CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
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ARCATA, CA 95521
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Hearing Date: 5/12/10
Commission Action: **Approval with Special Conditions**

ADOPTED FINDINGS

Application No.: **1-83-270-A**

Applicant: **Bower Limited Partnership**

Project Location: On the west side of Highway One, upslope from the Gualala River estuary, approximately 500 feet south of its outlet to the Pacific Ocean, at 39250 South Highway One in Gualala, Mendocino County (APN 145-261-05).

Description of Project Previously Approved: Construction of a 120-foot-long wooden retaining wall, west of an existing market adjacent to the bluff edge and Gualala River.

Description of Current Amendment Request: Amend the permit to allow for (1) replacement of the constructed 70-foot-long wooden retaining wall with an approximately 105-foot-long "Geoweb" retaining wall extending across the subject property with an approximately 30-foot-long concrete block end wall at the southern end of the retaining wall, (2) installation of 118 linear feet of 12-inch storm drain with a storm drain manhole, and (3) replacement of an existing underground septic tank.

Substantive File Documents: (1) Mendocino County CDP No. 55-2006;
(2) Mendocino County Local Coastal Program

STAFF NOTE

Adopted Findings. The Commission held a public hearing and approved the permit amendment with conditions at the meeting of May 12, 2010. The adopted findings for approval differ from those contained in the written staff recommendation dated April 29, 2010. Prior to the public hearing, staff prepared an addendum dated May 11, 2010 to make changes to the staff recommendation dated April 29, 2010.

The addendum included revisions and additions to the findings that add more discussion and respond to comments received on the staff recommendation including text for the "Protection of Environmentally Sensitive Habitat," "Visual Resources," and "Public Access" findings that was not included in the original staff report. This added text is included as Finding E, Finding F, and Finding G, respectively, of the adopted findings. In addition, the addendum included changes to the special conditions including revisions to Special Condition Nos. 3, 4, and 6 not included in the original staff report. Furthermore, the addendum included one additional exhibit (Exhibit No. 11) that presents additional letters of correspondence and ex parte communications received following publication of the staff report.

At the hearing, the Commission made an addition to Special Condition No. 3(A)(10) requiring that any imported fill used in the project shall be compatible with the native soil and Northern coastal scrub habitat present at the project site. The Commission also added Special Condition 9 requiring a timeframe for completion of construction within two (2) years, as proposed by the applicant, and allowing for reasonable extensions to be granted by the Executive Director for good cause.

Copies of the original April 29, 2010 staff recommendation report and its exhibits, and the May 11, 2010 addendum can be downloaded from the Commission's website at the following URLs:

- Report with Exhibits: https://documents.coastal.ca.gov/reports/2010/5/W16a-5-2010.pdf
- Addenda: https://documents.coastal.ca.gov/reports/2010/5/W16a-5-2010-a2.pdf

The following resolution, conditions, and findings were adopted by the Commission on May 12, 2010 upon conclusion of the public hearing.

I. RESOLUTION

The Commission hereby approves the proposed permit amendment and adopts the findings set forth below, subject to the conditions below, on the grounds that the development with the proposed amendment, as conditioned, will be in conformity with the certified Mendocino County Local Coastal Program. Approval of the permit amendment complies with the California Environmental Quality Act because all feasible mitigation measures and alternatives have been incorporated to substantially lessen any significant adverse impacts of the amended development on the environment.

II. STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the applicant or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Interpretation**. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

3. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

4. **Terms and Conditions Run with the Land**. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

Note: The original permit (CDP No. 1-83-270) contained two special conditions. Special Condition No. 1 of the original permit is modified and superseded by Special Condition No. 1 of CDP Amendment No. 1-83-270-A. Special Condition No. 2 of the original permit is reimposed without any changes as a condition of CDP Amendment No. 1-83-270-A and remains in full force and effect. Special Condition Nos. 3-9 are additional new special conditions attached to CDP Amendment No. 1-83-270-A. For comparison, the text of the original permit conditions is included in Exhibit No 8.

Deleted wording within the modified special conditions is shown in **~~bold strikethrough~~** text, and new condition language appears as **bold double-underlined** text.

1. **~~Prior to transmittal of this permit the applicant shall agree, in a form acceptable to the Executive director, to maintain the proposed retaining wall as well as the existing dedicated accessway. The applicant shall agree to maintain the accessway for a period of 21 years or until the accessway is accepted by either a public or private agency.~~** The **permittee shall maintain the**

retaining wall **authorized by CDP Amendment No. 1-83-270-A** ~~**shall be maintained**~~ for the life of the development on site. ~~**The offer shall bind any and all successors and assigns of the applicant or landowner**~~.

3. Revised Final Soil Stabilization and Drainage Improvement Plans

A. PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-83-270-A, the permittee shall submit to the Executive Director, for review and written approval, final soil stabilization and drainage improvement plans prepared in consultation with the Redwood Coast Land Conservancy, the Dorothy King Young Chapter of the California Native Plant Society, and the Mendocino Coast Cooperative Weed Management Area that substantially conforms to the proposed soil stabilization and drainage improvement plans shown on sheets C100, C110, C200, C300, C400, C500, C504, C505, C600, C601, C610, C611, C620, C621, and C630 titled "Soil Stabilization and Drainage Improvements" dated April, 2008, attached as Exhibit No. 5 of the staff report, but shall be revised to include the following provisions:

1) The Geoweb Retaining Wall shall be aligned such that the seaward edge of the top of the wall conforms with the alignment of the original retaining wall constructed pursuant to CDP No. 1-83-270. The approved drainage improvements and septic tank replacement shall be repositioned as necessary to accommodate the required realignment of the approved wall.

2) The storm drain proposed to extend across APN 145-261-05 shall include inline drains to capture runoff from the parcel that flows towards the bluff and an on-site infiltration interceptor to capture any pollutants contained in the run-off. The system shall be designed to treat or filter stormwater runoff from each storm, up to and including the 85th percentile, 24-hour storm event.

3) The end wall proposed at the southern end of APN 145-261-05 shall be designed to accommodate a crossing by the public access trail in its existing location and in a manner consistent with Mendocino County CDP No. 23-03 granted to the Redwood Coast Land Conservancy for construction of the public access trail and related improvements.

4) At the northern end of APN 145-261-05, an end wall extending inland generally perpendicular to the Geoweb retaining wall of a design similar to the end wall approved at the southern end of APN 145-261-05 or its equivalent shall be included to protect against erosion around the north end of the wall. The end wall shall be designed to accommodate a crossing by the public access trail in its existing location and in a manner consistent with Mendocino County CDP No. 23-03 granted to the Redwood Coast Land Conservancy for construction of the public access trail and related improvements. The end wall shall also be

designed to accommodate the possible future extension of a bluff retaining wall to the north on the adjacent parcel. This northern end wall on APN 145-261-05 need not be included if the Commission approves Appeal No. A-1-MEN-08-015 for a continuation of the Geoweb retaining wall on to adjoining APN 145-261-13.

5) **The permittee shall replace in-kind and in a manner consistent with Mendocino County CDP No. 23-03 any existing public access improvements developed by the Redwood Coast Land Conservancy on APN 145-261-05 and in adjoining areas disturbed by the development authorized under CDP No. 1-83-270-A;**

6) **All plantings on the face of the Geoweb retaining wall shall be maintained in good condition throughout the life of the project to ensure continued compliance with the approved final landscaping provisions of the plans. If any of the trees and plants to be planted die, become decadent, rotten, or weakened by decay or disease, or are removed for any reason, they shall be replaced no later than January 1st of the next winter season in-kind or with another native species common to the coastal Mendocino County area that will grow to a similar or greater height in amounts sufficient to ensure that at least 50% of the face of the geoweb wall is covered by native vegetation;**

7) **All proposed plantings shall be native species and compatible with the plantings to be planted as part of the Northern coastal scrub restoration plan required by Special Condition No. 4, below. All proposed plantings shall be obtained from local genetic stocks within Mendocino and Sonoma Counties. If documentation is provided to the Executive Director that demonstrates that native vegetation from local genetic stock is not available, native vegetation obtained from genetic stock outside the local area, but from within the adjacent region of the floristic province, may be used. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or by the State of California shall be planted or allowed to naturalize or persist within the development site. No plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government shall be utilized within the property;**

8) **Rodenticides containing any anticoagulant compounds, including but not limited to, Bromadiolone, Brodifacoum, or Diphacinone, shall not be used;**

9) **The success of the plantings shall be monitored on a regular basis for five years, and monitoring results shall be submitted annually to the Executive Director by December 31 of each calendar year; and**

10) **Any imported fill used in the project shall (a) be compatible with the native soil and Northern coastal scrub habitat present at the project site and (b) have minimal weed seed; and the source and means to be utilized to ensure weed seed is minimized shall be specified.**

B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

4. Northern Coastal Scrub Habitat Restoration Plan

A. PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-83-270-A, the permittee shall submit for the review and approval of the Executive Director a plan for restoring and enhancing the northern coastal scrub habitat located on the portions of the bluff face below the exposed portions of the Geoweb retaining wall that will be disturbed by the development and/or backfilled. The plan shall be prepared by a qualified botanist or licensed landscape architect and shall prepared in consultation with the Redwood Coast Land Conservancy, the Dorothy King Young Chapter of the California Native Plant Society, and the Mendocino Coast Cooperative Weed Management Area.

1) The plan shall demonstrate that:

i. Northern coastal scrub habitat shall be restored all along the portions of the bluff face on APN 145-261-05 below the exposed portions of the Geoweb retaining wall that will be disturbed by the development and/or backfilled;

ii. The Northern coastal scrub habitat shall visually buffer the base of the Geoweb retaining wall from Gualala Point Regional Park;

iii. Invasive weeds shall be eliminated from the disturbed bluff area;

iv. Only those plants that are drought tolerant and native to "northern coastal scrub" habitats of Mendocino County shall be used;

v. All proposed plantings shall be obtained from local genetic stocks within Mendocino County. If documentation is provided to the Executive Director that demonstrates that native vegetation from local genetic stock is not available, native vegetation obtained from genetic stock outside the local area, but from within the adjacent region of the floristic province, may be used. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or by the State of California shall be planted or allowed to naturalize or persist on the parcel. No plant species listed as a "noxious weed" by the State of California or the U.S. Federal Government shall be utilized within the property;

vi. **No rodenticides of any kind shall be utilized within the property that is the subject of CDP No. 1-83-270-A;**

vii. **All plantings shall be maintained in good condition throughout the life of the project. If any of the plants to be planted die, become decadent, rotten, or weakened by decay or disease, or are removed for any reason, they shall be replaced no later than January 1st of the next winter season in-kind or with another native Northern coastal scrub species in amounts sufficient to ensure that at least 90% vegetative cover of the restoration area is maintained;**

viii. **The success of the restoration plan shall be monitored on a regular basis, and monitoring results shall be submitted annually to the Executive Director by December 31 of each calendar year;**

ix. **As many of the existing large blue blossom and silk tassel bush shall be retained as possible;**

x. **Erosion control fabric shall be installed on filled areas and other bare soil and densely seeded with fast-growing native ground cover to help hold the soil and outcompete non-native velvet grass and other weeds; and**

xi. **Weed eradication strategies shall be focused on eliminating the most noxious of the invasive weeds (Himalayan blackberry, capeweed, greater periwinkle, jubata grass, ice plant, and pride of Madeira) and follow-up strategies shall be devised to eliminate and/or control other invasive plants at the site including poison hemlock, wild radish, velvet grass, Harding grass, wild teasel, bull thistle, and Italian thistle.**

2) **The plan shall include, at a minimum, the following components:**

i. **A final landscape site plan depicting the species, size, and location of all plant materials to be planted on the property, any irrigation system, delineation of the approved development, and all other landscape features;**

ii. **A schedule for the planting of the landscaping; and**

iii. **A narrative description of the methods to be used for invasive plant removal and management; and**

iv. **A monitoring plan for evaluating the success of the restoration plan.**

B. **The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.**

5. Color of Geoweb Material

PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-83-270-A, the permittee shall submit for the review and approval of the Executive Director color samples of the proposed Geoweb material. The color of the Geoweb material shall be black or a dark earth tone color.

6. Best Management Practices & Construction Responsibilities

The permittee shall comply with the following construction-related requirements:

A. Any and all excess excavated material resulting from construction activities shall be removed and disposed of at a disposal site outside the coastal zone or placed within the coastal zone pursuant to a valid coastal development permit;

B. Straw bales, coir rolls, or silt fencing structures shall be installed prior to and maintained throughout the construction period to contain runoff from construction areas, trap entrained sediment and other pollutants, and prevent discharge of sediment and pollutants down slope toward the Gualala River;

C. On-site vegetation shall be maintained to the maximum extent feasible during construction activities;

D. Any disturbed areas shall be replanted or seeded and if necessary mulched as soon as feasible following completion of construction, but in any event no later than January 1st of the next winter season consistent with the final approved plan required by Special Condition Nos. 3 and 4 above;

E. All on-site stockpiles of construction debris shall be covered and contained at all times to prevent polluted water runoff;

F. No ground-disturbing activities shall occur during the period of October 15 and April 15 to minimize the potential for soil disturbance during the rainy season; and

G. Noise generating construction activities shall be limited in duration to the hours between 8:00 a.m. and 5:00 p.m., Monday through Friday only so as to limit noise impacts to nearby visitor serving facilities.

7. Deed Restriction

PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE DEVELOPMENT AUTHORIZED BY COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-83-270-A, the permittee shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded against the parcel(s) governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the

subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the entire parcel or parcels governed by this permit. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

8. Permit Expiration & Condition Compliance

This coastal development permit shall be deemed issued upon the Commission's approval and will not expire. Failure to comply with the special conditions of this permit may result in the institution of an action to enforce those conditions under the provisions of Chapter 9 of the Coastal Act.

9. Timeframe for Completion of Construction

All development authorized by CDP Amendment No. 1-83-270-A shall be completed within two (2) years of the date of Commission approval of CDP Amendment No. 1-83-270-A, or within such additional time as the Executive Director may grant for good cause.

IV. FINDINGS AND DECLARATIONS

The Commission finds and declares the following:

A. Background

Permit History

In 1981, the North Coast Regional Commission approved CDP NCR-80-P-75, granted to the Redwood Empire Title Company, for the building of the Surf Supermarket located on the subject parcel (APN 145-261-05). As a condition of approval, CDP NCR-80-P-75 required recordation of an offer to dedicate a 25-foot-wide easement for public access and passive recreation along the bluff. John J. and Ida L. Bower recorded the offers to dedicate required by the permit and the Commission issued the CDP for the construction of Surf Supermarket. CDP No. NCR-80-P-75 does not authorize use of any portion of the easement for a parking lot or placement of any structures or materials in any portion of the easement.

CDP No. NCR-80-P-75 specified that the supermarket building would be set back 35 feet at its northwest corner and 55 feet at its southwest corner from the bluff edge. However, when the building was constructed in the early 1980s, the structure was constructed such that the southwest corner is set back only 24 feet from the bluff edge. Thus, the constructed building was therefore placed directly within the area offered for public access along the bluff constituting a violation of CDP NCR-80-P-75. In an effort

to protect the public access required by CDP NCR-80-P-75, the Commission subsequently approved CDP 1-83-270 authorizing a 120-foot-long wood retaining wall west of the market along the edge of the bluff (See Exhibit 8). Special Condition No. 1 of CDP No. 1-83-270 requires that the retaining wall be maintained for the life of the development on the site. To comply with Special Condition No. 1 of CDP No. 1-83-270, the subject coastal development permit amendment application has been submitted to the Coastal Commission by Bower Limited Partnership to replace the failing retaining wall behind the supermarket. Specifically, the proposed amendment requests authorization to (1) replace the constructed 70-foot-long wooden retaining wall with an approximately 105-foot-long "Geoweb" retaining wall extending across the subject property with an approximately 30-foot-long concrete block end wall at the southern end of the retaining wall, (2) install 118 linear feet of 12-inch storm drain with a storm drain manhole, and (3) replace an existing underground septic tank.

In a related action, the applicant proposes to extend the replacement retaining wall that is proposed under Permit Amendment 1-83-270-A to the north across the top of the bluff face of APN 145-261-13 within the area of Mendocino County's coastal permit jurisdiction. The portion of the wall proposed on APN 145-261-13 is the subject of related Appeal No. A-1-MEN-05-015, an appeal of the decision of Mendocino County to grant local CDP Permit No. 55-2006 for construction of this portion of the retaining wall (The boundary between the portion of the proposed retaining wall that is the subject of Permit Amendment 1-83-270-A and that portion that is the subject of Appeal No. A-1-MEN-05-015 is shown in Exhibit 3). On April 11, 2008, the Coastal Commission found that the appeal of the County's approval of Permit No. 55-2006 raised a substantial issue with respect to the grounds on which the appeal was filed, pursuant to Section 30625 of the Coastal Act and Section 13115 of Title 14 of the California Code of Regulations. As a result, the County's approval is no longer effective, and the Commission must consider the project *de novo*. The Commission has not yet acted on the project de novo.

Subdivision of Adjoining Property to the North

In 1977, the North Coast Regional Commission granted CDP NCR-77-C-115 to John and Ida Bower for a land division of 4.5 acres immediately adjacent to the north of the supermarket parcel (APN 145-261-05) into 3 lots of 1.9, 1.0, and 1.6 acres (APNs 145-261-11, 145-261-12, and 145-261-13). APNs 145-261-11 and 145-261-12 are developed with motels and APN 145-261-13, the site that is the subject of related Appeal No. A-1-MEN-08-015, is developed with a strip of commercial units bordering Highway One which are leased by separate commercial entities. Parcel 13, is the southernmost of this group of three parcels. As a condition of the 1977 land division, the Commission required recordation of an offer to dedicate a 25-foot-wide lateral bluff top access easement and a five-foot-wide vertical access easement from Highway One to the mean high water line of the Gualala River. As they did for the offer to dedicate required by CDP NCR-80-P-75, John J. and Ida L. Bower recorded the offer to dedicate required by CDP Nos. NCR-77-C-115 for the subdivision and the Commission issued the CDP. CDP Nos. NCR-77-C-115 and NCR-80-P-75 do not authorize use of any

portion of the easement for a parking lot or placement of any structures or materials in any portion of the easement.

Gualala Bluff Trail

In 1994, the Redwood Coast Land Conservancy (RCLC) accepted the offers-to-dedicate public access easements described above. The RCLC has received CDPs from Mendocino County to construct a bluff top trail, known as the Gualala Bluff Trail. Phase I of this trail, in a portion of the easement resulting from CDP NCR-77-C-115 (three-lot subdivision), was completed in 1998. The CDP for Phase II of this trail, which includes Parcel 13, the Surf Supermarket property, and another parcel further south (Oceansong Restaurant), was approved by Mendocino County in 2004 (CDP 23-03).

Following issuance of the CDP for Phase II of the Gualala Bluff Trail in 2004, Bower Limited Partnership initiated litigation against RCLC, with a cross-complaint filed by the Coastal Commission, over several issues regarding the easements on Parcels 5 and 13, including the validity of RCLC's acceptance of the easement on Parcel 13, the permissible scope of development of public pedestrian access on the parcels, the location of the public pedestrian access easements on the parcels, and alleged Coastal Act violations for unpermitted development within the easements.

Mutual Settlement Agreement and Release Between Involved Parties

A Mutual Settlement Agreement and Release by and between Bower Limited Partnership (BLP), John H. Bower, Redwood Coast Land Conservancy (RCLC), Shirley Eberly, Lois Lutz, and California Coastal Commission was established in 2007 (Case No. SCUK CVG 0594172). The agreement provides, in part, to the applicant (Bower Limited Partnership) access and use of the easement area for uses that are "*not inconsistent with the public pedestrian access authorized by the May 2004 Mendocino County coastal development permit*." The agreement specifies that such access and use may include, but is not limited to, replacement of the retaining wall on Parcel 5, installation of a retaining wall on Parcel 13, and installation and relocation of necessary utilities on Parcels 5 and 13, provided that BLP obtains all necessary permits for such work, including coastal development permits where required. The agreement also states that RCLC understands and agrees that such work may result in temporary disruption and/or temporary relocation of pedestrian access on RCLC's easement area and that BLP further agrees that to the extent that any of its use of or access to the easement area damages the public pedestrian access amenities constructed by RCLC, BLP will expeditiously repair such damage at BLP's expense. While the agreement establishes that uses "*not inconsistent with the public pedestrian access authorized by the May 2004 Mendocino County coastal development permit*" may be located within the public access easement area, the agreement in no way obligates the County or the Coastal Commission to approve a CDP for such uses but rather, expressly requires the applicant to obtain all necessary permits form the County or the commission for any development located within the public access easement area.

B. Site Description

The subject site is an approximately half-acre blufftop parcel located on the west side of Highway One, upslope from the Gualala River estuary, approximately 500 feet south of its outlet to the Pacific Ocean, at 39250 South Highway One in Gualala, Mendocino County (APN 145-261-05) (See Exhibits 1-3). The parcel is planned and zoned Gualala Village Mixed Use (GVMU) in the County's LCP. As discussed above, the subject parcel is developed with a supermarket and related ancillary facilities authorized by previous coastal development permits granted by the Commission. Also as discussed above, a partially improved portion of the Gualala Bluff Top Trail, which provides public access along the bluff, extends through a 25-foot-wide public access easement along the bluff edge of the property, several commercial buildings and the recently constructed Gualala Bluff Trail.

The bluff face contains a bare scarp from a landslide that destroyed the original retaining wall constructed pursuant to CDP 1-83-270 (See Exhibit 4). The otherwise vegetated bluff face is composed mostly of a Northern coastal scrub plant community interspersed with various ruderal and exotic species. This habitat is not considered to be an environmentally sensitive habitat area (ESHA), although the intertidal waters of the estuary and adjoining riparian areas are a form of ESHA. The proposed wall is located more than 50 feet away from these environmentally sensitive areas.

The site is located across the Gualala River from a sand spit separating the river from the ocean. The sand spit and the land area to the south is part of Guala Point Regional Park, a Sonoma County park.

C. Amendment Description

The proposed amendment request would modify CDP No. 1-83-270 to add authorization to (1) replace the constructed 70-foot-long wooden retaining wall with an approximately 105-foot-long "Geoweb" retaining wall extending across the subject property with an approximately 30-foot-long concrete block end wall at the southern end of the retaining wall, (2) install 118 linear feet of 12-inch storm drain with a storm drain manhole, and (3) replace an existing underground septic tank.

The proposed Geoweb wall is a form of retaining wall that would extend along the face of the bluff at the project site. The Geoweb wall is different from common retaining walls made of concrete blocks or driven sheetpiles in that it is a flexible, three-dimensional cellular confinement system, using interconnected strips of curved and perforated polyethylene to form layers of interconnected cells. The proposed Geoweb wall would utilize layers of cells approximately 3-1/2 feet wide. Each layer of cells is filled with earthen material before the next layer of Geoweb cells is placed on top of the previous layer. Gradually, the layers of cells are built up to the desired height flush with the top of the bluff. The proposed Geoweb wall would be built to the top of the bluff. The vertical length of the proposed wall will vary from approximately 13 to 27 feet, with the greater vertical length occurring at the site of the landslide where the Geoweb wall will be two-tiered. As proposed, some portions of the wall would be placed within

excavated portions of the bluff, others alongside the bluff, and still others extending out from the bluff with backfill placed behind. Some portions of the face of the Geoweb wall would be covered with backfill. The outer cells of the exposed Geoweb wall would be filled with topsoil and planted with native vegetation to help mute the appearance of the wall.

The approved development would involve approximately 1,376 cubic yards of grading within an excavation area of approximately 3,547 square feet along the bluff. The 3,547 square feet of vegetated bluff to be excavated is comprised of invasive, ruderal plant species as well as areas of native northern coastal scrub habitat.

D. Conformance with LCP Limitations on Construction of Retaining Walls

LCP Policies and Standards:

LUP Policy 3.4-12 and Coastal Zoning Code Section 20.500.020(E)(1) state:

> Seawalls, breakwaters, revetments, groins, harbor channels and other structures altering natural shoreline processes or retaining walls shall not be permitted unless judged necessary for the protection of existing development or public beaches or coastal dependent uses. Allowed developments shall be processed as conditional uses, following full environmental geologic and engineering review. This review shall include site-specific information pertaining to seasonal storms, tidal surges, tsunami runups, littoral drift, sand accretion and beach and bluff face erosion. In each case, a determination shall be made that no feasible less environmentally damaging alternative is available and that the structure has been designed to eliminate or mitigate adverse impacts upon local shoreline sand supply and to minimize other adverse environmental effects. The design and construction of allowed protective structures shall respect natural landforms, shall provide for lateral beach access, and shall minimize visual impacts through all available means. (emphasis added)

Discussion

The proposed Geoweb wall is a form of retaining wall that would extend along the face of the bluff at the project site. As discussed above, the Geoweb wall is different from common retaining walls made of concrete blocks or driven sheetpiles in that it is composed of a flexible, three-dimensional cellular confinement system, using interconnected strips of curved and perforated polyethylene to form layers of interconnected cells that are filled with earthen material and stacked on top of each other. The constructed Geoweb wall forms a barrier to retain the bluff behind it.

The above cited policies set limitations on the construction of retaining walls.

Neither the certified Mendocino County LCP nor the Coastal Act contain a definition of "retaining wall." However, Webster's New World Dictionary, Third Collegiate Edition, defines "retaining wall" as "a wall built to keep a bank of earth from sliding or water from flooding." The bluff face at the subject property has experienced a significant debris

flow or slide that destroyed the previous retaining wall built along the bluff face pursuant to the original permit. As the primary intent of constructing the proposed Geoweb wall is to prevent additional sliding of the bluff face and protect development and uses on the blufftop, and as the proposed Geoweb structure with its numerous layers of interconnected cells filled with earthen material placed on top of each other form a kind of wall, the Commission finds that the proposed Geoweb structure constitutes a "retaining wall."

LUP Policy 3.4-12 and Coastal Zoning Code Section 20.500.020(E)(1) apply to retaining walls that alter natural shoreline processes. The erosion of bluffs along a shoreline is a natural shoreline process. The subject site has experienced landsliding that has eroded both the parts of the bluff composed of previously placed fill as well as lower parts of the bluff below the previously placed fill. Much of the eroded sediment enters coastal waters and serves to nourish coastal and estuarine beaches and sand spits. The construction of the Geoweb wall will slow this natural erosion and beach nourishment process, thus altering natural shoreline processes.

As cited above, LUP Policy 3.4-10 and Coastal Zoning Code Section 20.500.020(E)(1) prohibit the development of retaining walls and other shoreline structures unless such structures are determined to be necessary either for the protection of (1) existing development, (2) public beaches, or (3) coastal dependent uses. As discussed above, in 1981, the North Coast Regional Commission approved CDP NCR-80-P-75, for the building of the Surf Supermarket located on the subject parcel (APN 145-261-05). As a condition of approval, CDP NCR-80-P-75 required recordation of an offer to dedicate a 25-foot-wide easement for public access and passive recreation along the bluff.

CDP No. NCR-80-P-75 specified that the supermarket building would be set back 35 feet at its northwest corner and 55 feet at its southwest corner from the bluff edge. However, when the building was constructed in the early 1980s, the structure was constructed such that the southwest corner is set back only 24 feet from the bluff edge. Thus, the constructed building was therefore placed directly within the area offered for public access along the bluff constituting a violation of CDP NCR-80-P-75. In an effort to protect the public access required by CDP NCR-80-P-75, the Commission subsequently approved CDP 1-83-270 authorizing a 120-foot-long wood retaining wall west of the market along the edge of the bluff. Special Condition No. 1 of CDP No. 1-83-270 requires that the retaining wall be maintained for the life of the development on the site.

As noted above, the original retaining wall that was constructed failed and was destroyed in landsliding that occurred in the winter of 2005-2006. The resulting slide scarp is over steepened and unstable and threatens the bluff edge where the public access easement exists. The amendment request was submitted to comply with the requirements of Special Condition No. 1 of the original permit by proposing a new retaining wall to replace the wall that has failed and thereby protect the public access easement.

The public access easement has been accepted and is managed by the Redwood Coast Land Conservancy (RCLC). Assisted by grant money provided by the California Coastal Conservancy, the RCLC has been developing the Gualala Bluff Top Trail within this particular easement and adjoining easements that extend along the downtown commercial district of Gualala. The Gualala Bluff Top Trail is considered a link in the California Coastal Trail. Thus, the public access easement and the trail it will accommodate provides important coastal access and is a coastal dependent use. As maintenance of a retaining wall in this location has been required by the Commission since 1983 to protect the public access easement and the easement has been directly threatened by an adjacent bluff landslide, the Commission finds that the proposed Geoweb wall is necessary for the protection of a coastal dependent use consistent with the requirements of LUP Policy 3.4-10 and Coastal Zoning Code Section 20.500.020(E)(1).

E. Protection of Environmentally Sensitive Habitat

LCP Policies and Standards:

Environmentally Sensitive Habitat Areas (ESHA) are defined on page 38 of the Mendocino County LUP as:

> Any areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Coastal Zoning Code Section 20.496.010 "Environmentally Sensitive Habitat and other Resource Areas—Purpose" states (emphasis added):

> …Environmentally Sensitive Habitat Areas (ESHA's) include: anadromous fish streams, sand dunes, rookeries and marine mammal haul-out areas, wetlands, riparian areas, areas of pygmy vegetation which contain species of rare or endangered plants and habitats of rare and endangered plants and animals.

LUP Policy 3.1-7 states: (emphasis added)

> A buffer area shall be established adjacent to all environmentally sensitive habitat areas. The purpose of this buffer area shall be to provide for a sufficient area to protect the environmentally sensitive habitat from significant degradation resulting from future developments. The width of the buffer area shall be a minimum of 100 feet, unless an applicant can demonstrate, after consultation and agreement with the California Department of Fish and Game, and County Planning Staff, that 100 feet is not necessary to protect the resources of that particular habitat area and the adjacent upland transitional habitat function of the buffer from possible significant disruption caused by the proposed development. The buffer area shall be measured from the outside edge of the environmentally sensitive habitat areas and shall not be less than 50 feet in width. New land division shall not be allowed which will create new parcels entirely within a buffer area. Developments permitted within a buffer area shall generally be the same as those uses permitted in the adjacent

environmentally sensitive habitat area and must comply at a minimum with each of the following standards:

1. It shall be sited and designed to prevent impacts which would significantly degrade such areas;

2. It shall be compatible with the continuance of such habitat areas by maintaining their functional capacity and their ability to be self-sustaining and to maintain natural species diversity; and

3. Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel. Mitigation measures, such as planting riparian vegetation, shall be required to replace the protective values of the buffer area on the parcel, at a minimum ratio of 1:1, which are lost as a result of development under this solution.

Coastal Zoning Code Section 20.496.020 "Environmentally Sensitive Habitat and other Resource Areas—-Development Criteria" states (emphasis added):

(A) Buffer Areas. A buffer area shall be established adjacent to all environmentally sensitive habitat areas. The purpose of this buffer area shall be to provide for a sufficient area to protect the environmentally sensitive habitat from degradation resulting from future developments and shall be compatible with the continuance of such habitat areas.

(1) Width. The width of the buffer area shall be a minimum of one hundred (100) feet, unless an applicant can demonstrate, after consultation and agreement with the California Department of Fish and Game, and County Planning staff, that one hundred (100) feet is not necessary to protect the resources of that particular habitat area from possible significant disruption caused by the proposed development. The buffer area shall be measured from the outside edge of the Environmentally Sensitive Habitat Areas and shall not be less than fifty (50) feet in width. New land division shall not be allowed which will create new parcels entirely within a buffer area. Developments permitted within a buffer area shall generally be the same as those uses permitted in the adjacent Environmentally Sensitive Habitat Area.

(2) Configuration. The buffer area shall be measured from the nearest outside edge of the ESHA (e.g., for a wetland from the landward edge of the wetland; for a stream from the landward edge of riparian vegetation or the top of the bluff).

(3) Land Division. New subdivisions or boundary line adjustments shall not be allowed which will create or provide for new parcels entirely within a buffer area.

(4) Permitted Development. Development permitted within the buffer area shall comply at a minimum with the following standards:

(a) Development shall be compatible with the continuance of the adjacent habitat area by maintaining the functional capacity, their ability to be self-sustaining and maintain natural species diversity.

(b) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel.

(c) Development shall be sited and designed to prevent impacts which would degrade adjacent habitat areas. The determination of the best site shall include consideration of drainage, access, soil type, vegetation, hydrological characteristics, elevation, topography, and distance from natural stream channels. The term "best site" shall be defined as the site having the least impact on the maintenance of the biological and physical integrity of the buffer strip or critical habitat protection area and on the maintenance of the hydrologic capacity of these areas to pass a one hundred (100) year flood without increased damage to the coastal zone natural environment or human systems.

(d) Development shall be compatible with the continuance of such habitat areas by maintaining their functional capacity and their ability to be self-sustaining and to maintain natural species diversity.

(e) Structures will be allowed within the buffer area only if there is no other feasible site available on the parcel. Mitigation measures, such as planting riparian vegetation, shall be required to replace the protective values of the buffer area on the parcel, at a minimum ratio of 1:1, which are lost as a result of development under this solution.

(f) Development shall minimize the following: impervious surfaces, removal of vegetation, amount of bare soil, noise, dust, artificial light, nutrient runoff, air pollution, and human intrusion into the wetland and minimize alteration of natural landforms.

(g) Where riparian vegetation is lost due to development, such vegetation shall be replaced at a minimum ratio of one to one (1:1) to restore the protective values of the buffer area.

(h) Aboveground structures shall allow peak surface water flows from a one hundred (100) year flood to pass with no significant impediment.

(i) Hydraulic capacity, subsurface flow patterns, biological diversity, and/or biological or hydrological processes, either terrestrial or aquatic, shall be protected.

(j) Priority for drainage conveyance from a development site shall be through the natural stream environment zones, if any exist, in the development area. In the drainage system design report or development plan, the capacity of natural stream environment zones to convey runoff from the completed development shall be evaluated and integrated with the drainage system wherever possible.

No structure shall interrupt the flow of groundwater within a buffer strip. Foundations shall be situated with the long axis of interrupted impermeable vertical surfaces oriented parallel to the groundwater flow direction. Piers may be allowed on a case by case basis.

(k) If findings are made that the effects of developing an ESHA buffer area may result in significant adverse impacts to the ESHA, mitigation measures will be required as a condition of project approval. Noise barriers, buffer areas in permanent open space, land dedication for erosion control, and wetland restoration, including off-site drainage improvements, may be required as mitigation measures for developments adjacent to environmentally sensitive habitats. (Ord. No. 3785 (part), adopted 1991)

Discussion

A botanical survey of the site was prepared for the applicant by BioConsultant LLC dated August 2007 (See Exhibit No. 7). The survey included a complete floristic survey performed during three site visits in the spring and summer of 2007 and a botanical assessment of both the APN 145-261-05, the subject parcel, and APN 145-261-13, the adjoining parcel to the north where a continuation of the geoweb wall is proposed under Appeal No. A-1-MEN-08-015.

The blufftop portion of the subject parcel has been previously disturbed and developed and contains sparse vegetation. In contrast, the bluff face portion of the parcel is heavily vegetated. According to the botanical survey, the predominant vegetation on the bluff face is a dense northern coastal scrub vegetation community. The dominant shrub species are blue blossom and coyote bush. Other important shrub species include silk tassel bush, California blackberry, oso bery, thimbleberry, and western poison oak. The northern coastal scrub community includes a dense herbaceous understory consisting primarily of native perennials such as figwort, angelica and Douglas's iris, and more open areas are carpeted with species such as coast paintbrush and California brome. The botanical survey indicates the vegetation association most closely corresponds to Coyote Brush Scrub and Dwarf Scrub Alliance, two natural communities recognized by the California Natural Diversity Database (September 2003). This alliance is synonymous with Northern (Franciscan) Coastal Scrub recognized by the CNDD in the past. The northern coastal scrub vegetation community is not considered to be rare and is not considered to be an ESHA.

The northern coastal scrub vegetation community at the site should not be confused with a Northern Coastal Bluff Scrub community, which is rare and considered to be ESHA. Although the two scrub communities have some features in common, according to the botanical survey the two communities are recognizably different in stature, species composition, phenology, and physical site factors.

