of Public Works, with a requirement for annual inspections prior to the rainy season to ensure proper performance.

The County Geologist has reviewed and accepted the Geotechnical and Engineering Geology Reports prepared for the site and all recommendations contained in the reports have been incorporated as conditions of project approval. A condition of approval requires a pre-construction meeting with the consulting engineers, Public Works Stormwater Management staff and the County Geologist.

Zoning & General Plan Consistency

The subject property is approximately ½ acre in area, is located in the R-1-6 (single-family residential – 6,000 square foot minimum parcel size) zone district and R-UL (Urban Low Residential) General Plan designation. The proposed bluff stabilization measures are allowed uses in the zone districts and governing General Plan designations, in that the measures are necessary to preserve the safety of the existing residences on the site.

Local Coastal Program Consistency

The proposed bluff stabilization is in conformance with the certified Local Coastal Program, in that the preservation of the bluff will protect the residences on the subject and surrounding properties from catastrophic failure. The proposed work will conform to Geotechnical and

Engineering Geological Reports that have been reviewed and accepted by the County Geologist.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.

- **APPROVAL** of Application Number **121214,** based on the attached findings and conditions.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

Report Prepared By: Robin Bolster-Grant
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz CA 95060
Phone Number: (831) 454-5357
E-mail: robin.bolster@co.santa-cruz.ca.u

CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 121214
Assessor Parcel Number: 043-152-16
Project Location: 630 Bayview Dr., Aptos

Project Description: Recognize the construction of a deep pit stormwater percolation system and construct a 151-foot long shotcrete retaining wall to replace an existing failing wood retaining wall.

Person or Agency Proposing Project: California Jeffrey Naess

Contact Phone Number: (831) 426-3560

A. _____ The proposed activity is not a project under CEQA Guidelines Section 15378.

B. _____ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).

C. _____ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.

D. __X__ **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

Specify type: 15269 Emergency Projects

E. _____ **Categorical Exemption**

Specify type:

F. Reasons why the project is exempt:

This project involves the construction of a deep pit stormwater percolation system and replacement of an existing retaining wall involving no expansion of use. The deep pit system is required to control runoff previously contributing to bluff failure. The existing retaining wall is failing and the replacement wall is necessary to prevent the failure of the coastal bluff. Therefore, the construction of the percolation system and the replacement wall constitutes an emergency project.

In addition, none of the conditions described in Section 15300.2 apply to this project.

_____ Date: _____

Robin Bolster-Grant, Project Planner

EXHIBIT A

Coastal Development Permit Findings

1. That the project is a use allowed in one of the basic zone districts, other than the Special Use (SU) district, listed in section 13.10.170(d) as consistent with the General Plan and Local Coastal Program LUP designation.

This finding can be made, in that the property is zoned R-1-6 (Single-family residential, 6,000 square foot minimum net parcel size). The proposed bluff stabilization and drainage improvements are allowed uses in conjunction with the existing residential uses on the site.

2. That the project does not conflict with any existing easement or development restrictions such as public access, utility, or open space easements.

This finding can be made, in that the proposal does not conflict with any existing easement or development restriction such as public access, utility, or open space easements as the proposed development is limited to installation of drainage improvements and the replacement of an existing retaining wall. No easements are known to encumber the property.

3. That the project is consistent with the design criteria and special use standards and conditions of this chapter pursuant to section 13.20.130 et seq.

This finding can be made, in that, while the replacement retaining wall may be visible from the beach, the concrete is tinted to match the surrounding sand and will be textured to mimic the bluff. Additionally, a landscape plan is required to be submitted for approval. The landscape plan will include both revegetation of all disturbed areas as well as vegetation to provide screening, in the form of hanging vines and/or plantings positioned at the base of the wall. The use of proper tinting and vegetation will ensure that the wall does not negatively impact the viewshed from the beach in the long term.

4. That the project conforms with the public access, recreation, and visitor-serving policies, standards and maps of the General Plan and Local Coastal Program land use plan, specifically Chapter 2: figure 2.5 and Chapter 7, and, as to any development between and nearest public road and the sea or the shoreline of any body of water located within the coastal zone, such development is in conformity with the public access and public recreation policies of Chapter 3 of the Coastal Act commencing with section 30200.

This finding can be made, in that while the project site is located between the shoreline and the first public road, the replacement retaining wall will have no impact on access or recreational opportunities as no pedestrian or other access points are located in the vicinity.

EXHIBIT B

5. That the proposed development is in conformity with the certified local coastal program.

This finding can be made, in that the structure is sited and designed to be visually compatible, to the greatest extent practicable, in scale with, and integrated with the character of the surrounding neighborhood. The wall may be temporarily visible from surrounding properties and the beach; however the concrete is required to be tinted to match the color of the sand and vegetation will be planted in such a way as to provide additional screening over time. Such planting may consist of hanging vines planted at the top of the wall or individual planting embedded within the face of the wall itself.

EXHIBIT B

Conditions of Approval

Exhibit A. Project Plans (7 sheets) prepared by Soils Engineering Construction, Inc., dated 12/19/12, revised 3/12/13, Drainage Plan prepared by Bowman & Williams, dated 8/20/12.

I. This permit authorizes construction of the deep pit stormwater percolation system approved under an Emergency Coastal Permit as well as the new construction of a 151-foot long shotcrete retaining wall, with a maximum height of 14 feet, to replace an existing wood retaining wall.. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/ owner shall:

A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.

B. Any outstanding balance due to the Planning Department must be paid prior to receiving a final inspection for any active Building or Grading Permits.

II. Prior to issuance of a Building Permit the applicant/owner shall:

A. Submit four copies of the approved Discretionary Permit with the Conditions of Approval attached. The Conditions of Approval shall be recorded prior to submittal.

B. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "A" on file with the Planning Department. Any changes from the approved Exhibit "A" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:

1. One elevation shall indicate materials and colors as they were approved by this Discretionary Application.

2. Grading, drainage, and erosion control plans. Plans must show all bluff wall and drainage improvements. If engineering elements from different engineers are shown on different plan sheets, care must be taken to asure that there are not conflicts between the elements. A change order will be necessary to make Bowman Williams and Associates Plan match the retaining wall plan by Soils Engineering Construction.

EXHIBIT C

3. Provide a recorded Maintenance Agreement for the proposed percolation pits. Agreement shall be reviewed and approved by the Department of Public Works Stormwater Management Section.

4. Plans shall reference the technical reports and include a statement that the project shall conform to the reports' recommendations.

C. A Maintenance Plan for the drainage improvements must be recorded by the County Recorder's Office and copies submitted to the Stormwater Section of the Department of Public Works and to Environmental Planning staff.

D. A landscape and erosion control plan shall be submitted to Environmental Planning staff for review and approval. The landscape plan must demonstrate the establishment or re-establishments to vegetation on all surfaces that are disturbed as well as vegetation designed to provide screening of the shotcrete wall. Only drought-tolerant native and adaptable plants shall be included in the vegetation plan.

E. Meet all requirements of and pay Zone 6 drainage fees to the County Department of Public Works, Stormwater Management, if required.

F. Meet all requirements and pay any applicable plan check fee of the Aptos La Selva Fire Protection District, if required.

G. Submit 3 copies of a soils report prepared and stamped by a licensed Geotechnical Engineer.

H. Complete and record a Declaration of Geologic Hazards for the work on the coastal bluff. **You may not alter the wording of this declaration**. Follow the instructions to record and return the form to the Planning Department.

III. All construction shall be performed according to the approved plans for the building permit. Prior to final building inspection, the applicant/owner must meet the following conditions:

A. The property owner, applicant or other responsible party shall contact Environmental Planning at (831) 454-3168 four working days prior to final site inspection.

B. Erosion control measures must be in place at all times during construction. All disturbed soils shall be stabilized to prevent siltation in the watercourse.

C. Construction shall conform to all recommendations made in the Geotechnical and Engineering Geology Reports prepared for this site.
Project Civil Engineer shall inspect the drainage improvements and provide the

EXHIBIT C

Department of Public Works Stormwater Management staff with a letter confirming that the work was completed per plans. Letter shall specify the elements inspected, whether invert elevations, pipe sizing, and all relevant design features. As-built plans, stamped by the Civil Engineer, may be submitted in lieu of the letter. The as-built stamp shall be placed on each sheet of the plans where stormwater management improvements were shown.

D. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.

IV. Operational Conditions

A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.

V. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, it officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.

A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

EXHIBIT C

2. COUNTY defends the action in good faith.

C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.

D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor'(s) in interest, transferee(s), and assign(s) of the applicant.

In accordance with Chapter 18.10 of the County Code, minor variations to this permit which do not affect the overall concept, intensity, or density may be approved by the Planning Director at the request of the applicant or staff.

Approval Date: _____

Effective Date: _____

Expiration date: _____

Wanda Williams	Robin Bolster-Grant
Deputy Zoning Administrator	Project Planner

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code

EXHIBIT C

COASTAL BLUFF STABILIZATION
REPLACEMENT OF BLUFFTOP RETAINING WALLS

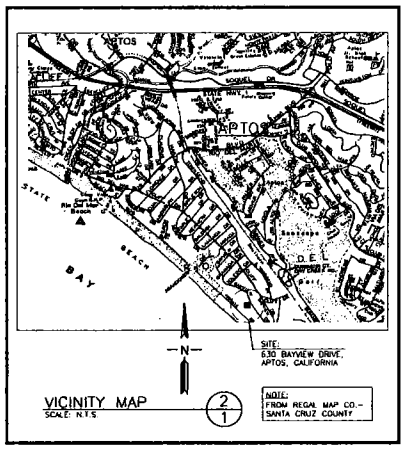
PREPARED FOR:

VALENTINE REYES
P.O. BOX 219,
GILROY, CALIFORNIA 95021

PROJECT ADDRESS:

630 BAYVIEW DRIVE, APTOS,
SANTA CRUZ COUNTY, CALIFORNIA 95003
APN: 043-152-16

SHEET INDEX:



VICINITY MAP (2/1)
SCALE: N.T.S.

PROJECT CONTACTS/CONSULTANTS:

OWNER:
VALENTINE REYES
P.O. BOX 219,
GILROY, CALIFORNIA 95021

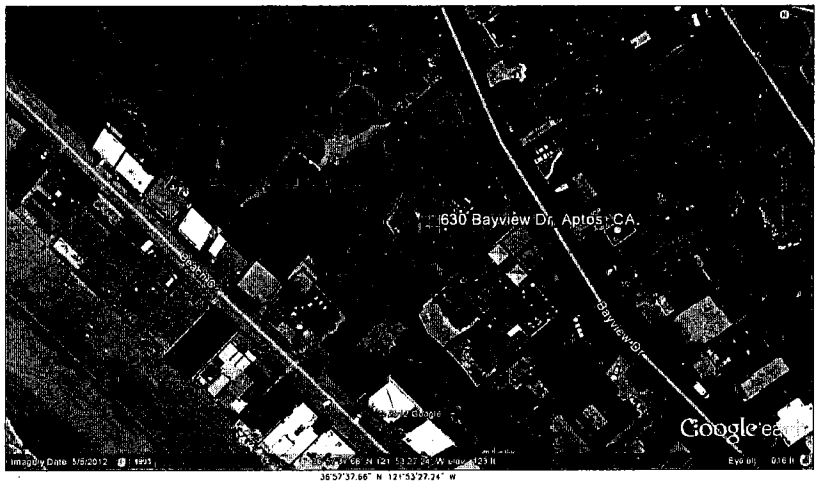
CIVIL ENGINEER:
SOIL ENGINEERING CONSTRUCTION, INC.
GEORGE E. DREW, P.E.
927 ARGUELLO STREET,
REDWOOD CITY, CALIFORNIA 94063
(650) 367-9595

GEOTECHNICAL ENGINEER:
HARO, KASUNICH AND ASSOCIATES, INC.
RICH L. PARKS, P.E., G.E.
116 EAST LAKE AVENUE,
WATSONVILLE, CALIFORNIA 95076
(831) 722-4175

SURVEYOR:
BOWMAN & WILLIAMS
JEFFREY R. HAESS, P.E.
1011 CEDAR STREET,
SANTA CRUZ, CALIFORNIA 95060
(831) 426-3560

GEOLOGY CONSULTANT:
ROGERS E. JOHNSON & ASSOCIATES
41 HANGAR WAY, SUITE B,
WATSONVILLE, CALIFORNIA 95076
TEL. (831) 728-7200

0 1" 2" 3"
ORIGINAL DRAWING MEASURE



AERIAL VIEW OF EXISTING BLUFF (1/1)
SCALE: N.T.S.

NOTE:
IMAGE FROM GOOGLE EARTH, 2012.
IMAGERY DATE: 5/5/2012.

SOIL ENGINEERING CONSTRUCTION, INC.
927 ARGUELLO STREET, REDWOOD CITY, CALIFORNIA 94063
PHONE (650) 367-9595 FAX (650) 367-9139

SOIL ENGINEERING CONSTRUCTION, INC.