The botanical survey notes that invasive exotic species are widespread on the bluff, occurring in the bluff top area, in the debris slide area, and less frequently at the toe of the bluff. The invasive exotic species include Himalayan blackberry, capeweed, wild radish, Italian thistle, wild teasel, poison hemlock, bull thistle, Harding grass, and velvet

grass which occur primarily at the top of the bluff but extend down the bluff face in places. Within the debris slide area, capeweed, wild radish, and other invasive species have become newly established. Other invasive exotics that can be found on the site include greater periwinkle, ice plant, pride of Madeira (a shrub-like ornamental plant), and mature clumps of jubata grass. The abundance of such weeds is attributed to the project site's long history of disturbance and the placement of imported fill, which provided bare soil for weed establishment and contained weed seed contaminants.

The subject property itself contains no known ESHA. As noted above, the northern coastal scrub vegetation community is not considered to be an ESHA, and no special-status plant species, rare natural communities, or special-status wildlife species were observed during the biological surveys of the site. The site does contain a population of morning-glory plants, and the applicant's botanist evaluated whether the plant is coastal bluff morning-glory (*Calystegia purpurata ssp saxicola*), a rare plant, or climbing morning glory (*Calystegia purpurata ssp. purpurata*), a common plant. As discussed in a letter dated February 8, 2008 to the Mendocino County Board of Supervisors included at the end of Exhibit No. 7, the botanist concludes the morning glory population on the site is a population of the common climbing morning glory plant because the plants possess the growth habit and overall preponderance of leaf shape characteristics of the common subspecies.

Although no ESHA is known to occur on the subject property, the site is adjacent to an ESHA. Between the toe of the bluff and the Gualala River Estuary, just beyond the western property line, is an intertidal area containing scattered pockets of wetland vegetation in mud flats among large boulders. The estuarine/intertidal wetland and the estuary itself are considered to be ESHA. In addition, the sand spit across the river contains sensitive dune habitat and further up the Gualala River Estuary, well beyond the project site, are additional wetland and riparian sensitive habitat area.

As the development site is located adjacent to and as close as 28 feet from the adjoining estuarine/intertidal wetland ESHA and in the vicinity of other ESHA, the subject property is subject to the ESHA buffer requirements of LUP Policy 3.1-7 and Coastal Zoning Code Section 20.496.020. According to these policies, a buffer area of a minimum of 100 feet shall be established adjacent to all ESHAs, unless an applicant can demonstrate, after consultations and agreement with the California Department of Fish and Game (DFG) that 100 feet is not necessary to protect the resources of that particular habitat area from possible significant disruption caused by the proposed development. The policies state that in that event, the buffer shall not be less than 50 feet in width.

The existing development at the site was approved prior to certification of the Mendocino County LCP in 1992. The Surf Supermarket with its blufftop public access easement was approved in 1981, pursuant to Coastal Development Permit No. NCR-80-P-75. The public access easement was accepted by the Redwood Coast Land Conservancy and has been partially constructed. The retaining wall that the proposed Geoweb wall will replace was approved under Coastal Development Permit No. 1-83-270 in 1983. Installation of the Geoweb wall under the current permit amendment

request will satisfy the requirements of Special Condition No. 1 of the original permit that the retaining wall be maintained. The public access easement and the original retaining wall as originally approved, constructed, and required to be maintained are located as close as 28 feet from the edge of the estuarine/intertidal wetland ESHA. This existing setback from the estuarine/intertidal wetland ESHA at the base of the bluff would not change as a result of the proposed project. The replacement retaining wall would be constructed in the same location as the original retaining wall and would be located a minimum of 28 feet from the ESHA.

As noted above, LUP Policy 3.1-7 and Coastal Zoning Code Section 20.496.020 indicate that a buffer area of 100 feet shall be established adjacent to all ESHAs, although the buffer width can be reduced to a minimum of 50 feet under certain circumstances. In this case, the substantial existing pre-LCP development, the retaining wall that is required to be maintained under Coastal Development Permit No. 1-83-270, and the required, recorded, and accepted public access easement is located as close as 28 feet from a portion of the ESHA, precluding the establishment of a greater buffer in these portions of the site.

The botanical report recommends the implementation of certain measures to protect the adjacent estuarine/intertidal wetland ESHA. These measures include the following:

1. Implementation of a Storm Water Pollution Prevention Plan (SWPPP) consisting of site specific measure to reduce impacts to water quality and protect the adjacent estuarine habitats during construction.

2. Use of certain construction site best management practices (BMPs) in the SWPPP.

3. Use of a reinforced “Super Silt Fence” at the limits of construction to prevent sediment, rock, debris and/or other materials from entering the ESHAs during construction.

4. The implementation of a comprehensive northern coastal scrub restoration plan that would not only revegetate disturbed areas reducing the potential for erosion, but would also restore the historically altered coastal scrub habitat all along the length of the bluff and eliminate the widespread invasive weeds The restored coastal scrub habitat would produce greater native plant biodiversity, in turn creating higher quality wildlife habitat with pleasing aesthetic and scenic values. The botanical report recommends that the restoration plan (a) use native plantings, (b) be implemented by a professional restoration company, (c) incorporate a restoration monitoring component, (d) include the installation of erosion control fabric on bare soil areas and densely seeding these areas with fast-growing native perennial California brome to help hold the soil in the first year after construction and to outcompete non-native velvet grass and other weeds, (e) focusing weed eradication strategies on eliminating the most noxious of the invasive weeds (Himalayan blackberry, capeweed, greater periwinkle, jubata grass, ice plant,

and pride of Madeira) and devising follow-up strategies to eliminate and/or control poison hemlock, wild radish, velvet grass, wild teasel, bull thistle, and Italian thistle, and designing and implementing a long-term management effort, and (f) making modifications to the restoration plan as needed.

To ensure that erosion control measures, northern coastal scrub restoration plan, and other protective measures recommended by the applicant's biologist are implemented, the Commission attaches Special Condition Nos. 3, 4 and 6. Special Condition No. 3 requires the permittee to submit revised final soil stabilization and drainage improvement plans for the review and approval of the Executive Director that substantially conform to the submitted plans, but among other things, are revised to provide that that native species compatible with the Northern coastal scrub habitat on the existing bluff face be planted in the outer cells of the Geoweb wall and be maintained to help make the wall as compatible as possible with the character of the existing bluff setting. The establishment of the vegetation must be monitored for five years and the permittee is responsible to maintain the vegetation such that at least 50% of the face of the Geoweb wall is covered by native vegetation during the life of the development. Special Condition No. 4 requires the submittal for the review and approval of the Executive Director a plan for restoring and enhancing the northern coastal scrub habitat located on the portions of the bluff face below the exposed portions of the Geoweb retaining wall that will be disturbed by the development and/or backfilled to help make the wall as compatible as possible with the character of the existing bluff setting. The restoration plan must include the specific measures recommended by the applicant's biologist to ensure the best chance at successfully restoring the northern coastal scrub plan community by planting and preserving native plants, eliminating and managing invasive weeds and using erosion control fabric in denuded areas. A monitoring plan must be submitted to measure the success of the restoration effort and provisions of the condition would require that vegetation that fails must be replaced in amounts to ensure at least 90% cover of the restoration area is maintained. Special Condition No. 6 requires the use of various best management practices to control erosion and sedimentation impacts on the Gualala River Estuary. Finally, Special Condition No. 7 requires the applicant to execute and record a deed restriction detailing the specific development authorized under the permit and identifying all applicable special conditions attached to the permit to provide notice to future owners of the terms and limitations placed on the use of the property, including requirements for maintenance of the retaining wall and restoration of the bluff face vegetation. As conditioned, the project will provide for appropriate erosion control measures and the restoration and maintenance of a native northern coastal scrub community along the bluff face to protect against erosion and sedimentation of the adjacent estuarine/intertidal wetland ESHA.

Furthermore, the estuarine/intertidal wetland ESHA as well as the wetland, riparian, and dune ESHA in the project vicinity could be adversely affected by the development if non-native, invasive plant species were introduced from landscaping at the site. Introduced invasive exotic plant species could spread into the ESHA and displace native riparian and wetland vegetation, thereby disrupting the value and function of the adjacent ESHA, either by direct planting or by allowing wind blown seeds from invasives

to light in disturbed areas where they could outcompete native plants. As discussed above, Special conditions 3 and 4 require the use of native plant species of native stock and preclude the use of invasive exotics in required plantings and require that exotics not be allowed to naturalize or persist at the site. The restoration plan required by Special Condition No. 4 requires that specific weed eradication strategies be devised and that an invasive plant management plan be prepared. In addition, Special Condition No. 4 requires that denuded areas be covered with erosion control fabric and densely seeded with fast-growing native ground cover to hold the soil and outcompete non-native velvet grass and other weeds. As conditioned, the potential for the development to accelerate the spread of invasive exotic vegetation that could damage native ESHA will be minimized.

To help in the establishment of vegetation, rodenticides are sometimes used to prevent rats, moles, voles, and other similar small animals from eating the newly planted saplings. Certain rodenticides, particularly those utilizing blood anticoagulant compounds such as brodifacoum, bromadiolone and diphacinone, have been found to poses significant primary and secondary risks to non-target wildlife present in urban and urban/ wildland areas. As the target species are preyed upon by raptors or other environmentally sensitive predators and scavengers, these compounds can bio-accumulate in the animals that have consumed the rodents to concentrations toxic to the ingesting non-target species. Therefore, to minimize this potential significant adverse cumulative impact to environmentally sensitive wildlife species, Special Condition Nos. 3 and 4 prohibit the use of specified rodenticides on the property governed by CDP No. 1-83-270-A.

To help prevent continued erosion of the bluff face, the development includes the installation of drainage improvements to capture runoff and direct the flow into an existing drainage channel where the runoff. Although the drainage improvements will help reduce erosion and sedimentation, the captured runoff from the development site that is allowed to drain off the site the estuarine waters below the bluff would contain entrained sediment and other pollutants from impervious surfaces such as building roofs and paved areas used by vehicles and that would contribute to degradation of the quality of coastal waters within the adjacent estuarine/wetland ESHA. Therefore, Special Condition No. 3(A)(2) requires the storm drain proposed to extend across APN 145-261-05 to include an on-site infiltration interceptor to capture any pollutants contained in the run-off and treat or filter stormwater runoff from each storm, up to and including the 85th percentile, 24-hour storm event to protect water quality.

With the mitigation measures discussed above, which are designed to minimize any potential impacts to the adjacent and nearby environmentally sensitive habitat areas, the project as conditioned will not significantly degrade adjacent ESHA and will be compatible with the continuance of the adjacent estuarine/intertidal wetland ESHA as well as the wetland, riparian, and dune ESHA in the project vicinity. Therefore, the Commission finds that the proposed development, as conditioned, is consistent with the provisions of LUP Policies 3.1-7 and Coastal Zoning Ordinance Section 20.496.020 as all impacts of the development on the adjacent ESHA would be mitigated to less than significant levels.

F. Protection of Visual Resources

LCP Policies and Standards:

LUP Policy 3.5-1 states in applicable part:

> "The scenic and visual qualities of Mendocino County coastal areas shall be considered and protected as a protected resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas designated by the County of Mendocino Coastal Element shall be subordinate to the character of its setting." [emphasis added]

LUP Policy 3.5-5 states in applicable part:

> Providing that trees will not block coastal views from public areas such as roads, parks and trails, tree planting to screen buildings shall be encouraged. In specific areas, identified and adopted on the land use plan maps, trees currently blocking views to and along the coast shall be required to be removed or thinned as a condition of new development in those specific areas. New development shall not allow trees to block ocean views.

Coastal Zoning Ordinance Section 20.388.060 states: emphasis added:

> Development in Westport, Caspar, Little River, Albion, Elk, Manchester, Anchor Bay and Gualala shall be subject to the development criteria in Section 20.504.020. [emphasis added]

Coastal Zoning Ordinance Section 20.504.020 states in applicable part:

> (B) The communities and service centers, designated as CRV or CFV, of Westport, Caspar, Albion, Elk and Manchester, and the additional areas of Little River, Anchor Bay and Gualala, as described below, shall have special protection as set forth in Section 20.504.020(C):
>
> (3) Gualala: The Sonoma County Line on the south to Big Gulch on the north including all commercial and industrially zoned parcels on the east side of Highway 1 and all parcels west of Highway 1.
>
> (C) Development Criteria.
>
> (1) The scale of new development (building height and bulk) shall be within the scope and character of existing development in the surrounding neighborhood.
>
> (2) New development shall be sited such that public coastal views are protected.

(3) The location and scale of a proposed structure will not have an adverse effect on nearby historic structures greater than an alternative design providing the same floor area. Historic structure, as used in this subsection, means any structure where the construction date has been identified, its history has been substantiated, and only minor alterations have been made in character with the original architecture.

(4) Building materials and exterior colors shall be compatible with those of existing structures.

(D) The scenic and visual qualities of Mendocino County Coastal Areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas designated by the County of Mendocino Coastal Element shall be subordinate to the character of its setting. (Ord. No. 3785 (part), adopted 1991) [emphasis added]

Discussion:

The subject property is not located within a designated highly scenic area but is within a special neighborhood as designated in the Mendocino County LCP. As cited above, the LCP sets forth numerous policies regarding the protection of visual resources. LUP Policy 3.5-1 states that the scenic and visual qualities of Mendocino County coastal areas must be considered and protected by requiring that permitted development be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas.

In addition, LUP Policy 3.5-2 and CZC Section 20.504.020 require special protection for several communities, including within the Gualala area, all commercial and industrially zoned parcels on the east side of Highway 1 and all parcels west of Highway 1, such as the subject property. CZC Section 20.504.020 requires that development of these parcels are subject to the development criteria set forth in CZC Section 20.504.020(C), which require that (1) the scale of new development (building height and bulk) shall be within the scope and character of existing development in the surrounding neighborhood, (2) coastal views by protected, (3) the location and scale of a proposed structure shall not have an adverse effect on nearby historic structures, and (4) Building materials and exterior colors shall be compatible with those of existing structures.

The development as conditioned conforms to the applicable requirements of LUP Policy 3.5-1 and CZC Section 20.504.020. The proposed new development will not block any coastal views. The Geoweb retaining wall will not appreciably rise above the edge of the bluff and thus will not block any of the existing views to the estuary through the site

and from the adjoining public access easement. Therefore, the development will be sited and designed to protect views.

The new development does involve landform alteration. The installation of the Geoweb retaining wall will require excavation and reconstruction of the upper portions of the existing bluff face. As described previously, the Geoweb wall is different from common retaining walls made of concrete blocks or driven sheetpiles in that it is a flexible, three-dimensional cellular confinement system, using interconnected strips of curved and perforated polyethylene to form layers of interconnected cells. The proposed Geoweb wall would utilize layers of cells approximately 3-1/2 feet wide. Each layer of cells is filled with earthen material before the next layer of Geoweb cells is placed on top of the previous layer. Gradually, the layers of cells are built up to the desired height flush with the top of the bluff. The proposed Geoweb wall would be built to the top of the bluff. The vertical length of the proposed wall will vary from approximately 13 to 27 feet, with the greater vertical length occurring at the site of the landslide where the Geoweb wall will be two-tiered. As proposed, some portions of the wall would be placed within excavated portions of the bluff, others alongside the bluff, and still others extending out from the bluff with backfill placed behind. Some portions of the face of the Geoweb wall would be covered with backfill. The outer cells of the exposed Geoweb wall would be filled with topsoil and planted with native vegetation to help mute the appearance of the wall. The approved development would involve approximately 1,376 cubic yards of grading within an excavation area of approximately 3,547 square feet along the bluff.

As discussed previously, the approved Geoweb wall is needed to protect the adjoining public access easement from erosion of the bluff face. The permit granted for the original retaining wall that subsequently failed requires that the wall be maintained in place to protect the public access easement. Installation of the wall will necessarily involve excavation and reconstruction of the bluff face as described above. However, as the wall will be aligned in the same location as the wall that failed, the general form of the bluff will be maintained. As conditioned to require restoration of the northern coastal scrub plant community in the areas of the bluff below the Geoweb wall that will be disturbed, and to require planting of the outer cells of the Geoweb wall with vegetation that will partially screen the retaining wall, the project will restore as much as possible the appearance of the previously existing bluff face. Therefore, the Commission finds that as the alignment of the Geoweb wall will match the alignment of the previous retaining wall and as the restoration of natural plant communities will be restored in disturbed areas of the bluff, the development will minimize the alteration of natural land forms.

The new development will be visually compatible with the character of the surrounding area for several reasons. First, the bluff in this location was previously protected by a retaining wall which formed part of the character of the site. The new Geoweb wall form will replace this aspect of the site with another wall. Second, as discussed above, the requirements of Special Conditions 3 and 4 that the outer cells of the Geoweb wall be planted with native vegetation to partially screen the wall and that the disturbed bluff area be restored with northern coastal scrub vegetation will help blend the retaining wall into the surrounding bluff face. The conditions require that the vegetation be maintained

to retain 50% vegetative cover of the Geoweb wall and that the bluff area below the wall be managed to maintain at least 90% vegetative cover. Third, Special Condition No. 5 requires the applicant to submit for the review and approval of the Executive Director color samples of the proposed Geoweb material and that the color be black or a dark earth tone color to blend into the natural environment of the bluff. Therefore, the Commission finds that the development as conditioned will be visually compatible with character of the surrounding area.

The proposed new development will not have an adverse effect on nearby historic structures. No historic structures are known to exist in the immediate vicinity of the proposed development and the Geoweb wall will not replace any structures except the non-historic failed retaining wall.

For all of the above reasons, the Commission finds that the development as conditioned is consistent with the visual resource protection policies of the LCP, including LUP Policy 3.5-1, LUP Policy 3.5-2, LUP Policy 3.5-15, and CZC Section 20.504.020.

G. Public Access

LCP Policies and Standards:

Projects located between the first public road and the sea and within the coastal development permit jurisdiction of a local government are subject to the coastal access policies of both the Coastal Act and the LCP. Coastal Act Sections 30210, 30211, and 30212 require the provision of maximum public access opportunities, with limited exceptions. Section 30210 states that maximum access and recreational opportunities shall be provided consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse. Section 30211 states that development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation. Section 30212 states that public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, adequate access exists nearby, or agriculture would be adversely affected.

Discussion

In its application of the above policies, the Commission is limited by the need to show that any denial of a permit application based on this section, or any decision to grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential access.

The purpose of the development is to protect an existing public access easement from bluff erosion. As discussed previously, in 1981, the North Coast Regional Commission approved CDP NCR-80-P-75, for the building of the Surf Supermarket located on the subject parcel (APN 145-261-05). As a condition of approval, CDP NCR-80-P-75

required recordation of an offer to dedicate a 25-foot-wide easement for public access and passive recreation along the bluff.

CDP No. NCR-80-P-75 specified that the supermarket building would be set back 35 feet at its northwest corner and 55 feet at its southwest corner from the bluff edge. However, when the building was constructed in the early 1980s, the structure was constructed such that the southwest corner is set back only 24 feet from the bluff edge. Thus, the constructed building was therefore placed directly within the area offered for public access along the bluff constituting a violation of CDP NCR-80-P-75. In an effort to protect the public access required by CDP NCR-80-P-75, the Commission subsequently approved CDP 1-83-270 authorizing a 120-foot-long wood retaining wall west of the market along the edge of the bluff. Special Condition No. 1 of CDP No. 1-83-270 requires that the retaining wall be maintained for the life of the development on the site. The original retaining wall that was constructed failed and was destroyed in land sliding that occurred in the winter of 2005-2006. The resulting slide scarp is over steepened and unstable and threatens the bluff edge where the public access easement exists. The amendment request was submitted to comply with the requirements of Special Condition No. 1 of the original permit by proposing a new retaining wall to replace the wall that has failed and thereby protect the public access easement.

Depending on the manner in which it is built, the replacement of the wall could adversely affect the existing easement or the public access improvements that have been built to date or have yet to be installed. If the wall were aligned inland of the original failed retaining wall, the width of the public access easement could be compromised. To prevent such a result, Special Condition 3(A)(1) requires that the alignment of the replacement Geoweb wall conform to the alignment of the original retaining wall constructed pursuant to the original permit. Special Condition No. 1 of the original permit (1-83-270) required the permittee to maintain the original retaining wall for the life of the development of the site in order to protect the dedicated accessway. Maintaining the same alignment of the wall will ensure that the easement width is not compromised where existing development on the inland side of the easement comes close to the easement.

Construction of the wall will displace already completed portions of the public access trail improvements built within the public access easement by the holder and manager of the easement, the Redwood Coast Land Conservancy (RCLC). The RCLC obtained CDP No. 23-03 from Mendocino County to construct these public access improvements according to a particular plan. To ensure that these improvements are replaced, Special Condition No. 3(A)(5) requires that the permittee replace in-kind and in a manner consistent with Mendocino County CDP No. 23-03 any existing public access improvements developed by the Redwood Coast Land Conservancy on APN 145-261-05 and in adjoining areas disturbed by the development authorized under CDP No. 1-83-270-A. In addition, to ensure that RCLC can review the final construction plans and provide input as to whether the plans for replacement of public access improvements are consistent with Special Condition No. 3(A)(5) and the other requirements of the condition and will enable RCLC to meet its responsibilities for improving and managing

the public access easement, the special condition requires that the plans be prepared in consultation with RCLC.

Therefore, the Commission find that the proposed project, as conditioned, is consistent with the public access policies of the certified Mendocino County LCP and Chapter 3 of the Coastal Act as the Geoweb retaining wall project will protect the existing lateral public access easement along the top of the bluff from continued erosion, ensure that public access improvements damaged by construction will be appropriately replaced.

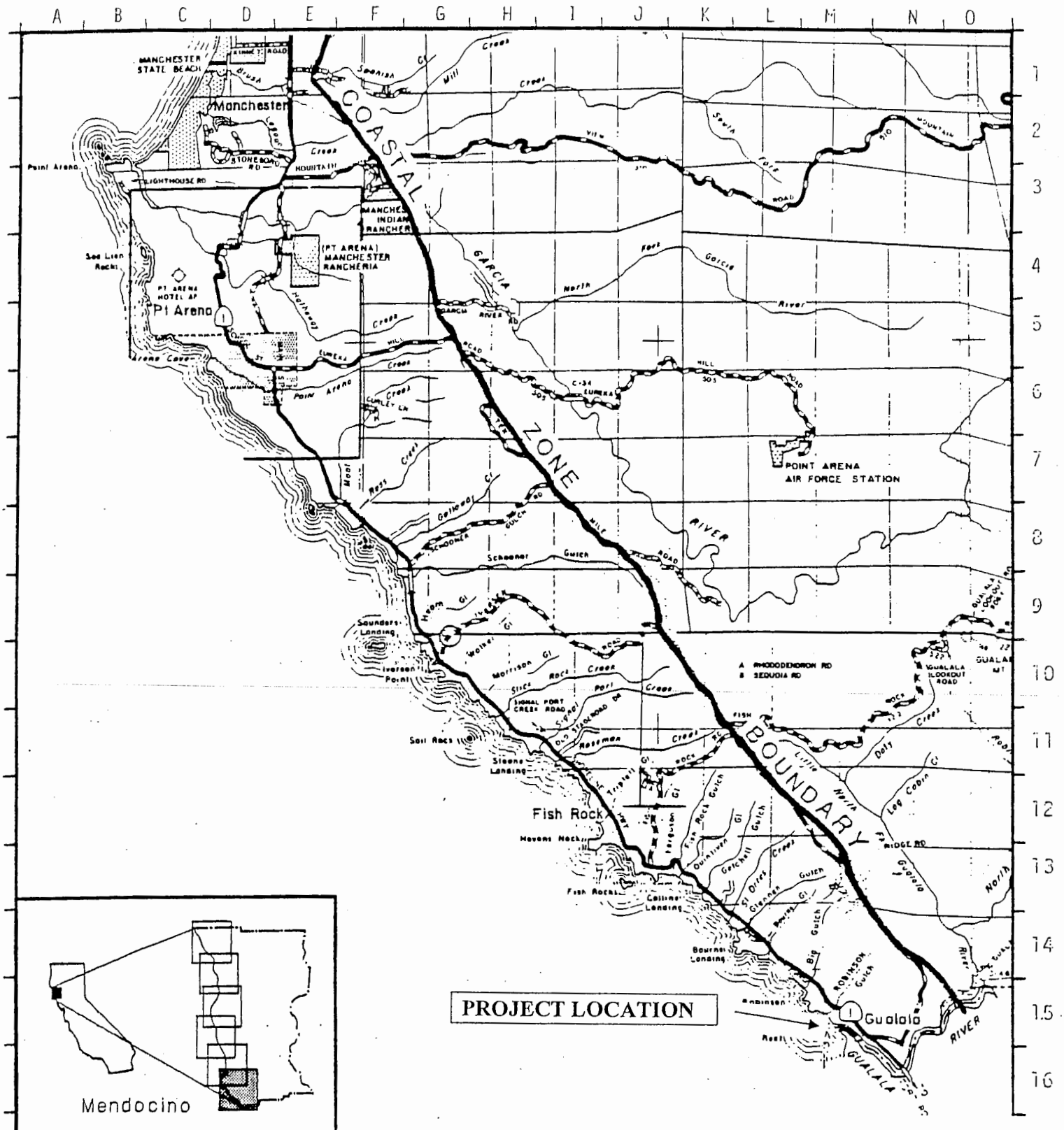
H. California Environmental Quality Act

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application as modified by any conditions of approval to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Commission incorporates its findings on LCP and Coastal Act consistency at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed above, the proposed amended development as conditioned is consistent with the policies of the certified Mendocino County Local Coastal Program. Mitigation measures which will minimize all adverse environmental impacts have been required as permit amendment special conditions. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed amended development, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

V. EXHIBITS

1. Regional Location Map
2. Vicinity Map
3. Amendment Project Site
4. Site Photographs
5. Project Plans
6. Revised Project Description
7. Botanical Surveys
8. Original Permit Staff Report
9. Applicant’s Correspondence
10. General Correspondence
11. Additional Correspondence



California Coastal Commission

LOCATION MAP

County of Mendocino

EXHIBIT NO. 1

APPEAL NO. 1-83-270-A1

BOWER LIMITED PARTNERSHIP

REGIONAL LOCATION MAP

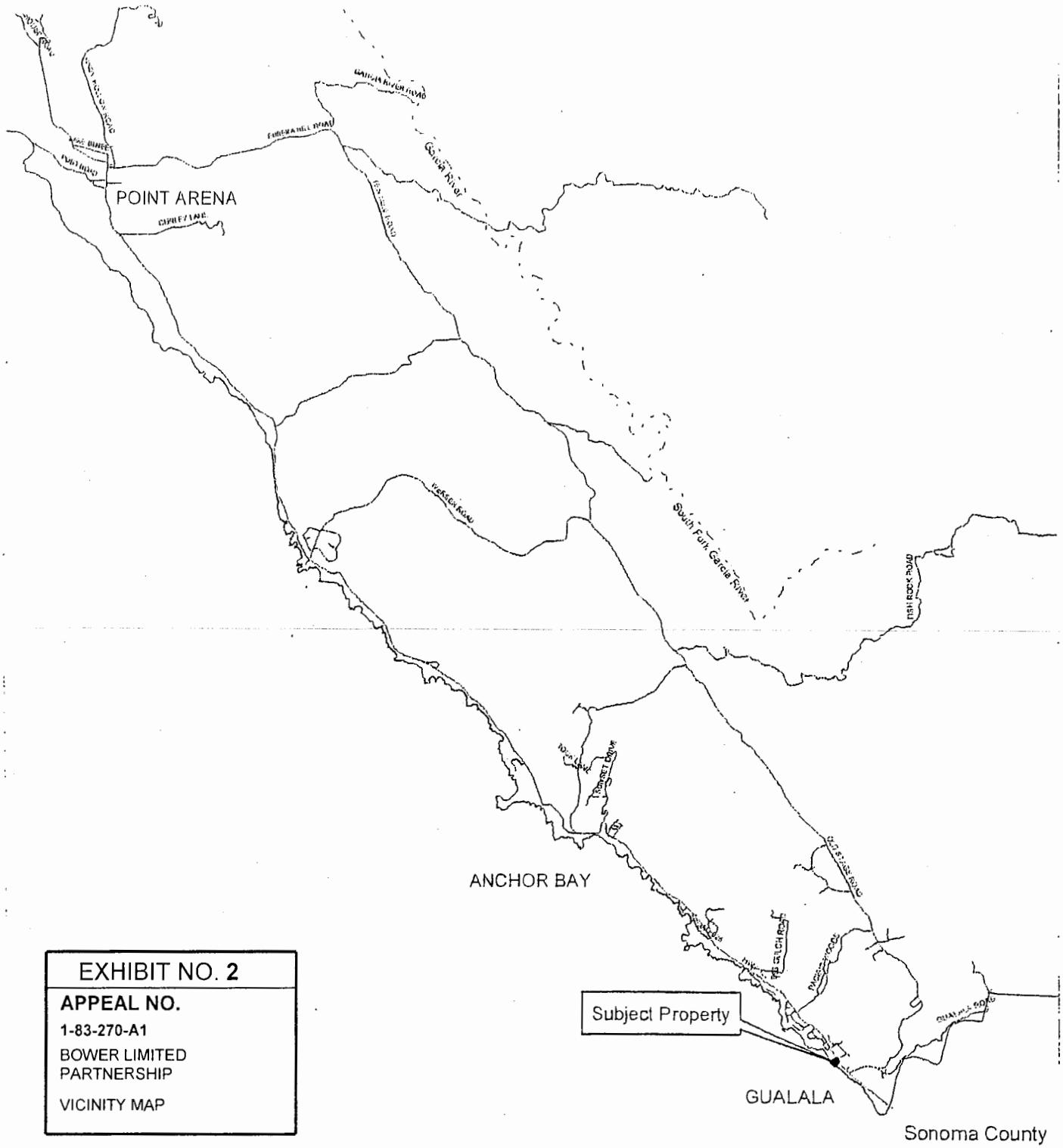


EXHIBIT NO. 2

APPEAL NO.

1-83-270-A1

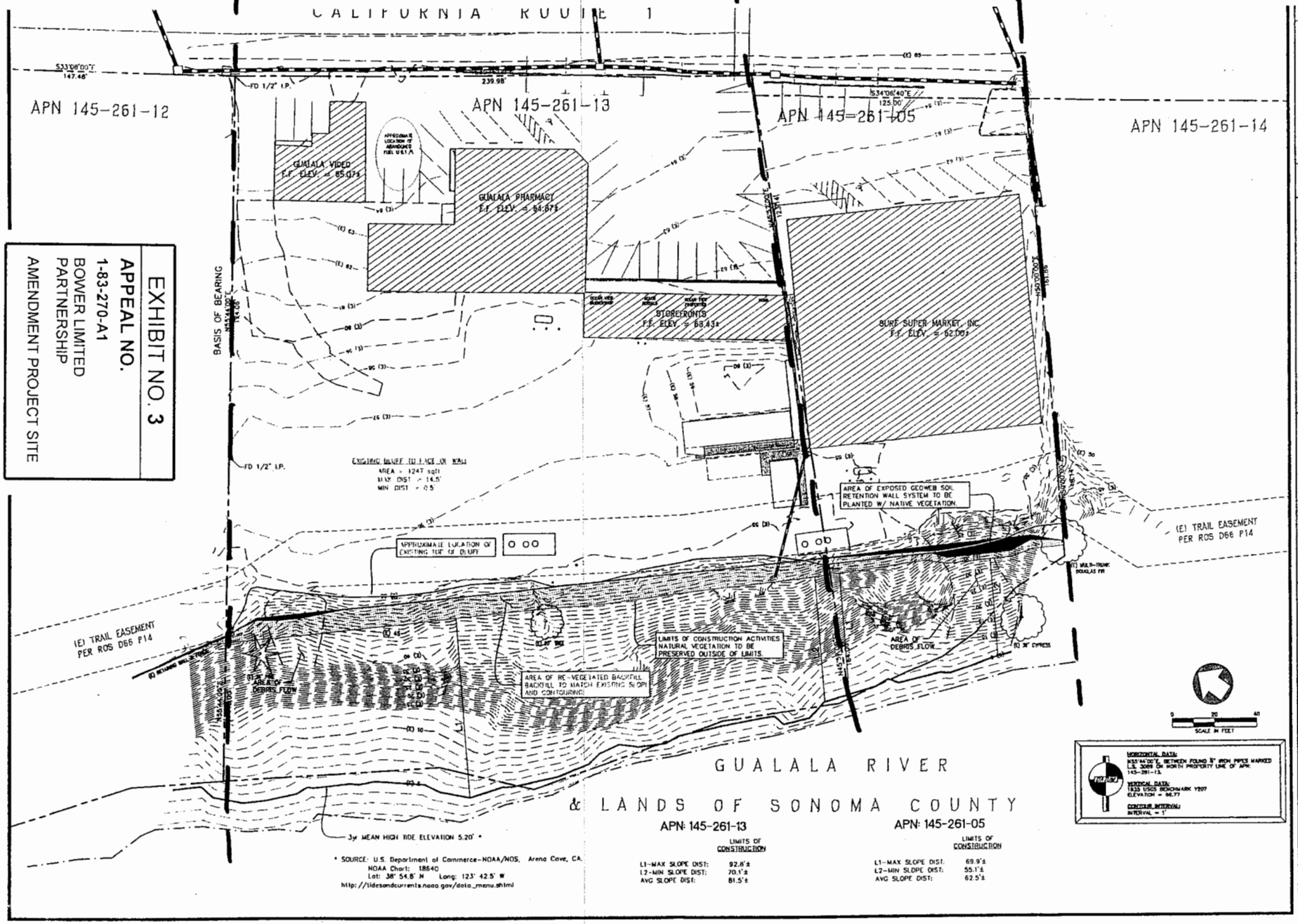
BOWER LIMITED PARTNERSHIP

VICINITY MAP

LOCATION MAP

APPEAL NO. A-1-MEN-08-015
SITE

CDP 1-83-270-A
PERMIT AMENDMENT
SITE



APN: 145-261-13

LIMITS OF CONSTRUCTION

L1-MAX SLOPE DIST:	92.8'±
L2-MIN SLOPE DIST:	70.1'±
AVG SLOPE DIST:	81.5'±

APN: 145-261-05

LIMITS OF CONSTRUCTION

L1-MAX SLOPE DIST:	69.9'±
L2-MIN SLOPE DIST:	55.1'±
AVG SLOPE DIST:	62.5'±

* SOURCE: U.S. Department of Commerce-NOAA/NOS, Arena Cove, CA.
NOAA Chart: 18640
Lat: 38° 54.8' N Long: 123° 42.5' W
http://tidesandcurrents.noaa.gov/data_menu.shtml

HORIZONTAL DATUM:
N55°44'30"E, BETWEEN FOUND 3" IRON PIPES MARKED L.S. 3089 ON NORTH PROPERTY LINE OF APN: 145-291-13.
VERTICAL DATUM:
1935 USGS BENCHMARK Y207
ELEVATION = 96.77'
CONTOUR INTERVAL:
INTERVAL = 1'

EXHIBIT NO. 3
APPEAL NO.
1-83-270-A1
BOWER LIMITED PARTNERSHIP
AMENDMENT PROJECT SITE

BY:	REVISION	DATE
DRA	WALL CROSS SECTIONS	12/5/08
DRA	SHEET 3a AND 5a	11/10/07
DRA	ALTERNATE WALL SECTIONS	01/09/08

DRAWING: BOTANICAL SURVEY EXHIBIT
CONSTRUCTION ACTIVITY ZONE
PROJECT: SURF MARKET IMPROVEMENTS

RAU AND ASSOCIATES INC.
CIVIL ENGINEERS · LAND SURVEYORS
100 NORTH PINE STREET (707) 462-1936 UKIAH, CA 95482

OWNER: BOWER LIMITED TRUST
BOWER LIMITED PARTNERSHIP
LOCATION: 39200 - 39250 S. HIGHWAY 1
GUALALA, CALIFORNIA

DATE: JAN, 2008
SCALE: AS SHOWN
DRAWN: DRA
CHECKED: GDR
JOB NO. R05024
SHEET 1.1

Z:\R05024\Drawings\$PLANSETS\Wall Permit App Drawings 072006\Botanical Survey Exhibit-1A.dwg, 02/04/2008 9:2[illegible]:03 AM, 1:2

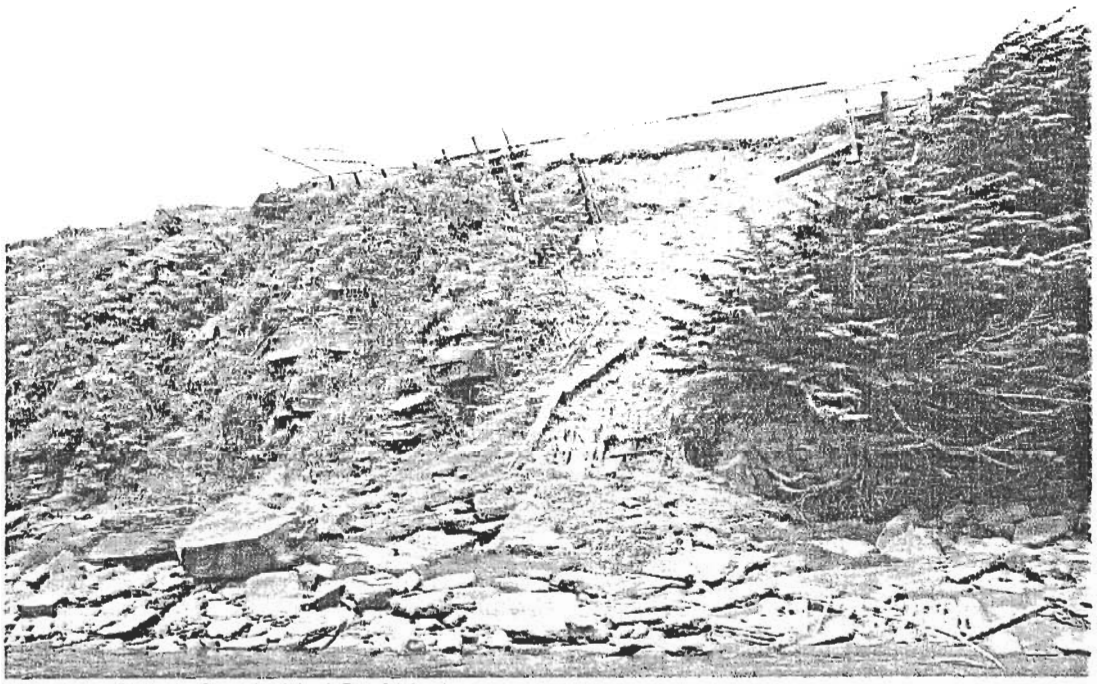


Photo 1. Debris flow behind Surf Market

Photo 2. Fill failure

EXHIBIT NO. **4**

APPEAL NO.

1-83-270-A1

BOWER LIMITED PARTNERSHIP

SITE PHOTOS (1 of 3)

Photo 3. Sediment delivery to estuary.

Photo 4. Sediment delivery to estuary.

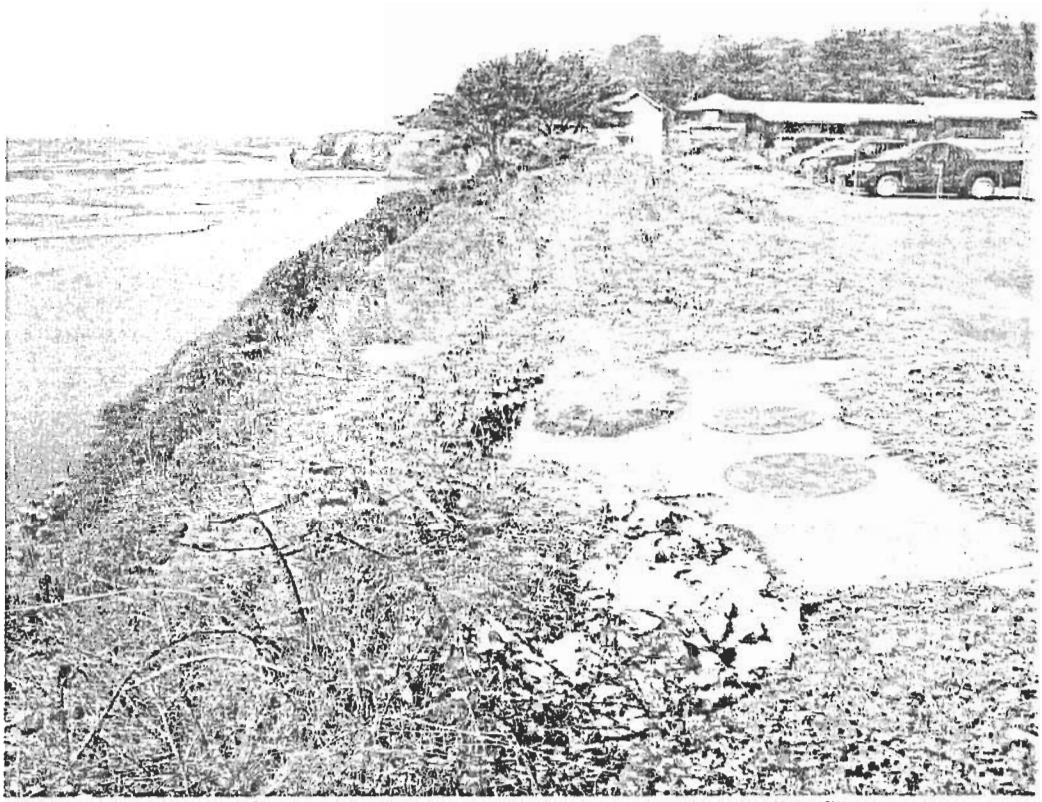


Photo 5. Exposed traffic slab covering interceptor tank due to eroding fill.

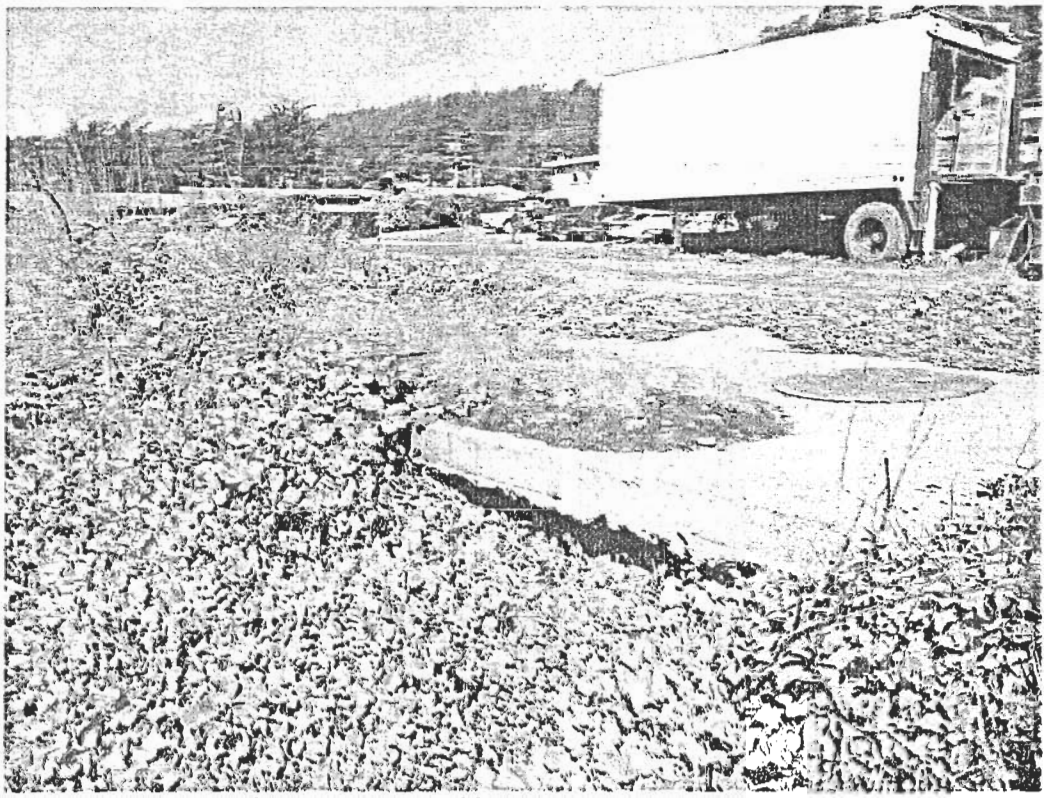


Photo 6. Exposed traffic slab at edge of fill.

CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION

BY	REVISION	DATE

DRAWING: EXISTING CONDITIONS
PROJECT: SOIL STABILIZATION & DRAINAGE IMPROVEMENTS

RAU AND ASSOCIATES INC.
CIVIL ENGINEERS · LAND SURVEYORS
100 NORTH PINE STREET · (707) 462-6536 · UKIAH, CA 95482

OWNER: BOWER LIMITED TRUST
BOWER LIMITED PARTNERSHIP
LOCATION: 39200 - 39250 S. HIGHWAY 1
GUALALA, CALIFORNIA

DATE:	APR. 2008
SCALE:	AS SHOWN
DRAWN:	DG
CHECKED:	CS
JOB NO.	R0924
SHEET	C100

REGISTERED PROFESSIONAL ENGINEER · CHRISTOPHER S. RAU · NO. 21908 · EXP. 6-30-09 · CIVIL · STATE OF CALIFORNIA

BASIS OF BEARING
S 56°37'00" W, BETWEEN FOUND MONUMENTS AS SHOWN ON A MAP FILED IN MAP CASE 2, DRAWER 31, PAGE 24, M.C.R.

DATUM
1935 U.S.G.S. BENCH MARK "Y207" ELEVATION=66.77'

CONTOUR INTERVAL
CONTOUR INTERVAL = 2'

SCALE IN FEET: 0, 20, 40

CALIFORNIA ROUTE 1

GUALALA RIVER & LANDS OF SONOMA COUNTY

APN 145-261-14

APN 145-261-05

APN 145-261-13

APN 145-261-12

SURF SUPER MARKET INC.
F.F. ELEV. = 65.00±

STOREROOMS
F.F. ELEV. = 63.43±

GUALA PHARMACY
F.F. ELEV. = 64.87±

GUALA VIDEO
F.F. ELEV. = 65.07±

APN: 145-261-05
CDP Amendment No. 1-83-270-A1

APN: 145-261-13
Appeal No. A-1-MEN-08-015
CDP 55-2006

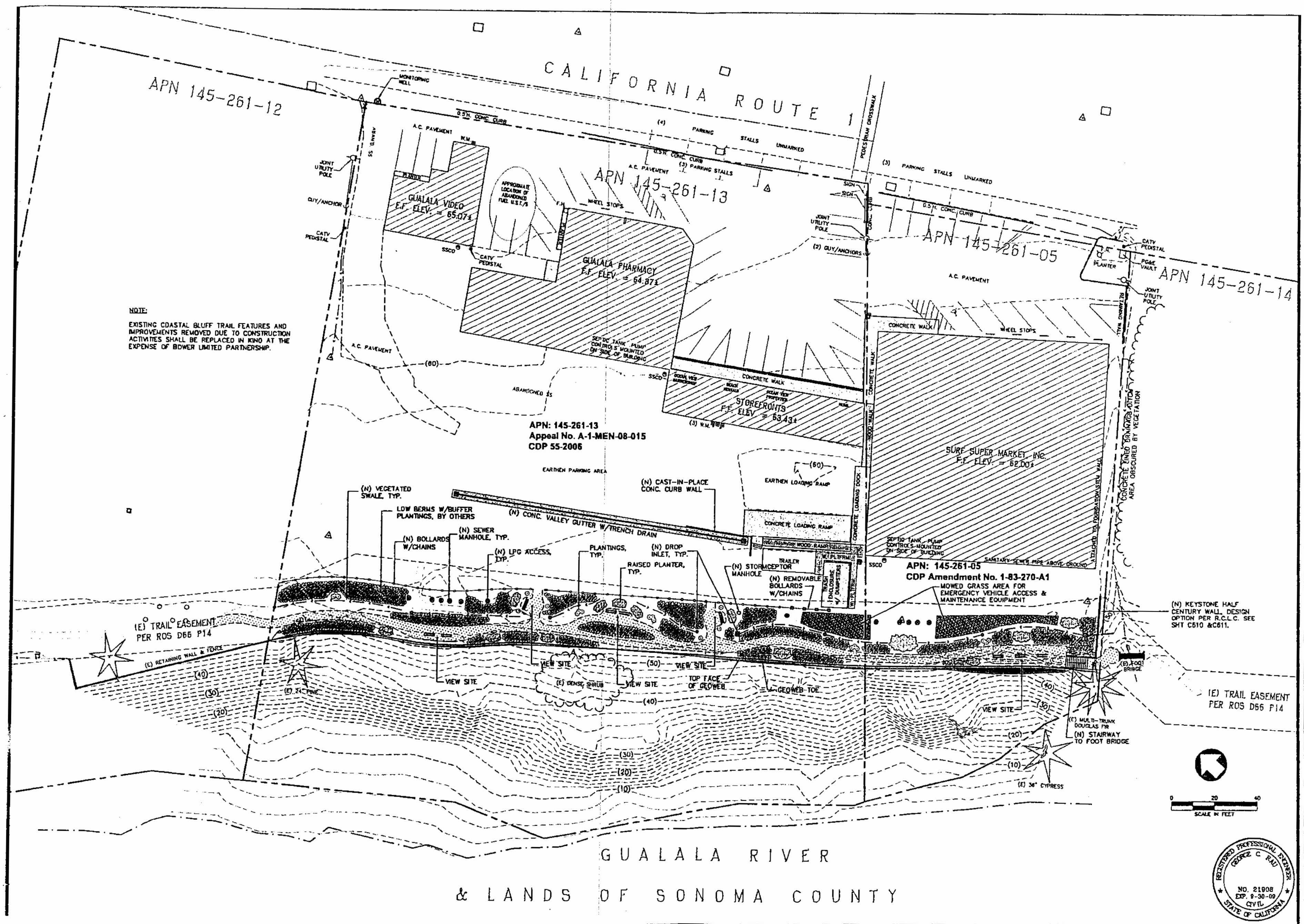
(E) TRAIL EASEMENT PER ROS 866 P14

BASIS OF BEARING S 56°37'00" W 1251.14'

EXHIBIT NO. 5

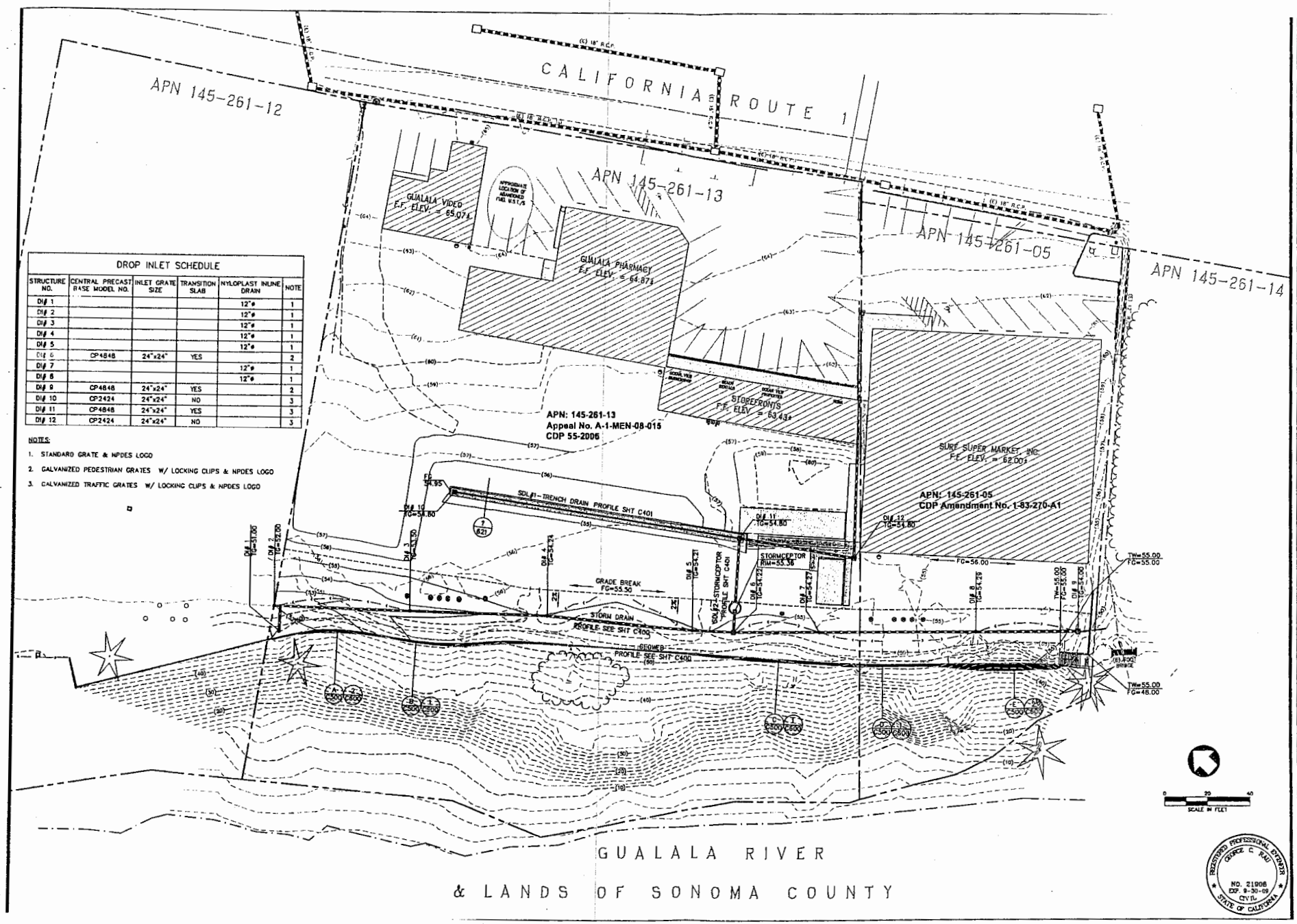
APPEAL NO.
1-83-270-A1
BOWER LIMITED PARTNERSHIP

PROJECT PLANS (1 of 11)



OWNER:	BOWER LIMITED TRUST BOWER LIMITED PARTNERSHIP
LOCATION:	39200 - 39250 S. HIGHWAY 1 GUALALA, CALIFORNIA
	RAU AND ASSOCIATES INC. CIVIL ENGINEERS · LAND SURVEYORS
DRAWING:	SITE PLAN
PROJECT:	SOIL STABILIZATION & DRAINAGE IMPROVEMENTS
DATE:	April, 2008
SCALE:	AS SHOWN
DRAWN:	DRA
CHECKED:	GCR
JOB NO.	R05024
SHEET	C110

CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION



DROP INLET SCHEDULE					
STRUCTURE NO.	CENTRAL PRECAST BASE MODEL NO.	INLET GRATE SIZE	TRANSITION SLAB	NYLOPLAST INLINE DRAIN	NOTE
DI# 1				12"ø	1
DI# 2				12"ø	1
DI# 3				12"ø	1
DI# 4				12"ø	1
DI# 5				12"ø	1
DI# 6	CP4848	24"x24"	YES		2
DI# 7				12"ø	1
DI# 8				12"ø	1
DI# 9	CP4848	24"x24"	YES		2
DI# 10	CP2424	24"x24"	NO		3
DI# 11	CP4848	24"x24"	YES		3
DI# 12	CP2424	24"x24"	NO		3

NOTES:

1. STANDARD GRATE & NPDES LOGO
2. GALVANIZED PEDESTRIAN GRATES W/ LOCKING CLIPS & NPDES LOGO
3. GALVANIZED TRAFFIC GRATES W/ LOCKING CLIPS & NPDES LOGO

REGISTERED PROFESSIONAL ENGINEER
GEORGE C. RAU
NO. 21906
EXP. 9-30-09
CIVIL
STATE OF CALIFORNIA

BY:	REVISION	DATE

DRAWING: GRADING & DRAINAGE PLAN

PROJECT: SOIL STABILIZATION & DRAINAGE IMPROVEMENTS

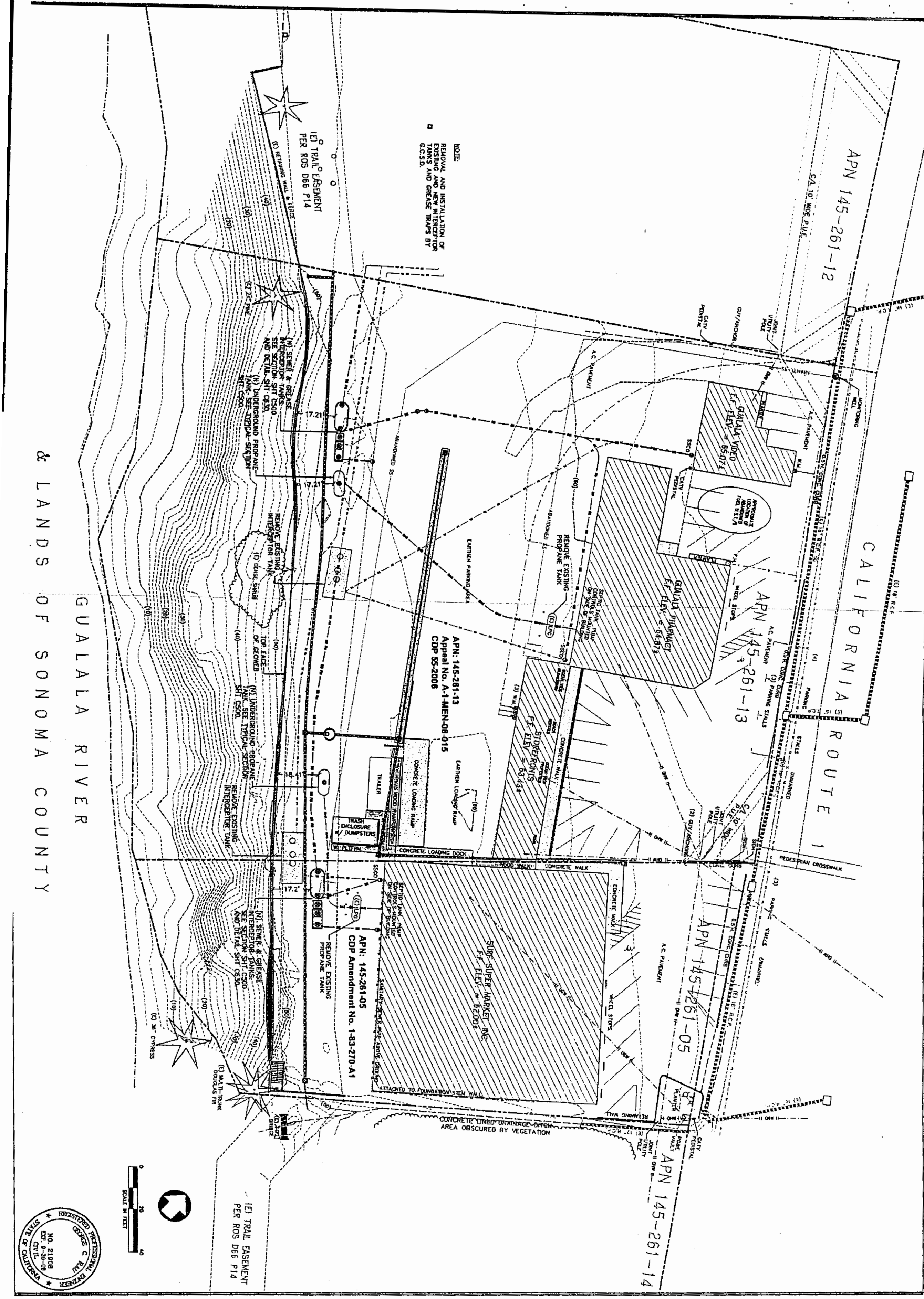
RAU AND ASSOCIATES INC.
CIVIL ENGINEERS · LAND SURVEYORS
301 NORTH MAIN STREET (707) 462-1636 UKIAH, CA 95482

OWNER: BOWER LIMITED TRUST
BOWER LIMITED PARTNERSHIP

LOCATION: 39200 - 39250 S. HIGHWAY 1
GUALALA, CALIFORNIA

DATE:	April, 2008
SCALE:	AS SHOWN
DRAWN:	DRA
CHECKED:	GCR
JOB NO.	R0502A
SHEET	C200

CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION

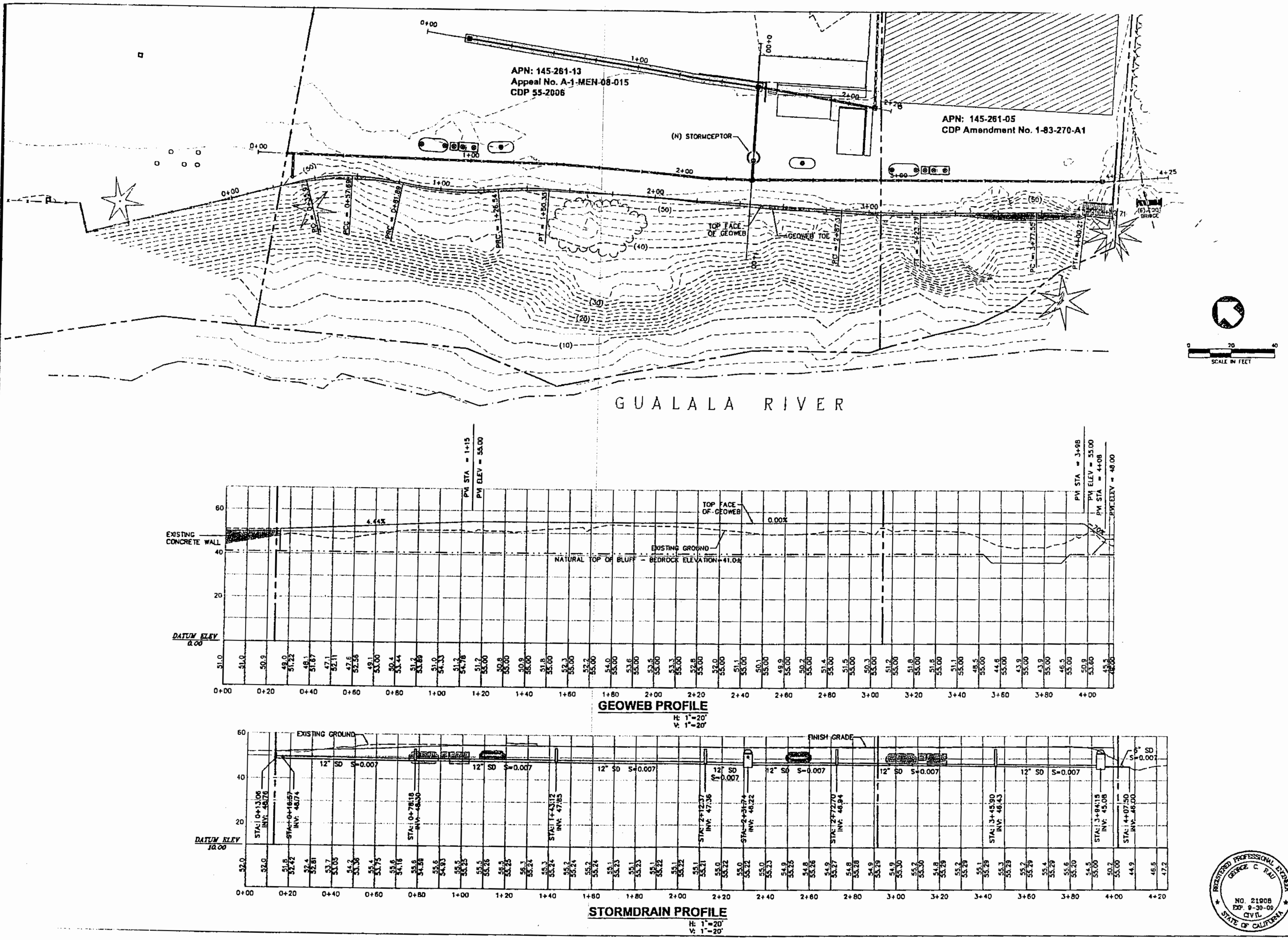


OWNER:	BOWER LIMITED TRUST BOWER LIMITED PARTNERSHIP	RAU AND ASSOCIATES INC. CIVIL ENGINEERS · LAND SURVEYORS 100 NORTH PINE STREET · (707) 462-6536 · UKIAH, CA 95482	DRAWING:	UTILITY PLAN
LOCATION:	39200 - 39250 S. HIGHWAY 1 GUALALA, CALIFORNIA		PROJECT:	SOIL STABILIZATION & DRAINAGE IMPROVEMENTS

DATE	REVISION	BY:

DATE:	APRIL 2008
SCALE:	AS SHOWN
DRAWN:	DRA
CHECKED:	GCR
JOB NO.:	R00024
SHEET	C300

CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION



OWNER: BOWER LIMITED TRUST
BOWER LIMITED PARTNERSHIP

LOCATION: 39200 - 39250 S. HIGHWAY 1
GUALALA, CALIFORNIA

RAU AND ASSOCIATES INC.
CIVIL ENGINEERS · LAND SURVEYORS
100 NORTH PINE STREET · (707) 462-6536 · UKIAH, CA 95482

DRAWING: PLAN & PROFILE
GEOWEB & STORM DRAIN

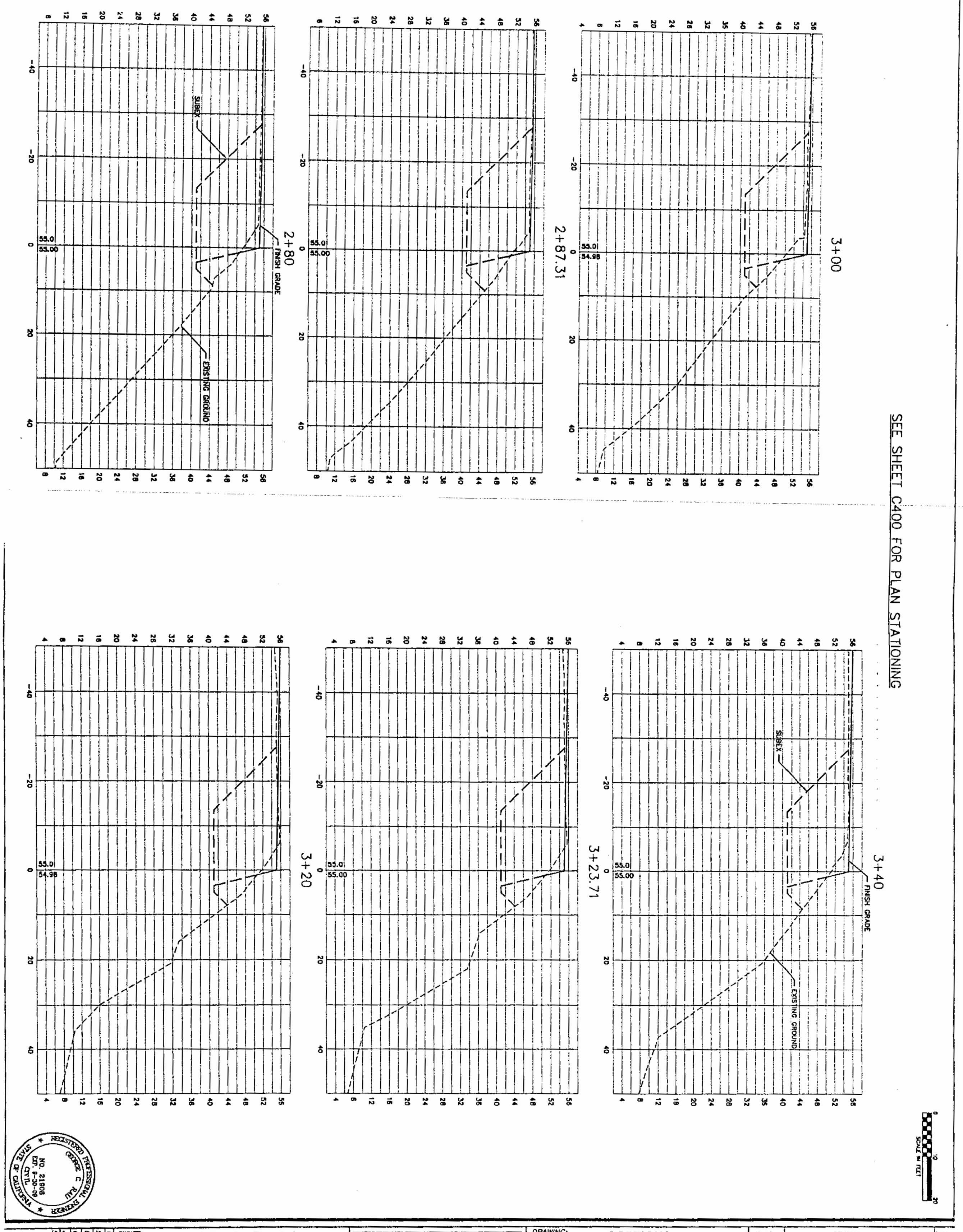
PROJECT: SOIL STABILIZATION &
DRAINAGE IMPROVEMENTS

DATE	REVISION	BY

DATE:	April, 2008
SCALE:	AS SHOWN
DRAWN:	DRA
CHECKED:	CCR
JOB NO.	R05024
SHEET	

C400

CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION



OWNER: BOWER LIMITED TRUST BOWER LIMITED PARTNERSHIP	RAU AND ASSOCIATES INC.	DRAWING: SECTIONS STA: 2+80 - 3+40	DATE / REVISION / BY:
LOCATION: 39200 - 39250 S. HIGHWAY 1 GUALALA, CALIFORNIA	CIVIL ENGINEERS · LAND SURVEYORS 100 NORTH PINE STREET · (707) 462-6536 · UKIAH, CA 95482	PROJECT: SOIL STABILIZATION & DRAINAGE IMPROVEMENTS	

DATE: APR. 2008 · SCALE: AS SHOWN · DRAWN: DRA · CHECKED: DCR · JOB NO. R05024 · SHEET

C504

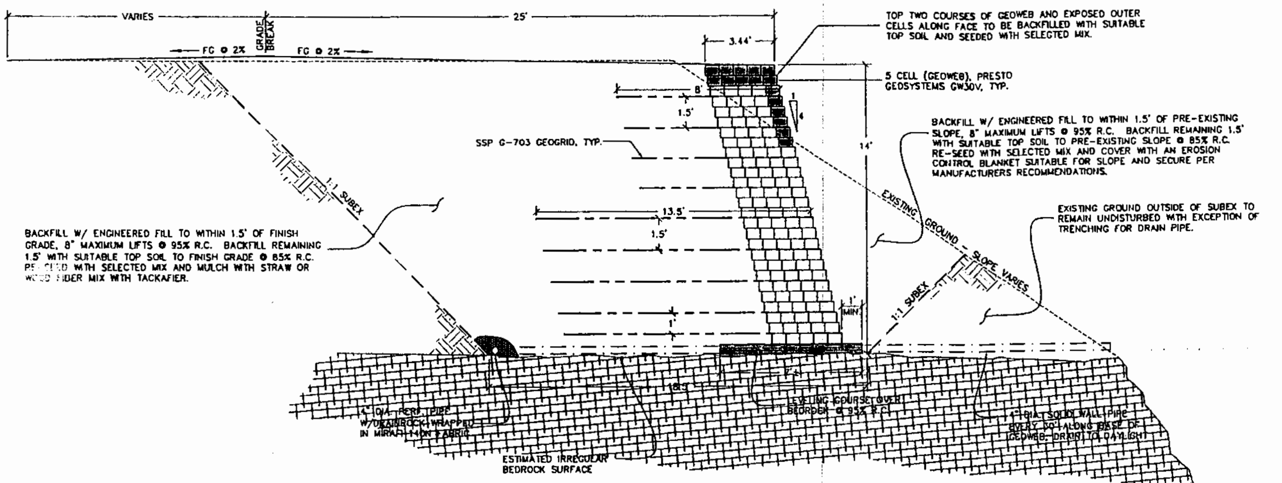
CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION

CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION

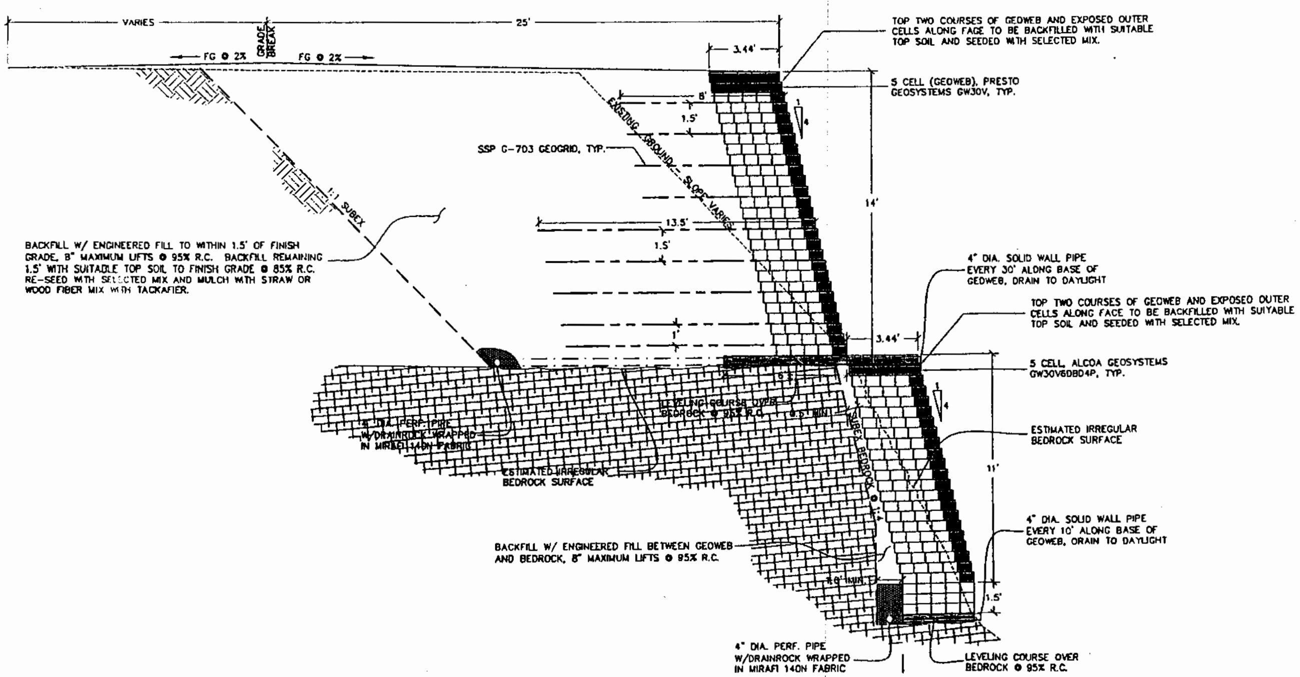
OWNER:	BOWER LIMITED TRUST BOWER LIMITED PARTNERSHIP	DATE:	JUNE, 2008
LOCATION:	39200 - 39250 S. HIGHWAY 1 GUALALA, CALIFORNIA	SCALE:	AS SHOWN
		DRAWN:	DRA
		CHECKED:	GCR
		JOB NO.	N0502A
		SHEET	C505

DRAWING:	SECTIONS STA: 3+60 - 4+12.71	R&U AND ASSOCIATES INC.	CIVIL ENGINEERS · LAND SURVEYORS 100 NORTH RAE STREET · (707) 462-1550 · UKIAH, CA 95482	DATE	REVISION	BY:
PROJECT:	SOIL STABILIZATION & DRAINAGE IMPROVEMENTS					

SEE SHEET C400 FOR PLAN STATIONING



1 TYPICAL GEOWEB SECTION (NON DEBRIS FLOW AREA)



2 TYPICAL GEOWEB SECTION - DEBRIS FLOW AREA

NOTES:

1. EXCAVATE AND SHAPE FOUNDATION SOILS TO THE GRADES, ELEVATIONS AND DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS.