REGISTERED PROFESSIONAL ENGINEER
GEORGE E. DREW
No. 20681
EXP. 9-30-13
CIVIL
STATE OF CALIFORNIA

AERIAL VIEW OF EXISTING BLUFF, VICINITY MAP AND PROJECT CONTACTS/ CONSULTANTS

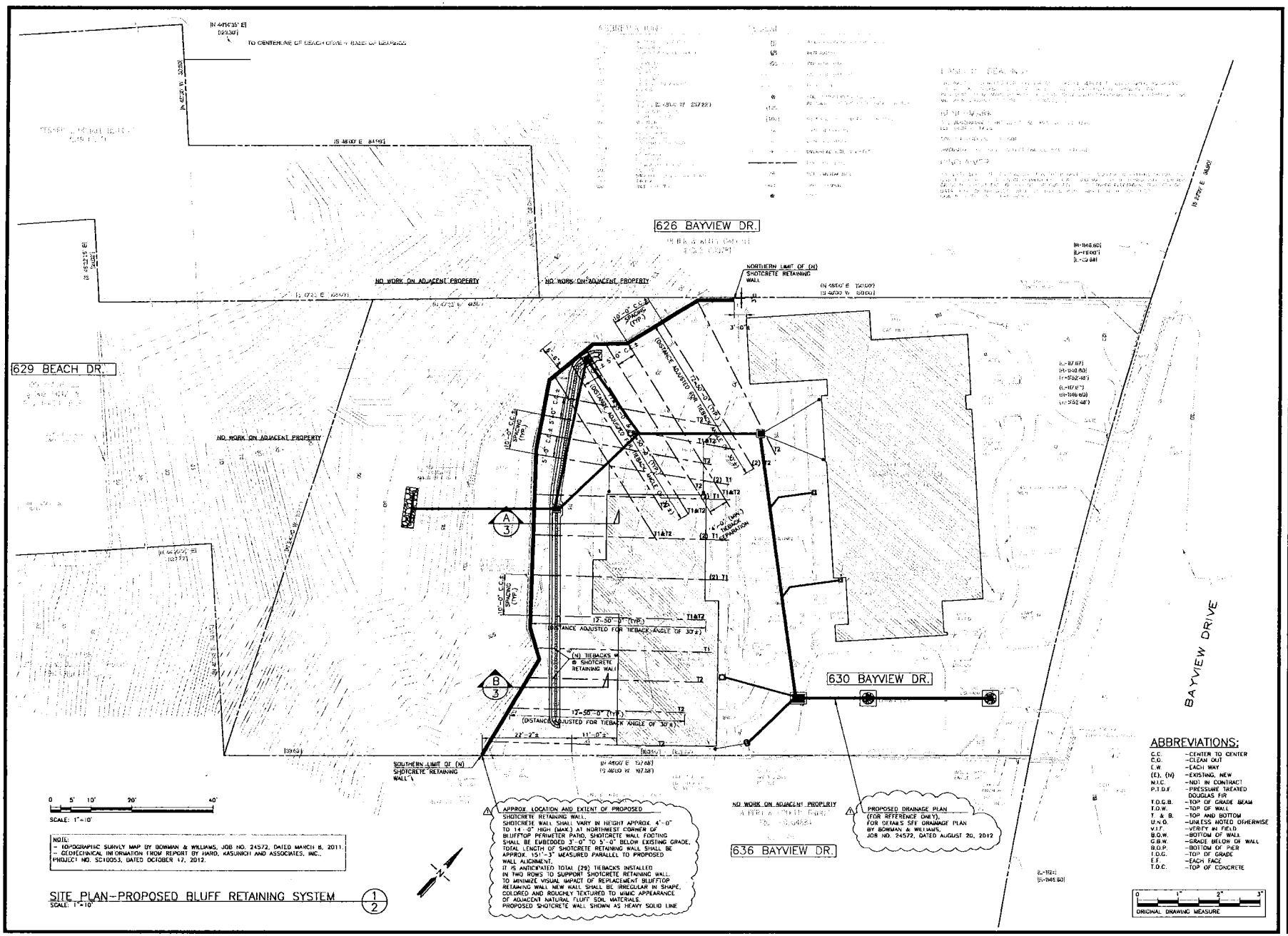
COASTAL BLUFF STABILIZATION
630 BAYVIEW DRIVE,
APTOS, SANTA CRUZ COUNTY,
CALIFORNIA 95003

FILE NO.	
DATE	12-10-12
PROJECT	12-053
DRC. NO.	Bayview Dr-01
REVISION	02-12-13
REVISION	
REVISION	
REVISION	
DESIGNED BY:	BH
CHECKED BY:	GED

1 OF 7

EXHIBIT D

-12-



NOTE:
- TOPOGRAPHIC SURVEY MAP BY BOWMAN & WILLIAMS, JOB NO. 24572, DATED MARCH 8, 2011.
- GEOTECHNICAL INFORMATION FROM REPORT BY HARO, KASUNICH AND ASSOCIATES, INC., PROJECT NO. SC10053, DATED OCTOBER 17, 2012.

SITE PLAN--PROPOSED BLUFF RETAINING SYSTEM (1/2)
SCALE: 1"=10'

SOIL ENGINEERING CONSTRUCTION, INC.
SOIL ENGINEERING CONSTRUCTION INC.
627 ARCUELLO STREET, REDWOOD CITY, CALIFORNIA 94063
PHONE (650) 367-6139 FAX (650) 367-6139
REGISTERED PROFESSIONAL ENGINEER GEORGE E. DIEHL No. 20681 EXP. 9-30-13 CIVIL STATE OF CALIFORNIA

SITE PLAN--PROPOSED BLUFF RETAINING SYSTEM

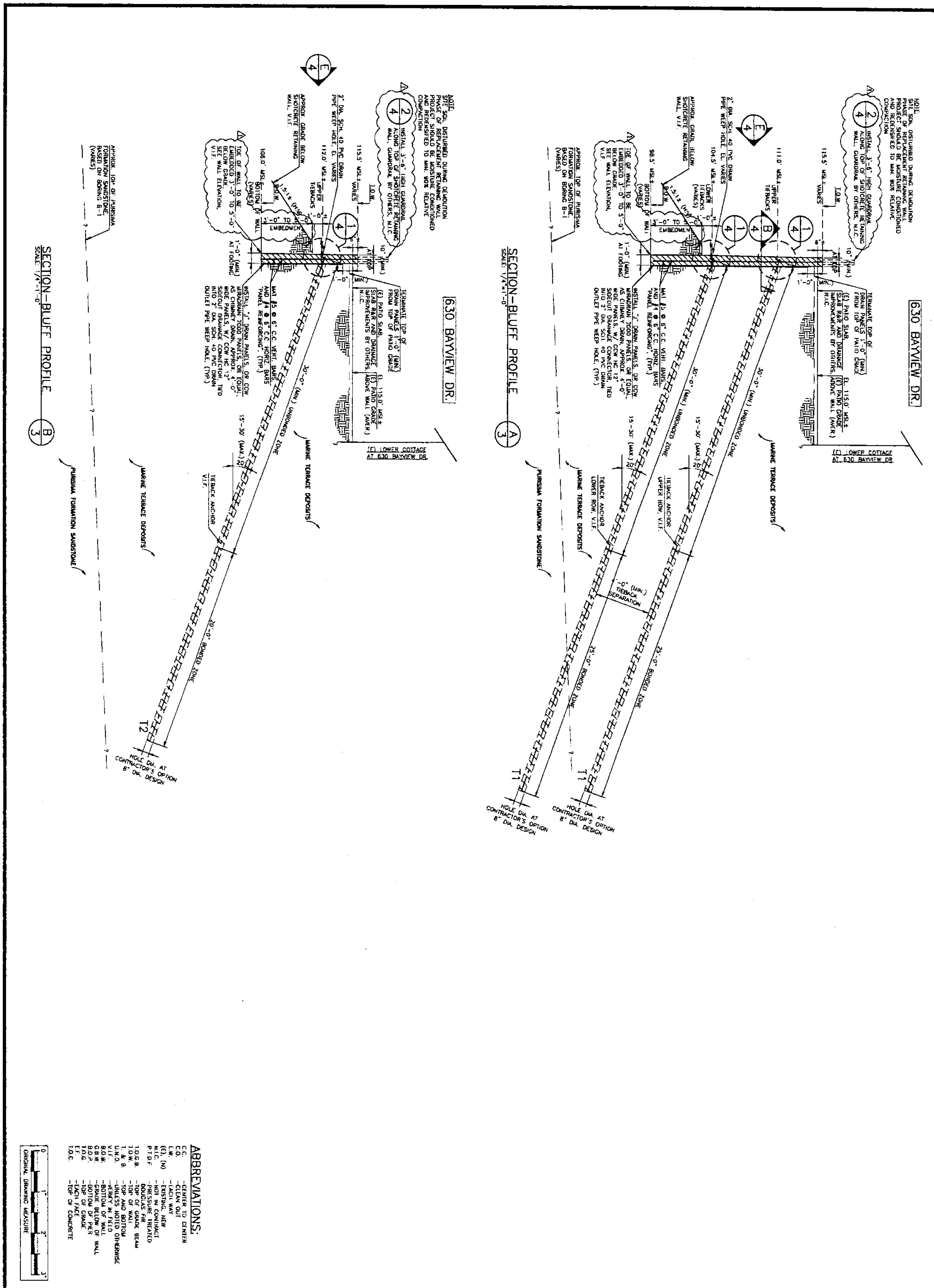
COASTAL BLUFF STABILIZATION

630 BAYVIEW DRIVE,
APTOS, SANTA CRUZ COUNTY,
CALIFORNIA 95003

FILE NO.	
DATE	12-18-12
PROJECT	13-003
DRG. NO.	Bayview SH-02
REVISION	02-12-13
REVISION	
REVISION	
REVISION	
DESIGNED BY	RH
CHECKED BY	GED

2 OF 7

EXHIBIT D



COASTAL BLUFF STABILIZATION 630 BAYVIEW DRIVE, APTOS, SANTA CRUZ COUNTY, CALIFORNIA 95003	**BLUFF PROFILE SECTIONS A–A' & B–B'**

REGISTERED PROFESSIONAL ENGINEER · GEORGE E. DREW · No. 20661 · EXP 9-30-13 · CIVIL · STATE OF CALIFORNIA

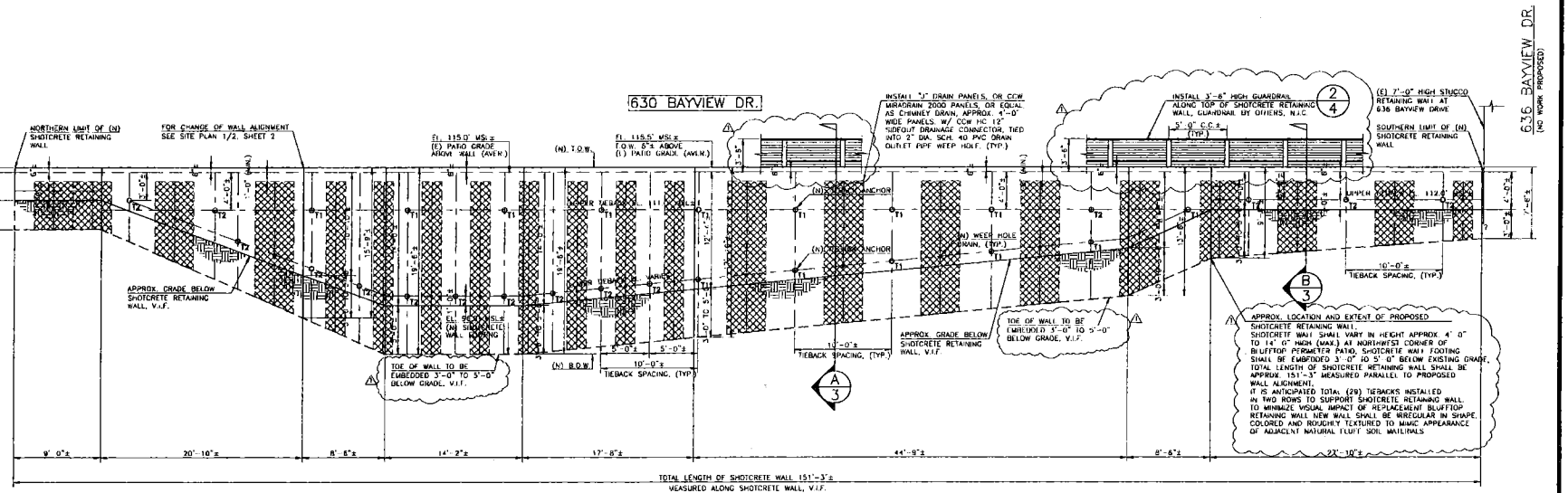
SOIL ENGINEERING CONSTRUCTION

SOIL ENGINEERING CONSTRUCTION, INC.
927 ARGUELLO STREET, REDWOOD CITY, CALIFORNIA 94063
PHONE (650) 367-9595 FAX (650) 367-8139

3 OF 7

EXHIBIT D

EXHIBIT D



PROFILE–WALL ELEVATION (E/4)
SCALE: 3/16"=1'-0"

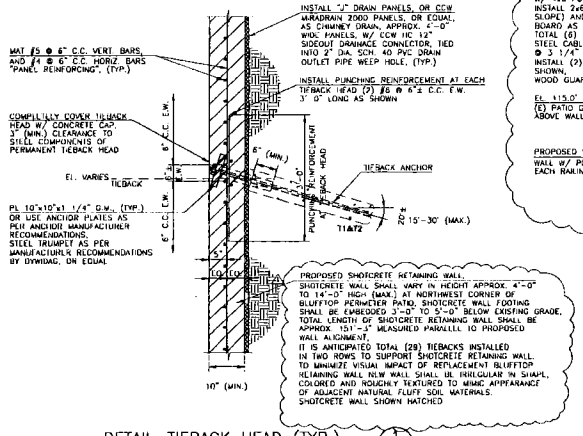
TIEBACK ANCHOR TABLE "A"