2. VERIFY THAT THE FOUNDATION SOIL SATISFIES THE DESIGN STRENGTH REQUIREMENTS. IF UNACCEPTABLE SOILS ARE ENCOUNTERED, THEY SHALL BE REMOVED AND REPLACED WITH ENGINEERED FILL AS DIRECTED BY THE PROJECT ENGINEER.

3. PLACE SPECIFIED GRANULAR BASE (LEVELING PAD) MATERIALS TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS AND COMPACT TO A MINIMUM 95% OF STANDARD PROCTOR DRY DENSITY (SPDD). IF SPECIFIED, EXPAND GEOWEB FOOTING SECTIONS INTO POSITION ON THE THE PREPARED SUBGRADE (OR BASE) AND TEMPORARILY ANCHOR AT THE CORNERS AND ALONG THE EDGES.

4. OVERFILL GEOWEB CELLS WITH THE SPECIFIED GRANULAR INFILL MATERIAL. THE MAXIMUM PARTICLE SIZE OF THE INFILL MATERIAL SHALL NOT BE GREATER THAN 50 mm (2 in). COMPACT THE INFILL MATERIAL AND SURROUNDING FILL TO A MINIMUM 95% OF SPDD. REMOVE EXCESS FILL TO LEVEL WITH THE TOP OF THE CELLS.

5. INSTALL PERFORATED SUBDRAIN PIPE, WRAPPED WITH THE SPECIFIED NONWOVEN GEOTEXTILE, OR BACKFILL WITH CLEAR STONE, WRAPPED IN A NONWOVEN GEOTEXTILE, ADJACENT TO THE FOOTING OR AS SHOWN ON THE CONSTRUCTION DRAWINGS. PLACE DRAINAGE SYSTEM AT A MINIMUM GRADIENT OF 1% TO THE SPECIFIED OUTLETS. CONNECT SUBDRAIN PIPES TO SPECIFIED OUTLETS WITH T-CONNECTORS. WRAP OUTLET PIPES WHICH PASS THROUGH FOOTING OR WALL SECTIONS WITH GEOTEXTILE TO PREVENT LOSS OF CELL INFILL MATERIALS. CONNECT OUTLET PIPES TO SITE DRAINAGE SYSTEM IF PRESENT, OR ENSURE THAT DISCHARGE AT OUTLETS WILL NOT CAUSE LOCALIZED EROSION. COMPACT FILL MATERIALS SURROUNDING THE DRAINAGE SYSTEM.

6. WHERE SPECIFIED, PLACE GEOTEXTILE OVER THE BASE AND EXTEND UP THE FACE OF THE EXCAVATION AND PIN INTO POSITION. ALLOW 300 mm (12 in) OVERLAPS AT ADJOINING SECTIONS OF GEOTEXTILE. WHERE GEOCOMPOSITE DRAINAGE MATERIALS ARE SPECIFIED, ENSURE THAT EACH STRIP IS CONTINUOUS AND FULLY ENCAPSULATED WITH A GEOTEXTILE TO AN UNRESTRICTED OUTLET.

7. EXPAND GEOWEB SECTIONS, DIMENSIONED ACCORDING TO THE CONSTRUCTION DRAWINGS INTO POSITION USING STRETCHER FRAMES, TEMPORARY STAKES OR OTHER SUITABLE METHOD TO TEMPORARILY HOLD IN PLACE. INTERLEAF OR OVERLAP EDGES OF ADJACENT SECTIONS IN EACH LAYER, ACCORDING TO WHICH SIDE WALL PROFILES ABUT. ENSURE THAT ALL ADJOINING SECTIONS ARE FLUSH AT THE JOINTS AND ADJOINING CELLS ARE FULLY STAPLED.

8. PLACE SPECIFIED INFILL MATERIAL TO APPROXIMATELY 50 mm (2 in) ABOVE THE CELL WALLS. COMPACT INFILL AND BACKFILL MATERIALS TO A MINIMUM 95% OF SPDD AND REMOVE EXCESS MATERIAL ABOVE THE CELL WALLS. USE WALK-BEHIND COMPACTION EQUIPMENT TO COMPACT MATERIAL WITHIN THE GEOWEB SECTIONS AND WITHIN 1 m (3 ft) OF THE BACK OF GEOWEB SECTIONS.

9. PLACED SUBSEQUENT LAYERS WITH THE SPECIFIED SET BACK AND ALIGN GEOWEB SECTIONS TO AVOID OVERHANGING OF UPPER SECTIONS OVER LOWER SECTIONS.

10. WHERE DIFFERENT INFILL MATERIALS ARE SPECIFIED FOR THE OUTER CELLS (EG. TOPSOIL/VEGETATED), THE FOLLOWING PROCEDURES MAY BE USED.

A) COVER OUTER CELLS WITH REMOVABLE BOARD WHILE FILLING BACK CELLS. PLACE SPECIAL INFILL IN OUTER CELLS BEFORE ADVANCING TO THE NEXT LAYER.

B) LEAVE OUTER CELLS OPEN BUT USE EXTRA CARE TO FILL BACK CELLS AND AVOID EXCESSIVE SPILLAGE INTO OUTER CELLS. WHERE THE SPECIFIED OUTER CELL INFILL AND VEGETATION WILL TOLERATE IT, SOME SPILLAGE OF GRANULAR INFILL INTO THE OUTER CELLS IS ACCEPTABLE.

REINFORCED WALL SYSTEMS

1. INSTALL GEOSYNTHETIC REINFORCEMENT BETWEEN GEOWEB SECTIONS AT THE SPECIFIED ELEVATIONS. PLACE THE LEADING EDGE OF THE GEOSYNTHETIC AT THE FRONT FACE OF THE GEOWEB SECTION TO BE PLACED AND EXTEND THE SPECIFIED DISTANCE (I.E. LENGTH) OVER THE COMPACTED BACKFILL. ENSURE THAT THE GEOSYNTHETIC REINFORCEMENT IS PLACED WITH THE HIGH STRENGTH DIRECTION PERPENDICULAR TO THE WALL FACE.

2. PLACE AND INFILL THE NEXT GEOWEB SECTION ON TOP OF THE GEOSYNTHETIC REINFORCEMENT.

3. MANUALLY TENSION THE GEOSYNTHETIC AND HOLD TAUT (TEMPORARY STAKES OR OTHER METHOD) DURING PLACEMENT OF THE SPECIFIED BACKFILL SOIL.

4. PLACE BACKFILL MATERIAL WITHIN REINFORCED SOIL ZONE IN 200 mm (8 in) LIFTS AND COMPACT TO A MINIMUM 95% OF SPDD. ENSURE THAT THE GEOSYNTHETIC REINFORCEMENT REMAINS TAUT AND IS NOT DISPLACED WHILE PLACING THE BACKFILL MATERIAL. THIS IS BEST ACCOMPLISHED BY PLACING THE BACKFILL AT THE BACK OF THE GEOWEB SECTIONS AND SPREADING TOWARD THE BACK OF THE REINFORCED SOIL ZONE. SHAPE AND COMPACT THE BACKFILL LEVEL WITH THE TOP OF THE GEOWEB SECTIONS PRIOR TO PLACING THE NEXT LAYER.

5. PLACE AND COMPACT RETAINED SOILS (FILL SITUATIONS) BEHIND THE REINFORCED SOIL ZONE IN 200 mm (8 in) LIFTS AND COMPACT TO A MINIMUM 95% OF SPDD.

REGISTERED PROFESSIONAL ENGINEER GEORGE C. RAU NO. 21908 EXP. 9-30-09 CIVIL STATE OF CALIFORNIA

BY:	REVISION	DATE	

DRAWING: DETAILS TYPICAL GEOWEB SECTION

PROJECT: SOIL STABILIZATION & DRAINAGE IMPROVEMENTS

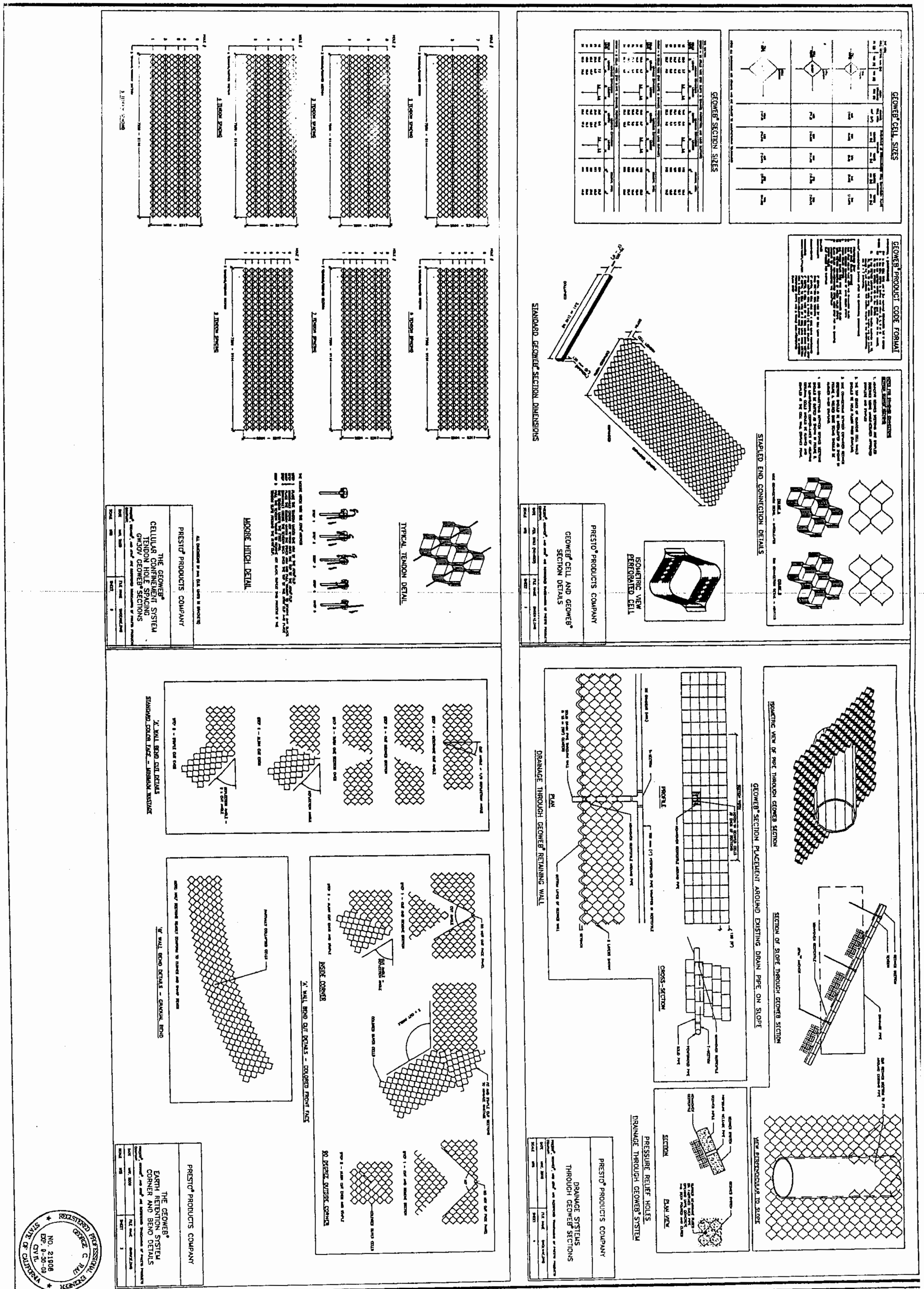
RAU AND ASSOCIATES INC.
CIVIL ENGINEERS · LAND SURVEYORS
100 NORTH PINE STREET · (707) 462-6536 · UKIAH, CA 95482

OWNER: BOWER LIMITED TRUST, BOWER LIMITED PARTNERSHIP

LOCATION: 39200 - 39250 S. HIGHWAY 1, GUALALA, CALIFORNIA

DATE:	April, 2008
SCALE:	AS SHOWN
DRAWN:	DRA
CHECKED:	GCR
JOB NO.	R05024
SHEET	C600

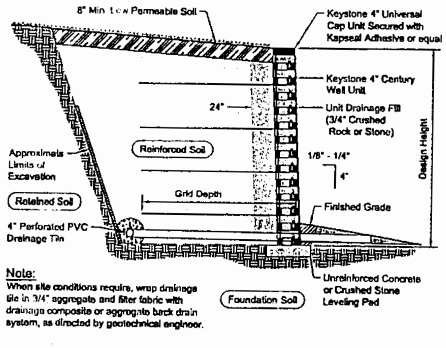
CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION


GEOWEB® CELL SIZES
GEOWEB® SECTION SIZES
GEOWEB® PRODUCT CODE FORMAT
STAPLED END CONNECTION DETAILS
STANDARD GEOWEB® SECTION DIMENSIONS
ISOMETRIC VIEW PERFORATED CELL
PRESTO® PRODUCTS COMPANY
GEOWEB® CELL AND GEOWEB® SECTION DETAILS
TYPICAL TENDON DETAIL
MOORE HITCH DETAIL
PRESTO® PRODUCTS COMPANY
THE GEOWEB® CELLULAR CONFINEMENT SYSTEM TENDON HOLE SPACING GW30V GEOWEB® SECTIONS
ISOMETRIC VIEW OF PIPE THROUGH GEOWEB SECTION
SECTION OF SLOPE THROUGH GEOWEB SECTION
GEOWEB® SECTION PLACEMENT AROUND EXISTING DRAIN PIPE ON SLOPE
PROFILE
CROSS-SECTION
PLAN
DRAINAGE THROUGH GEOWEB® RETAINING WALL
VIEW PERPENDICULAR TO SLOPE
SECTION
PLAN VIEW
PRESSURE RELIEF HOLES
DRAINAGE THROUGH GEOWEB® SYSTEM
PRESTO® PRODUCTS COMPANY
DRAINAGE SYSTEMS THROUGH GEOWEB® SECTIONS
'A' WALL BEND CUT DETAILS
STANDARD COLOR FACE - MINIMUM WASTAGE
'A' WALL BEND DETAILS - GRADUAL BEND
'A' WALL BEND CUT DETAILS - COLORED FRONT FACE
INSIDE CORNER
90 DEGREE OUTSIDE CORNER
PRESTO® PRODUCTS COMPANY
THE GEOWEB® EARTH RETENTION SYSTEM CORNER AND BEND DETAILS
REGISTERED PROFESSIONAL ENGINEER
GEORGE C. RAU
NO. 21906
EXP. 9-30-08
CIVIL
STATE OF CALIFORNIA

C601	DATE: APRIL 2008 SCALE: AS SHOWN DRAWN: DKA CHECKED: CCR JOB NO. R05024 SHEET	OWNER: BOWER LIMITED TRUST BOWER LIMITED PARTNERSHIP LOCATION: 39200 - 39250 S. HIGHWAY 1 GUALALA, CALIFORNIA	RAU AND ASSOCIATES INC. CIVIL ENGINEERS · LAND SURVEYORS 100 NORTH PINE STREET · (707) 462-6536 · UKIAH, CA 95482	DRAWING: DETAILS GEOWEB PROJECT: SOIL STABILIZATION & DRAINAGE IMPROVEMENTS

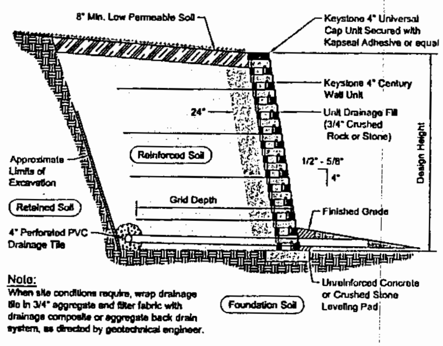
DATE	REVISION	BY:

CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION



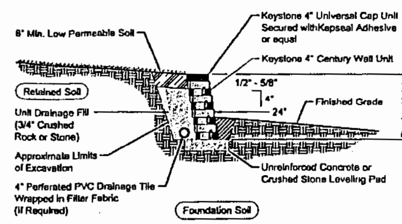
Note:
When site conditions require, wrap drainage tile in 3/4" aggregate and filter fabric with drainage composite or aggregate back drain system, as directed by geotechnical engineer.

Typical Reinforced Wall Section
4" Century Wall Unit - Near Vertical Setback



Note:
When site conditions require, wrap drainage tile in 3/4" aggregate and filter fabric with drainage composite or aggregate back drain system, as directed by geotechnical engineer.

Typical Reinforced Wall Section
4" Century Wall Unit - 1/2" Setback



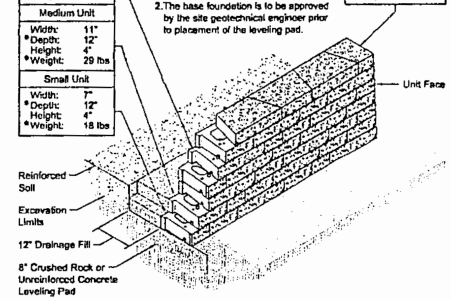
Typical Gravity Wall Section
4" Century Wall Unit - 1/2" Setback

Base Leveling Pad Notes:

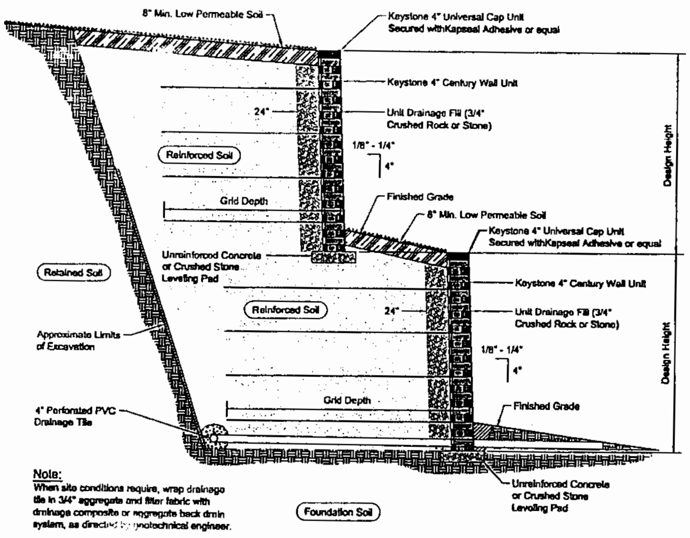
1. The leveling pad is to be constructed of crushed stone or 2,000 psi unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

Large Unit	
Width:	18"
*Depth:	12"
Height:	4"
*Weight:	46 lbs
Medium Unit	
Width:	11"
*Depth:	12"
Height:	4"
*Weight:	29 lbs
Small Unit	
Width:	7"
*Depth:	12"
Height:	4"
*Weight:	18 lbs

Universal Cap Unit	
Width:	14"/8"
*Depth:	12"
Height:	4"
*Weight:	30 lbs

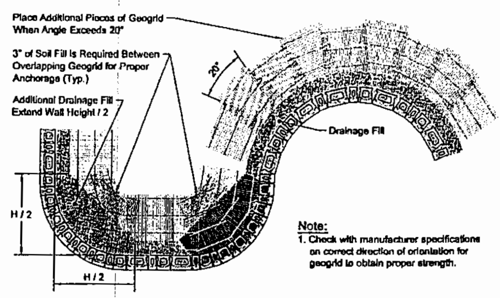


Century Wall Unit/Base Pad Isometric Section View
* Dimensions & Weight May Vary by Region



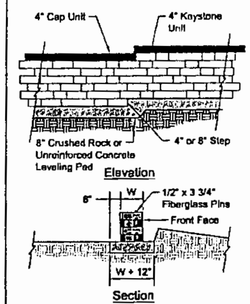
Note:
When site conditions require, wrap drainage tile in 3/4" aggregate and filter fabric with drainage composite or aggregate back drain system, as directed by geotechnical engineer.

Typical Reinforced Tiered Wall Section
4" Century Wall Unit - Near Vertical Setback

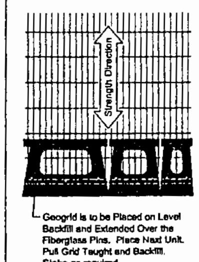


Note:
1. Check with manufacturer specifications on correct direction of orientation for geogrid to obtain proper strength.

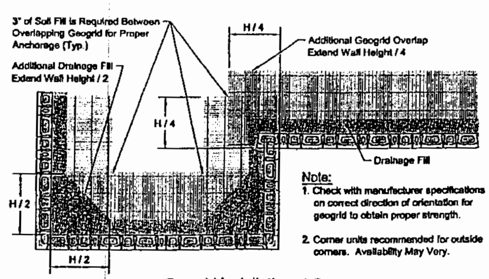
Geogrid Installation on Curves



Leveling Pad and Cap Step Detail



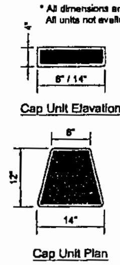
Grid & Pin Connection



Note:
1. Check with manufacturer specifications on correct direction of orientation for geogrid to obtain proper strength.
2. Corner units recommended for outside corners. Availability May Vary.

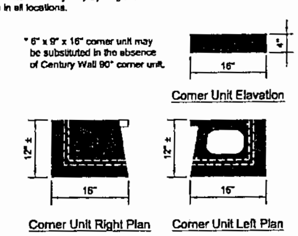
Geogrid Installation at Corners

* All dimensions are nominal and may vary by Region. All units not available in all locations.

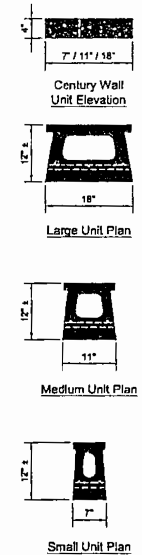


Universal Cap Unit

* 6" x 9" x 16" corner unit may be substituted in the absence of Century Wall 90° corner unit.



Century Wall 90° Corner Unit



Century Wall Unit

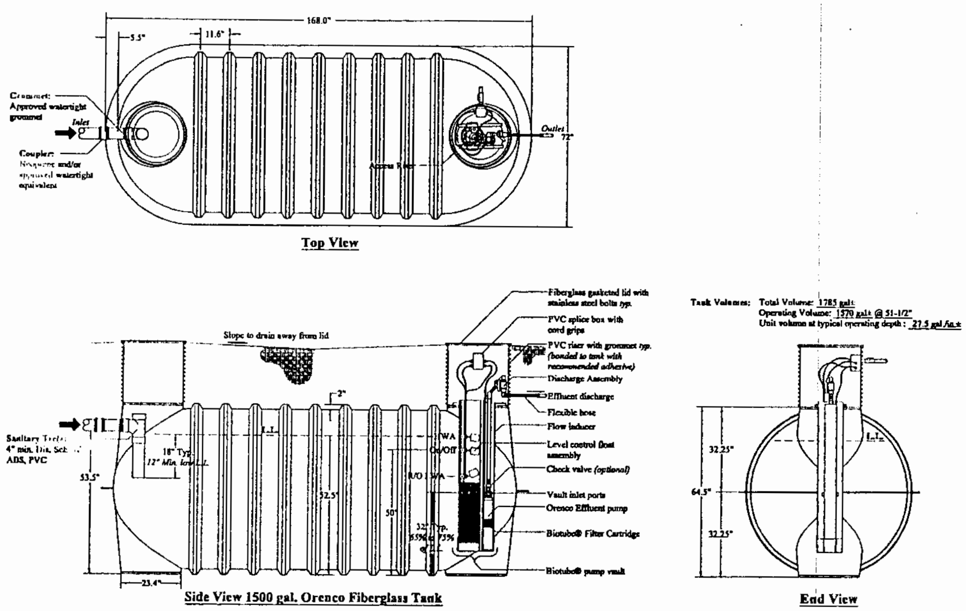
KEYSTONE RETAINING WALL SYSTEMS
A CONTECH COMPANY
4444 W 78th Street
Minneapolis, MN 55435
952-897-1040

REGISTERED PROFESSIONAL ENGINEER GEORGE C. RAU NO. 21908 EXP. 9-30-09 CIVIL STATE OF CALIFORNIA

OWNER:	BOWER LIMITED TRUST BOWER LIMITED PARTNERSHIP
LOCATION:	39200 - 39250 S. HIGHWAY 1 GUALALA, CALIFORNIA
	RAU AND ASSOCIATES INC. CIVIL ENGINEERS · LAND SURVEYORS 100 NORTH PINE STREET · (707) 462-6536 · UKIAH, CA 95482
DRAWING:	DETAILS - TYPICAL KEYSTONE WALL
PROJECT:	SOIL STABILIZATION & DRAINAGE IMPROVEMENTS
DATE	REVISION	BY

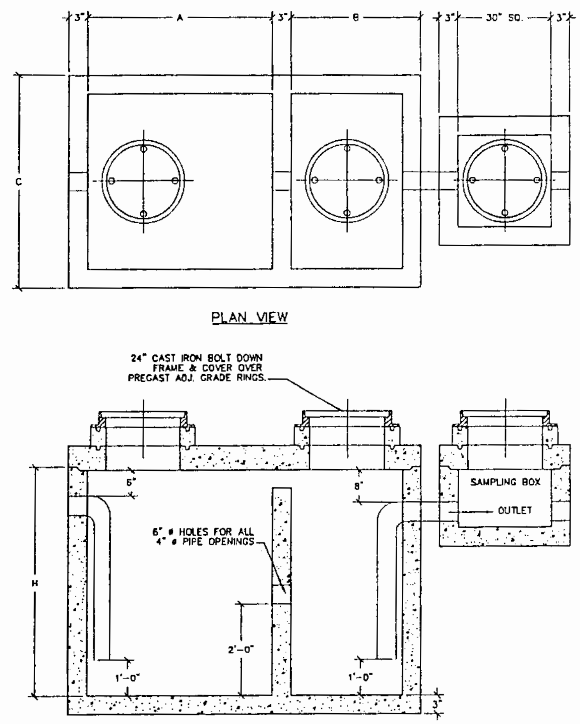
DATE:	April, 2008
SCALE:	AS SHOWN
DRAWN:	DRA
CHECKED:	GCR
JOB NO.	R05024
SHEET	C610

CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION



ORENCO 2-COMPARTMENT 1,500 GALLON FIBERGLASS TANK

ORENCO SYSTEMS, INC. (800)348-9843



DIMENSION TABLE
(TWO CHAMBERS)

CAPACITY GALLONS	A	B	C	H			WEIGHT POUNDS
560	3'-0"	2'-0"	3'-0"	6'-0"			13,000
785	4'-0"	3'-0"	3'-0"	6'-0"			16,000
1050	4'-0"	3'-0"	4'-0"	6'-0"			18,000
➡ 1200	5'-0"	3'-0"	4'-0"	6'-0"			19,700 ⬅
1500	5'-0"	3'-0"	5'-0"	6'-0"			22,000
2000	6'-0"	4'-0"	5'-0"	6'-0"			25,200
3000	8'-6"	4'-0"	6'-0"	6'-0"			32,000

NOTES :

1. CONCRETE COMPRESSIVE STRENGTH=4000 PSI AT 28 DAYS.
2. REINFORCING STEEL TO MEET THE DESIGN REQUIREMENTS OF H20 TRAFFIC LOADS FOR THE TOP SLAB, AND 50 pcf LATERAL SOIL PRESSURE FOR THE WALLS AND THE FLOOR.
3. CONTRACTOR TO SUPPLY AND INSTALL: PIPE AND FITTINGS, NON-SHRINK GROUT AT THE PIPE PENETRATIONS, JOINT SEAL AT ALL PRECAST JOINTS, WATERPROOF COATING IF REQUIRED.

CP PRECAST TWO-CHAMBER SAND & GREASE INTERCEPTOR
Dwg No. S&G Page No. 8-3, 8-4 N.T.S.

REGISTERED PROFESSIONAL ENGINEER GEORGE C. RAU NO. 21908 EXP. 9-30-09 CIVIL STATE OF CALIFORNIA

DATE	REVISION	BY

DRAWING: DETAILS SANITARY SEWER

PROJECT: SOIL STABILIZATION & DRAINAGE IMPROVEMENTS

RAU AND ASSOCIATES INC.
CIVIL ENGINEERS · LAND SURVEYORS
100 NORTH PINE STREET · (707) 462-6536 · UKIAH, CA 95482

OWNER: BOWER LIMITED TRUST BOWER LIMITED PARTNERSHIP

LOCATION: 39200 - 39250 S. HIGHWAY 1 GUALALA, CALIFORNIA

DATE: April, 2008
SCALE: AS SHOWN
DRAWN: DRA
CHECKED: GCR
JOB NO. R05024
SHEET

C630

CALIFORNIA COASTAL COMMISSION PERMIT & BIDDING PURPOSES ONLY - NOT FOR CONSTRUCTION

GEORGE C. RAU, P.E.
PRESIDENT
JAVIER J. RAU
VICE PRESIDENT
WALTER HAYDON, P.L.S.
ROGER VINCENT, P.E.
CATHY A. McKEON, P.E.

RAU AND ASSOCIATES INC.
CIVIL ENGINEERS • LAND SURVEYORS

EXHIBIT NO. 6
APPEAL NO.
1-83-270-A1
BOWER LIMITED PARTNERSHIP
REVISED PROJECT DESCRIPTION (1 of 32)

June 16, 2008

RECEIVED
JUN 20 2008
CALIFORNIA COASTAL COMMISSION

Bob Merrill
California Coastal Commission
North Coast District Office
710 E Street, Suite 200
Eureka, CA 95501-1865

Job Number R05024

RE: CDP AMENDMENT APPLICATION NO. 1-83-270-A1 (BOWER LIMITED PARTNERSHIP); ALTERNATIVE GEOWEB DESIGN

Dear Bob:

Tiffany had asked for a project description of the revised design for the above referenced project. We have just completed the revised plans and project statistics (attached). This letter provides further information about the project.

The project has been redesigned in keeping with the associated project to the north currently under your review (Appeal No. A-1-MEN-08-015). The concrete Ultrablock retaining wall that was originally designed to replace the failed wood retaining wall behind the Surf Market has been replaced with a more environmentally friendly technology, Geoweb cellular confinement system (Geoweb), to repair and stabilize the area of the failed wall and debris flow. Geoweb will stabilize the fill without requiring a retaining wall or the use of concrete. The Geoweb technology allows for a more natural looking slope face by having the ability to create contours and quickly establish vegetation on the face of the slope.

After hearing concerns voiced at the Coastal Permit Administrator (CPA) hearing last fall by project opponents regarding the aesthetics of the wall, particularly by the California Native Plant Society (CNPS) regarding the difficulty of finding plants to successfully climb and screen the wall, we revisited the possibility of an alternative design. We had previously considered a number of different retaining structure and slope stabilization designs before we selected the original concrete block design. We reviewed alternative designs again at the request of Coastal Commission staff, and in November 2007 in response to appellant Drouillard, who suggested a variety of different wall designs. Each time we determined that the concrete gravity wall was the only feasible option due to the height of the wall required at the large debris flow behind the Surf Market and for longevity in a harsh coastal environment. Since the wall that had failed was constructed of wood, we selected a material that would have the longest life and would not require maintenance for long-term function.

One of the designs we had previously considered was the Geoweb system. The specifications for this system showed that the maximum height was 20 feet. The section height required for the debris flow behind the Surf Market is over 25 feet. For this reason we dismissed the Geoweb system as an option. Following the CPA hearing in November and upon learning of the Board of Supervisors appeal, we again researched options for a solution that would address the concerns raised by project opponents. We contacted the distributor of the Geoweb system to see if there were any situations in which the wall could be constructed higher than 20 feet. We provided the project plans and detailed site information to a consulting engineer for Geoweb and spent several weeks providing details as they attempted a preliminary design. It was with this level of detailed research that we discovered

that the Geoweb system could work at the Surf Super site with a specially designed, two-tiered wall system.

As you can see from the attached project statistics, when compared to the original concrete block structure, the Geoweb system significantly reduces the project footprint, grading volumes and vegetation removal, while providing a completely vegetated slope face that will blend in with the natural environment. Case studies show this system has been used in other coastal bluff settings and sensitive environments, and is in general use by Caltrans, State Parks and other public agencies. For these reasons we were enthusiastic about the new design and were confident that issues regarding aesthetics and revegetation success would be alleviated by using Geoweb technology.