MARK	DESIGN LOAD KIPS	TEST LOAD KIPS	LOCK-OFF LOAD KIPS	UNBONDED ZONE FEET (MIN.)	BONDED ZONE FEET	TOTAL LENGTH FEET	TOTAL NUMBER EACH	NOTE
T1	75.0	100.0	45.0	30	25	55	14	
T2	50.0	67.0	30.0	30	20	50	15	

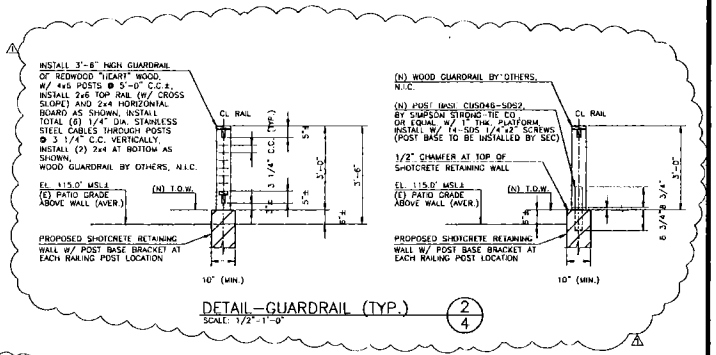
NOTES:
- TIEBACK ANCHORS TO BE BY DCI DYWIDAG, OR EQUAL.
- ALL TIEBACK ANCHORS TO BE DBL CORROSION PROTECTED.
- BAR ANCHOR: T1–USE 1 1/4" DIA, GR 150 ASTM A722, DYWIDAG BAR AND HARDWARE.
- BAR ANCHOR: T2–USE 1" DIA, GR 150 ASTM A722, DYWIDAG BAR AND HARDWARE.
- MULTISTRAND ANCHOR: T1–USE (3) 0.6" DIA. 270 KSI ANCHOR, ASTM A722, DYWIDAG HARDWARE.
- MULTISTRAND ANCHOR: T2–USE (2) 0.6" DIA. 270 KSI ANCHOR, ASTM A722, DYWIDAG HARDWARE.
- ALL TIEBACK ANCHORS TO BE PROOF TESTED TO 133% D.L.

TIEBACK ANCHOR TESTING PROCEDURE TO BE IN GENERAL CONFORMANCE WITH PTI MANUAL, FIFTH EDITION, AND SPECIFICALLY IN ACCORDANCE WITH FOLLOWING SECTIONS:
MEMORANDUM TESTING SECTION 4.3.7.1
PROOF TESTING SECTION 4.3.7.2
ACCEPTANCE CRITERIA SECTION 4.5.6

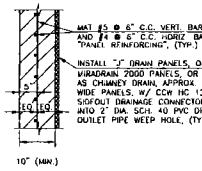
- INCLINATION BELOW HORIZONTAL PLANE 15° TO 30° (MAX.), MAY VARY.
- NON PRESSURE GROUTED, DRILLED 8" DIA. ANCHOR HOLES USED FOR DESIGN PURPOSES.
- MINIMUM UNBONDED ZONE IS 30'-0"
- TYPICAL TIEBACK ANCHOR HORIZONTAL SPACING 10'-0" C.C.±
- WORKING SHAFT BOND FRICTION 2,160 PSF (FACTOR OF SAFETY=2).
- APPROX. TOTAL TIEBACK ANCHORS ANTICIPATED AS SHOWN ABOVE. TOTAL NUMBER OF EACH MARK IS ESTIMATED ONLY, BASED ON DESIGN SECTIONS, V.I.F. FOR EACH MARK LOCATION SEE SITE PLAN AND WALL ELEVATION. ADDITIONAL TIEBACK ANCHORS MAY BE INSTALLED IF DEEMED NECESSARY BY SOIL ENGINEER'S REPRESENTATIVE BASED ON FIELD CONDITIONS.



DETAIL–TIEBACK HEAD (TYP.) (1/4)
SCALE: 3/4"=1'-0"



DETAIL–GUARDRAIL (TYP.) (2/4)
SCALE: 3/2"=1'-0"



NOTE:
TO MINIMIZE VISUAL IMPACT OF REPLACEMENT BLUFFTOP RETAINING WALL NEW WALL SHALL BE IRREGULAR IN SHAPE. COLORED AND ROUGHLY TEXTURED TO MIMIC APPEARANCE OF ADJACENT NATURAL FLUFF SOIL MATERIALS.

SECTION–WALL (TYP.) (B/4)
SCALE: 3/4"=1'-0"

ABBREVIATIONS:

C.C.	–CENTER TO CENTER
C.O.	–CLEAN OUT
E.W.	–EACH WAY
(E), (N)	–EXISTING, NEW
N.I.C.	–NOT IN CONTRACT
P.T.D.F.	–PRESSURE TREATED DOUGLAS FIR
T.O.G.B.	–TOP OF GRADE BEAM
T.O.W.	–TOP OF WALL
T. & B.	–TOP AND BOTTOM
U.N.O.	–UNLESS NOTED OTHERWISE
V.I.F.	–VERIFY IN FIELD
B.O.W.	–BOTTOM OF WALL
G.B.W.	–GRADE BELOW OF WALL
M.O.P.	–MOTION OF PILE
T.O.G.	–TOP OF GRADE
E.F.	–EACH FACE
T.O.C.	–TOP OF CONCRETE

0 1" 2" 3"
ORIGINAL DRAWING MEASURE

SOIL ENGINEERING CONSTRUCTION, INC.
827 ARGUELLO STREET, REDWOOD CITY, CALIFORNIA 94063
PHONE (650) 367-6565 FAX (650) 367-6139
SOIL ENGINEERING CONSTRUCTION, INC.
REGISTERED PROFESSIONAL ENGINEER GEORGE E. DIDION No. 20681 EXP. 9-30-13 CIVIL STATE OF CALIFORNIA

SHOTCRETE BLUFF RETAINING SYSTEM– WALL ELEVATION, SECTIONS AND DETAILS

COASTAL BLUFF STABILIZATION

630 BAYVIEW DRIVE,
APTOS, SANTA CRUZ COUNTY,
CALIFORNIA 95003

FILE NO.	
DATE	12-18-12
PROJECT	12-003
DWG. NO.	Bayview 12-04
REVISION	1 12-12-13
REVISION	
REVISION	
REVISION	
DESIGNED BY:	BH
CHECKED BY:	GED

PROJECT NOTES:

GENERAL NOTES:

1. DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH 2010 CBC, AS AMENDED BY STATE OF CALIFORNIA, AND COUNTY OF SANTA CRUZ CODES AND ORDINANCES.
2. ALL DIMENSIONS, CONDITIONS AND LOCATION OF FACILITIES TO BE VERIFIED AND DETERMINED IN FIELD.
3. EXACT LOCATION AND EXTENT OF PROPOSED COASTAL BLUFF STABILIZATION MAY BE ADJUSTED AS FIELD CONDITIONS REQUIRE AT TIME OF CONSTRUCTION.
   ENGINEER OF RECORD SHALL BE INFORMED ON ANY DEVIATION FROM APPROVED LOCATION OF SOIL PIN WALL AND WILL SUBMIT TO BUILDING OFFICIALS REVISED CALCULATIONS AND REVISED DRAWINGS FOR APPROVAL.
4. ALL EXPOSED STEEL, IF ANY, SHALL BE GALVANIZED OR COATED WITH CORROSION INHIBITING PAINT.
5. CAST-IN-PLACE CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:
   - SHOTCRETE WALL/FACING: f'c=4,000 PSI
   MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO, BY WEIGHT, NORMAL WEIGHT CONCRETE, TO BE OF 0.45.
   USE CEMENT TYPE II - V PORTLAND CEMENT.
   CONCRETE TEST SPECIMEN SPECIAL INSPECTION IS REQUIRED.
6. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 FOR #4 BARS AND ABOVE.
7. STEEL MEMBERS, IF ANY, SHALL BE:
   ALL WIDE FLANGE STEEL MEMBERS SHALL CONFORM TO ASTM A572, GRADE 50,
   - MISCELLANEOUS CHANNELS, ANGLES, AND PLATES SHALL CONFORM TO ASTM A36.
8. ALL RETROFIT ANCHORS, LEVELERS AND HARDWARE TO BE BY SIMPSON STRONG-TIE COMPANY, INC., OR EQUAL.
9. SECTION AT CONSTRUCTION JOINT (C.J.) MAKE ROUGH AND FORM KEY.
10. REINFORCEMENT COVER (2010 CBC SEC. 1907.7.1.):
    - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH SHALL HAVE MINIMUM 3" CONCRETE COVER.
    CONCRETE EXPOSED TO EARTH OR WEATHER SHALL HAVE MINIMUM 2" CONCRETE COVER FOR #6 BARS AND ABOVE, 1 1/2" FOR #5 BARS AND BELOW.
11. SPLICES OF REBAR TO BE CLASS (B) SPLICE.
    FOR SHOTCRETE METHOD LAP SPLICES OF REINFORCING BARS IN SHOTCRETE SHALL BE BY NON-CONTACT LAP SPLICE METHOD WITH AT LEAST 2 1/2" CLEARANCE BETWEEN BARS (2010 CBC SEC. 1913.4.2).
12. EPOXY ADHESIVE, IF ANY, TO BE "SET-XP" BY SIMPSON STRONG-TIE COMPANY, INC., ESR-2508 OR EQUAL.
    CONCRETE / GROUT PATCH SHALL BE APPROVED HIGH STRENGTH CEMENT BASED COMPOUND.
13. TIEBACK ANCHOR NOTES:
    SEE TIEBACK ANCHOR TABLE "A" AND RELEVANT SECTIONS, DETAILS AND NOTES.
    TIEBACK ANCHORS TO BE BY DCI DYWIDAG, OR EQUAL.
    TIEBACK ANCHORS SHALL BE DBL CORROSION PROTECTED.
    USE ADEQUATE CENTRALIZERS, IF BAR IS USED, @ 10'-0" C.C.#.
    HOLE DIA. AT CONTRACTOR'S OPTION. 8" DIA. IS USED IN DESIGN.
    ALLOW HOLE CONCRETE BACKFILL CURE TIME BEFORE TESTING.
    HOLES TO BE DRILLED, PIPE GROUTED FROM BOTTOM OF HOLE FOR ENTIRE BONDED ZONE. GREASE FILLED PVC SLEEVE WILL BE PROVIDED OVER UNBONDED LENGTH TO ASSURE LOAD IS ONLY ON BONDED LENGTH. SECOND STAGE OF GROUTING SHALL BE ACCOMPLISHED AFTER ACCEPTED TESTING. ALL WAY UP REMAINING HOLE, FRACTURE GROUTING MAY BE UTILIZED, AT CONTRACTOR'S OPTION TO ACHIEVE CONSIDERABLY HIGHER SOIL-GROUT BOND CAPACITY. TIEBACK ANCHORS DEPTH MAY BE ADJUSTED BY GEOTECHNICAL CONSULTANT, BASED ON ACTUAL BOND STRENGTH DEVELOPED IN TEST PROGRAM, OR PER ACTUAL SOIL CONDITIONS AT TIME OF DRILLING OPERATION.
14. SPECIAL INSPECTION (2010 CBC SEC. 1704):
    - SEE SPECIAL INSPECTION SCHEDULE.
    UPON CONCLUSION OF CONSTRUCTION, ENGINEER OF RECORD WILL PREPARE SUMMARY LETTER OF HIS OBSERVATIONS RELATIVE TO SLOPE STABILIZATION, AND AS-BUILT CONSTRUCTION CONDITIONS.
15. DESIGN RECOMMENDATIONS AND PARAMETERS.
    - GEOTECHNICAL INVESTIGATION, REPLACEMENT OF BLUFFTOP RETAINING WALLS, 630 BAYVIEW DRIVE, RIO DEL MAR, APN. 044-261-04, BY HARO, KASUNICH & ASSOCIATES, INC., PROJECT NO SC10053, DATED OCTOBER 17, 2012
16. PROJECT SOIL ENGINEER: HARO, KASUNICH AND ASSOCIATES, INC., SHALL CONFIRM THAT COASTAL BLUFF PLAN AND SPECIFICATIONS HAVE BEEN REVIEWED AND THAT IT HAS BEEN DETERMINED THAT RECOMMENDATIONS IN THEIR GEOTECHNICAL REPORT(S) ARE PROPERLY INCORPORATED INTO CONSTRUCTION PLANS.
    APPROVAL LETTER SHALL BE SUBMITTED TO COUNTY OF SANTA CRUZ BUILDING AND PLANNING DEPARTMENT.
17. PROJECT SOIL ENGINEER: HARO, KASUNICH AND ASSOCIATES, INC., SHALL BE RETAINED BY OWNER TO PROVIDE OBSERVATION AND TESTING SERVICES DURING CONSTRUCTION PER GEOTECHNICAL REPORT(S) RECOMMENDATIONS.
    INSPECTION AND TESTING REPORTS SHALL BE SUBMITTED TO COUNTY OF SANTA CRUZ BUILDING AND PLANNING DEPARTMENT.
18. SOIL ENGINEER OF RECORD:
    HARO, KASUNICH & ASSOCIATES, INC.
    TEL. (831) 722-4175, FAX (831) 722-3202
    (SEE ALSO PROJECT CONTACTS/CONSULTANTS, SHEET 1.)
19. ALL CONSTRUCTION SHALL COMPLY WITH RECOMMENDATIONS OF AFOREMENTIONED REPORT(S).

PUBLIC WORKS REQUIREMENTS:

21. OWNER SHALL APPLY FOR AND OBTAIN TEMPORARY ENCROACHMENT PERMITS, IF APPLICABLE, FROM DEPARTMENT OF PUBLIC WORKS FOR ALL WORK IN RIGHT OF WAY, EASEMENTS OF PROPERTY IN WHICH COUNTY HOLDS INTEREST, INCLUDING DRIVEWAY, SIDEWALKS, SEWER CONNECTIONS, SEWER CLEANOUTS, CURB DRAINS, OR STORM DRAIN CONNECTIONS IN FIELD.
22. ALL CONSTRUCTION RELATED ACTIVITIES WHICH REQUIRE COUNTY PERMIT SHALL BE ALLOWED ONLY DURING HOURS OF 8:00 A.M. TO 5:00 P.M., MONDAY THROUGH FRIDAY AND 9:00 A.M. TO 4:00 P.M. SATURDAYS. NO CONSTRUCTION ACTIVITY OR RELATED ACTIVITIES SHALL BE ALLOWED OUTSIDE OF AFOREMENTIONED HOURS OR ON SUNDAYS AND FOLLOWING HOLIDAYS: NEW YEAR'S DAY, PRESIDENT'S DAY, MEMORIAL DAY, 4TH OF JULY, LABOR DAY, THANKSGIVING DAY, AND CHRISTMAS DAY. ALL GASOLINE POWERED CONSTRUCTION EQUIPMENT SHALL BE EQUIPPED WITH AN OPERATING MUFFLER OR BAFFLING SYSTEM AS ORIGINALLY PROVIDED BY MANUFACTURER, AND NO MODIFICATION TO THESE SYSTEMS IS PERMITTED.
    VERIFY AFOREMENTIONED HOLIDAY SCHEDULE AND HOURS WITH COUNTY OF SANTA CRUZ BUILDING DEPARTMENT.
23. CONTRACTOR SHALL ENSURE THAT APPLICABLE BEST MANAGEMENT PRACTICES (BMPS) FROM COUNTY OF SANTA CRUZ STORMWATER PREVENTION PROGRAM (STOPP) ARE FOLLOWED TO PREVENT DISCHARGE OF SOIL OR ANY CONSTRUCTION MATERIAL INTO GUTTER, STORM DRAIN, OR CREEK.

SITE WORK NOTES:

31. ALL EXISTING TREES TO REMAIN.
    EXISTING BUSHES IMMEDIATELY BELOW RETAINING WALLS SHALL BE CLEARED AS NECESSARY.
32. ALL PIPING SHALL HAVE GLUED JOINTS AND ALL CHANGES IN DIRECTION MORE THAN 45 DEGREES SHALL BE MADE WITH LONG SWEEP FITTINGS TO ALLOW FOR MAXIMUM FLOW.
    ALL PERFORATED PIPING SHALL BE INSTALLED WITH PERFORATIONS DOWN.

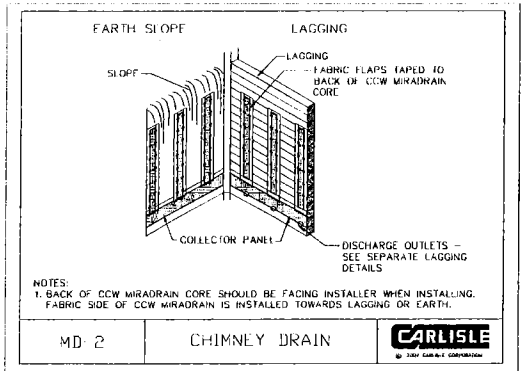
STATEMENT OF SPECIAL INSPECTIONS (2010 CBC SEC. 1704):

I. SOILS (2010 CBC TABLE 1704.7):
   1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY (PERIODICALLY DURING TASK LISTED).
   2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL (PERIODICALLY DURING TASK LISTED).
   3. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL, IF ANY (CONTINUOUS DURING TASK LISTED).
   4. SOIL ENGINEER'S REPRESENTATIVE TO OBSERVE DRILLING OPERATION TO CONFIRM DEPTH OF TIEBACK ANCHORS.
   5. SOIL ENGINEER'S REPRESENTATIVE TO OBSERVE PROOF TESTING OF ALL TIEBACK ANCHORS:
   - PROOF TEST ALL TIEBACK ANCHORS EACH ROW.
   - ANCHOR TEST LOAD (T.L.) @ 133% D.L. (SEE TIEBACK ANCHOR TABLE "A").
   - ANCHOR LOCK-OFF LOAD @ 80% D.L. (SEE TIEBACK ANCHOR TABLE "A").
   - ANCHORS TESTING PROCEDURE TO BE IN GENERAL CONFORMANCE WITH PTI MANUAL (POST TENSIONING INSTITUTE).
   - UPON CONCLUSION OF ANCHORS TESTING, SOIL ENGINEER WILL PREPARE SUMMARY LETTER OF HIS OBSERVATIONS RELATIVE TO BOTH LOAD TESTING AND ANCHOR DEPTH, AND AS-BUILT CONSTRUCTION CONDITIONS.

II. CONCRETE CONSTRUCTION (2010 CBC TABLE 1704.4):
   1. INSPECTION OF REINFORCING STEEL AND PLACEMENT IS REQUIRED (PERIODIC).
   2. VERIFYING USE OF REQUIRED DESIGN MIX FOR CONCRETE: f'c=4,000 PSI, W/C RATIO=0.45, TYPE II - V CEMENT.
   LAB TESTING OF CONCRETE SPECIMENS IS REQUIRED.

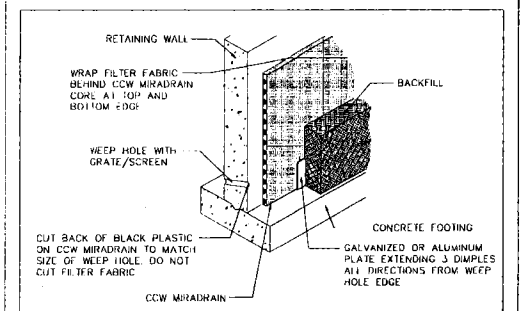
III. DRAINS/EROSION CONTROL INSPECTION (2010 CBC):
   1. VERIFY MATERIALS AND PLACEMENT OF DRAINS/EROSION CONTROL. (PERIODICALLY DURING TASK LISTED).

FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN INSPECTIONS SHALL BE SUBMITTED AT POINT IN TIME AGREED UPON BY PERMIT APPLICANT AND BUILDING OFFICIAL PRIOR TO START OF WORK.
IF NOT SPECIFICALLY AGREED AND/OR REQUIRED, FINAL REPORT WILL BE SUBMITTED AFTER WORK COMPLETION.



NOTES:
1. BACK OF CCW MIRADRAIN CORE SHOULD BE FACING INSTALLER WHEN INSTALLING. FABRIC SIDE OF CCW MIRADRAIN IS INSTALLED TOWARDS LAGGING OR EARTH.

MD-2	CHIMNEY DRAIN	CARLISLE



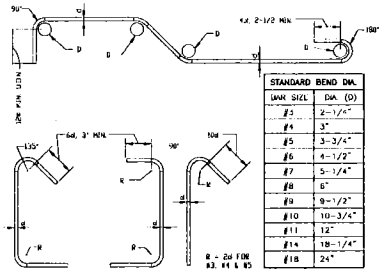
MD-1	RETAINING WALL DETAIL	CARLISLE

CCW-MIRADRAIN 2000-STANDARD DETAILS (1/5)
SCALE: N.T.S.

MIN. DEVELOPMENT LENGTH IN INCHES (Ld):		
	f'c = 3.0 ksi	f'c = 4.0 ksi
#4	12"	12"
#5	15"	15"
#6	19"	18"
#8	35"	30"

LAP LENGTH IN INCHES (1.3D Ld):		
	f'c = 3.0 ksi	f'c = 4.0 ksi
#4	16"	16"
#5	20"	20"
#6	25"	24"
#8	46"	39"

NOTES:
- FOR LAP SPLICES USE CLASS "B" SPLICES, (LAP OF 1.3D Ld).
- AT CONTRACTOR'S OPTION, HIGH STRENGTH COUPLERS MAY BE UTILIZED.
*(COUPLERS TO DEVELOP AT LEAST 125% SPECIFIED YIELD STRENGTH fy OF BAR)
- FOR CONCRETE OF f'c=2.5 KSI USE TABLE FOR f'c=3.0 KSI.



STANDARD BEND DIA.	
BAR SIZE	DIA. (D)
#3	2-1/2"
#4	3"
#5	3-3/4"
#6	4-1/2"
#7	5-1/4"
#8	6"
#9	9-1/2"
#10	10-3/4"
#11	12"
#14	18-1/4"
#18	24"

STANDARD REINF. HOOKS AND BENDS

NOTES:
- HOOK LENGTHS ARE MINIMUMS. LONGER HOOKS SHALL BE PROVIDED WHERE DETAILED ON DRAWINGS.
- BAR STIRRUP AND TIE CONFIGURATION SHALL BE AS SHOWN ON DRAWINGS.

ABBREVIATIONS:

C.C.	- CENTER TO CENTER
C.O.	- CLEAN OUT
E.W.	- EACH WAY
(E), (N)	- EXISTING, NEW
N.I.C.	- NOT IN CONTRACT
P.T.D.F.	- PRESSURE TREATED DOUGLAS FIR
T.O.G.B.	- TOP OF GRADE BEAM
T.O.W.	- TOP OF WALL
T. & B.	- TOP AND BOTTOM
U.N.O.	- UNLESS NOTED OTHERWISE
V.I.F.	- VERIFY IN FIELD
B.O.W.	- BOTTOM OF WALL
G.B.W.	- GRADE BELOW OF WALL
B.O.P.	- BOTTOM OF PILE
T.O.C.	- TOP OF GRADE
E.F.	- EACH FACE
T.O.C.	- TOP OF CONCRETE

0 1" 2" 3"
ORIGINAL DRAWING MEASURE

SOIL ENGINEERING CONSTRUCTION, INC.
627 ARGUELLO STREET, REDWOOD CITY, CALIFORNIA 94063
PHONE (650) 367-8586 FAX (650) 367-8130

SOIL ENGINEERING CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
GEORGE E. OREN
No. 29681
EXP. 9-30-13
CIVIL
STATE OF CALIFORNIA

PROJECT NOTES, STANDARD TABLES AND STANDARD WALL DRAIN DETAILS

COASTAL BLUFF STABILIZATION
630 BAYVIEW DRIVE,
APTOS, SANTA CRUZ COUNTY, CALIFORNIA 95003

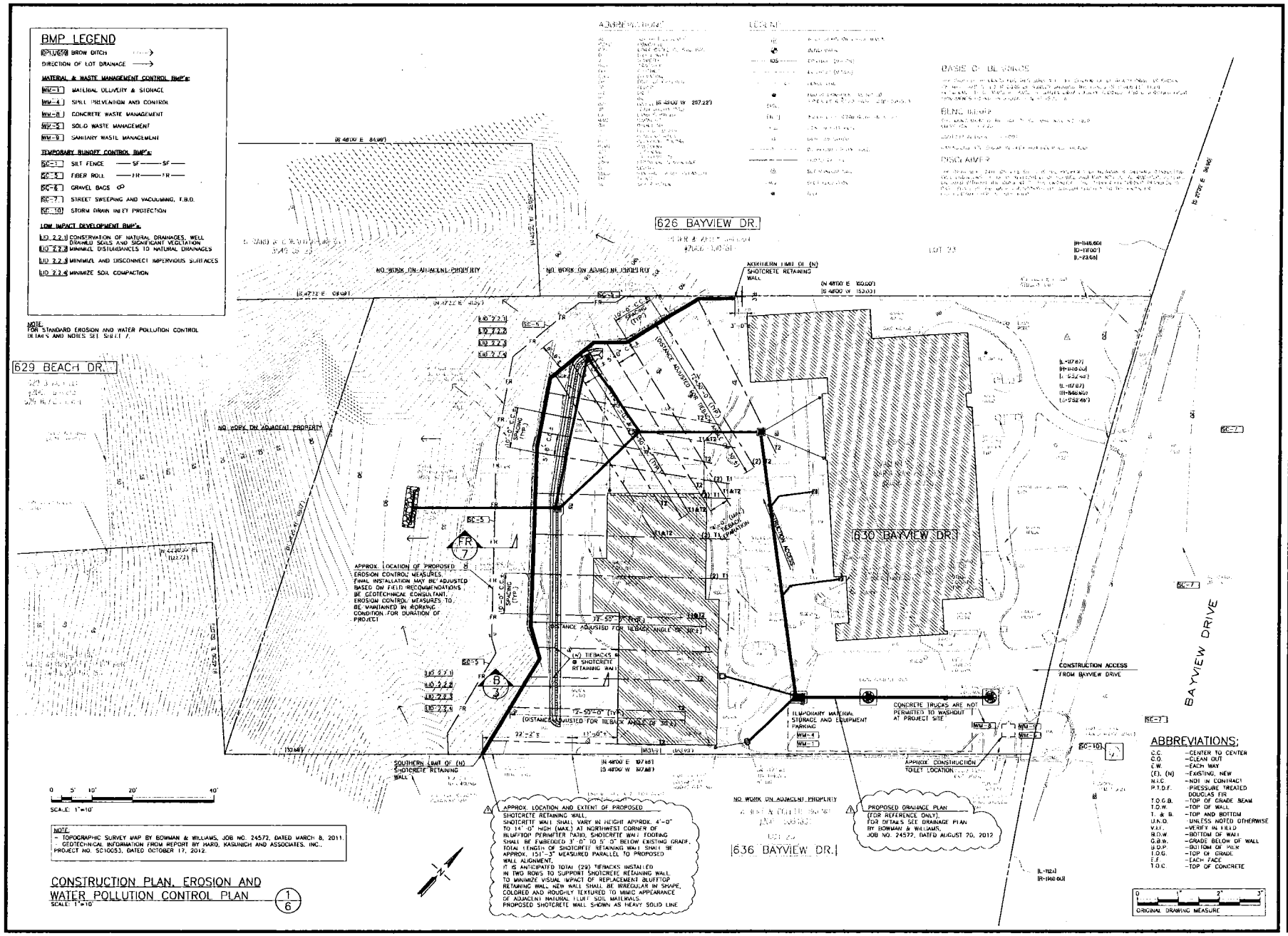
FILE NO.	
DATE	
PROJECT	12-10-12
DWG. NO.	12-1001
REVISION	Revised 12-20
REVISION	
REVISION	
REVISION	
DESIGNED BY	BH
CHECKED BY	GEO