Information about Geoweb technology is attached. Additional product information, case studies and photos can be viewed at the distributor's website: http://www.sspco.com/geoweb/geoweb_earthret.html.

Plans for the alternative design are attached for your review. The rest of the project, including drainage improvements and stormwater treatment facilities remains unchanged. There are minor changes in the location of interceptor tanks, as shown in the plans. We have added some details at the south end of the project site including stairs to the footbridge and a small retaining wall for the stairs.

BENEFITS OF THE NEW DESIGN

The new design will have a smaller footprint in that the limits of disturbance will not be as close to the estuary and excavation will not have to extend as far east towards the market. As a result, the amount of existing vegetation that will be disturbed is considerably less. See tables below and project statistics (attached) for changes in grading volumes, excavation area, and revegetation areas, all of which are significantly reduced with the new design[1].

Table 1. Changes in the Extent of Grading and Vegetation Removal[2]

	Original Design (Concrete Block Wall)	Alternative Design (Geoweb System)	Δ	% Δ
Excavation Volume (cubic yards)	2,008	1,376	-632	-31%
Excavation Area (square feet)	7,521	3,547	-3,974	-53%
Revegetation Area (square feet)[3]	6,853	3,171	-3,682	-54%

[1] The figures in Table 1 represent the portion of wall on APN 145-261-05 only. A similar reduction in the extent of grading and vegetation impacts is also noted on APN 145-261-13.
[2] The values in Table 1 are approximate. Values are based on preliminary improvement plans and estimated depth to bedrock, which is variable and cannot be fully known until excavation occurs.
[3] In order to accurately compare revegetation areas for both designs, the estimate in Table 1 does not include planting on the face of the Geoweb. The face of the Geoweb will also be planted with native vegetation, unlike the concrete block wall design which depended on climbing and hanging vine-like species planted at the base and top of the wall.

Table 2. Changes to Construction Activity Zone in Relation to Gualala River

Distance to Mean High Tide (Feet)	Original Design (Concrete Block Wall)	Alternative Design (Geoweb System)	Δ[4]
Maximum Slope Distance	43.1±	69.9±	+26.8 feet
Minimum Slope Distance	28.4±	55.1±	+26.7 feet
Average Slope Distance	35.8±	62.5±	+26.7 feet

Vegetation removal resulting from grading activities will be significantly less due to a reduction in the volume and area of excavation. The extent of vegetation to be removed has dropped from 7,521 ft^2 to 3,547 ft^2, a reduction of 53 percent. The Geoweb is designed so that vegetation can successfully grow on the face of the slope. Cells within the Geoweb are filled with topsoil and planted; vegetation grows vertically from the cells and perforations in the Geoweb material allow for root growth. The overall chances for vegetative success at the site are improved with the new design.

One of the primary concerns raised by project opponents was the appearance of the concrete wall and the ability to successfully conceal it with native vegetation. The new design will allow the face of the slope to be mostly vegetated within 1-2 years. We are consulting with a local restoration organization and a botanist who works specifically with the Geoweb system in order to ensure the proper selection of plant materials for the slope based on a recommended plant list prepared specifically for the Gualala area. We have provided a potential plant list to RCLC and CNPS and will ask for their input about plant selection before designing the revegetation plan.

Increased vegetative cover and more diverse plant life will provide improved habitat for small animals, birds and insects.

The reduced footprint increases the buffer between the construction activity zone and the edge of the estuary by over 26 feet, resulting in a minimum 55-foot buffer between construction activities and mean high tide (exhibit attached).

The aesthetic impacts are significantly reduced. Geoweb technology was designed so that it would, in a short period of time, become invisible in the natural landscape. The protected slope will be mostly vegetated within 1-2 years following construction. Within several years vegetation will completely cover the structure so that it blends with the natural environment. See "after" photos of case studies (attached).

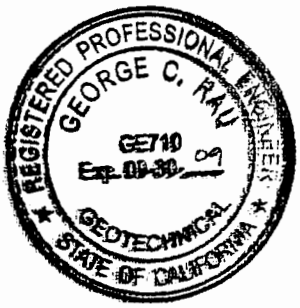
Because the fabric of the Geoweb system is flexible, it can be installed along contours on the face of the fill slope to look more natural. You can see from the plans that we have been able to create a softer, more natural looking edge than we were able to with the concrete blocks. The top of the Geoweb will be between 0" and 8" above finished grade, unlike the concrete wall which extended between 0.5 to 2.0 feet above finished grade. Product materials consist of polymer-based fabric and anchors, aggregate and soil, so there will be no concrete materials near the estuary.

[4] The numbers in this column represent how much farther the construction activity zone will be from the estuary's edge (mean high tide) due to the new project design. Sources: Botanical Survey Exhibit Construction Activity Zone, August 2007 (concrete wall design) and January 2008 (Geoweb design).

If you have any questions regarding the new design please feel free to contact me or George at (707) 462-6536.

Very truly yours,

Julie Price
Environmental Planner



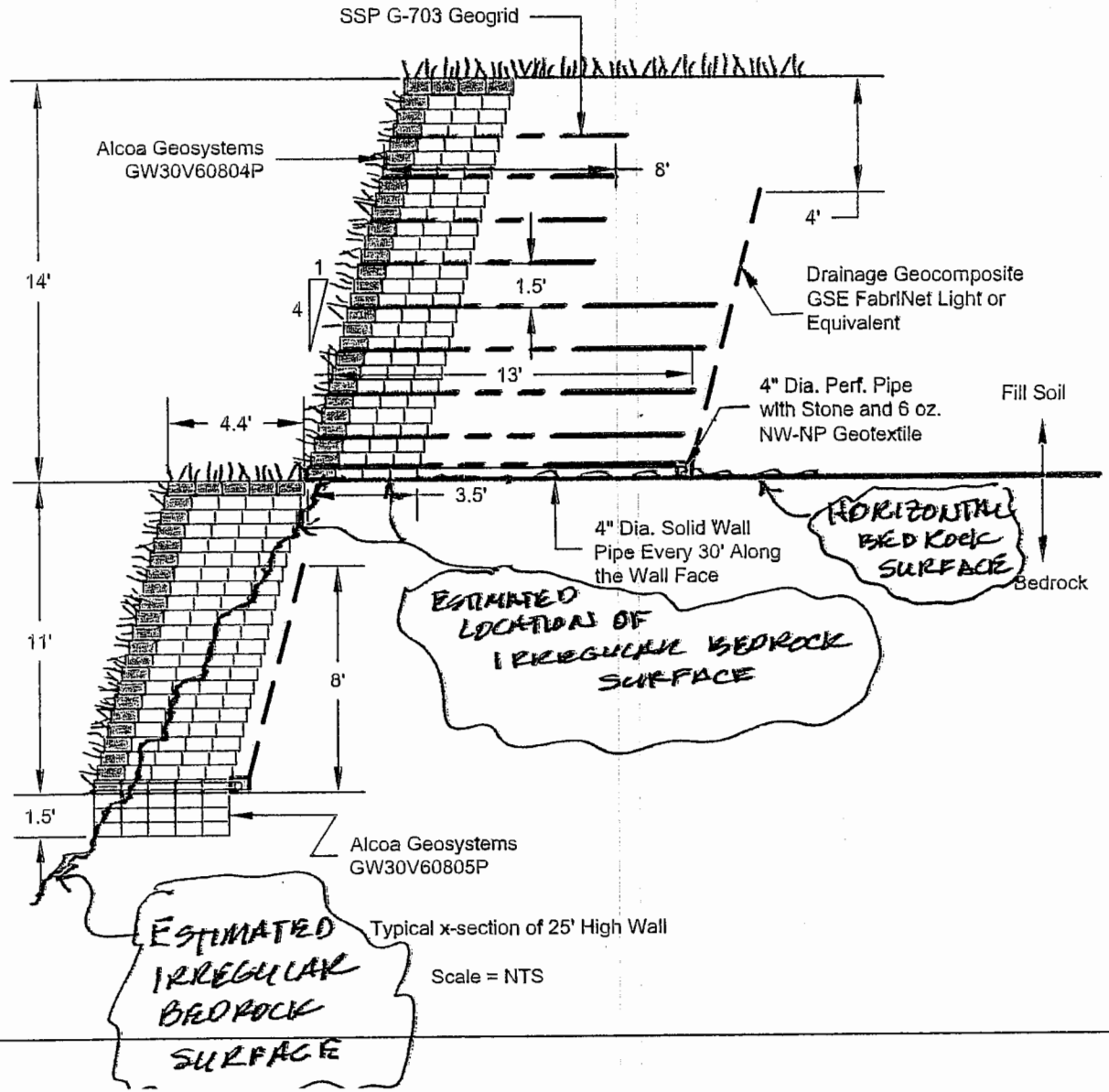
Reviewed by:
George C. Rau
Registered Civil Engineer, C21908
Registered Geotechnical Engineer, GE710
Expires 9-30-2009

CC: John Bower, Bower Limited Partnership
Alan Block, Law Offices of Alan Robert Block

Attachments: (Revised) Project Plans
(Revised) Project Statistics
Construction Activity Zone Exhibit
Geoweb Case Studies
Geoweb Specifications

Notes:

1. Refer to the design report for additional information.
2. This design is based upon the unique characteristics of only genuine Geoweb system components. Accessories utilized for this project and in this design are patented products that are only for use with Genuine Geoweb Cellular Confinement product. Any use of this design for any other product is strictly prohibited.
3. Vary Geogrid dimensions at the same ratio to the wall height as indicated in this x-section.



Typical x-section of 25' High Wall

Scale = NTS

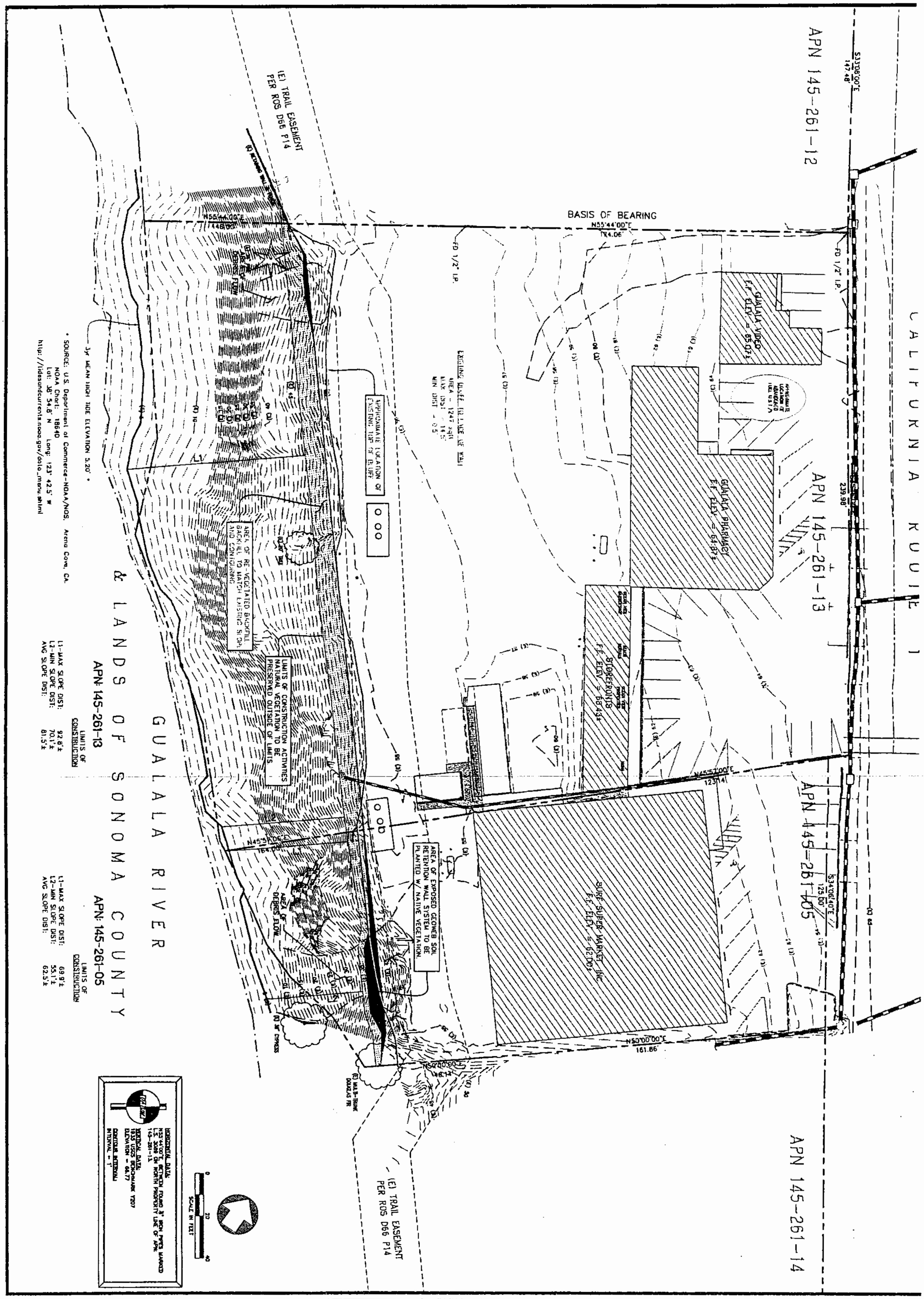
Cave Engineering, LLC
9600 Great Hills Trl, Suite 150W
Austin, TX 78759
512-340-2330

Preliminary Drawings
Surf Market Improvements

Designed by: DN
Drawn by: DN

Sheet
1 of 1

Z:\R05024\Drawings\S PLANSETS\Wall Permit App Drawings 072006\Botanical Survey Exhibit-1A.dwg, 02/04/2008 9:29:03 AM, 1:2



SHEET 1.1	DATE: JAN. 2008	SCALE: AS SHOWN	DRAWN: DM	CHECKED: CDR	JOB NO. R05024

OWNER: BOWER LIMITED TRUST
BOWER LIMITED PARTNERSHIP

LOCATION: 39200 - 39250 S. HIGHWAY 1
GUALALA, CALIFORNIA

RAU AND ASSOCIATES INC.
CIVIL ENGINEERS · LAND SURVEYORS
100 NORTH PINE STREET · (707) 462-6536 · UKIAH, CA 95482

DRAWING: BOTANICAL SURVEY EXHIBIT
CONSTRUCTION ACTIVITY ZONE

PROJECT: SURF MARKET IMPROVEMENTS

DATE	REVISION	BY:
12/6/06	WALL CROSS SECTIONS	DRA
11/10/07	SHEET 3a AND 5a	DRA
01/09/08	ALTERNATE WALL SECTIONS	DRA

TABLE C. PROJECT STATISTICS: **Original Design (Ultrablock Concrete Wall) vs. Alternative Design (Geoweb System)**

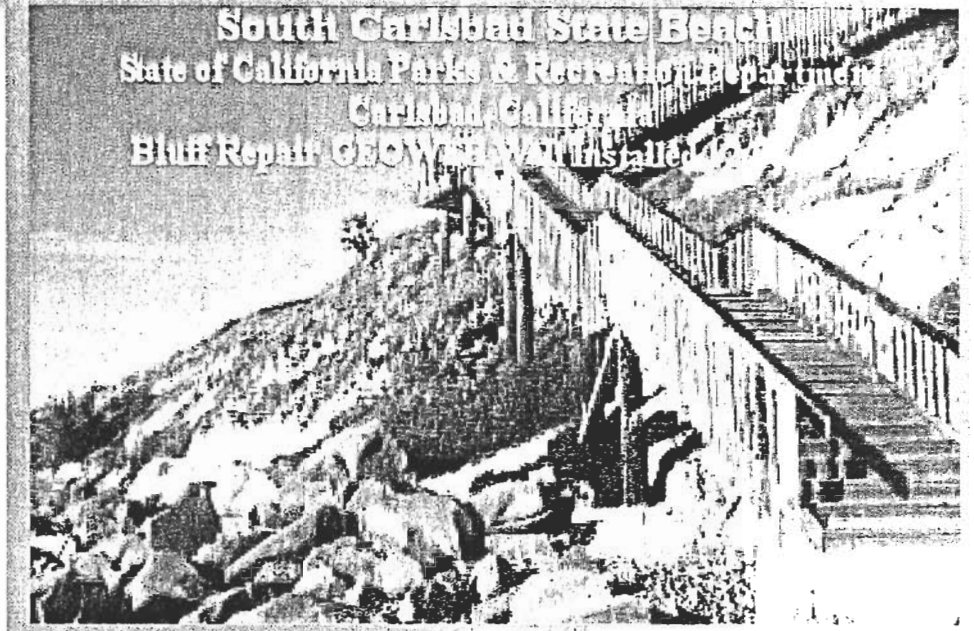
	APN	Original Design (Ultrablock)	Alternative Design (Geoweb)	Δ	% Δ
1. Excavation Volume (cy)	145-261-13	6,024	3,243	-2,781	-46%
	145-261-05	2,008	1,376	-632	-31%
	Total	8,032	4,619	-3,413	-42%
2. Average Depth of Excavation and Wall Construction (ft)	145-261-13	18	13	-5	-28%
	145-261-05	22.5	17	-5.5	-24%
	Total	N/A	N/A	N/A	N/A
3. Maximum Depth of Excavation and Wall Construction (ft)	145-261-13	25	14	-11	-44%
	145-261-05	30	25.0	-5	-17%
	Total	N/A	N/A	N/A	N/A
4. Total Surface Area of Disturbance (Excavation Area) (sf)	145-261-13	23,485	9,508	-13,977	-60%
	145-261-05	7,521	3,547	-3,974	-53%
	Total	31,006	13,055	-17,951	-58%
5. Vegetation Removal (sf)	145-261-13	9,685	4,353	-5,332	-55%
	145-261-05	7,521	3,547	-3,974	-53%
	Total	17,206	7,900	-9,306	-54%
6. Revegetation Area (does not include "wall" face)(sf)	145-261-13	8,343	4,154	-4,189	-50%
	145-261-05	6,853	3,171	-3,682	-54%
	Total	15,196	7,325	-7,871	-52%
7. Average Exposed Surface Area (sf)	145-261-13	2,523	2,288	-235	-9%
	145-261-05	1,175	940	-235	-20%
	Total	3,698	3,228	-470	-13%
8. Average Planted Wall Area (sf)	145-261-13	0	2,288	2,288	2288%
	145-261-05	0	940	940	940%
	Total	0	3,228	3,228	3228%
9. Maximum Height of Structure (ft)	145-261-13	≤25	≤14	-11	-44%
	145-261-05	≤30	≤25	-5	-17%
	Total	N/A	N/A	N/A	N/A
10. Maximum Height of Structure above Existing & Finished Grade (ft)	145-261-13	≤11	≤10	-1	-9%
	145-261-05	≤25	≤18	-7	-28%
	Total	N/A	N/A	N/A	N/A
11. Length of Retaining Structure (ft)	145-261-13	286	286	0	0
	145-261-05	94	94	0	0
	Total	380	380	0	0

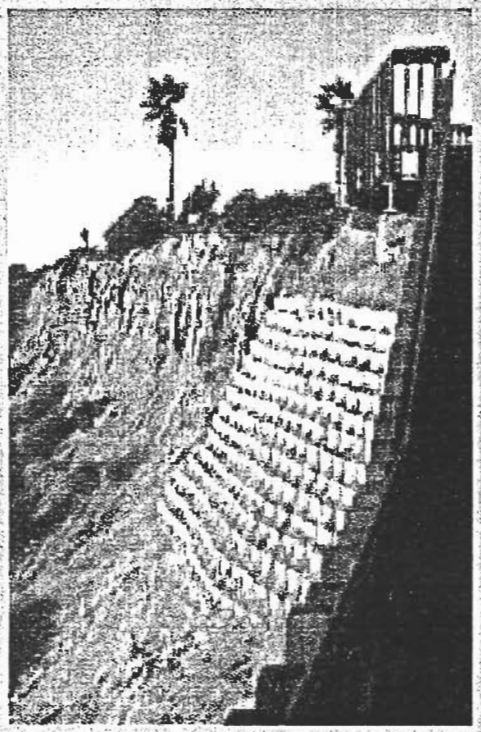
Prepared by Rau and Associates, Inc. June 2008

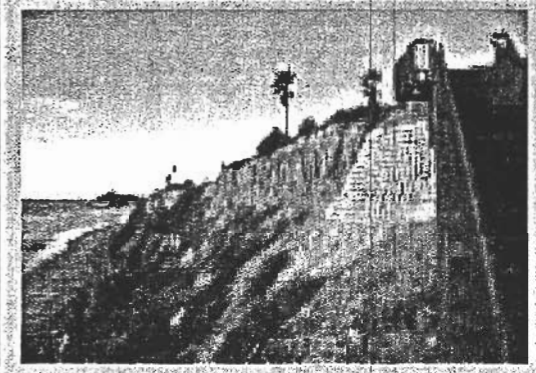
The values in Table C are approximate. Values are based on preliminary improvement plans and estimated depth to bedrock, which is variable and cannot be fully known until excavation occurs.

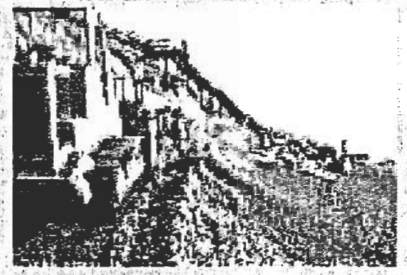
CALIFORNIA COASTAL PROTECTION

Utilizing the GEOWEB® Cellular Confinement System







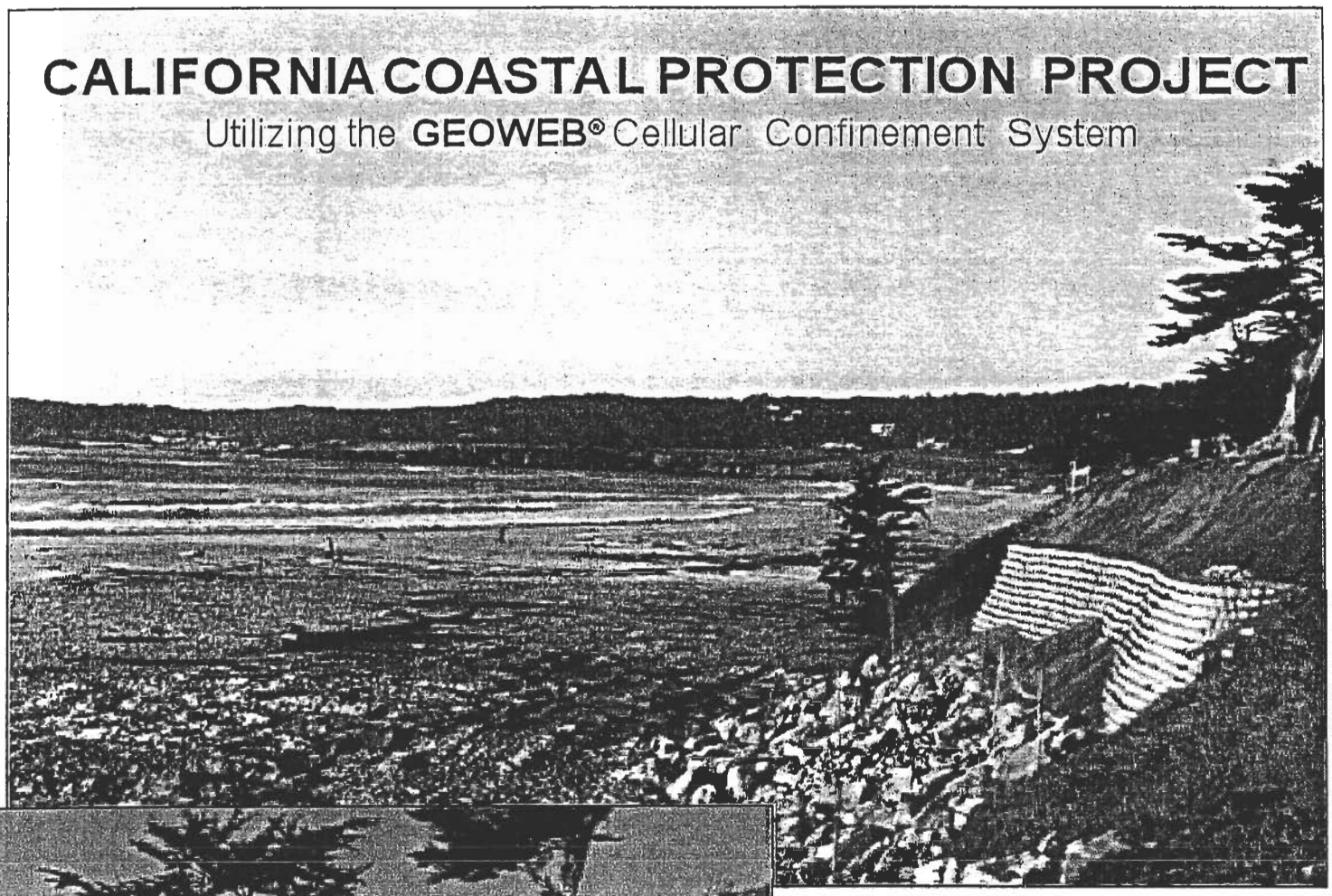


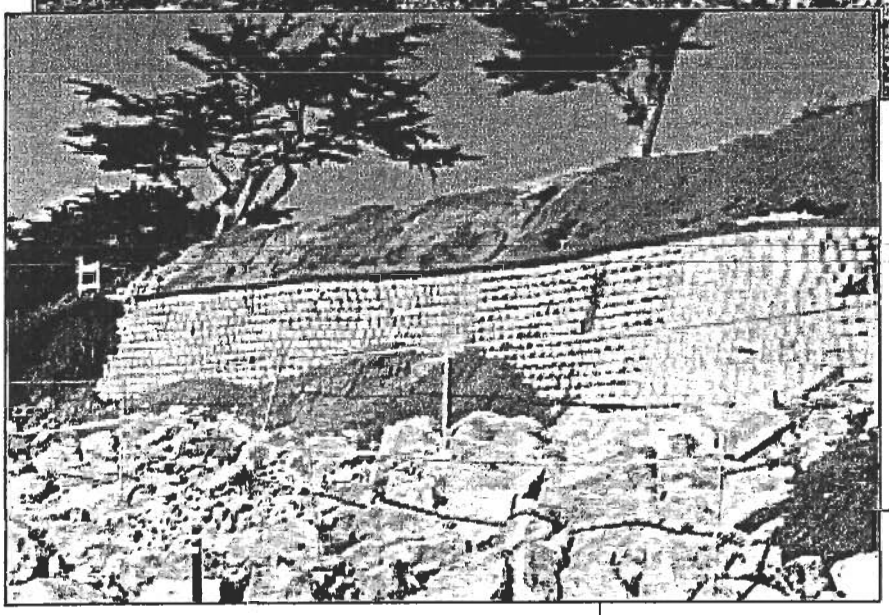
Soil Stabilization Products Company, Inc.
PO Box 2779 Merced, CA 95344-0779
Ph: (800) 523-9992 or (209) 383-3296
Fax: (209) 383-7849 Email: info@sspco.com
Website: http://www.sspco.com

SSPCo®

CALIFORNIA COASTAL PROTECTION PROJECT

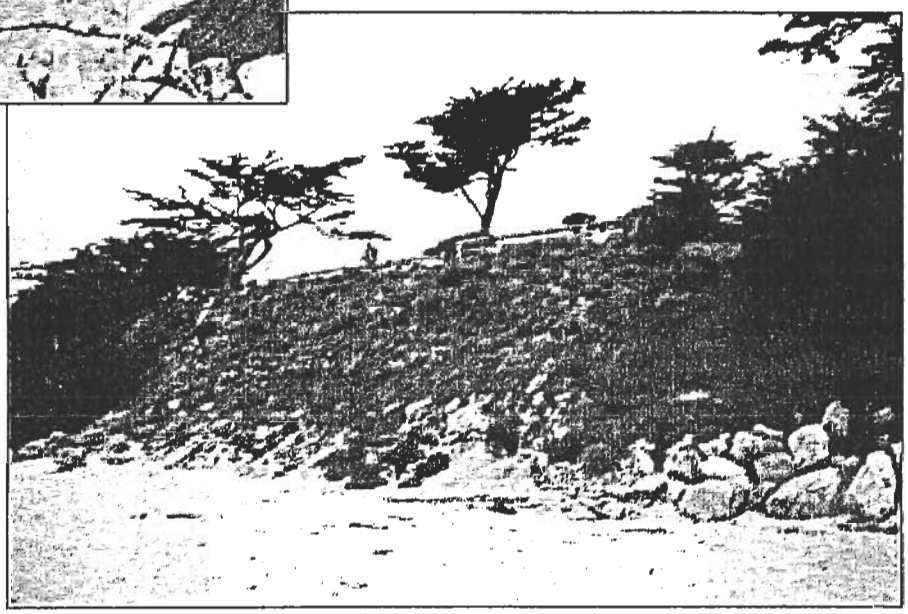
Utilizing the **GEOWEB®** Cellular Confinement System





Owner: City of Carmel
Carmel, California

Views of revegetating wall (below), newly constructed wall (left), and newly constructed wall with Pebble Beach beyond Carmel Bay (above)



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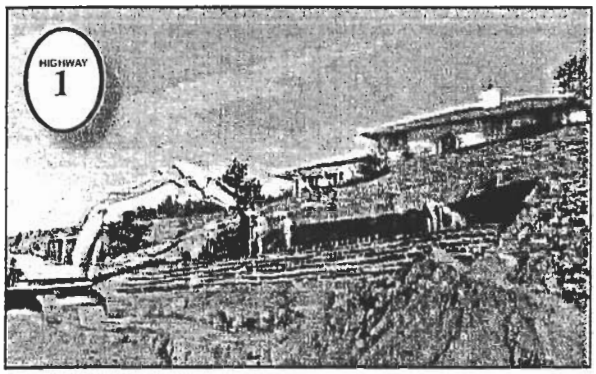
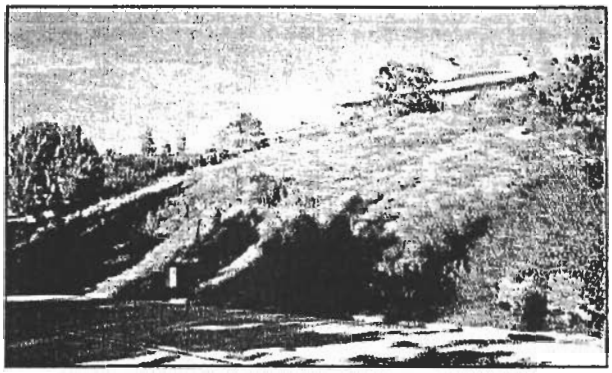
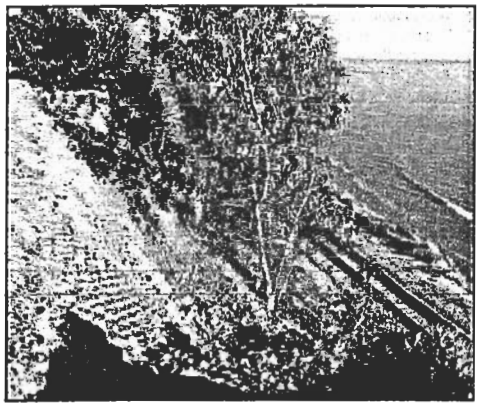
1991 Repair of Slope Failure in Watsonville





A saturated soil condition in the winter of '91-'92 that resulted in the failure of a 2H:1V slope on the frontage road serving Highway 1. Because the location of the slope failure was highly visible, immediately downhill from a private residence, and next to a roadway drain inlet, Caltrans engineers needed a repair technique that would control sedimentation problems and be invisible following a season's growth of vegetative cover. The slide area was excavated to competent soils, then a drainage net which routed subsurface water to a perforated 6" diameter drainage pipe was installed. Compacted granular infill was then placed in lifts and the **GEOWEB**® System fascia was installed and infilled with soils that would support revegetation at the face of the slope. The finished slope face received a landscaping treatment which was protected by an erosion control blanket. Monitoring the project in subsequent years, the slope quickly blended in with its surroundings. Now, more than a decade later, the house above provides the only visual clue that can be used to reference the site of the repair.



2002 Coastal Slide Repair

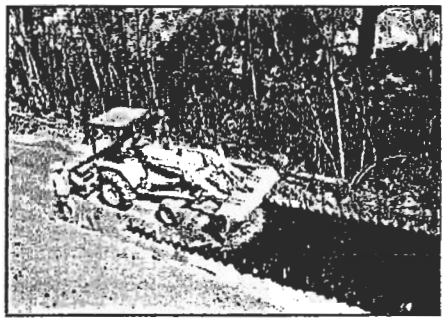
A **GEOWEB** System retaining wall was constructed south of Santa Barbara along the coast in an area known as Summerland. Wedged between Highway 101 and the railroad tracks, this steep and narrow site was an ideal application for a **GEOWEB** System earth retention installation. Designed to support vegetative cover, the tan colored **GEOWEB** System installation will blend well with the natural soil cover until the hydroseeded surfaces establish vegetative cover, much like the installation picture on page 3 at left at Los Trancos Creek.

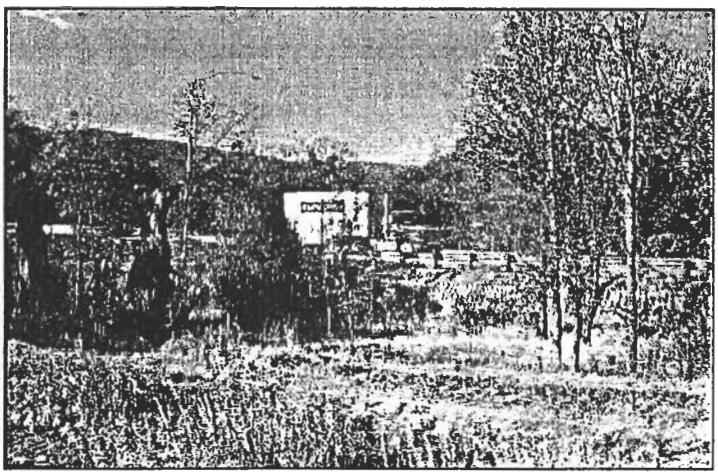
HIGHWAY 101

1995 Highway 101 Retaining Wall

A **GEOWEB** System retaining wall was specified as a means of meeting right-of-way requirements for an onramp to Highway 101 in Santa Margarita. Completed in the fall of 1995, this installation demonstrates the **GEOWEB** System's flexibility in tight building circumstances.