5 OF 7

EXHIBIT D

-16-

EXHIBIT I



SOIL ENGINEERING CONSTRUCTION, INC.
827 ARGUELLO STREET, REDWOOD CITY, CALIFORNIA 94063
PHONE (650) 367-4866 FAX (650) 367-4139

REGISTERED PROFESSIONAL ENGINEER GEORGE E. DREW No. 20681 EXP 9-30-13 CIVIL STATE OF CALIFORNIA

CONSTRUCTION PLAN, EROSION AND WATER POLLUTION CONTROL PLAN

COASTAL BLUFF STABILIZATION

630 BAYVIEW DRIVE, APTOS, SANTA CRUZ COUNTY, CALIFORNIA 95003

DATE 12-18-12
PROJECT 12-003
DWG. NO. Revised 8-08
REVISION 1 03-12-13
REVISION
REVISION
REVISION
DESIGNED BY: RH
CHECKED BY: GED

6 OF 7

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. Owner: VALENTINE REYES, P.O. BOX 219, GILROY, CALIFORNIA
It shall be the owner's responsibility to maintain control of the entire construction operation and to keep the entire site in compliance with the soil erosion control plan

2. Civil Engineer: GEORGE E. DREW, R.C.E.

3. Construction Superintendent: GEORGE E. DREW, 927 ARGUELLO ST., REDWOOD CITY, CA, (408) 888-3422.
Contractor: SOIL ENGINEERING CONSTRUCTION, INC., 927 ARGUELLO ST., REDWOOD CITY, CA, (650) 367-9595.

4. This plan is intended to be used for interim erosion and sediment control only and is not to be used for final elevations or permanent improvements.

5. Developer will submit to the County monthly (at the first of each month between Oct 15 and April 30th) certifications that all erosion/sediment measures identified on the approved erosion control plan are in place. If measures are not in place, Developer shall provide the County with a written explanation of why the measure is not in place and what will be done to remedy this situation.

6. Owner/contractor shall be responsible for monitoring erosion and sediment control measures prior, during, and after storm events.

7. Reasonable care shall be taken when hauling any earth, sand, gravel, stone, debris, paper or any other substance over any public street, alley or other public place. Should any blow, spill or track over and upon said public or adjacent private property immediate remedy shall occur.

8. Sanitary facilities shall be maintained on the site.

9. During the rainy season, all paved areas shall be kept clear of earth material and debris. The site shall be maintained so as to minimize sediment laden runoff to any storm drainage system, including existing drainage swales and water courses.

10. Construction operations shall be carried out in such a manner that erosion and water pollution will be minimized. State and local laws concerning pollution abatement shall be complied with.

11. Contractor shall provide dust control as required by the appropriate federal, state and local agency requirements.

EROSION AND SEDIMENT CONTROL MEASURES

1. The facilities shown on this plan are designed to control erosion and sediment during the rainy season, October 15 to April 30. Facilities are to be operable prior to October 15 of any year. Grading operations during the rainy season which leave denuded slopes shall be protected with erosion control measures immediately following grading on the slopes. During the non-rainy season Best Management Practices (BMPs) must be implemented during construction which includes, but is not limited to: stabilized construction entrance, tire wash area and inlet protection.

2. This plan covers only the first winter following grading with assumed site conditions as shown on the Erosion Control Plan. Prior to October 15, the completion of site improvement shall be evaluated and revisions made to this plan as necessary with the approval of the County Engineer. Plans are to be resubmitted for County approval prior to October 15 of each subsequent year until site improvements are accepted by the County.

3. Construction entrances shall be installed prior to commencement of grading. All construction traffic entering onto the paved roads must cross the stabilized construction entrance ways. (Also include this note on grading plans.)

4. Contractor shall maintain stabilized entrance at each vehicle access point to existing paved streets. Any mud or debris tracked onto public streets shall be removed daily and as required by the County.

5. If hydroseeding is not used or is not effective by 09/23, then other immediate methods shall be implemented, such as Erosion control Blankets, or a three-step application of 1) seed, mulch, fertilizer 2) blown straw 3) tackifier and mulch.

6. Inlet protection shall be installed at open inlets to prevent sediment from entering the storm drain system. Inlets not used in conjunction with erosion control are to be blocked to prevent entry of sediment.

7. Lots with houses under construction will not be hydroseeded. Erosion protection for each lot with a house under construction shall conform to the Typical Lot Erosion Control Detail shown on this sheet.

8. This erosion and sediment control plan may not cover all the situations that may arise during construction due to unanticipated field conditions. Variations and additions may be made to this plan in the field. Notify the County Representative of any field changes.

Maintenance Notes

1. Maintenance is to be performed as follows.
A. Repair damages caused by soil erosion or construction at the end of each working day.

B. Swales shall be inspected periodically and maintained as needed.

C. Sediment traps, berms, and swales are to be inspected after each storm and repairs made as needed.

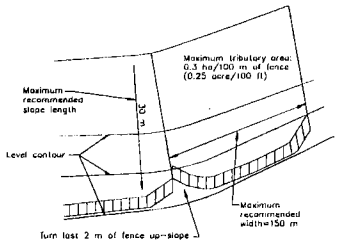
D. Sediment shall be removed and sediment trap restored to its original dimensions when sediment has accumulated to a depth of 1 foot.

E. Sediment removed from trap shall be deposited in a suitable area and in such a manner that it will not erode.

F. Rills and gullies must be repaired.

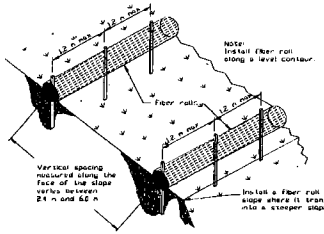
2. Sand bag inlet protection shall be cleaned out whenever sediment depth is one half the height of one sand bag.

GMP: Layout Of A Silt Fence CD56(2)

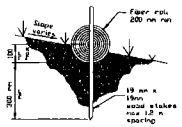


NOTE:
Locate silt fence along a level contour.

TYPICAL SILT FENCE LAYOUT
NOT TO SCALE



TYPICAL FIBER ROLL INSTALLATION
N.T.S.



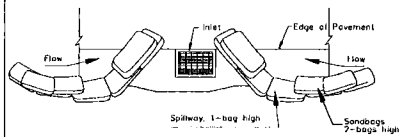
ENTRENCHMENT DETAIL
N.T.S.

LEGEND:
(Symbol Size May Vary)

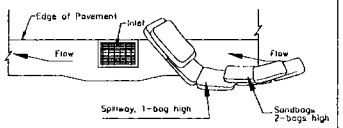
Fiber Rolls	FR
Stabilized Construction Entrance	
Concrete Washout	
Direction of Surface Drainage	
Inlet Protection	

ABBREVIATION

CI	Curb Inlet	PVC	Poly Vinyl Chloride
CL	Center Line	PUE	Public Utility Easement
CS	Concrete Surface	PVC	Polyvinyl Chloride
FF	Finished Floor	RCP	Reinforced Concrete Pipe
FL	Flow Line	RG	Rough Grade
GB	Grade Break	R/W	Right-of-Way
GS	Garage Slab	SD	Storm Drain
HP	High Point	SDMH	Storm Drain Manhole
LP	Low Point	TC	Top of Curb
PL	Property Line	TDC	Top of Depressed Curb
PSE	Public Service Easement	TVC	Top of Vertical Curb



TYPICAL PROTECTION FOR INLET ON SUMP



TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:
1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

0 1" 2" 3"
ORIGINAL DRAWING MEASURE

SOIL ENGINEERING CONSTRUCTION, INC.
927 ARGUELLO STREET, REDWOOD CITY, CALIFORNIA 94063
PHONE (650) 367-9595 FAX (650) 367-4139

REGISTERED PROFESSIONAL ENGINEER
GEORGE E. DREW
No. 20681
EXP. 9-30-13
CIVIL
STATE OF CALIFORNIA

EROSION AND WATER POLLUTION CONTROL PLAN-STANDARD DETAILS AND NOTES

COASTAL BLUFF STABILIZATION
630 BAYVIEW DRIVE,
APTOS, SANTA CRUZ COUNTY, CALIFORNIA 95003

T&E NO	
DATE	12-18-12
PROJECT	12-003
DWG NO	Survey 8-07
REVISION	△
REVISION	
REVISION	
REVISION	
DESIGNED BY:	GH
DRAWN BY:	GEO