HIGHWAY 101



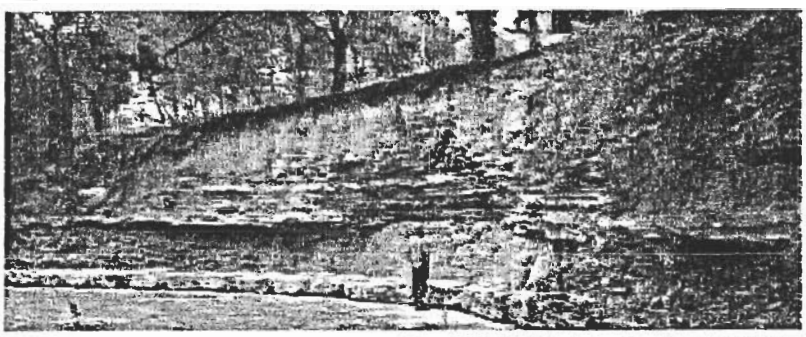


GEOWEB® Cellular Confinement System

West Bouldin Creek

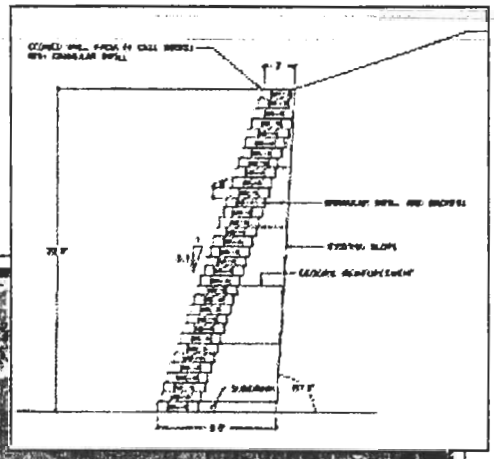
Watershed Protection Program
City of Austin

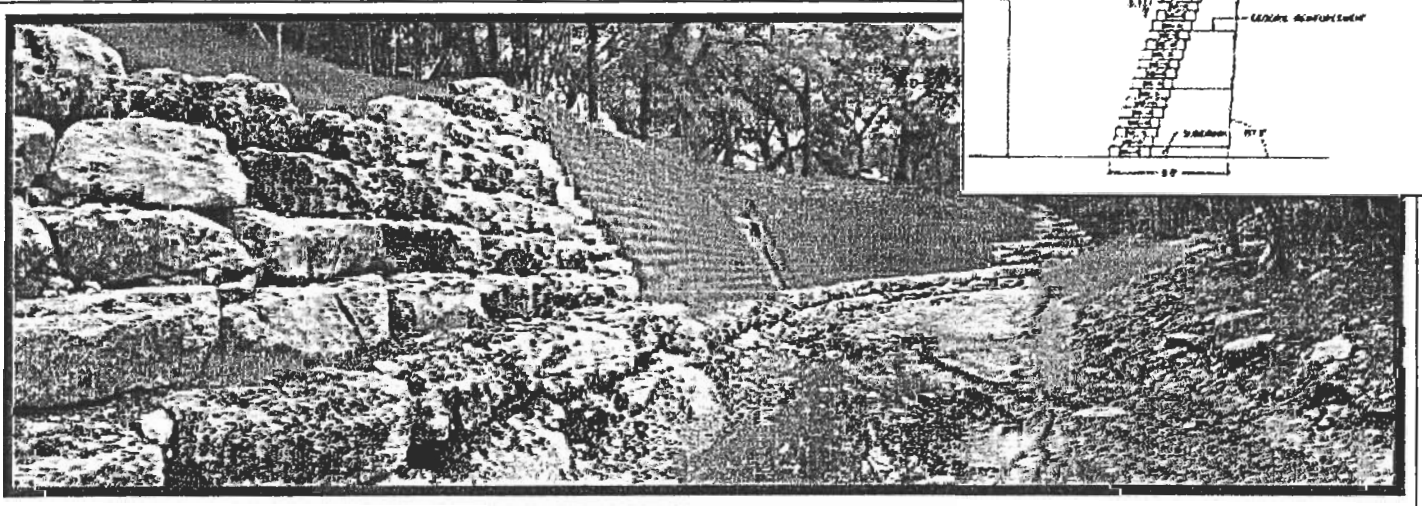
The Watershed Protection Department of the City of Austin is enthusiastic about cellular confinement technology. Though only recently added as a favorite system in their problem solving toolkit, this technology has been applied with dramatic success by in-house personnel in designing and building a 22 foot retaining wall to reinforce an eroding streambank. West Bouldin Creek makes a 90 degree turn at South Sixth Street in Austin which focuses erosive forces on the outside bank of the stream adjacent to the roadway. These focused flows had caused undermining of the more than 20 foot high embankment, and emergency repairs had to be effected before the roadway was impacted. Designers wanted the repair to incorporate a long term solution which could resist these erosive pressures without sacrificing the natural creekside appearance. For this application they chose the GEOWEB Cellular Confinement System over the more conventional gabion basket design.



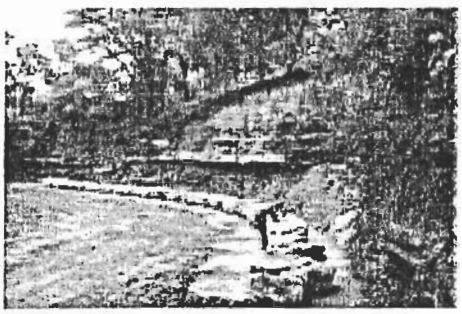
West Bouldin Creek wall prior to installation of the GEOWEB Cellular Confinement System

The GEOWEB Cellular Confinement System design was developed by department engineering staff with product support by SSPCo and preliminary design assistance by Presto Products Company. A sand colored face provided for a natural appearance during revegetation. Perforations in the interior cell walls enabled lateral movement of water out of the interior, and wall batter was designed to accommodate native shrub plantings of sufficient size to speed revegetation.

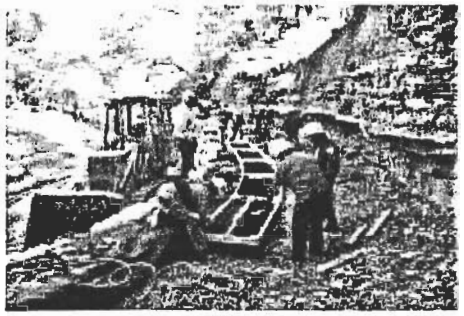




Revegetation of the West Bouldin Creek wall after installation of the GEOWEB Cellular Confinement System

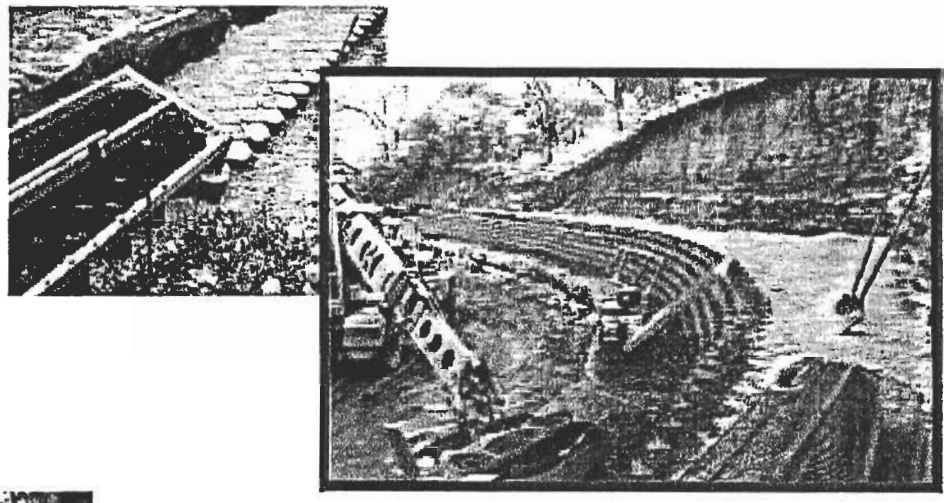


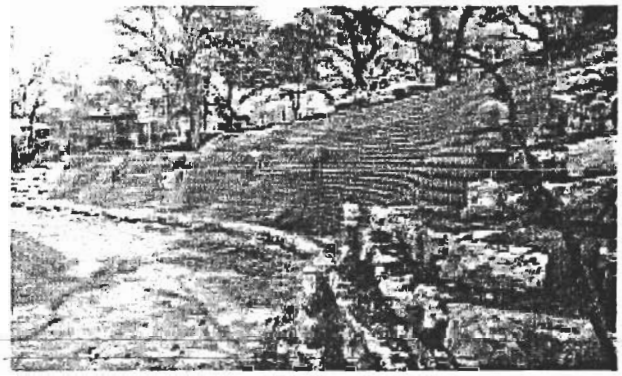
Placing layer of stone at base of wall



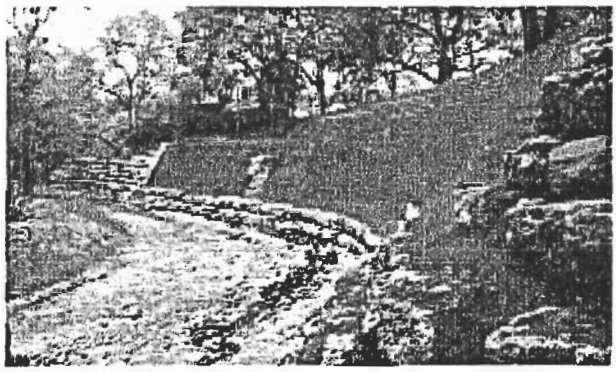
City crews installing the GEOWEB sections

Michael Kelly, watershed engineer, summarized the experience of design and installation, "Though GEOWEB was new to everyone in the department from design staff to the installation crew, with SSPCo assistance and InterSol preliminary design help, we were able to produce a finished product which has amazed everyone and came in at 1/3 the cost it would have been if it had gone out to competitive bid."





Planting native shrubs and grasses in the wall face



Finished wall revegetating just one month after construction

SOIL STABILIZATION PRODUCTS COMPANY, INC.

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E-mail: info@sspco.org Website: http://www.sspco.org

City of Austin

Founded by Congress, Republic of Texas, 1839
Municipal Building, Eighth at Colorado P.O. Box 1088, Austin, Texas 78767 Telephone 512/499-2222

Mr. Mel Lee
Soil Stabilization Products Company, Inc.
P.O. Box 2779
Merced, CA 95344

August 23, 1999

Mr. Lee,

I am writing in response to the superior service you have provided to the City of Austin, Watershed Protection Department. Specifically, Soil Stabilization Products Company has provided the assistance necessary for our engineering staff to design a reinforced Geoweb Cellular Confinement System to prevent further erosion of a steep streambank on West Bouldin Creek in Austin, TX.

The site in question has vertical bluffs up to 22 ft. in height adjacent to a roadway. The action of the stream has caused undermining of the bluff. Our project goals are to prevent further erosion of the bluff while maintaining the natural appearance of the streambank. Initial gabion designs would satisfy our stability needs, but would compromise the aesthetic of the project. We turned to SSPC, Inc. for advice on the suitability of a vegetated Geoweb wall to solve our problem. Our staff was familiar with the concept of Geowebs, but had never designed or implemented such a system.

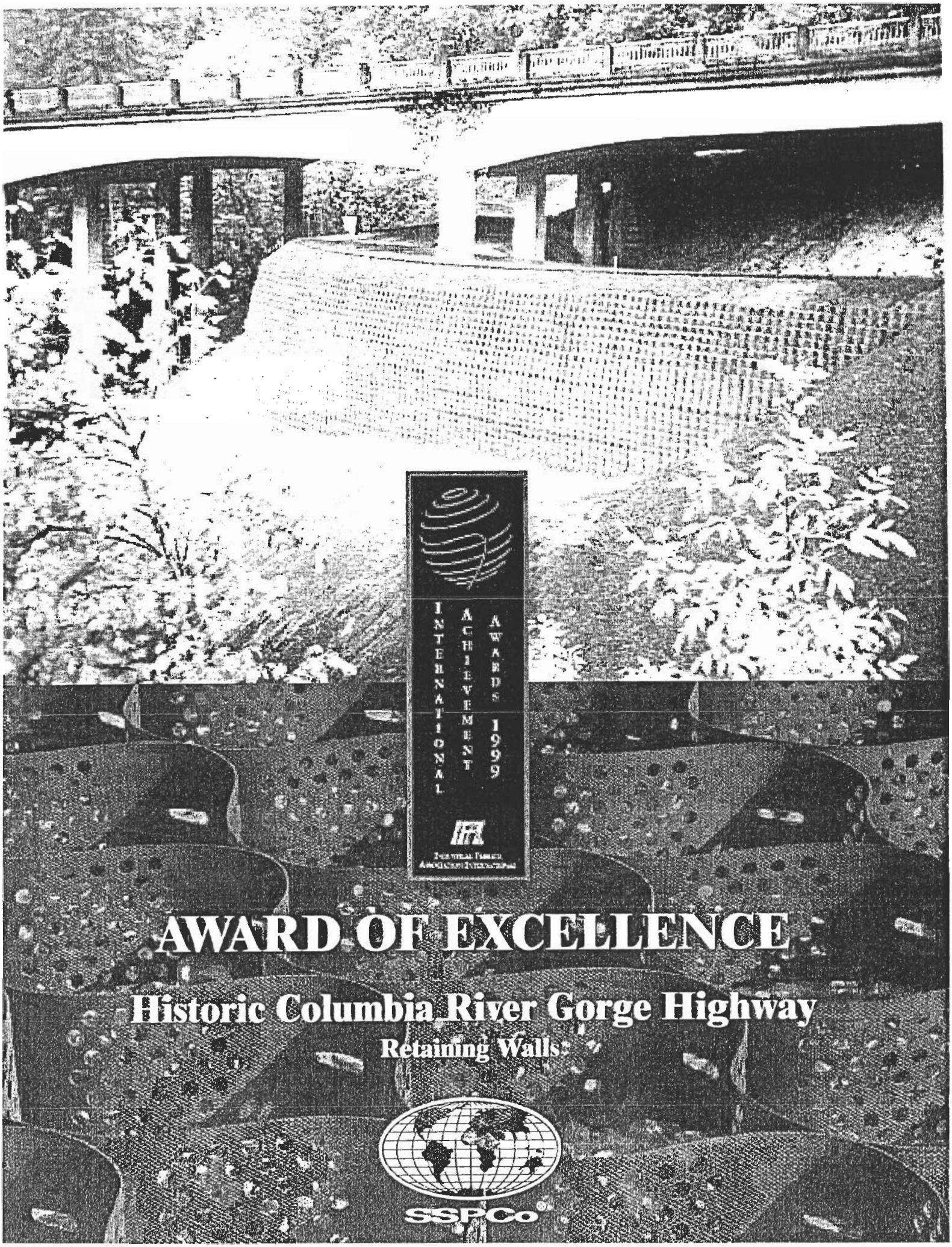
SSPC, Inc. provided the necessary information on material specifications and design aids that allowed our staff to design the steep reinforced system. The most useful service your team provided was the technical assistance provided by Mr. Samuel Landrith and Jamie Walls of InterSol Engineering. With their input, City Of Austin engineers were able to design a structurally sound wall that will be vegetated on the face. Mr. Walls of InterSol engineering performed internal stability analysis that not only corroborated our analysis, but resulted in a more elegant, cost-effective design. Originally, our staff engineers had designed the wall to be all Geoweb. Mr. Walls suggested that the same structural integrity could be attained using geogrid inclusions with a Geoweb facia. Our staff is familiar with using geogrid reinforcements, thus we were pleased to learn that we could integrate geogrid into our design. This design change will facilitate construction of the wall by our crews who are familiar with geogrid, but not Geoweb installation.

Additionally, Mr. Lee, I appreciate the manner in which you provided exceptional project management. Your coordination ensured that we were able to secure all information necessary to design the project and procure the materials in a timely manner. The City Of Austin was acting under emergency action to complete this project before the roadway was impacted.

To summarize, SSPC, Inc. has allowed our engineers to gain the skills needed to design Geoweb walls. This technology is a valuable tool in our constant quest to stabilize slopes while preserving a vegetated face in the public. We will continue to explore other applications of Geoweb systems and look forward to working with your staff on future projects. I will provide photographic and narrative accounts of the project as it nears completion.

Sincerely,

Mike Kelly, E.I.T
City of Austin
Watershed Engineering and Field Operations
WATERSHED PROTECTION DEPARTMENT


INTERNATIONAL ACHIEVEMENT AWARDS 1999
AWARD OF EXCELLENCE
Historic Columbia River Gorge Highway
Retaining Walls
SSPCo

COLUMBIA RIVER GORGE
RETAINING WALLS

This geocomposite earth retention project along the Columbia Gorge highlights an increasing trend toward application of geocell or cellular confinement product technology for fully vegetated protection structures (greenwalls) in situations which were once limited to the use of obtrusive manmade reinforcements constructed of concrete materials, shotcrete, rock rip rap, rock-filled gabion baskets, metal bin walls and sheet pilings, wood crib walls, used automobile tires and other even less desirable materials.

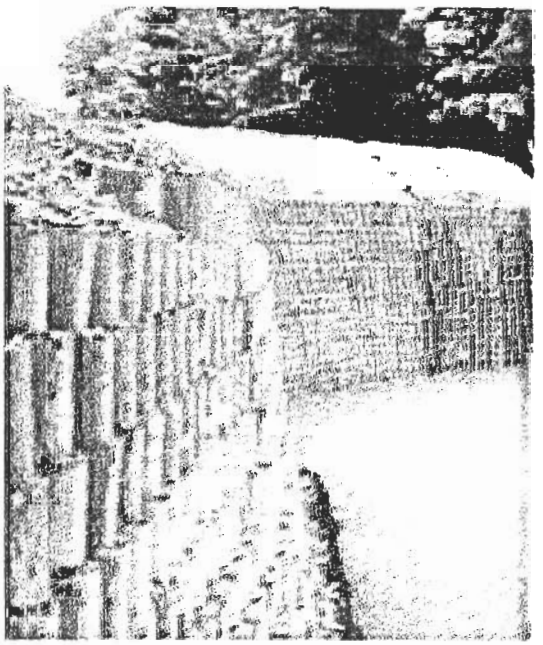
The Tanner-Moffett project, constructed along the Oregon side of the Columbia River is located in a highly scenic natural area where the Columbia River carves through the Cascade Mountains. The Columbia River Gorge was given protection with National Scenic Area status in 1986. The original paved highway, now known as Historic Columbia River Gorge Highway 30, has long since been divided up into isolated sections by the construction of the Bonneville Dam and the I-84 highway. When a plan was proposed to connect two sections of Highway 30 by constructing one mile of highway from Tanner Creek to Moffet Creek, including a bike path and pedestrian way that would eventually become part of a 100 mile trail extending from Portland to The Dalles, lead agency Oregon Department of Transportation (Oregon DOT) took on both the engineering design challenge and a public relations challenge in coordinating the involvement of multiple public agencies. Since the scenic corridor encompasses forests, creeks, waterfalls and shoreline visible from both the Washington and Oregon sides of the Columbia River, Oregon DOT design engineering staff had to coordinate input from the Washington Department of Transportation, the Federal Highway Administration, the US Forest Service, and local county and city governments, while addressing the environmental and aesthetic requirements of the Historic Columbia River Highway Advisory Committee and the Columbia Gorge Commission.

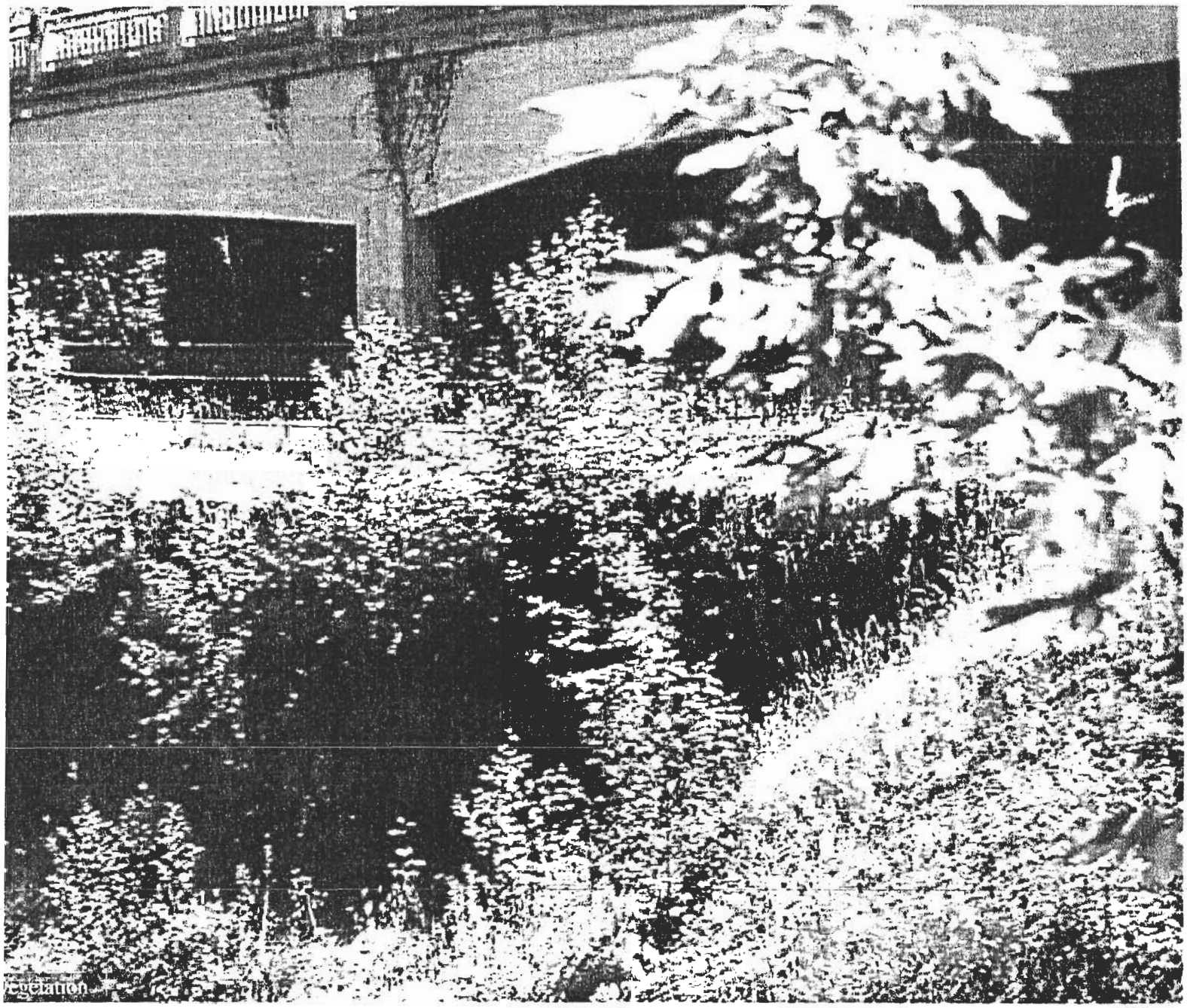
One of the most challenging problems during this phase was the design of a series of switchbacks to gradually bring the bike path from highway level down to the level of the creek at the point where Tanner Creek passes under the bridge. The site provides a spectacular view of the river and the Cascade Mountains in profile. Retaining walls were going to be necessary to keep the newly steepened side slopes in place, but they would have to be attractive and look natural. An earth retention structure using a geocell facia was selected as a more suitable option than gabions. Final design was supplied by Oregon DOT, and the walls were constructed as an FHWA Experimental Feature Project in recognition that this was the state's first experience with a geocomposite wall design of this nature.

Six walls were ultimately required, one more than 16 feet in height. All were constructed with high strength woven geotextile fabrics for soil reinforcement. The **GEOWEB**® Cellular Confinement System was used as the facia and manufactured with a texturized outer face colored green to harmonize with the surrounding landscape until vegetation could be fully established. The **GEOWEB** cells within the interior wall used the standard perforated **GEOWEB** System cell wall design, providing lateral drainage and increased root lock-up for the vegetative cover. A substantial natural spring was discovered behind one of the walls after construction was completed. With the perforated cells within the wall, lateral drainage was already a built-in feature. An underground drainage pipe system was installed to move the water downhill, protecting the slope below the retaining walls from erosion by the focused water flow.

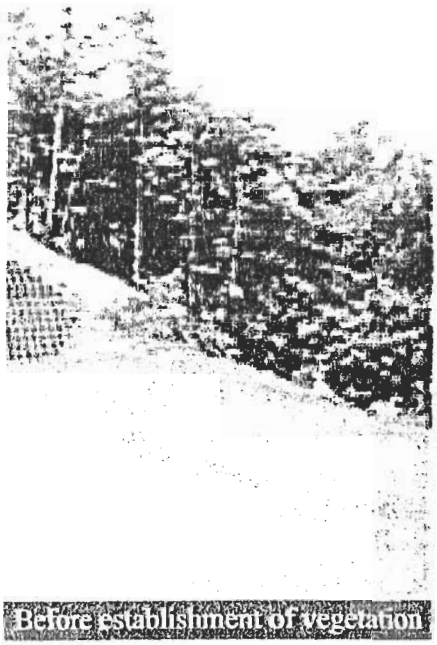
The **GEOWEB** greenwalls were ideally suited for the unique engineering and environmental challenges presented by the Tanner-Moffett project. Oregon DOT engineers are using the design experience gained on this greenwall project to address ongoing earth retention requirements.

View from previous page after establishme

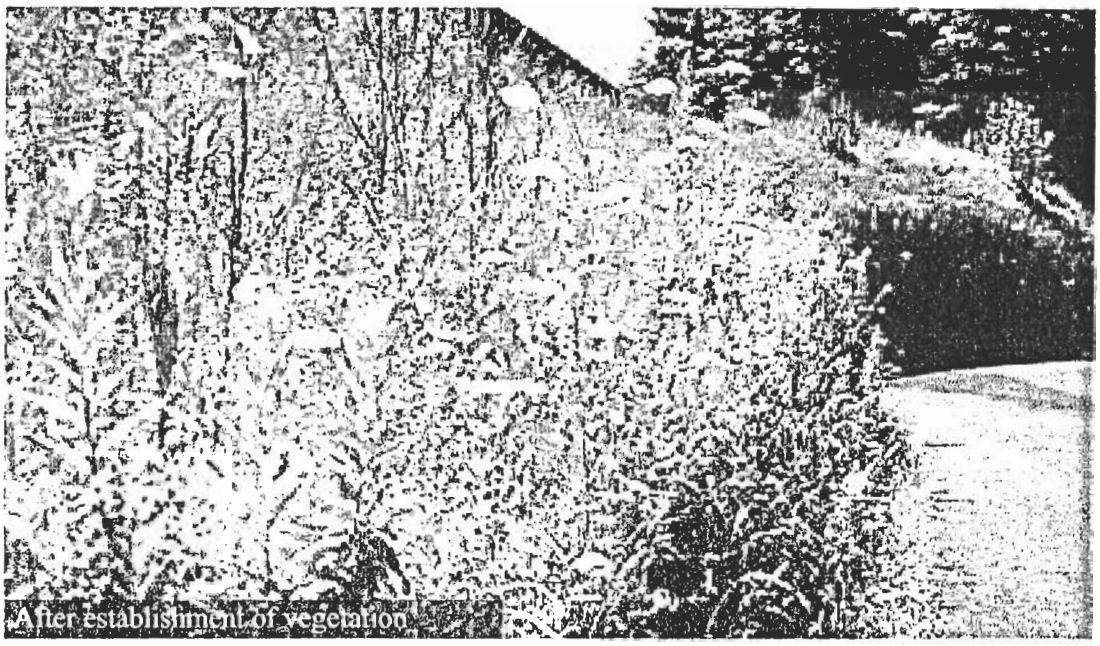




egetation

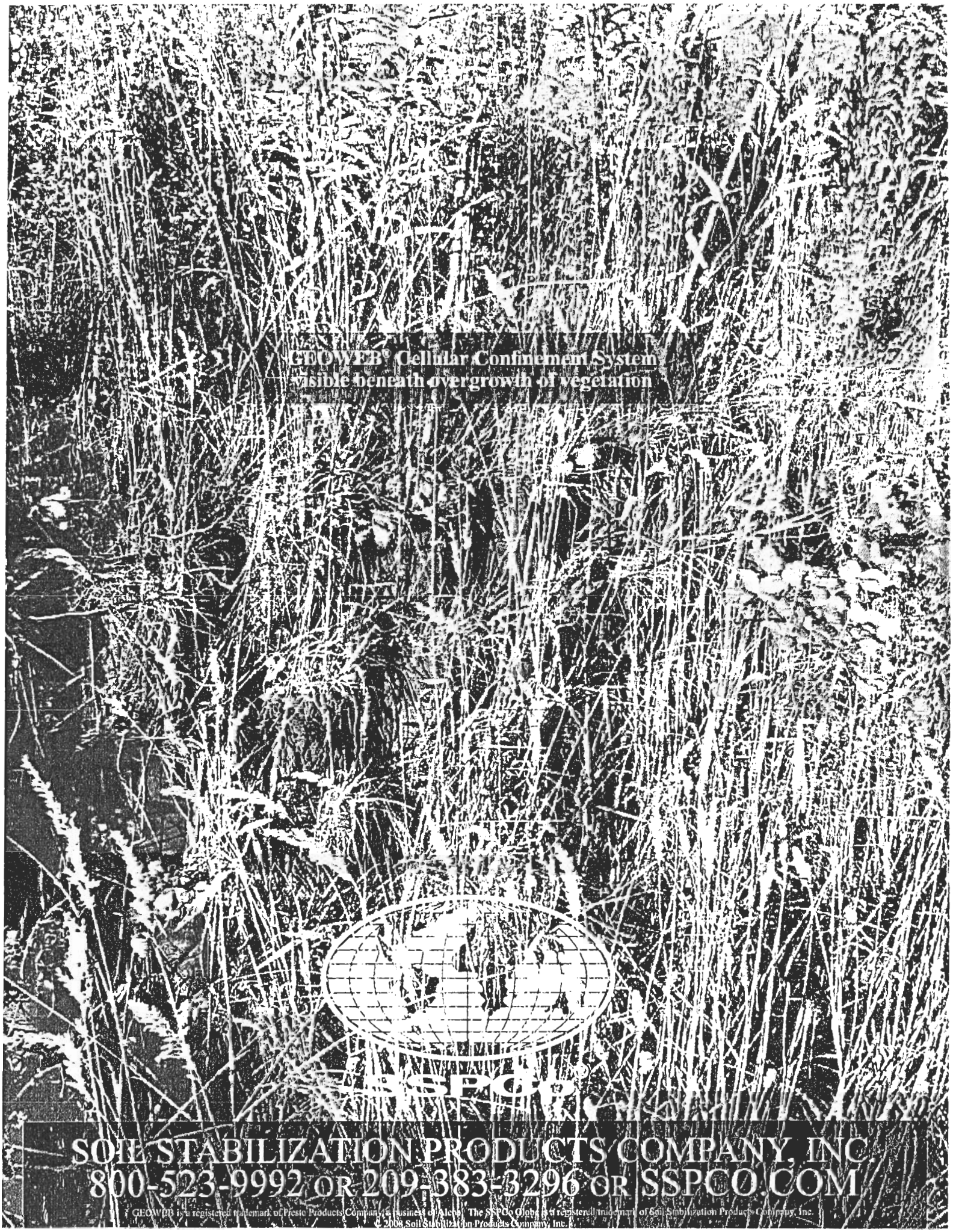


Before establishment of vegetation



After establishment of vegetation

GEOWEB® CELLULAR CONFINEMENT SYSTEM



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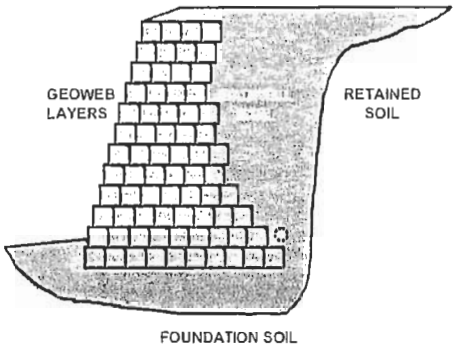
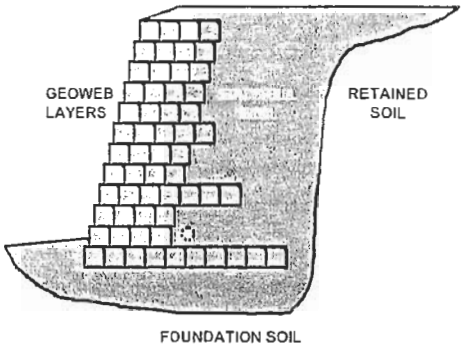
THE GEOWEB® EARTH RETENTION SYSTEM
TECHNICAL OVERVIEW

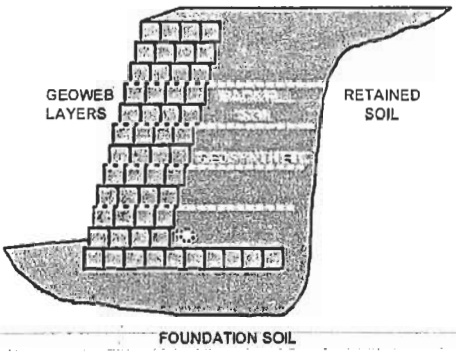
GEOWEB GRAVITY WALL



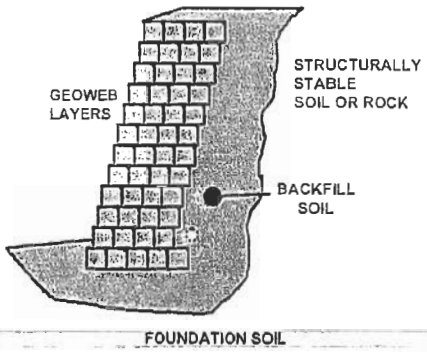
GEOWEB ZONED GRAVITY WALL



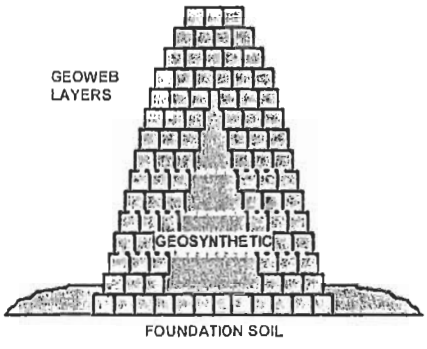
GEOCOMPOSITE GRAVITY WALL



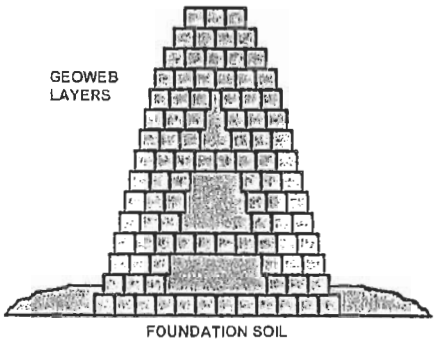
GEOWEB FACIA



FREE-STANDING GEOCOMPOSITE WALL



FREE-STANDING GEOWEB WALL



PRESTO PRODUCTS COMPANY, P.O. BOX 2399, APPLETON, WISCONSIN, USA 54912-2399
Telephone: 920-738-1118 or 800-548-3424 ■ Fax: 920-738-1222
e-mail: info@prestogeo.com www.prestogeo.com/

THE GEOWEB® EARTH RETENTION SYSTEM TECHNICAL OVERVIEW

Contents

THE GEOWEB® EARTH RETENTION SYSTEM
TECHNICAL OVERVIEW

INTRODUCTION

The use of earth retention structures has expanded in recent years as (1) transportation upgrades are increasingly constructed within existing rights-of-way and (2) development of prime industrial, residential, and commercial property has spilled on to sites requiring additional improvement. The Geoweb cellular confinement system has been specifically developed to meet the challenges that *change-in-grade* construction present, particularly when foundation conditions are predominately compressible soils. The versatility of the Geoweb cellular confinement system is shown on the front page, illustrating the basic earth retention structures that can be formed using the product. Presented here is an explanation of technical and design requirements for selecting the most appropriate Geoweb earth retention structure for your project.

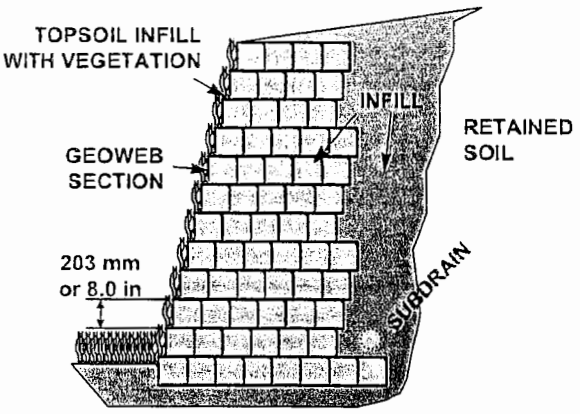


Figure 1 Vegetated Wall

Earth retention structures are commonly incorporated into civil construction work to accommodate irregular topography and to facilitate grade separation. Their use, in place of simple earth slopes, is generally dictated by the severity of grade change and by availability or cost of land within a project site. Typical applications utilizing this technology are:

- Widening within existing rights-of-way
- Adding a lane of traffic or parking
- Grading development sites to boundary limits
- Providing truck or emergency vehicle access
- Expanding sports fields & storage yards
- Reshaping & stabilizing storm water channels
- Building storm water detention structures
- Repair of failed slopes and retention structures
- Safety barriers along transportation corridors
- Energy absorbers
- Noise attenuation walls

A typical Geoweb earth retention structure is illustrated in Figure 1.

The primary function of an earth structure is to provide a very steep, or in some cases vertical surface, which is erosion resistant and structurally stable under its self-weight and externally imposed loads. The near vertical *change in grade* requires that earth materials be stacked higher and steeper than their internal shear strength properties will permit. Consequently, the magnitude of lateral earth pressure, which these earth structures must resist, is directly related to:

- Height of the *change in grade,*
- Internal shear strength of the earth materials,
- Geometry of slope above the structure, and
- Magnitude of any imposed surcharge loading.

Table 1 Geoweb Earth Retention Structure Selection Guidelines

	GRAVITY SYSTEMS		GEOCOMPOSITE SYSTEMS	
Constraints	Full Geoweb	Zoned Geoweb	Geosynthetic / Geoweb	Slope
Wall Heights	< 6.1 m (20 ft)	>3.5 m (12 ft)	> 3 m (10 ft)	>2 m (7 ft)
Limited Excavation Area	Acceptable	Acceptable	Possible	Unfeasible
Foundation Conditions	Competent to Variable	Competent to Variable	Competent to Poor	Competent to Poor
Infill/Backfill Requirements	Granular Only	Granular Only	Granular / Site Soils	Granular / Site Soils
Availability of Granular Fill	Plentiful	Plentiful	Limited to Scarce	Limited to Scarce

The project sites soil conditions, availability of suitable backfill materials, economics and the completed aesthetics govern which Geoweb retention structure would be most appropriate. Table 1 provides a brief summary of the key criteria that favor certain types of Geoweb earth retention structures.

The basic Geoweb system can be readily adapted to a wide range of design requirements and site conditions. The extreme versatility of Geoweb results from its inherent flexibility, unique load-deformation behavior, and suitability with a wide range of infill materials and foundation soils. This permits Geoweb earth retention structures to cost-effectively replace conventional earth retention structures such as:

- Concrete cantilever
- Mechanically Stabilized Earth (MSE) or Earth-anchored systems
- Soldier pile & lagging with or without tiebacks
- Concrete gravity
- Concrete crib
- Timber crib
- Sheet pile

GEOWEB SYSTEM ADVANTAGES

Durability

Retention structures using the Geoweb cellular confinement system provide superior resistance to attack from chemicals, water and freeze-thaw that beset many earth retention systems. Polyethylene plastic used to make Geoweb products is resistant to penetration by water, eliminating any potential for cracking, spalling, splintering, or corrosion that initiates deterioration of concrete, steel, and timber-based earth retention systems. Consequently, the system is well suited to structures that are exposed to seawater, extreme pH soils, or road de-icing salts and chemicals.

Components used in Geoweb earth retention structures are durable. The longevity of naturally occurring aggregate and other soils utilized in Geoweb earth retention structures has been well documented in the engineering literature. Geosynthetic reinforcement used to stabilize backfill soils is manufactured from specially formulated polymers engineered to resist creep and environmental degradation throughout the design life of the structure. By implementing geosynthetic industry standard Task Force 27 design guidelines, a safe working strength, LTDS, for geosynthetic reinforcement can be determined for any design life ranging from 5 to 120 years.

Performance

Geoweb confinement systems provide the most flexible retention structure available today. This flexibility permits Geoweb walls to be constructed over more variable and compressible foundation soils than allowed with conventional earth retention structures having rigid structural facing systems. This flexibility provides the designer and owner of earth retention structures a confined mass that can tolerate large deformation without loss of structural integrity or adversely affecting the aesthetics, especially with vegetated facing treatment. Since the Geoweb facia and soil reinforced system are constructed using similar soils, differential movement is minimized, allowing construction on foundation soils that would require a deep foundation for more conventional retaining walls.

Ease of Construction

Individual Geoweb sections are compact and lightweight. A single forty-foot container can hold the required number of sections to construct 1,240 m² (13,300 ft²) of Geoweb wall face, making shipping costs, even to remote locations, very reasonable. Installers can easily handle the Geoweb sections in all temperatures, making it one of the fastest manually constructed facing systems available. Sections are quickly expanded, positioned, infilled, and compacted by typical construction crews. By extending soil reinforcement, such as geotextiles and geogrids, between Geoweb layers at predetermined elevations, the system becomes an MSE structure.

Infill Materials

Multi-layer Geoweb sections in earth retention structures are generally infilled with select, free-draining granular materials, such as sand, gravel or graded stone. To enhance the erosion resistance, the outer Geoweb cells may be filled with concrete. To enhance appearance, the outer Geoweb cells may be filled with vegetated topsoil (see Figure 1).

The polymer nature of both the Geoweb wall sections and the geosynthetic soil reinforcement also permits the use of some fine grained cohesive soil backfill (i.e., CL, ML, SC with PI<20). Since corrosion of the Geoweb facing or geosynthetic soil-reinforcement-elements is typically not possible, utilization of available cohesive soils is an important factor in the selection and use of soil reinforced Geoweb retaining walls. Use of available site soils generally translates into significant cost savings over other types of soil retention structures. However, site soils must be verified by site-specific engineering for a given project.

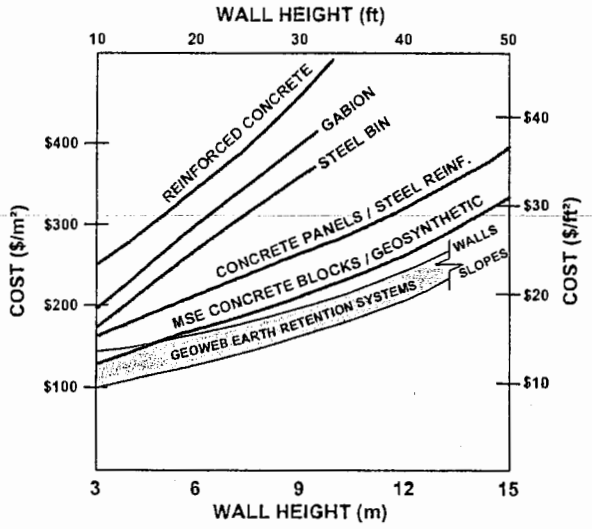


Figure 2 Installed Cost Comparison

Economics

Geoweb retention structures are cost competitive with other conventional earth retention systems (see Figure 2). This graph illustrates that, depending upon wall height, Geoweb retention structures offer a 25 to 50 % cost savings over conventional cast-in-place concrete retaining walls. Although the installed cost for all earth retention systems will vary with site specific conditions such as; accessibility, soil conditions, cost of infill and compaction of infill, labor rates, surcharge loading, length of wall, etc.. This installed cost graph (Figure 2), indicates *relative* cost competitiveness by comparing Geoweb structures built in 1988 with the cost of more conventional earth retention construction methods as compiled by the California DOT in 1986.

Environment

Geoweb retention walls represent an advanced system in protecting the environment. The polymer based products utilized with naturally occurring soils/aggregates comprise a system which is extremely resistant to deterioration. Furthermore, if deterioration begins, the process is slow, and harmful toxin or contaminant by-products are not generated.

The environmental impact of a retaining wall on an area can be visual or even physical, as an obstacle to wildlife. The Geoweb retention wall system minimizes both impacts by blending into the natural environment with vegetated facings and different colored (black, tan, green and white) products. The vegetated face treatment also provides a surface which has noise absorbing tendencies.

ENGINEERING CONCEPTS

The Geoweb system is a flexible, three-dimensional cellular confinement system, formed with surface-textured strips of polyethylene. The individual strips are inter-connected by a series of offset, full-depth, ultrasonically welded seams. When expanded, the strips form the walls of an integrated cellular (honeycomb) structure into which selected fill materials are placed and compacted. The engineering properties of the confined mass reflect the inherent strength of the compacted infill material and the high *lateral restraint* provided by the Geoweb cell. The load deformation performance of infilled Geoweb is significantly different from that of an equivalent mass of unconfined infill material. The confining cell structure imparts an *effective cohesion* to the infill material, thereby increasing its *shear strength* and *stiffness*. This improvement results from the *hoop strength* of the cell walls, the *passive resistance* of the adjacent cells and the high *frictional interaction* between the infill and the cell walls (Bathurst & Karpurapu). Consequently, a very efficient soil matrix is created by using the Geoweb cellular confinement system and granular soil infills.

The large frictional resistance between infilled layers permits stacking subsequent layers of Geoweb sections to create a composite structure that behaves as a monolithic gravity mass, which is flexible enough to conform to variable foundation conditions. This frictional resistance allows Geoweb sections to be used either as a self-contained gravity retaining wall or as a narrow, uniform facia system for soil-reinforced retaining walls.

GEOWEB WALL SELECTION

Selection of the appropriate Geoweb earth retention system will be governed by the project constraints shown in Table 1. The first step in systematically evaluating those criteria is to define the wall geometry, surcharge loading, excavation limits, and soil/groundwater conditions at the specific wall location. This is facilitated by generating a plan and profile drawing of the wall to understand its relationship to existing and proposed finish grades. The drawing should contain the location of any proposed or existing structures including underground utilities and property boundaries that may affect wall construction. Based upon wall location (cut or fill), foundation conditions, and the availability/cost of suitable granular infill soils, select the general type of Geoweb retention structure to design; gravity or soil-reinforced. Many combinations can

result using these two basic configurations, with economics and site constraints being the determining factors.

Global Stability

Final selection should be made based upon engineering design of the Geoweb retention structure which must address the major modes of potential failure; external, internal, local, and global stability. *Global stability* (Figure 3) *of the earth retention structures should be addressed by the site geotechnical or civil engineer* and is generally independent of wall type selected.

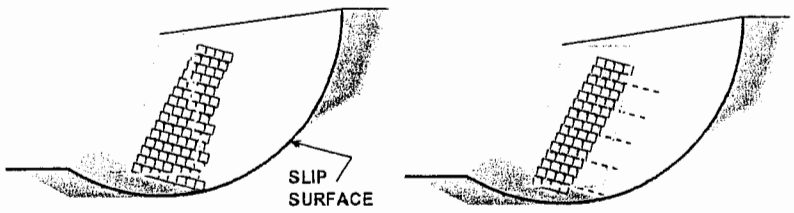


Figure 3 Global Slope Stability

DESIGN GUIDELINES

Following is a summary of the engineering calculations used to analyze gravity (A) and soil reinforced (B) Geoweb walls. The generalized geometric and soil properties for these two types of Geoweb earth retention structures are shown in Figure 4 and Figure 5. The complex calculations for soil reinforced steepened slope design are generally done with computer programs and will not be presented. For a more detailed explanation of these calculations refer to the listed references.

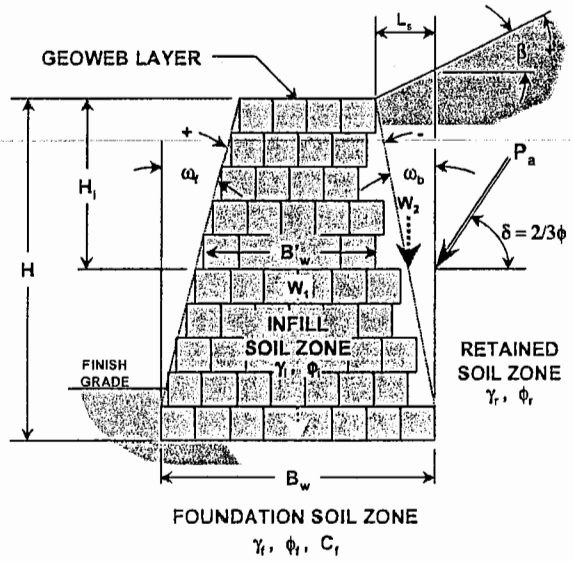


Figure 4 Design Model, Gravity Geoweb Wall

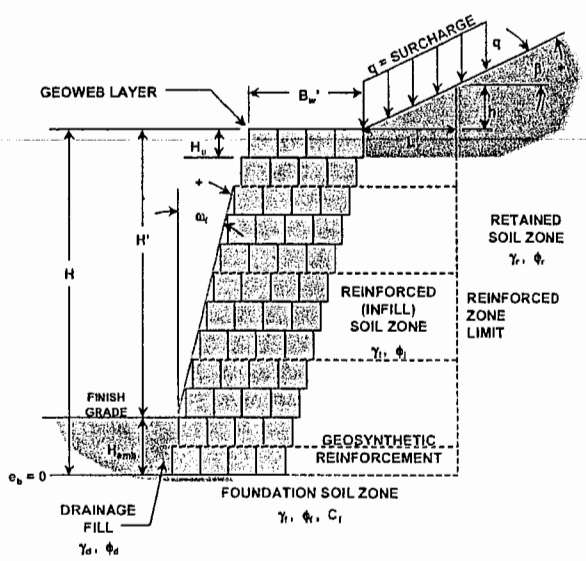


Figure 5 Design Model, Soil Reinforced Geoweb Wall

Step 1 Determine the earth pressure coefficient

Determine the earth pressure coefficient, K_a:

A. For Gravity walls (Full & Zoned) utilize Coulomb earth pressure theory K_a (after Jumikis):

$$K_a = \frac{\cos^2(\phi + \omega_b)}{\cos^2 \omega_b \cos(\omega_b - \delta)\left[1 + \sqrt{\frac{\sin(\phi + \delta)\sin(\phi - \beta)}{\cos(\omega_b - \delta)\cos(\omega_b + \beta)}}\right]^2}$$

NOTE: Assume $\omega_b = 0$ for individual analysis of Geoweb wall sections.

B. For Soil Reinforced walls utilize Rankine earth pressure theory, $K_{a'}$ (after AASHTO, FHWA, & Task Force 27):

$$K_{a'} = \cos\beta \frac{\cos\beta - \sqrt{\cos^2\beta - \cos^2\phi}}{\cos\beta + \sqrt{\cos^2\beta - \cos^2\phi}}$$

EXTERNAL STABILITY

The general failure modes for external stability are shown in Figure 6.

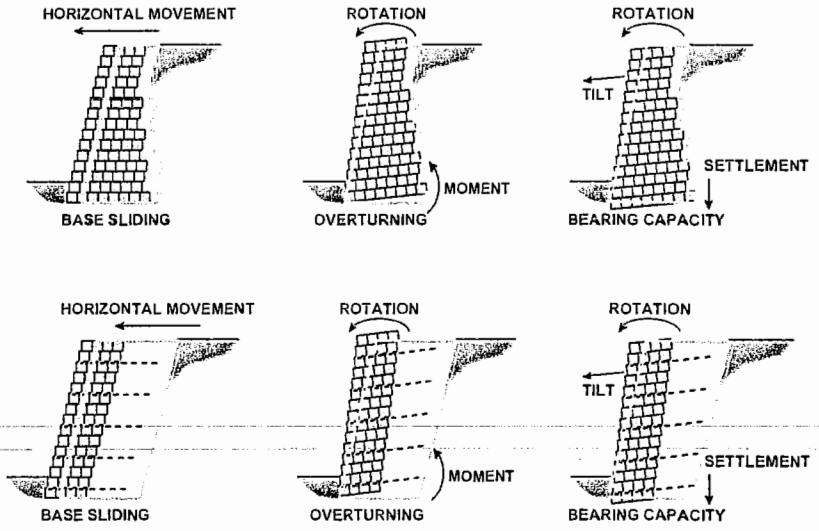


Figure 6 External Stability Modes of Failure

Step 2 Determine the earth forces

Determine the earth forces acting for external stability:

A. For gravity walls use total height of stacked Geoweb sections, H:

$$P_{sh} = 0.5 K_a \gamma_r H^2 \cos\delta$$

$$P_{sv} = 0.5 K_a \gamma_r H^2 \sin\delta$$

$$P_{qh} = K_a q H \cos\delta$$

$$P_{qv} = K_a q H \sin\delta$$

B. For soil reinforced walls use height (H+h) at the back of the reinforced soil mass and $K_{a'}$ based upon ϕ_r:

$$P_s = 0.5\, K_a\, \gamma_r\, (H + h)^2 \cos\beta$$

$$P_q = K_a\, q\, (H + h) \cos\beta$$

Step 3 Determine the weight of the wall

Determine the weight of the wall for sliding resistance:

$$W' = \left[(H B_w) - (0.5 H^2 \tan\omega_f) \right] \gamma_i$$

A. For gravity walls use total weight of stacked Geoweb sections, plus weight of retained soil in front of heel of base layer, plus dead load surcharge in front of heel of base layer.

$$W' = W_1 + W_2 + L_S \gamma_r$$

for $\omega_b \leq 0$, $W = W'$

for $\omega_b > 0$, $W = W' + \left(0.5\, H^2 \tan\omega_b \right) \gamma_i$

B. For soil reinforced walls use entire width of the reinforced zone, L, to resist sliding:

$$W_r = \left[(H L) - \left(0.5\, H^2 \tan\omega_f \right) + \left(0.5\, h L' \right) \right] \gamma_i$$

Step 4 Determine the Factor of Safety against sliding

Determine the Factor of Safety against sliding, FS_{sl}. Conceptually this is the sliding resistance generated at the base of the structure due to self-weight, divided by the lateral forces trying to move the structure outward, as shown in Figure 6. Generally, a FS_{sl} greater than 1.5 is acceptable for design.

A. For gravity walls determine sliding resistance along base width, B_W, using lowest value of ϕ_i or ϕ_f: [ϕ_f used for illustrative purposes]

$$FS_{sl} = \frac{(W' + P_{sv} + P_{qv}) \tan\phi_f}{(P_{sh} + P_{qh})} + c_f B_w \text{ or}$$

$$FS_{sl} = \frac{(W' + P_{sv} P_{qv}) \tan\phi_i}{(P_{sl} + P_{qh})}$$

B. For soil reinforced walls determine sliding along base length of reinforcement, i.e. the width of the reinforced zone, L, using lowest value of ϕ_i, ϕ_d or ϕ_f: [ϕ_f used for illustrative purposes]

$$FS_{sl} = \frac{W_r \tan\phi_f}{(P_s + P_q)}$$

Note: The complexity of the remaining analyses dictates that the calculations be presented on a conceptual basis only. The exact equations will not be presented, but the reader is encouraged to obtain the appropriate reference to review the entire set of calculations for each analysis.

Step 5 Determine the Factor of Safety against overturning

Determine the Factor of Safety against overturning, FS_{ot}. The tendency for the structure to rotate is evaluated by comparing the moments resisting rotation, generated by the self weight of the structure, to the driving moments initiated by the imposed lateral loads. Overturning about the toe of the structure is analyzed to protect against excessive outward tilting and distortion. A FS_{ot} greater than 2.0 indicates suitable performance.

$$FS_{ot} = \frac{\text{Moments}_{\text{resisting}}}{\text{Moments}_{\text{driving}}}$$

A. For gravity walls determine the moments resisting overturning about the toe of base width, B_W as shown in Figure 4.

B. For soil reinforced walls sum moments about the toe of the structure, along the base length of geosynthetic reinforcement, L, as shown in Figure 5.

Step 6 Determine the Factor of Safety against bearing capacity failure

Determine the Factor of Safety against bearing capacity failure, FS_{bc}. A conventional bearing capacity analysis is performed by comparing the calculated *ultimate* and *allowable* bearing pressure determined from soils testing and analysis by a geotechnical engineer to the calculated *applied* bearing stress using a conservative Meyerhof stress distribution. Generally, a FS_{bc} greater than 2.0 for gravity walls and 2.5 for soil reinforced walls is acceptable.

$$FS_{bc} = \frac{\text{Bearing Pressure}_{ultimate}}{\text{Bearing Stress}_{applied}}$$

A. For gravity walls, determine the applied bearing pressure for the effective base width, B_w after taking eccentricity into account.

B. For soil reinforced walls, determine the applied bearing pressure along the base length of geosynthetic reinforcement, L, as shown in Figure 5.

INTERNAL STABILITY

The general modes of failure for internal stability are shown in Figure 7.

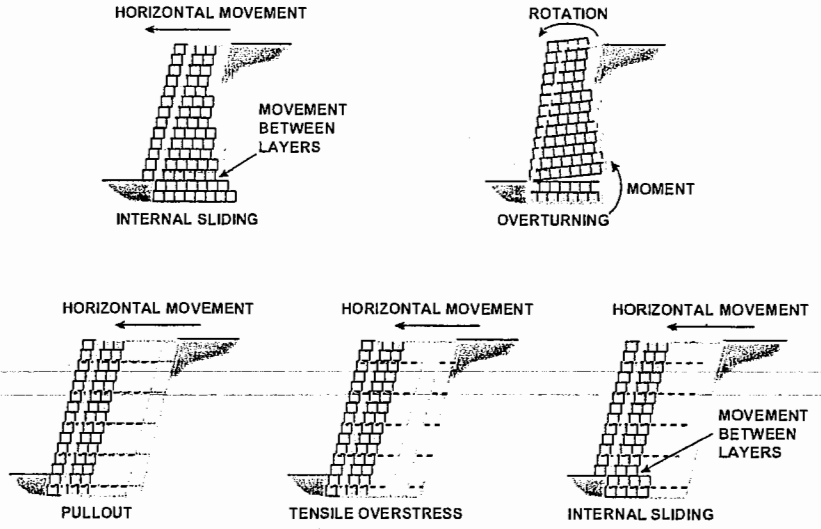


Figure 7 Internal Stability Modes of Failure

Step 7 Determine the Factor of Safety against an internal sliding failure

Determine the Factor of Safety against an internal sliding failure, FS_{sl}. This analysis is very similar to the earlier external sliding analysis, except the sliding surface exits through the Geoweb facia at some point less than the full wall height, H. It ensures that the reduction of Geoweb base width with increasing wall height for gravity walls, and increase in vertical spacing of geosynthetic reinforcement with height for soil-reinforced walls, does not create a more critical sliding surface than the full height of the structure (See EXTERNAL STABILITY, Step 4). Generally, a FS_{sl} greater than 1.5 is acceptable for design.

$$FS_{sl} = \frac{\text{Sliding Resistance}}{\text{Lateral Forces}_{applied}}$$

A. For gravity walls, determine the external applied lateral forces for each incremental height of wall, Hi, as measured from the top of wall to the bottom of each Geoweb layer. Compare that to the sliding resistance of the Geoweb base width, B'_w for that layer, as shown in Figure 4.

B. For soil reinforced walls, determine the external applied lateral forces for each incremental height of wall, i.e. the bottom of each Geoweb layer. Compare the external applied lateral forces to the sliding resistance on the geosynthetic reinforcement, plus the sliding resistance at the layer width, $B_{w'}$ where the potential failure surface may exit, as shown in Figure 5.

Step 8 Determine the Factor of Safety against internal overturning

Determine the Factor of Safety against internal overturning, $\mathbf{Fs_{ot}}$, for each incremental height H_i, using the base width B'_w at each layer level, see Figure 4. A $\mathbf{FS_{ot}}$ greater than 2.0 indicates suitable performance.

$$\mathbf{FS_{ot}} = \frac{\text{Moments}_{\text{resisting}}}{\text{Moments}_{\text{driving}}}$$

A. For gravity walls determine the moments resisting overturning about the toe of each base width, B'_w for each incremental height, H_i, see Figure 7.

This concludes the engineering analysis required for the design of gravity Geoweb walls, except for Step 16. The following analytical steps refer to soil reinforced walls only.

Step 9 Determine the design properties of the geosynthetic reinforcement

Determine the design properties of the geosynthetic reinforcement, consisting of a Long Term Design Strength **LTDS** and a coefficient of interaction $\mathbf{C_i}$. Guidelines for interpreting manufacturer supplied test data on geosynthetic reinforcement and determining design properties are provided in industry standards for geosynthetic reinforcement (Task Force 27, Christopher et. al., & Simac et. al.). The procedures for determining **LTDS** include the partial safety factors for effects of; (1) creep performance, (2) construction induced site damage, (3) chemical durability, (4) biological durability, and (5) other uncertainty factors.

Step 10 Determine the load applied to each geosynthetic reinforcement layer

Determine the load applied to each geosynthetic reinforcement layer resisting the applied lateral stress to maintain internal stability. For internal stability $K_{a'}$ is based upon ϕ_i:

B. For any selected vertical spacing of geosynthetic reinforcement, calculate the contributory area, A_c of each layer from the midpoints between layers above and below it. The applied force to each geosynthetic layer, Fg, will be equal to the average lateral stress at depth D (midpoint) of contributory area, as shown in this equation:

$$\mathbf{F_g} = (\gamma_i D + q) K_{a'} A_c \cos\beta$$

Step 11 Determine the Factor of Safety against tensile overstress

Determine the Factor of Safety against tensile overstress, $\mathbf{FS_{tos}}$. This factor of safety ensures there is sufficient allowable tensile capacity in the geosynthetic reinforcement to resist the applied force. For routine structures the $\mathbf{FS_{tos}}$ is generally considered sufficient when greater than 1.0. However, for more important structures, the $\mathbf{FS_{tos}}$ is usually increased to a minimum of 1.2. The $\mathbf{FS_{tos}}$ is calculated as:

$$\mathbf{FS_{tos}} = \frac{\text{LTDS}}{F_g}$$

B. The $\mathbf{FS_{tos}}$ should be calculated for each geosynthetic layer in the proposed reinforcement layout (vertical spacing) for soil reinforced walls.

Step 12 Determine the Factor of Safety against pullout

Determine the Factor of Safety against pullout of the geosynthetic reinforcement FS_{po} for each reinforcement layer. This factor of safety ensures that the load applied to the geosynthetic reinforcement is transferred to the soil in the anchorage zone, i.e., beyond the internal failure plane. The minimum FS_{po} generally used in design is 1.5. The FS_{po} is calculated as follows:

$$FS_{po} = \frac{AC}{F_g}$$

B. The anchorage capacity, AC for any geosynthetic reinforcement, may be calculated using its pullout properties, C_i, available anchorage length, L_a and depth to the midpoint, d, of the anchorage length as shown in the following equation.

$$AC = 2L_a C_i \gamma_i d \tan\phi_i$$

LOCAL STABILITY

Local stability analyses for the specific modes of failure shown in Figure 8, ensure that the Geoweb facia and soil reinforcement function together as one composite structure.

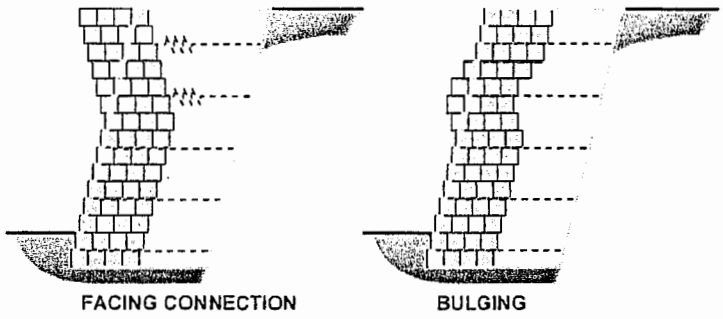


Figure 8 Local Stability Modes of Failure

Step 13 Determine the Factor of Safety against failure of the connection

Determine the Factor of Safety against failure of the connection between the geosynthetic reinforcement and the Geoweb facing, FS_{cs}. Connection strength, C_s, of MSE wall systems are typically determined through full-scale laboratory testing of the specific geosynthetic reinforcement with the MSE facing system (Bathurst & Simac). Based on the granular fills normally used with Geoweb systems, the connection will have a predominantly frictional component and thus can be calculated with a reasonable degree of accuracy. For both critical and non-critical structures a minimum FS_{cs} of 1.5 is considered acceptable.

B. Calculate the factor of safety for connection strength FS_{cs} of each layer as:

$$FS_{cs} = \frac{C_s}{F_g}$$

Step 14 Probability of bulging between layers

The probability of bulging between layers of geosynthetic reinforcement is determined by analyzing the shear capacity between Geoweb layers relative to the applied shear force. The applied shear force at the bottom of any layer is determined as the 'total lateral earth force', less the calculated applied force in the geosynthetic layers above that layer. The shear capacity S_C between Geoweb layers was determined using full scale testing (Bathurst 1987) and is available upon request.

B. The shear capacity S_C should be calculated at the bottom of each Geoweb layer. The factor of safety for shear capacity FS_{sc} is calculated as shown:

$$FS_{sc} = \frac{S_C}{\left(\text{Lateral Force}_{applied} - \sum F_{g(\text{layers above})}\right)}$$

Step 15 Maximum Unreinforced Height

B. The height of Geoweb wall above the uppermost geosynthetic reinforcement layer should be analyzed as a gravity structure to ensure adequate stability against sliding and overturning as described in calculation Step 7A and Step 8A.

Step 16 Properly designed drainage system

A properly designed drainage system is essential to good performance of Geoweb retaining walls. Generally, the granular infill used with Geoweb walls provides a good drainage media for relief of hydrostatic pressure and should be extended 300 to 600mm (12 to 24 in) behind the Geoweb sections as shown in Figure 1. If the retained soil has a finer gradation than the infill soil, it should be protected by a geotextile filter. For submerged walls, coastal structures, or sites with significant groundwater flow, a more comprehensive drainage design may be required.

Available Tools & Services

Presto Geosystems and its authorized distributors offer assistance to anyone interested in evaluating, designing, building or purchasing a Geoweb earth retention system. You may access these services by calling 800-548-3424 or 920-738-1118. In addition to working directly with you, the following information has been specifically developed and available for your use with the **Geoweb Earth Retention System**.

General Overview	Product data, basic engineering concepts and theory for general application of the Geoweb system.
Application Overview	How the system works, specific to the application area.
Case Histories	Specific project information on the design, construction and performance of the Geoweb system for all application areas.
SPECMaker® Specification Development Tool	A software tool available to develop complete material and construction specifications specific both to the application area and to details controlling the specific project.

Design Package

System Component Guideline	A set of tables relating system components to application areas.
Request for Project Evaluation	An application-specific project checklist to ensure all relevant data is collected for detailed engineering design of the Geoweb system.
Material Specification	An inclusive specification for most variations of the Geoweb material, anchoring materials, tendons, etc. See SPECMaker® Tool.
CSI Format Specifications	Comprehensive guide specification & product description of the Geoweb cellular confinement system in the standard CSI format.
Construction Specifications	Available through SPECMaker® Tool.
AutoCAD® Drawings	Drawings in DWG format and paper copy providing all the engineering details needed for plans with the Geoweb system.
Technical Overview	An application-specific, in-depth discourse centered on the theory and application of theory to solving problems with the Geoweb system.

Construction Package

Installation Guideline	An illustrated, application-specific, guideline for installation of the Geoweb system.

Other Resources

Videos	***Advancing Geotechnology*** ***Construction Techniques – Load, Slope & Channel*** ***Construction Techniques – Earth Retention***	Available in Multiple Languages
Technical Resources Library CD	All of the above and more. Requires Microsoft® Internet Explorer 4.0 and Windows® 95 minimum.	
Project Evaluation Service	Available through authorized distributors and representatives for all applications of the Geoweb cellular confinement system.	

Disclaimer

This document has been prepared for the benefit of customers interested in the Presto GEOWEB Cellular Confinement System. It was reviewed carefully prior to publication. Presto Products Company assumes no liability and makes no guarantee or warranty as to its accuracy or completeness. Final determination of the suitability of any information or material for the use contemplated, or for its manner of use, is the sole responsibility of the user.

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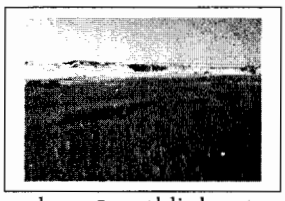

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Bob Merrill
California Coastal Commission
710 E Street, Suite 200
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May 4, 2010

SUBJECT: Bower Limited Partnership Permit Amendment 1-83-270-A1

Dear Mr. Merrill:

I would like to submit the following comments on the staff report recommendations for the proposed Bower Limited Partnership replacement of a retaining wall and septic tank, and installation of new drainage. I incorporate by reference my previous comments to the Coastal Commission and Mendocino County Planning Department (letters dated January 8, 2007 and November 16, 2007, covering CDP #55-2006, Gualala, Mendocino County: Bower Ltd. Trust, Bower Ltd. Partnership (agent: Rau and Associates); proposed Gualala Bluff concrete block retaining wall multiple CEQA and Coastal Commission policy issues.

The current permit (1-83-270-A1) appears to be a segment of the previous proposal, breaking out the replacement of the wooden retaining wall that was installed. I have already expressed my concerns about improper project segmentation (piecemealing) in my January 8, 2007 letter, in relation to the larger Surf Center development. The current permit is narrowly focused on the replacement of the failed slope stabilization and its consequences for a septic tank and drainage. While I have concerns about the validity of the original CCC authorization for fill and slope stabilization, which was solely for the purpose of accommodating the intrusion of buildings into the CCC-required setback in the 1980s (see staff report p. 2) – in effect, building a buffer into the sensitive coastal bluff and estuary margin habitat to compensate for the building footprint overstepping its authorized boundary – I believe the past and present deficiencies in the piecemealed replacement project can and should be mitigated.

The CCC staff-proposed mitigation measures are aimed at re-establishing appropriate native coastal bluff vegetation to reinforce stabilization of the geoweb-treated bluff slope

reconstructed above the previous debris flow. This is an appropriate objective if the project is authorized. However, the likelihood of success at establishing dominance of native coastal scrub vegetation on the extremely steep slope in the current setting is low, and the likelihood of persistent weed dominance is high. There are three main contributing causes for the probable re-invasion and persistent dominance of weeds in the treated area:

- Introduction of abundant weed seed banks in imported fill, in the absence of a permit condition that requires imported fill with both suitable physical and biological characteristics (negligibly small weed seed banks, storage of stockpiled fill in weed-excluding conditions). Most imported construction fill either contains, or acquires, weed seed banks due to weed prevalence in borrow area or stockpile areas.
- Abundant weed seed dispersal from adjacent and nearby coastal bluff and disturbed urban-rural interface lands (high colonization potential)
- Conventional weed control measures (manual removal) maintain vegetation disturbance gaps that favor recruitment and establishment of weeds, such that short-term weed cover reduction causes or contributes to long-term weed persistence.

The first cause of weed invasion (seed bank import in fill) can and should be mitigated by a requirement to obtain fill with minimal weed seed. The second cause of weed invasion (dispersal from proximate seed sources) can and should be mitigated by protection and enhancement of the adjacent old native/non-native mixed vegetation within the applicant's control and ownership. The weed abundance on the remaining segment of the bluff has been adversely affected by gully erosion that is directly related to concentrated past runoff (improper drainage) and point-source drainage discharge to the Gualala River lagoon/estuary from the applicant's unimproved dirt parking lot. Weed seed dispersal curves typically are asymptotic – exponential decrease in seed rain with distance – so there is scientifically sound basis for focusing weed mitigation conditions on the adjacent bluff vegetation. The conventional permit condition approach of weed mitigation, weed cover reduction (such as manual removal) is often counter-productive because it maintains disturbed soil gaps favorable for weed regeneration.

It is conventional to balance uncertain compensatory mitigation (replacement of impacted natural resources) with mitigation based on protection and enhancement of existing in-kind habitats with higher probability of conservation success, especially when protection and enhancement measures substantially improve the likelihood of compensatory mitigation success. I recommend that any conditions of authorization include a mitigation measure requiring protection and enhancement of the adjacent coastal bluff scrub that includes degraded (weed-invaded) but valuable mature, old coastal bluff scrub. This measure should include long-term implementation of a scientifically sound, appropriate weed management program. Note that this condition would also fully mitigate the impacts of project segmentation on coastal bluff resources.

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Two of the staff-proposed mitigation measures, despite valid aims, contain deficiencies with regard to vegetation management. Condition 6 requires failed plantings "**replaced no later than May 1st of the next spring season in-kind or with another native species common to the coastal Mendocino County area**". May 1 is not an appropriate cut-off date for successful transplanting of native shrubs. Native coastal scrub establishment with high survivorship depends on root growth during the entire wet season, and mortality risk increases with planting later than the first soil-wetting rains, especially in dry winters. Transplanting of replacement shrubs should occur no later than January 1 most years. The other planting condition (7) mistakenly assumes that local provenance transplant stock may be "available" rather than custom-grown in advance for a particular project. This is not the case for the native plant nursery industry: custom propagation is the norm for projects outside major restoration planting markets. Regional native stock is maintained only for areas of high commercial demand (particularly in slow economic times), so remote North Coast stock would normally be produced on contract for a particular project. The condition (7) should require custom propagation of local (southern Mendocino Coast/Northern Sonoma Coast; preferably from the site itself) transplants.