7 OF 7

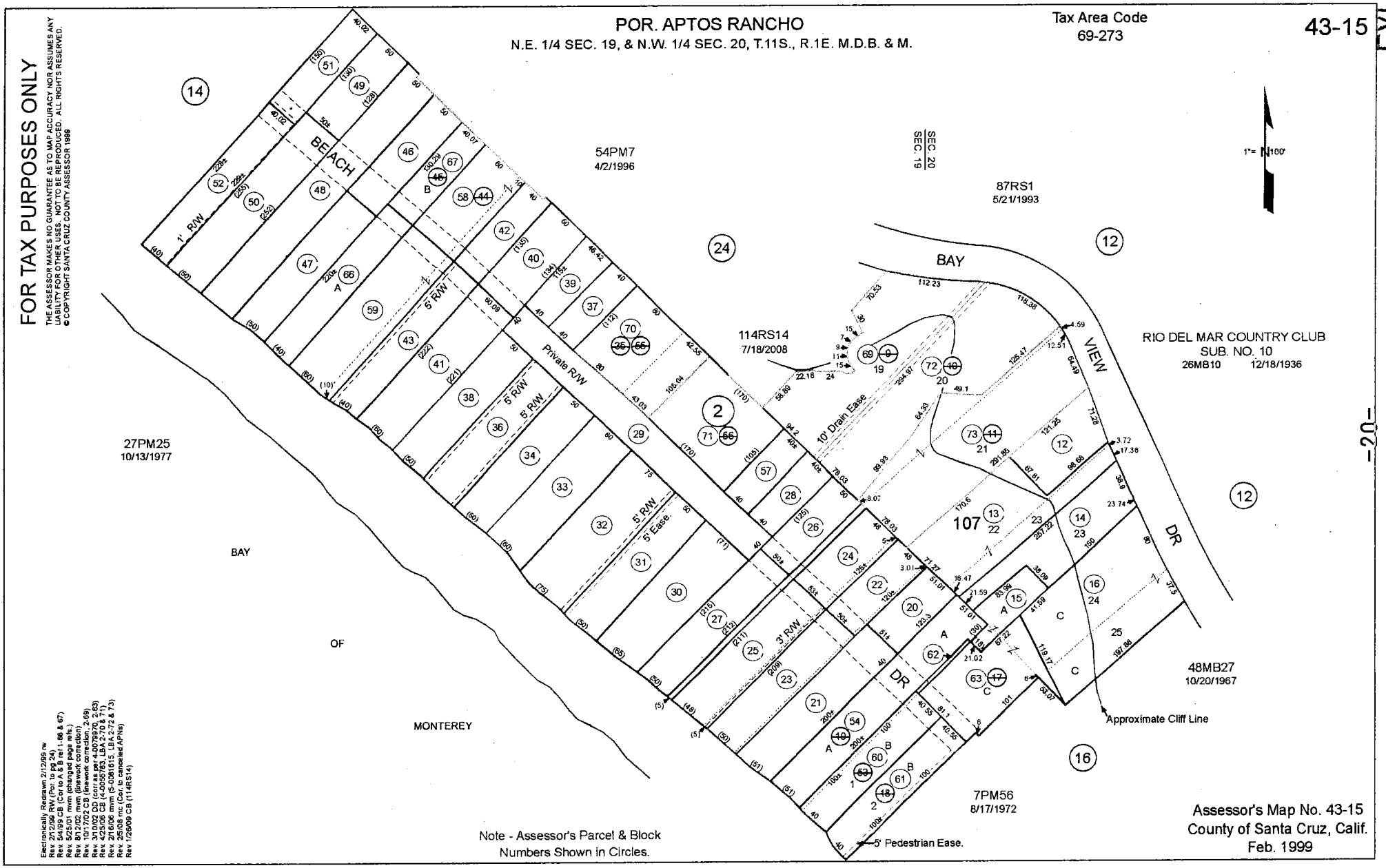
EXHIBIT D

-18-


630 BAYVIEW DRIVE
APPLICATION # 121214
RETAINING WALL COLOR

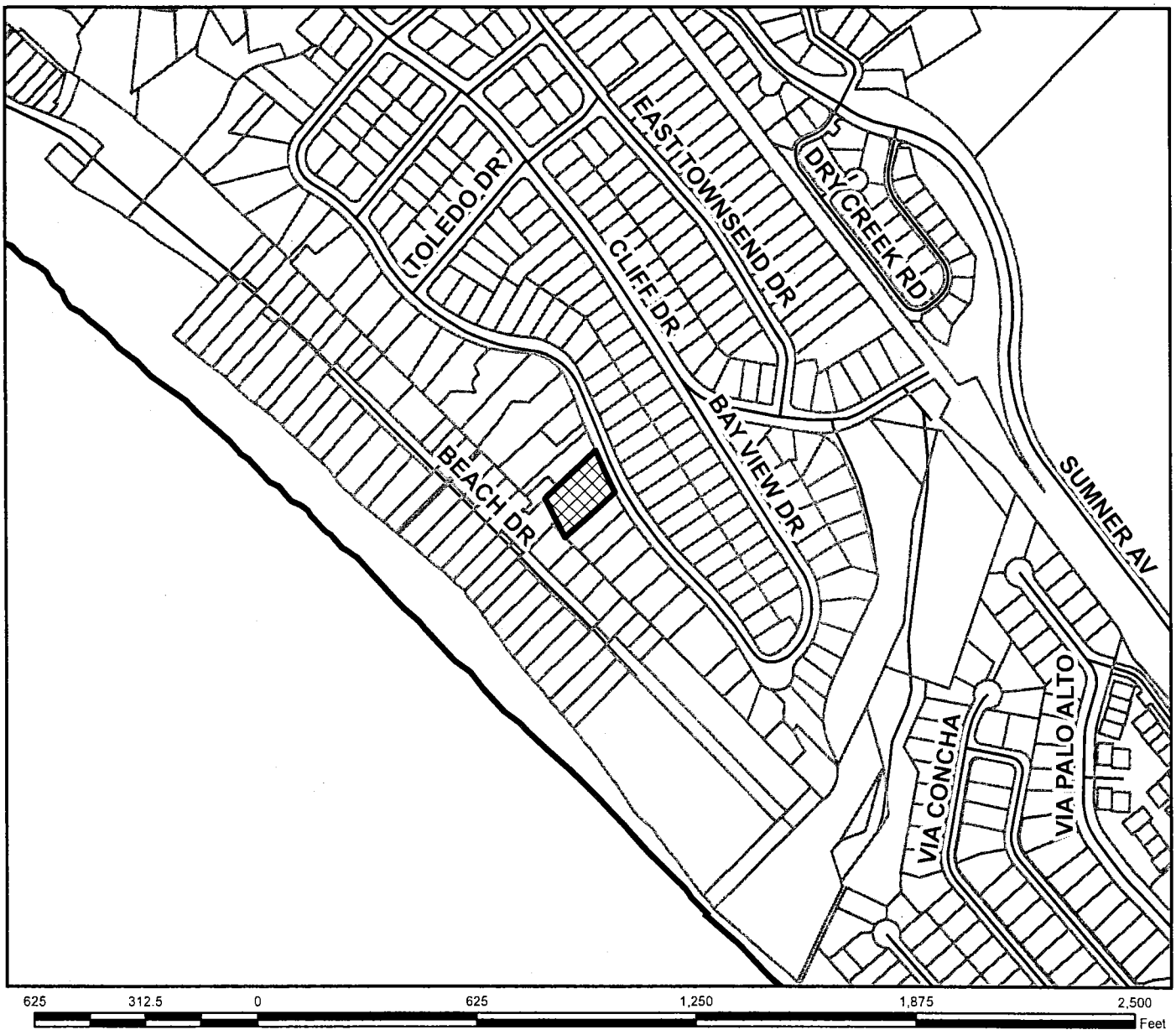
EXHIBIT E

-20-



Electronically Redrawn 2/12/99 rw
Rev. 2/13/99 RW (Por. to pg 24)
Rev. 4/4/99 CB (Corr. to 43-11, 66 & 67)
Rev. 5/25/01 mvm (changed page refs.)
Rev. 8/17/02 mvm (linework correction)
Rev. 10/17/02 CB (linework correction, 2-69)
Rev. 3/10/03 DD (corr as per 4-0079970, 2-83)
Rev. 4/25/05 CB (4-0055783, LBA 2-70 & 71)
Rev. 2/16/06 mvm (5-0081615, LBA 2-72 & 73)
Rev. 2/5/08 mc (Corr. to canceled APNs)
Rev 1/28/09 CB (114RS14)

Location Map



LEGEND

- APN: 043-152-16
- Assessors Parcels
- Streets
- County Boundary

N
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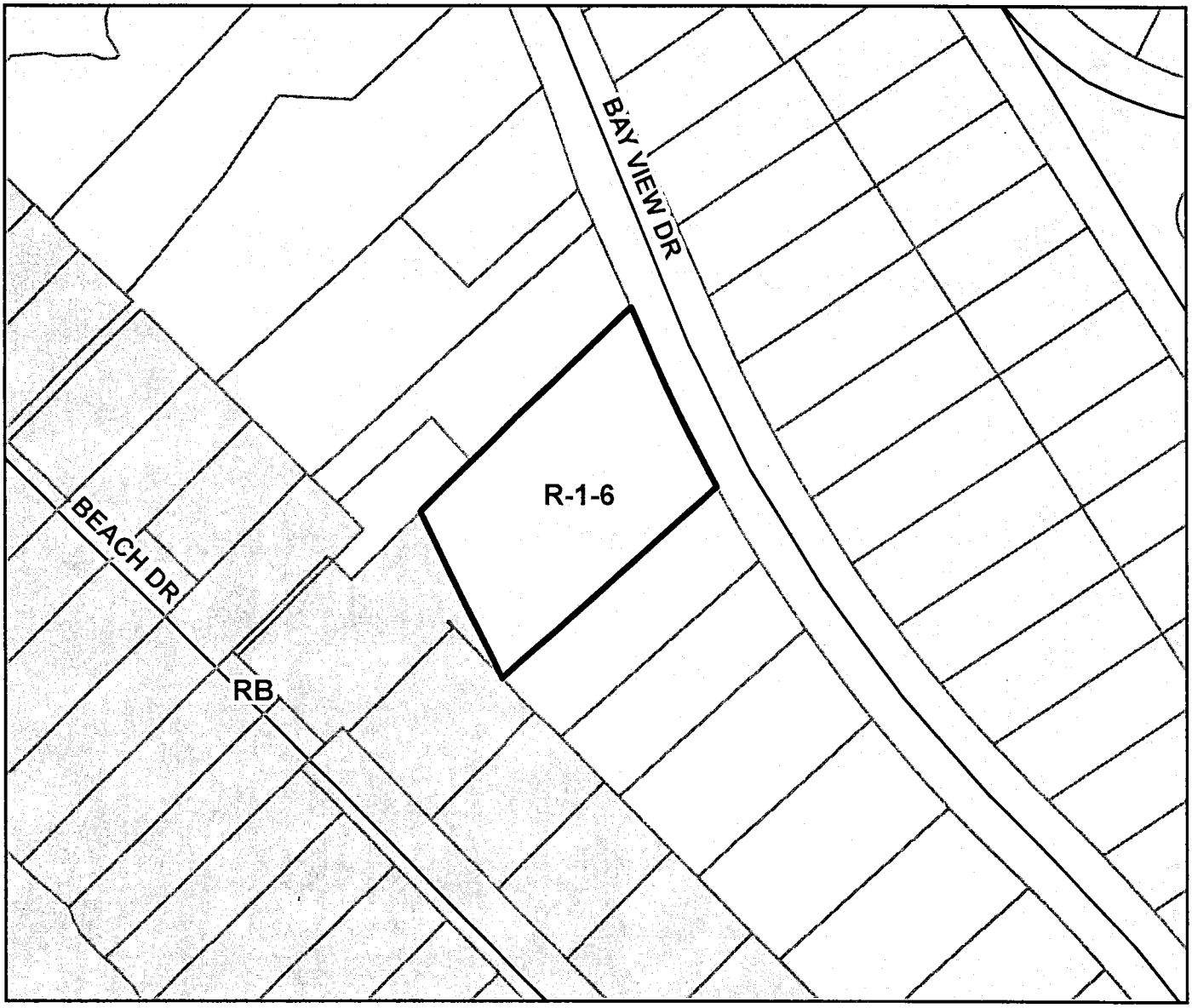
Map Created by
County of Santa Cruz
Planning Department
May 2013

EXHIBIT E

Zoning Map



LEGEND

APN: 043-152-16

Assessors Parcels

Streets

RESIDENTIAL-SINGLE FAMILY

RESIDENTIAL-OCEAN BEACH

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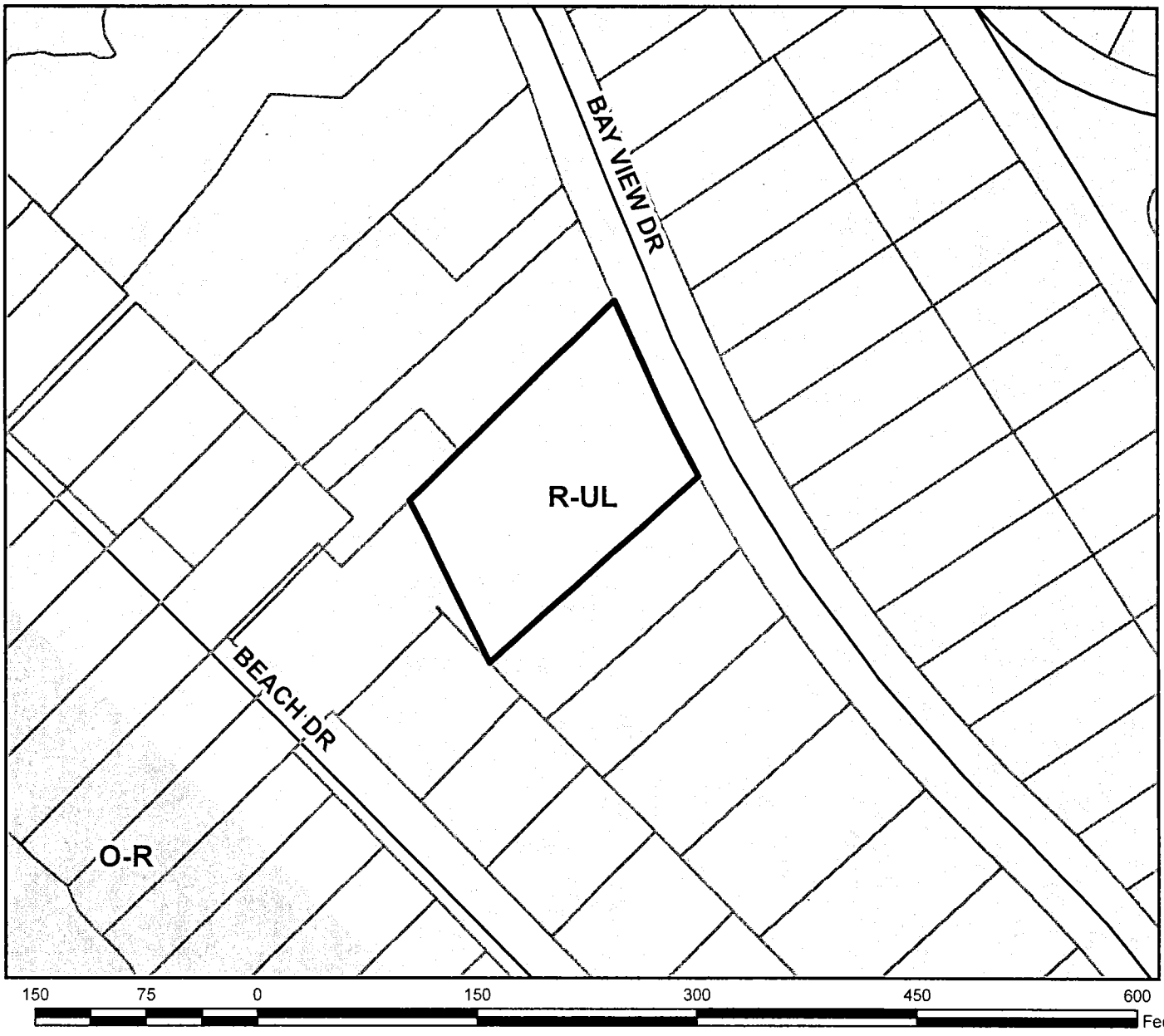
Map Created by
County of Santa Cruz
Planning Department
May 2013

EXHIBIT F

General Plan Designation Map



150 75 0 150 300 450 600 Feet

LEGEND

- APN: 043-152-16
- Assessors Parcels
- Streets
- Residential - Urban Low Density
- Parks and Recreation

N W E S

Map Created by
County of Santa Cruz
Planning Department
May 2013

EXHIBIT E

ROGERS E. JOHNSON AND ASSOCIATES
Consulting Engineering Geologists

41 Hangar Way, Suite B
Watsonville, California 95076-2458
e-mail: rogersjohnson@sbcglobal.net
Ofc (831) 728-7200 • Fax (831) 728-7218

26 July 2011

Job No. C11002-57

Valentine Reyes
630 Bayview Drive
Aptos, California 95003

Re: Geologic Evaluation of Coastal Blufftop
630 Bayview Drive
Aptos, California
Santa Cruz County APN 043-152-16

Dear Mr. Reyes:

As outlined in our scope of services, we have completed our evaluation of the blufftop property located at 630 Bayview Drive in Aptos, California. The parcel overlooks Beach Drive and Rio Del Mar State Beach. The blufftop is currently retained by a series of old retaining walls which are in various states of decay. The purpose of our work was, in conjunction with the project geotechnical engineers, Haro, Kasunich and Associates, to assess the stability of the bluff adjacent to your home. In addition, we provided geologic input to help mitigate potential future failure of the blufftop.

The scope of work performed for this investigation included 1) review of published and unpublished literature relevant to the site and vicinity, including our previous work on other properties in the immediate vicinity of the site; 2) analysis of stereo-aerial photographs; 3) geologic mapping of the site; 4) co-logging of one small-diameter exploratory boring; 5) coordination and meetings with the project geotechnical engineers; 6) compilation and analysis of the resulting data; and 7) preparation of this report and accompanying illustrations.

DESCRIPTION OF SITE AND VICINITY

The Site Location Map (Figure 1), Local Geologic Map (Figure 2), Site Plan Map (Plate 1) and Geologic Cross Sections (Plate 2) depict the relevant topographic and geologic information on the subject property.

Geomorphology

The subject site is located at the top of a coastal bluff on an elevated marine terrace. The bluff is about 100 feet high and is moderately steep to steep, averaging 34 degrees (67%) overall. A drainage swale which partially incises the terrace borders the upcoast portion of the property. The head of the drainage lies on the adjacent upcoast property and was obscured by dense vegetation

EXHIBIT F

and/or retaining walls near the top of the slope at the time of our work. At the blufftop corner formed by the seaward bluff-face and the drainage, the swale is approximately 30 feet deep. The ground surface atop the terrace slopes gently seaward at about 5 degrees (8%).

A series of wood retaining walls have supported the blufftop for several decades dating back to the 1940's. From our aerial photographic reconnaissance the configuration of the walls appears unchanged (i.e. the original walls remain). However, the walls, consisting of wood posts and railroad ties, among other materials, have decayed and have failed or are actively failing. Most recently, during the past winter, the soils retained behind the blufftop corner have eroded from underneath and behind the wall, partially undermining a walkway on the blufftop. The slopes below the retaining walls appear to have remained essentially unchanged during the past several decades, though shallow sloughing of the blufftop and bluff-face has periodically occurred.

It appears the greatest changes to the coastal bluff at the subject site historically result from cultural activity. Sometime in the early 1950's a stairway was constructed on the subject fluff-face, creating a beach access path. Remnants of the stairway are visible today. A conspicuous "knob" exists below the blufftop adjacent the access path. We believe this feature is a result of grading for the access path. Also from our aerial photographic inspection, a home or other structure existed in the lower portion of the upcoast drainage between around 1960 and 1978. The base of the slope between the structure and the subject blufftop was cut into to create a flat area around the structure, creating a locally oversteepened slope.

The subject bluff is fronted by Beach Drive at its base and a row of homes on its oceanward side. The beach fronting the Beach Drive is generally 200 feet wide or more in the summer months. A concrete seawall and/or rip-rap revetment exists oceanward of the beachfront homes and Beach Drive. A residence also exists at the base of the subject bluff below the subject parcel on the inland side of Beach Drive. The remainder of the toe of the bluff below the subject property is essentially undeveloped. These improvements have served to effectively protect the toe of the subject bluff from wave erosion. Although the typical process of surf-notching is no longer active, the steep, high bluffs are not immune to other geologic processes which pose hazards to the homes atop and at the base of the bluff.

Earth Materials and Geologic Structure

Figure 2 is taken from a published geologic map of Santa Cruz County (Brabb, 1989) and shows the sea cliff near the subject property as underlain by marine terrace deposits (late Pleistocene) resting on Purisima Formation bedrock (Pliocene). Exploratory drilling and reconnaissance mapping on the subject bluff indicates that the terrace deposits in this area are about 25 feet thick and composed of friable, uncemented sands, silty sands and gravelly sands.

The Purisima Formation sandstone forming the base of the coastal bluff consists of light yellowish brown sandstone with silt and abundant subrounded gravels and occasional cobbles. The sandstone bedrock is weakly cemented, friable and is comprised of thinly to thickly bedded fine, coarse and gravely sand horizons.

generated failures, storm generated landslides are an order of magnitude more common (a ten year cycle versus a hundred year cycle).

Our review of time sequential aerial photographs revealed several shallow failures on the subject coastal bluff. The failures, which occurred subsequent to development along Beach Drive (which has helped protect the base of the bluff from wave attack) resulted primarily from oversaturation of loose debris mantling the slope. Individual failures tended to be localized either within the upper bluff composed of the marine terrace deposits and or within the lower bluff comprised of Purisima Formation sandstone. Certainly, failures of this type will continue to occur where the bluff is not supported by retaining structures.

CONCLUSIONS and RECOMMENDATIONS

1. The coastal bluff below the subject property is protected from surf erosion and as a consequence the rate of retreat of the toe of the bluff is very slow. We estimate that the natural angle of repose of the overall bluff to be about 1.5:1. We anticipate that shallow sloughing and landsliding below the subject blufftop, as has occurred during the past several decades, will continue to be the dominant mode of failure as the slope attains a consistent, stable profile of 1.5:1 (34 degrees). Because of this, we recommend supporting the portion of the blufftop which lies above the projected 1.5:1 slope, as depicted on the geologic cross sections. Large-scale failure of the subject bluff in the future is a possibility, however there is no evidence for such types of failure in historical time. Fissuring 10's of feet behind the blufftop may occur during a seismic event.

2. The site is located in an area of high seismic activity and will be subject to strong seismic shaking in the future. Modified Mercalli Intensities of up to VIII are possible. The controlling seismogenic source for the subject property is the San Andreas fault, 12.5 kilometers to the northeast. The design earthquake on this fault should be M_w 7.9. Expected duration of strong shaking for this event is about 31 seconds. Deterministic analysis for the site yields a mean peak ground acceleration plus one dispersion of 0.62g.

3. The pseudostatic slope stability analysis of the coastal bluff, performed by the project geotechnical engineers, utilized our geologic cross sections and a site-specific seismic coefficient (k). Ashford and Sitar (2002) developed a method for calculating a site-specific pseudostatic seismic coefficient (k) specifically for a coastal blufftop setting. Following their guidelines yields a coefficient (k) of 0.49. This is based on a predicted PGA of 0.62g (mean plus one standard deviation), a total bluff height of 97 feet and an estimated slide height of 25 feet, occurring within the marine terrace deposits. It is our opinion that a seismic coefficient of 0.49 may be somewhat high due to the fact that the subject bluff-face is flatter than the 45 degree slope which Ashford and Sitar base their method on. However, when utilizing a *k* of 0.49, the model does not suggest that the slope fails in a catastrophic fashion. The most probable relatively large-scale failure that may occur at the site will mimic the terrace deposit failure which extended about 30 feet back

EXHIBIT F

from the blufftop as observed by our firm above New Brighton Beach approximately 1.5 miles upcoast from the subject site.

4. Drainage from improved surfaces, such as walkways, patios, roofs and driveways, at the top of the bluff should be collected in impermeable gutters or pipes and either carried to the base of the bluff via closed conduit or discharged into an established storm drain system that does not issue onto the bluff. At no time should any concentrated discharge be allowed to spill directly onto the ground adjacent to the existing residence. Any drain water on paved areas should not be allowed to flow toward the residence or toward the bluff top. The control of runoff is essential for control of erosion and prevention of ponding. Adequate drainage of runoff from the subject blufftop will inherently improve the overall stability of its slopes.

5. We request the privilege of reviewing all geotechnical engineering, civil engineering, drainage, and architectural reports and plans pertaining to the proposed retaining wall.

INVESTIGATION LIMITATIONS

1. The conclusions and recommendations contained herein are based on probability and in no way imply that the proposed development will not possibly be subjected to ground failure, seismic shaking or landsliding of such a magnitude that it overwhelms the site. The report does suggest that using the site for residential purposes in compliance with the recommendations contained herein is an acceptable risk.

2. This report is issued with the understanding that it is the duty and responsibility of the owner or his representative or agent to ensure that the recommendations contained in this report are brought to the attention of the architect and engineers for the project, incorporated into the plans and specifications, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. If any unexpected variations in soil conditions or if any undesirable conditions are encountered during construction, Rogers E. Johnson and Associates should be notified so that supplemental recommendations may be given.

ROGERS E. JOHNSON AND ASSOCIATES
Consulting Engineering Geologists

1980 Day Valley Road
Aptos, California 95003
e-mail: rogersjohnson@sbcglobal.net
ofc: (831) 728-7200

24 March 2013 **Job No. C11002-57**

Valentine Reyes
P.O. Box 219
Gilroy, California 95021

Subject: Review of Blufftop Retaining Wall Plans
630 Bayview Drive
Aptos, California
Santa Cruz County APN 043-152-16

Dear Mr. Reyes:

As requested, and as required by the Santa Cruz County Planning Department, we have reviewed the coastal bluff stabilization plans prepared by Soil Engineering Construction, the project structural engineers and contractor. The plans consist of seven Sheets, dated 12 March 2013, detailing a proposed tieback shotcrete retaining wall to replace a failing, aged wood wall. The proposed new wall will be constructed in essentially the same location as the existing wall.

Our firm previously reviewed drainage plans for the subject site. The drainage scheme is depicted on the bluff stabilization plans for reference only. However, the drainage features will be constructed in conjunction with the new retaining wall. Please refer to our drainage plan review letter (REJA, 2012) and the drainage plans (Bowman & Williams, 2012) for drainage-related details as they pertain to the proposed development.

As depicted on the plans, the proposed new tieback retaining wall will consist of a shotcreted, reinforced vertical wall retained by one or two rows of tiebacks. The base of the wall will be embedded a minimum of three feet into native earth materials and penetrate below a 1.5:1 line projected from the base of the slope.

The blufftop stabilization plan is in general conformance with the recommendations of our geologic report (REJA, 2011).

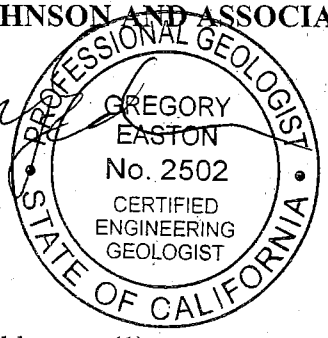
During construction of the wall and drainage improvements, a representative from our firm should inspect wall excavations and the exposed earth materials, as well as to identify any unexpected adverse geologic conditions.

EXHIBIT F

Please contact us if you have any questions or comments.

Sincerely,

ROGERS E. JOHNSON AND ASSOCIATES



Gregory Easton
Project Geologist
C.E.G. No. 2502

Rogers E. Johnson
Principal Geologist
C.E.G. No. 1016

Copies: Addressee (1)
Bowman & Williams; attn: Jeff Naess (3)
Haro, Kasunich & Associates; attn: Rick Parks (pdf)
Soil Engineering Construction; attn: George Drew (pdf)

References:

Bowman & Williams, 2012, Improvement Plans, Remedial Drainage Project, 630 Bayview Drive, County of Santa Cruz, California, 4 Sheets prepared 20August 2012.

Rogers Johnson & Associates, 2012, Review of Drainage Plans, 630 Bayview Drive, Aptos, California, Santa Cruz County APN 043-152-16, Job No. C11002-57, dated 21 August 2012, 2p.

Rogers Johnson & Associates, 2011, Geologic Evaluation of Coastal Blufftop, 630 Bayview Drive, Aptos, California, Santa Cruz County APN 043-152-16, Job No. C11002-57, prepared 26 July 2011, 15p, 2 Plates.

Soil Engineering Construction, 2012, Coastal Bluff Stabilization, Replacement of Blufftop Retaining Walls, 630 Bayview Drive, Aptos, California, Job No. 130-003, 7 Sheets dated 12 March 2013 (1st revision).

EXHIBIT F

Project No. SC10053.1
22 August 2012

VALENTINE REYES
P.O. Box 219
Gilroy, California 95021

Subject: Request for Emergency Permit, Percolation Testing, Geotechnical Recommendations and Review of Project Drainage Plan Set

Reference: Proposed Deep Pit Storm Water Percolation System
630 Bayview Drive, Rio Del Mar
APN 043-152-16
Santa Cruz County, California

Dear Mr. Reyes:

From a geotechnical perspective, an emergency situation exists at 630 Bayview Drive located in the Rio Del Mar area of Santa Cruz County, California.

The referenced parcel and the two blufftop residences it contains are situated lower in elevation than Bayview Drive. Uncontrolled stormwater runoff from the two residences and concrete driveway has flowed over the blufftop, undermined the blufftop concrete patio, and distressed the wood retaining wall system buttressing the blufftop improvements.

There is no storm drain system within Bayview Drive. Collecting site runoff and pumping it up to the street would negatively impact downstream neighbors.

If the site drainage is not controlled and blufftop erosion continues, the two residences at 630 Bayview Drive will soon be in imminent danger of being undermined.

Beginning in December 2010 Haro, Kasunich and Associates started work with Bowman & Williams, project civil engineers, to establish a drainage easement down coastal bluff face to Beach Drive. A drainage easement down the slope from 630 Bayview Drive must cross both parcel APN 043-152-063, containing the existing residence at 629 Beach Drive and the undeveloped parcel APN 043-161-053 at 631 Beach Drive. We were not able to secure permission for an easement across the undeveloped parcel, APN 043-152-053 and stopped our efforts to obtain a drainage easement down the slope to Beach Drive.

After the recent successful installation of a 100 foot deep, stormwater percolation pit at 330 Kingsbury Drive, we began investigating the potential installation of a deep percolation pit system at 630 Bayview Drive. The initial tasks needed for design of a deep pit percolation system were to explore the blufftop site soil profile and perform percolation testing.

Field Exploration

On 21 June 2012, working with Greg Easton, CEG of Rogers E. Johnson & Associates, we drilled a 75 foot deep exploratory test boring and completed the boring with pipe and gravel for percolation testing. The exploratory boring identified as boring location B-2 was drilled at about the center of the rectangular shaped, concrete driveway at the northeast corner of the project parcel; see the attached Goggle Earth color plate, Figure 1 – Percolation Test Boring Location Plan. Overhead power lines prohibit exploratory drilling and installation of deep pits at the top of the driveway adjacent Bayview Drive.

The blufftop exploratory test boring was drilled by a truck mounted rig using a 6 inch diameter continuous flight, solid stem auger.

Representative soil samples were obtained from the exploratory borings at selected depths or at major strata changes. These samples were recovered using the Standard Terzaghi Sampler (T).

The penetration resistance blow counts noted on the boring logs were obtained as the sampler was dynamically driven into the in situ soil. The process was facilitated using a tripod with a gasoline engine powered cathead to raise and drop a 140-pound hammer a 30-inch free fall distance and driving the sampler 6 to 18 inches and recording the number of blows for each 6-inch penetration interval. The blows recorded on the boring logs represent the accumulated number of blows that were required to drive the last 12 inches.

The soils encountered in the blufftop exploratory boring were continuously logged in the field and described by Greg Easton, CEG. Mr. Easton's Log of the Test Boring B-2 is attached to this report as Figures 2 through 5. The Boring Log denotes subsurface conditions at the location and time observed, and it is not warranted that they are representative of subsurface conditions at other locations or times.

EXHIBIT F

potential for the percolated runoff to daylight upon the 1.5:1(H:V) bluff face and destabilize the slope.

Immediately after excavation of B-2, a 2-inch diameter, PVC pipe with a bottom cap was placed in the borehole hole with the bottom of the pipe at 67.5 feet below grade. The pipe was slotted with a saw from 35 feet to 67.5 feet below grade. Slots were place every 4 inches on either side of the pipe. The pipe was then placed in the borehole, hung from the drill rig and borehole annulus was filled with 1/4 inch diameter, washed gravel. The upper 6 inches of the annulus was sealed with concrete to prevent surface runoff from flowing into the percolation test hole. The top of the vertical pipe was placed at approximately top of driveway grade and water depth measurements during the percolation tests were measured from this elevation.

On the morning of 26 June 2012, the percolation test hole was pre-saturated from 35 feet to 67.5 feet below grade.

We returned to the site approximately 24 hours later on 27 June 2012 to conduct percolation testing by the Falling Head Method. First we measured inside the PVC percolation test pipe and found no standing water, but the pre-saturation of the borehole caused the bottom 2 feet of the test pipe to silt in to about 65.5 feet below grade. We then re-filled the borehole up to 35 feet below grade and commenced percolation testing. Every 14 to 18 minutes (15 minute intervals was the target), we measured the depth of the falling water column relative to the top of the pipe/adjacent driveway grade. The results of our percolation testing are attached to this report as Figure 6.

Recommendations

1. With the impending winter storm season at hand, we recommend an Emergency Permit be applied for installation of the proposed deep pit percolation system. Concurrent with the installation of drainage system, we recommend the deteriorated, blufftop retaining system be replaced. The replacement wall system should buttress the existing configuration of the blufftop and be designed for both active earth pressures and a seismic surcharge.

EXHIBIT F

2. The percolation zone shall be placed from approximately 35 feet below driveway grade (≈ 84 feet NGVD29) to approximately 55 feet below driveway grade (≈ 64 feet NGVD29). We anticipate the percolation pit will be 3 feet in diameter.

3. The percolation pit should be over-drilled by 5 to 10 feet to accommodate sloughing of the borehole sidewall during construction.

4. A redundant percolation pit should be installed for the long term integrity of the drainage system. An overflow from the primary pit and the redundant pit should be constructed with a discharge point approved by the project engineering geologist. A silt trap should be installed upstream of the percolation pits to increase the useful life of the drainage system.

5. The annulus between the percolation zone and the borehole sidewall should be filled with a graded gravel mixture such as Caltrans Class I, Type A permeable material with the percolation zone pipe slots sized accordingly. The annulus above the percolation zone should be filled with 2-sack sand slurry to grade;

6. The depths of the silt trap and the percolation pits should be monitored and the bottoms cleaned of silt/debris as needed.

Drainage Plan Review

The project site Stormwater Runoff Calculations and Drainage Plan set utilizing deep pit percolation pits were prepared by Bowman & Williams and are dated 20 August 2012. Specifically we reviewed the geotechnical aspects of the following civil engineering plan sheets:

a. Sheet C0 – Cover Sheet;
b. Sheet C1 – Drainage Plan;
c. Sheet C2 - Details; and
d. Sheet C3 – Stormwater Pollution Control Plan.

The above outlined plan sheets have been prepared in general conformance to our geotechnical engineering recommendations.

EXHIBIT F

County of Santa Cruz, PLANNING DEPARTMENT

Discretionary Application Comments 121214

APN 043-152-16

Drainage Review

Routing No: 1 | Review Date: 09/24/2012

TRAVIS RIEBER (TRIEBER) : Complete

Completeness Comments: Application Complete? _X Yes __ No

The civil engineering plans prepared by Bowman & Williams dated August 20, 2012 have been received and are approved for the planning application stage. The calculations and plans are being reviewed under building application B-123079.

Policy Considerations and Compliance Issues:

Permit Conditions and Additional Information:

A recorded maintenance agreement is required for the proposed silt and grease trap and deep percolation pits. Please contact the County of Santa Cruz Recorder's office for appropriate recording procedure. The maintenance agreement form can be picked up from the Public Works office or can be found online at:
http://www.dpw.co.santa-cruz.ca.us/Storm_Water/FigureSWM25A.pdf

Upon approval of the project, a drainage "Hold" will be placed on the permit and will be cleared once the construction is complete and the stormwater management improvements are constructed per the approved plans: In order to clear the Hold, one of these options has to be exercised:
1. The civil engineer has to inspect the drainage improvements on the parcel and provide public works with a letter confirming that the work was completed per the plans. The civil engineer's letter shall be specific as to what got inspected whether invert elevations, pipe sizing, the size of the mitigation features and all the relevant design features. Notes of "general conformance to plans" are not sufficient.
2. As-built plans stamped by the civil engineer may be submitted in lieu of the letter. The as-built stamp shall be placed on each sheet of the plans where stormwater management improvements were shown.
3. The civil engineer may review as-built plans completed by the contractor and provide the county with an approval letter of those plans, in lieu of the above two options. The contractor installing the drainage improvements will provide the civil engineer as-built drawings of the drainage system, including construction materials, invert elevations, pipe sizing and any modifications to the horizontal or vertical alignment of the system. The as-built drawings, for each sheet showing drainage improvements and/or their construction details, must be identified with the stamp (or label affixed to the plan) stating the contractor's name, address, license and phone #. The civil engineer will review the as-built plans for conformance with the design drawings. Upon satisfaction of the civil engineer that the as-built plans meet the design intent and are adequate in detail, the civil engineer shall submit the as-built plans and a review letter, stamped by the civil engineer to the County Public Works

Drainage Review

Routing No: 1 | Review Date: 09/24/2012
TRAVIS RIEBER (TRIEBER) : Complete

Department for review to process the clearance of the drainage Hold if the submittal is satisfactory.

Routing No: 2 | Review Date: 02/06/2013
TRAVIS RIEBER (TRIEBER) : Complete

2nd Review Comments

Completeness Comments: Application Complete? _X Yes __ No

Drainage calculations and plans were previously approved with building permit B-123079.

No additional comments or conditions.

Environmental Planning

Routing No: 1 | Review Date: 09/17/2012
ANTONELLA GENTILE (AGENTILE) : Complete

Soils and Geology reports are still under review by the County Geologist. A formal evaluation of the reports will be forthcoming pending submittal of the retaining wall plans.

Routing No: 2 | Review Date: 02/13/2013
ANTONELLA GENTILE (AGENTILE) : Incomplete

The County Geologist has accepted the soils and geology reports and the following requirements shall apply to the project as conditions of acceptance:

1. All construction shall comply with the recommendations of the reports.

2. Final plans shall reference the reports and include a statement that the project shall conform to the reports' recommendations.

3. All plans submitted for permitting must show all of the bluff wall and drainage improvements. If engineering elements from different engineers are shown on different plan sheets care must be taken to assure that there are no conflicts between the elements. A change order will be necessary at some point to make Bowman Williams and Associates Plan match the retaining wall plan by Soils Engineering Construction.

4. The engineering geologist has indicated that no drainage shall be deposited on the slope below the home, but has accepted an emergency overflow below the wall. This overflow is connected to a series of deep pits that are intended to retain all site drainage.

Environmental Planning

Routing No: 2 | Review Date: 02/13/2013
ANTONELLA GENTILE (AGENTILE) : Incomplete

5. As a condition of the bluff wall and the final approval of the new engineered drainage system a maintenance plan must be developed and approved before the issuance of the coastal permit.

6. A landscape and erosion control plan must be developed by the project consultants to establish or reestablish vegetation on all surfaces that are disturbed. The plan must include only drought tolerant native and adaptable plants.

7. Prior to building permit issuance a plan review letter shall be submitted to Environmental Planning. After plans are prepared that are acceptable to all reviewing agencies, please submit a geotechnical plan review letter that states the project plans conform to the recommendations of the geotechnical report. Please note that the plan review letter must reference the final plan set by last revision date. The author of the report shall write the plan review letter.

8. Please submit an electronic copy of the reports in .pdf format via compact disk or email to: pln829@co.santa-cruz.ca.us. Please note that the reports must be generated and/or sent directly from the soils engineer of record/engineering geologist.

9. Please record the attached declaration before the final inspection of the home.

This project is considered incomplete. Please provide the following:

1. Per item 5 from the County Geologist above, please provide a maintenance plan for review.

2. Please submit a signed and stamped Soils (Geotechnical) Engineer Plan Review Form to Environmental Planning. An electronic copy of this form may be found on our website at www.sccoplanning.com, under Environmental / Geology & Soils / Assistance & Forms / Soils Engineer Plan Review Form.

3. Please submit a signed and stamped Geologist Plan Review Form to Environmental Planning. An electronic copy of this form may be found on our website at www.sccoplanning.com, under Environmental / Geology & Soils / Assistance & Forms / Geologist Plan Review Form.

Conditions of Approval

1. The project shall comply with all requirements of the County Geologist in his technical report acceptance letter.

Environmental Planning

Routing No: 2 | Review Date: 02/13/2013
ANTONELLA GENTILE (AGENTILE) : Incomplete

2. The wall shall be sculpted and/or colored in a manner that blends with the surrounding area. Prior to building permit approval, the applicant shall submit for review a plan that specifies the techniques that will be used to blend the wall's appearance with the bluff environment and community's visual appearance.

Routing No: 3 | Review Date: 04/12/2013
ANTONELLA GENTILE (AGENTILE) : Complete

Conditions of Approval

1. The project shall comply with all requirements of the County Geologist in his technical report acceptance letter.

2. The wall shall be sculpted and/or colored in a manner that blends with the surrounding area. Prior to building permit approval, the applicant shall submit for review a plan that specifies the techniques that will be used to blend the wall's appearance with the bluff environment and community's visual appearance.

3. A copy of the recorded stormwater maintenance agreement shall be provided to the Resource Planner with the building permit application.

4. Any changes to the drainage plan shall be submitted as a change order to the building permit.

Project Review

Routing No: 1 | Review Date: 01/16/2013
ROBIN BOLSTER (RBOLSTER) : Complete

Routing No: 2 | Review Date: 02/19/2013
ROBIN BOLSTER (RBOLSTER) : Incomplete

Febr 19, 2013
Please provide a color sample for the proposed shotcrete wall and a detail of the safety railing.
Please also call out color and material for the safety rail.

Routing No: 3 | Review Date:
() :

EXHIBIT G

Discretionary Application Comments 121214

APN 043-152-16

Project Review

Routing No: 3 | Review Date:

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EXHIBIT G