The vegetation design for the slide area needs to emphasize shrubs that can spread rapidly and dominate the cover, leaving no gaps for the gap-colonizing broadleaf weeds that dominate now. *Garrya*, *Rhamnus* (slow-growing) can be included, but without a matrix of blackberry, coyote-brush, ceanothus, and other fast-growing spreading shrubs, weeds will perpetuate. They should be planted at fairly high density to ensure rapid closure of the canopy. A pre-emptive competitive weed strategy including a cover crop (hydromulch seed of fast-growing competitive native annuals) should be applied in fall after installation to provide ample competition with weed seedlings. Seeds should be custom-propagated from local sources, otherwise hydroseeding will result in an aberrant landscape of S and Central California commercial bulk seed typical of CALTRANS-maintained roadsides.

The eventual repeated slope failure on the oversteepened, artificial slope appears likely as sea level rises and extreme storm wave erosion events undermine the slope from the base of the cliff below. Geoweb does not protect against undermining from below; the photo below is an example of geoweb failure at Half Moon Bay coastal bluffs where bluff erosion processes are controlled by wave undermining of a weakly consolidated sandstone marine terrace. The geoweb is left dangling after it is undermined. The Commission should condition the permit so that managed retreat and building relocation to a defensible distance back from the bluff edge, not artificial fill replacement, follows the next episode of inevitable slope failure at this unstable point.

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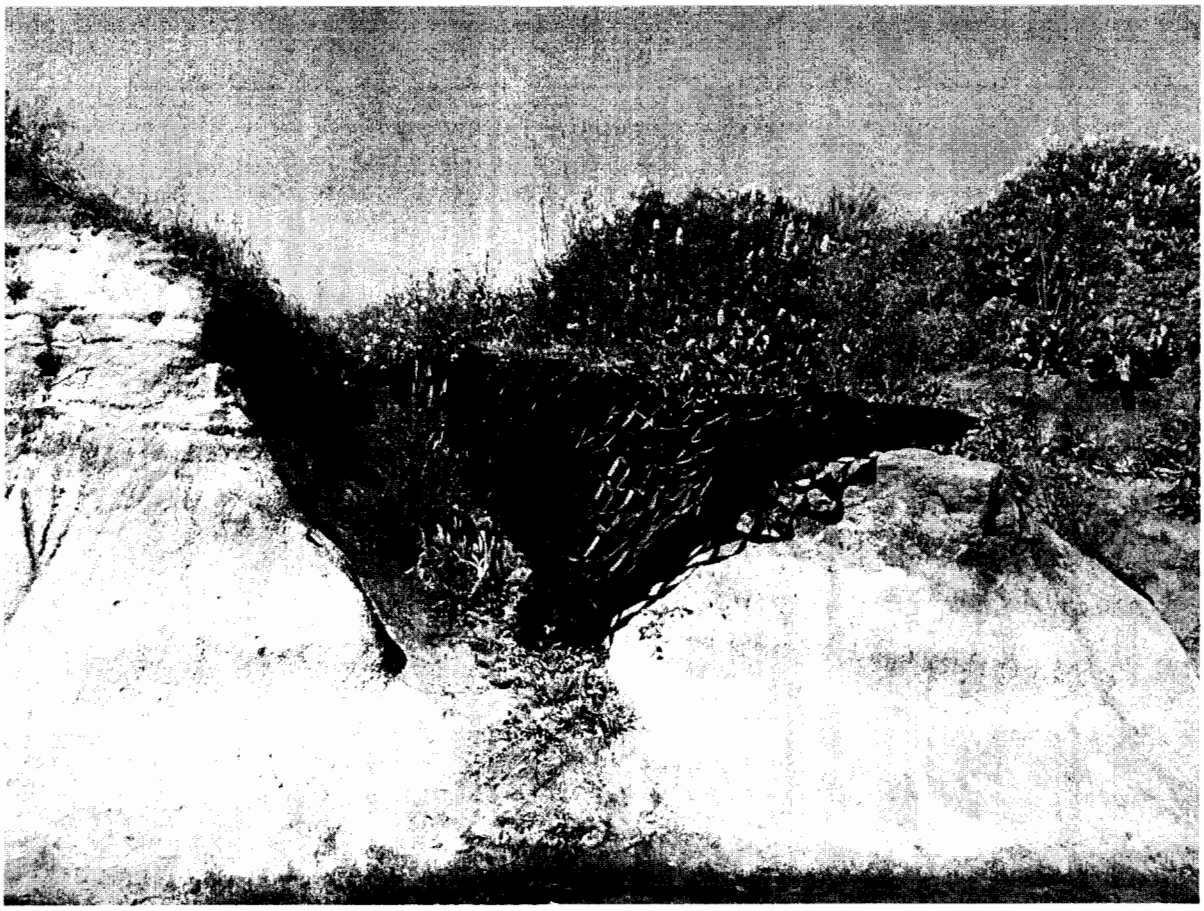

Example of geoweb failure at Half Moon Bay coastal bluffs (2009) where bluff erosion processes are controlled by wave undermining of a weakly consolidated sandstone marine terrace.

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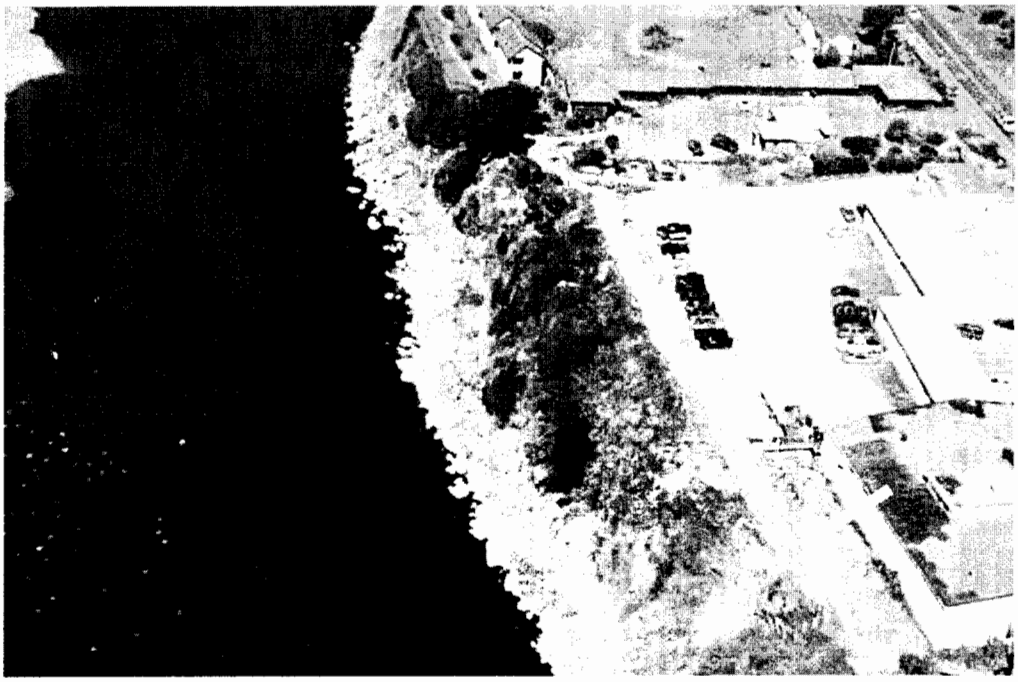

Oblique aerial view of the Bower project site (2007). Yellow arrow: location of slope failure; dashed red line indicates bluff armored at toe by natural bedrock slab-boulders, with mature coastal scrub soil and vegetation on the bluff face invaded by weeds, especially in areas of gully erosion caused by concentrated flow from parking lot runoff. Dominant onshore winds transport weed seed from the bluff vegetation to the proposed slope failure repair site.

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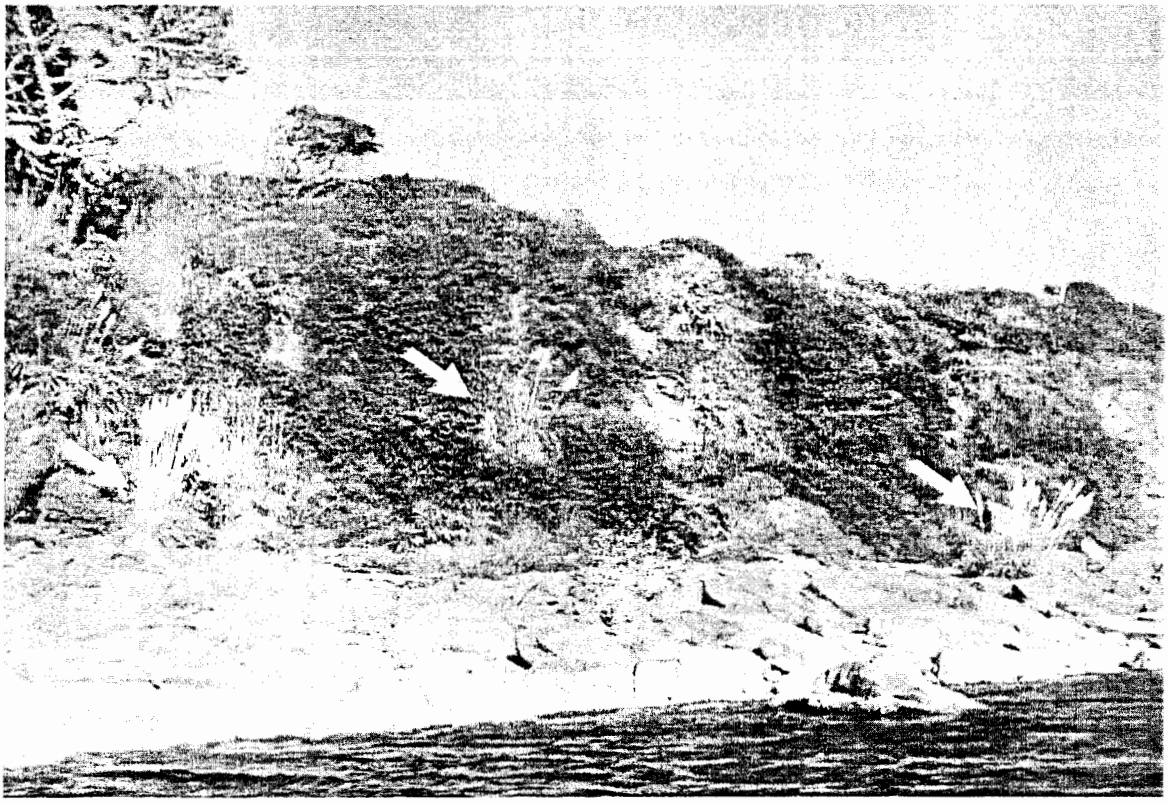

Weed seed sources of noxious non-native invasive species (including wind-dispersed jubata grass, *Cortaderia jubata* [yellow arrows], the remaining segment of the bluff west of the proposed slide repair site have been adversely affected by gully erosion that is directly related to concentrated past runoff from the unimproved dirt parking lot. Other weeds also built up populations along the parking lot edge prior to bluff trail improvements. These weed sources should be controlled in perpetuity to minimize risk of weed invasion in the disturbed soils of the proposed slide repairs.

If the Commission approves the proposed project, I recommend that the permit conditions be revised to incorporate the mitigation measures I have analyzed and suggested.

Respectfully submitted,

Signature on File

Peter R. Baye, Ph.D.

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Wednesday Item 16 a
Approve with Conditions

May 4, 2010

Robert Merrill and Commissioners
California Coastal Commission
North Coast District Office
710 E Street, Suite 200
Eureka, CA 95501
Fax (707) 445-7877

Re: Permit Amendment No. 1-83-270-A

Dear Mr. Merrill and Commissioners:

This permit amendment is to replace a failed retaining wall, move a tilting septic tank, relocate a propane tank, and add drainage improvements and treatment for water during the rainy season. If approved, all of these changes will impact a section of the Gualala Bluff Trail, a portion of the California Coastal Trail. I am writing as a frequent user of this trail. I have volunteered many hours helping to build, maintain, and monitor the trail so have had many opportunities to talk to members of the public who use the trail and have a good understanding of the issues involved. This letter reflects my opinions as an individual and a strong supporter of the trail.

The Redwood Coast Land Conservancy (RCLC) has a vested CDP for the trail, but most of the trail on this section has not been completed since in the lawsuit settlement RCLC agreed to wait until the retaining wall was replaced. Trail improvements are a gravel path, a drainage ditch, and a ramp with a few railroad tie steps to a crossing over the stream between the Bower property and the adjacent property. Before approving this permit amendment, conditions need to be added to protect the trail. The amendments to this permit were planned to facilitate future development shared with the community but not included in the permit that show expansion of the Market west towards the trail easement and a retaining wall to span the entire property in order to maximize parking on the adjacent parcel.

ESHA

The riparian area of the Gualala River is designated an ESHA in the certified Gualala Town Plan. The LCP states that the buffer area for the ESHA should be measured from the nearest outside edge ("for a stream the landward edge of the riparian vegetation or the top of the bluff"). The retaining wall will be built in the ESHA/ESHA buffer area. The amendment for the original retaining wall did not include any plan to restore vegetation that was lost when the Market was constructed or to contain the weeds on the non-engineered fill. The slide area and the area around it is now badly degraded and the trail easement and the adjoining area a field of weeds dominated by Cape Weed. Replacement of the wall is an opportunity to revegetate the bluff so that the appropriate riparian

vegetation is restored as much as possible and to control the weeds. This will make for a much improved trail experience for the public and less ongoing maintenance for RCLC. Special conditions no. 3 and 4 require that native species compatible with this Northern coastal scrub habitat be planted in the outer cells of the Geoweb wall and be maintained and a plan for restoring the bluff face be reviewed and approved before construction can begin. The botanical report suggests many specific shrubs that need to be included and also addresses weeds to be eradicated. An additional condition needs to be added that includes weed management and provides funding to ensure that the plantings will be maintained and monitored and weed eradication continue until plantings are established.

Drainage and Treatment of Water
Drainage was not adequately addressed with the previous retaining wall, which along with the lack of maintenance, led to its failure. A simple drain that collects water before it reaches the bluff has prevented further slides in this area since 2006 until a more permanent solution could be approved. Treatment of the water before it enters the estuary is important, but RCLC needs to be included in the plans for where this system will be if it is necessary for it to be on the trail easement.

Relocation of the septic interceptor tank
An interceptor tank was located too close to the bluff edge, probably without a permit since placement so close to the edge would be inconsistent with the LCP. It is now tilting and needs to be relocated to protect the estuary/lagoon. This application moves it to the trail easement behind the Market. There was no site analysis to determine where it should be relocated. There are other interceptor tanks adjacent to the trail easement or in a few cases on the easement that were in place before the trail was constructed. Only two of them, this one and the one on the adjacent parcel, are covered by concrete pads so that vehicles can drive over them. This is not only very unattractive, but it also means that the area around them often has standing water during the rainy season. This is an opportunity to move the tank off the easement. The setback area between the trail easement and the Surf Market may not have been considered because of the future plans for the Market to be expanded to the west. There needs to be a setback between the trail and the Market and in any event the trail is floating behind the Market and an expansion of the Market west should not be allowed. The staff report leaves the location of the septic tank up to the applicant and it should not be placed on the trail easement.

Relocation of the propane tank
There has been no justification for the relocation of the propane tank to the trail easement. A plan to bury it is a good one, but it should remain in the setback area further from the bluff and not interfering with the use and enjoyment of the trail when it is maintained. This permit does not address where it is to be relocated, but the application subject to the de novo hearing shows it located on the trail easement on the other parcel. Relocating the propane tank on the easement should be denied.

Garbage and Trash Issues
Garbage disposal issues from the Surf Market dumpsters adjacent to the trail should be addressed in this permit. In the lawsuit settlement RCLC and Bower Limited Partnership

(BLP) agreed to work cooperatively toward a solution, but a solution has not been found. As the public walks this portion of the trail they are exposed to unpleasant odors coming from the dumpsters. Trash falls out when the dumpsters are emptied twice a week. On the frequent windy days, it is especially bad as trash blows all along the trail and on to the bluff. Some of it accumulates behind the Market. Trail monitors consistently report the most trash in this section of the trail. Where the dumpsters are located next to the trail easement blocks the entry to the set back area between the easement and the Market. If maintenance on the Market is needed (painting, fixing the roof), trucks have to drive on the trail easement to get to the set back area. Once the trail is completed, emptying the trash under the current configuration will be more difficult since bollards will have to be removed each time the trash is collected so that the large trucks can access the dumpsters and drive on a portion of the easement. Moving the trash enclosure which is now a barrier to servicing the property could keep vehicles off the easement and adding a trash compactor would prevent trash from blowing out as it would be picked up intact instead of being emptied. If this is not part of this permit, it is unlikely that a solution will be found until the Market is expanded at a much later time. A condition should be added to correct this problem.

Replacing the wall

Attachments to the staff report show a redesign of the trail by the applicant, a design that does not closely follow the vested CDP for the trail which routed the trail away from the bluff which was considered unstable at the time the CDP was approved (before the retaining wall failed.) Special condition No. 3 in the staff report attempts to address this to a degree by asking for a redesign of the end wall on the southern end of the subject parcel to conform more closely with the CDP for the trail. A condition should be added that restores RCLC as the organization in charge of the design for the Gualala Bluff Trail. Consultation between BLP and RCLC on the plan is to be encouraged, but RCLC should remain in charge of the trail easement. The applicant has not been supportive of the trail and attempted in a lawsuit to stop it from being constructed and to limit the trail improvements. Creating a more attractive part of the trail behind the Surf Market is more likely if the group in charge of maintaining and monitoring it retains control of its design.

Adding conditions and denying a portion of the application would make it possible to approve this amendment.

Sincerely,

Signature on File

Mary Sue Ittner
P.O. Box 587
Gualala, CA 95445

May 5 2010

North Coast District Office
Bob Merrill, District Manager
710 E Street, Suite 200
Eureka, CA 95501
(707) 445-7833 or
(707) 445-7834
FAX (707) 445-7877

Re: Permit Number 1-83-270-A1 Bower Limited Partnership

Mr. Merrill,

I am writing to express my complete agreement to allow Mr. Bower to save not only his retaining wall since he is the property owner, but his timely actions, along with his financial resources to complete this project at no cost to the Great State of California or It's people is a blessing. I would note his efforts will allow future generations of California's to preserve and enjoy a view shed that is second only to mine.

I lived in Pacific Grove, Ca for 14 years and managed inns in Carmel, I know first hand that this Geoweb works. The name "Carmel by the Sea" was not a mistake, but a careful plan to enhance, save and rejuvenate a California treasure, it's coastline. That is why it will never be called "Carmel in the Sea".

While I no longer live in that area and have now placed all of my preverbal financial eggs into the ownership of the Surf Motel at Gualala, I must say that my motives are selfish. I have one of only a few allowed retaining walls on the river. My greatest fear is that I will not be able to protect my seawall if any portions of Mr. Bowers fail.

Driving the coast is one thing, getting out of your car and walking it " priceless "

"Gualala by the Sea", yes it has a ring to it, wont you agree.

I would also plead and pray that Mr. Bower be allowed to find new points west on his property and restore it to allow new vista points, ones like mine. I see on a daily bases the photo shots taken at the far west end of my property. I feel, should Mr. Bower get an opportunity to find new points west or several new points along the trail, that the coastal commission will be praised.

I am at your mercy and will be the greater recipient of the commission grace if this project is allowed to proceed.

Respectively

Signature on File

Eric R. Cogdill
Owner Surf Motel

California Native Plant Society
Dorothy King Young Chapter · P.O. Box 985 · Point Arena CA 95468

May 6, 2010

Wednesday: Item 16 a
Approve with Conditions

California Coastal Commissioners
Robert Merrill, District Manager
California Coastal Commission
North Coast District Office
710 E Street, Suite 200 FAX: 707-445-7877
Eureka, CA 95501

Re: Permit Amendment No. 1-83-270-A (Mendocino County, Bower Limited Partnership)

Dear Commissioners and Mr. Merrill:

The Dorothy King Young Chapter of the California Native Plant Society (CNPS) would like to offer the following comments on this project.

Scope of Comments
These comments focus on actions likely to have a negative impact on native vegetation, or that could set precedent for future projects that would negatively impact native vegetation. Impacts to be avoided may be direct, indirect or cumulative.

Soil Issues
CNPS supports repair of the slide behind the Surf Supermarket in a low-impact manner. Specific locations subject to slides and debris flows should be dealt with individually, which is why CNPS supports replacement of the original retaining wall that was allowed to fail.

Rather than attempting to "stabilize" the improperly placed, alien fill soil on the blufftop, CNPS recommends that this fill material be removed altogether. Any new fill needed in the course of repairing the old retaining wall should be weed-free and compatible with the native soil.

CNPS remains concerned about the use of a GeoWeb structure to re-establish native plants. It has never been clear how locally compatible, weed free soils for the GeoWeb cells would be obtained. Nor is it clear that the GeoWeb cells are appropriate for growing woody, deep-rooted plants.

Any comparative examples using GeoWeb should be projects with soils similar to our local soils. The Monterey County comparison project cited by the developer apparently has granitic soils, very different than our local soils.

It appears that the Geoweb could fail if the slope failure occurs from below the slump or debris slide. The Geoweb material would be undermined and left dangling – not good for native plants. Is the project proponent liable for repairing damage, should such an event occur?

Vegetation and Mitigation
The adjacent bluff parcel contains mature, woody native vegetation, which should guide revegetation efforts on the parcel behind the Surf Supermarket. Note that native bluff plants

(unlike some introduced plants such as iceplant) tend to have extensive, woody roots that help to hold the soil together and prevent erosion.

CNPS would like to see proper, long term management of vegetation on the site. This is of greater concern than damage from hypothetical, future debris flows.

Plant choices for re-vegetation and vegetation management protocols should be approved by the Coastal Commission. Decisions about re-construction and re-vegetation of the Gualala Bluff Trail should be managed under the aegis of the Redwood Coast Land Conservancy, the organization that holds the easement on the Bluff Trail.

Activities associated with Permit Amendment No. 1-83-270-A will have impacts that require mitigation. Such mitigation measures should include the adjacent bluff parcel owned by the applicant. The entire 285-foot reach on the applicant's land should be preserved, appropriately re-vegetated, and placed under a control program for invasive weeds.

For the parcel behind the market, local native plant species could help control weeds and erosion, while enhancing ecosystem functions on the bluff. This project would benefit from a "pre-emptive" weed control strategy using low, spreading native shrubs as barriers.

Such an approach would focus on shrubs that can spread and cover ground quickly, leaving no openings for gap-colonizing invasive weeds. Coyote brush, CA blackberry (*Rubus ursinus*), *Ceanothus gloriosus*. Planting them fairly close together will allow for rapid establishment of a dense, weed-smothering canopy.

It might also be advisable to utilize seed of fast-growing competitive native annuals, applied via hydromulch, fall after installation. Seeds should be obtained from north coast sources.

Silk tassel is slow-growing, so should be included, but within a matrix of blackberry or coyote-brush to help smother out weeds. Other woody plants could include *Ceanothus griseus*.

Project activities should retain as many existing mature, native shrubs, such as silk tassel, blue blossom and coyote brush, as possible. Plantings should also utilize native shrub species already on or close to the site.

Remove jubata grass (*Cortaderia jubata*) and pride of Madeira (*Echium* sp.) from the toe of the bluff and anywhere else they occur, replacing them with native shrubs

Eradicate macro-invasive species such as Himalayan blackberry, Capeweed, greater periwinkle, jubata grass, ice plant and pride of Madeira. Annual or biennial weeds like poison hemlock , teasel and alien thistles remain standing after they have died, presenting a fire hazard, so these should also be controlled. Wild radish and grasses like Harding and velvet grass will move into vacancies left by removal of larger weeds, so control is needed for these as well.

Conclusion

While CNPS has opposed many aspects of the proposals for both the applicant's parcels, our

members can still support some of the broader goals of the applicant, such as opening up coastal views.

CNPS comments are aimed at ensuring due process, so that coastal project applications are analyzed and permits issued in a manner consistent with the language and intent of the Local Coastal Plan.

We appreciate the diligence of the Coastal Commission staff in carefully considering all aspects of this project in the context of the California Coastal Act.

Sincerely,

Signature on File

Lori Hubbart, Chapter Conservation Chair
California Native Plant Society
Dorothy King Young Chapter

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ALAN ROBERT BLOCK
JUSTIN MICHAEL BLOCK

SENDER'S E-MAIL
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May 7, 2010

California Coastal Commission
710 E Street, Suite 200
Eureka, California 95501

Re: Coastal Development Permit No. 1-83-270-A (Bower Limited Partnership)

Project Description: Amend the existing permit to allow for the (1) replacement of a 70 foot long wooden retaining wall with an approximately 105 foot long "Geoweb" retaining wall extending across the subject property with an approximately 30 foot long concrete block wall at the southern end of the retaining wall; (2) installation of 118 linear feet of 12 inch storm drain with a storm drain manhole; and (3) replacement of an existing underground septic tank.

Scheduled: May 12 , 2010
Agenda Item: 16(a)

Dear Commissioners:

This office represents the applicant, Bower Limited Partnership ("BLP"), with regard to the pending amendment to a previously issued coastal development use permit ("CDP") to replace a wood retaining wall that was destroyed in a landslide that occurred in the winter of 2005-2206. The resulting slide scarp is over steepened and unstable and threatens the bluff edge where a public access easement exists. The amendment request was submitted to comply with the requirements of the originally issued CDP. The replacement of the destroyed wood retaining requires the relocation of an existing septic tank and the installation of drainage improvements. The property is located in the commercial area of Gualala along the east side of the Gualala River Estuary, in the southern County of Mendocino County.

Staff is recommending approval of the project with numerous special conditions, including, but not limited to, (1) submitting a revised Soil and Stabilization Plans requiring with numerous sub-category requirements; (2) submitting a Northern Coastal Scrub Habitat Restoration Plan with numerous sub-category requirements; (3) approval of color of Geoweb material; (4) Best Management Practices and Construction

Responsibilities with numerous sub-category requirements; (5) the recordation of a deed restriction against the property delineating all conditions of approval; and (6) permit compliance and conditional compliance.

The applicant has agreed to all recommended special conditions of approval with the exception of Special Condition Nos 3A(1); 3 A(6) and 4A(1)(vii).

Recommended Special Condition No. 3A(1) now provides as follows:

> "The Geoweb retaining wall shall be aligned such that the seaward edge of the top of the wall conforms to the existing slope break. The approved drainage improvements and septic tank shall be repositioned as necessary to accommodate the required realignment of the approved wall."

The proposed location of the geoweb system was designed to both recapture the 7 to 10 feet that were lost in the landslide of 2005-2006 and provide sufficient area for the new drainage system and septic tank relocation with the minimum amount of landform alteration. Although we understand that the Commission is concerned with maintaining the "natural contours" the recommended condition will NOT achieve this result. The applicant requested his engineer, George Rau, to design the least impacting fix possible. A fairly straight line to lay the geoweb system, and for the most part, that is what you have in this location, except for the slide area, which must be backfilled. Special Condition 3A(1) as recommended by staff will require that a substantial amount of existing earth be removed landward in order to both conform to the slide area and reposition the proposed drainage system and septic tank replacement. This will reduce the setback to the Surf Supermarket which was supposed to be achieved by the original settlement, preserving a corridor for the trial easement as well as a functional area to maintain the building at the rear of the market. For this reason, to achieve the intent of the original approval for the retaining wall, the applicant strongly contends that Special Condition No. 3A(1) should be modified to assure that the wall is constructed in its original location prior to the landslide.

Recommended Special Condition Nos. 3A(6) now provide as follows:

> "All plantings on the face of the Geoweb retaining wall shall be maintained in good condition throughout the life of the project to ensure continued compliance wit the approved final landscaping provisions of the plans. If any trees and plants to be planted die, become decadent, rotten, or weakened by decay or decease, or

> are removed for any reason, they shall be replaced no later than May 1st of the next spring season in-kind or with another native species common to the coastal Mendocino County area that will grow to a similar or greater height"

The purpose of Special Condition 3A(6) is to screen the visual effects of the Geoweb wall from the Gualala Point Regional Park. As worded, Special Condition No. 3A(6) requires that if ANY trees and/or plants die, become decadent, rotten, or weakened by decay or decease, or are removed for any reason, they must be replaced regardless of any visual effects of their death or removal. The applicant merely requests that the recommended special condition be reworded to only require replacement of trees or plants wherein the remaining trees or plants do not provide adequate screening to the park.

Recommended Special Condition No 4A(1)(vii) similarly provides as follows:

> "All plantings shall be maintained in good condition throughout the life of the project. If any of the plants to be planted die, die, become decadent, rotten, or weakened by decay or decease, or are removed for any reason, they shall be replaced no later than May 1st of the next spring season in-kind or with another native Northern coastal scrub species."

Similar, to Special Condition No. 3A(1), the purpose of Special Condition No 4A(1)(vii) is to screen the visual effects of the Geoweb wall from the Gualala Point Regional Park. As worded, Special Condition No. 4A(1)(vii) requires that if ANY trees and/or plants die, become decadent, rotten, or weakened by decay or decease, or are removed for any reason, they must be replaced regardless of any visual effects of the dead or otherwise removed trees or plants. The applicant merely requests that the special condition be reworded to only require replacement of tree or plants when the remaining trees or plants do not provide adequate screening to the park.

The Proposed Retaining Wall is Consistent With Applicable LUP Policies

The Coastal Act provides, first and foremost, the measure of a project's consistency with the State's goals regarding coastal resources. Therefore, before even reaching the issue of the consistency of the proposed retaining wall with applicable LUP policies, consideration should be given to the Coastal Act itself. Public Resources Code §30253 relevantly provides:

"New development shall:

* * *

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

* * *

(5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

The proposed retaining wall serves multiple, legitimate, authorized purposes, including but not limited to (1) compliance with Special Condition No. 1 of the original CDP which requires protection of the existing public access easement; (2) the preservation of the natural bluff slope; (3) the protection and relocation of the existing septic tank and ; (4) the optimization of proposed drainage facilities to be constructed near the edge of the bluff.

Public Resources Code §30251 provides, in relevant part:

"Permitted development shall be sited and designed to . . . minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas."

The proposed Geoweb wall as designed merely attempts to recapture the 7-10 feet of the western most bluff top lost in the winter 2005-2006 landslide. The placement of the wall as designed allows the construction of the Geoweb improvements, with necessary drainage improvements and septic tank replacement, without having to do substantial grading and excavation on the remaining bluff top area which will reduce ground disturbance closest to the existing trail and buildings. If the wall must be realigned as currently recommended in Special Condition No. 3A(1), landward of the slide area which will be backfilled, additional ground disturbance will be necessary to relocate the existing septic tank and install the necessary drainage improvements. This

will not minimize land form alternation and not be consistent with the intent of the Coastal Act.

Public Resources Code §30251 protects visual resources. Recommended Special Conditions Nos. 3A(6) and 4A(1)(vii) can do so adequately without requiring the replacement of EVERY single tree and plant which dies, or must otherwise be removed. Replacement of trees and plants should only be required when the screening of the wall from the park, or other public viewing areas, is not adequate

The applicant respectfully requests an approval as recommended by staff with modification to Special Condition Nos 3A(1), 3A(6) and 4A(1)(vii) as proposed above.

Thank you for your consideration, courtesy and anticipated cooperation.

Very truly yours,

LAW OFFICES OF
BLOCK & BLOCK
A Professional Corporation

ALAN ROBERT BLOCK

ARB/cw

cc: Commissioners
Bob Merrill
John Bower
George Rau

REDWOOD COAST LAND CONSERVANCY

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P.O. Box 1511, Gualala, CA 95445-1511 • (707) 785-3327 • email: rclc@mcn.org • www.rc-lc.org

Wednesday Item 16a

May 7, 2010

RECEIVED
MAY 10 2010
CALIFORNIA
COASTAL COMMISSION

California Coastal Commission
Robert Merrill, District Manager
North Coast District Office
710 E Street, Suite 200
Eureka, CA 95501

Re: Permit No. 1-83-270-A (Bower Limited Partnership, Mendocino Co.)

Dear Commissioners and Mr. Merrill:

Redwood Coast Land Conservancy (RCLC) is pleased that the Coastal Commission will be considering Permit No. 1-83-270-A on May 12, 2010. As the steward of the Gualala Bluff Trail, RCLC has a strong interest in having this issue resolved.

RCLC agrees in principle with the staff recommendation that Bower Limited Partnership (BLP) be allowed a permit with conditions to build a Geoweb retaining wall to replace the wooden wall which failed in 2006. Replacement of the retaining wall on parcel APN 145-261-05 will enable RCLC to complete an unfinished segment of the Gualala Bluff Trail and to connect it with the already completed portion of the trail south of the area where the wall failed.

As outlined in previous correspondence, RCLC requests that certain conditions be placed on the permitted construction to facilitate the building of the trail and to minimize any negative impacts on public access, use and enjoyment of the trail.

RCLC concurs with the requirement that BLP submit a full soil stabilization and drainage improvement plan for review by the Executive Director and recognizes that this process will necessarily be lengthy. RCLC's principal concern is that once the necessary approvals are obtained and construction begins on the replacement wall, the public's access to the completed portions of the trail will be negatively affected, potentially for a considerable period. Our concern is heightened by the fact that the trail is a vital link in the California Coastal Trail in Mendocino County.

The staff report notes the requirement in the settlement agreement that the trail be replaced "expeditiously". RCLC would prefer that BLP, in consultation with RCLC be required to establish a reasonable set time frame for the construction phase for building the wall and other improvements and for replacing trail sections impacted by construction. In this way, negative impacts to public access would be minimized.

The staff report also notes that BLP will be required to replace "in-kind" and "expeditiously repair at its own expense" any part of the trail that is damaged. As the steward of the trail, RCLC wishes to maintain control of the design and construction of the trail and would therefore like it stipulated, in addition, that any replacement or repair be done under the direction of and/or with the concurrence of RCLC regarding design, placement and materials used.

As RCLC has expressed in previous correspondence, we have several concerns about how the proposed retaining wall replacement will impact the design of the trail and surrounding area and the public access to and enjoyment of the trail:

• As holder of the Mendocino County CDP No. 23-03 for the Gualala Bluff Trail, RCLC is responsible for the development and maintenance of the trail. Although the language under Special Conditions requires that the wall be designed "in a manner consistent with the CDP" granted to the RCLC for the construction of the public access trail, there is no explicit requirement that RCLC have the opportunity to review and comment on the design of the wall and its potential impact on the building, use and maintenance of the trail. We therefore ask that BLP be explicitly directed to consult with RCLC when developing its proposed plan for replacing the retaining wall to make certain the plan is consistent with the CDP and will meet the needs of the public access trail and its ongoing maintenance, which will be RCLC's continuing responsibility.

• The staff report recommends that the wall follow the natural slope of the bluff edge rather than using fill to extend it westward. This recommendation is in keeping with RCLC's plan to build a trail with a natural feel rather than one with concrete walls and steps as submitted by BLP. We therefore request that BLP redesign the southern end of its proposed retaining wall to enable the trail to naturally follow the terrain as it currently does. Such a design would be more aesthetically pleasing and safer to traverse than a set of steep concrete stairs and would provide much easier access for wheelbarrows and other tools and equipment needed to maintain the trail.

•RCLC would also like to make certain that some form of safety barrier be designed along the wall to discourage people from approaching the bluff edge. The design should minimize impacts on the currently unobstructed views from the trail of the watershed. We would also like to work with BLP to preserve several large native trees and shrubs that might otherwise be removed during the construction of the wall.

• The staff report recommends approval for replacing the abandoned septic tank currently located in the trail easement. RCLC requests that BLP be directed to relocate the septic tank and other tanks and slabs outside the easement to provide a more aesthetically pleasing experience for trail users. As the staff report notes, the original CDP for construction of the Surf Supermarket did not authorize any structures or materials in any portion of the easement.

• RCLC also asks that BLP be directed to relocate permanently the Surf Supermarket's garbage and recycling containers away from the trail to eliminate the negative effect that litter and unpleasant odors currently have on the enjoyment of the trail. By addressing this nuisance, BLP would meet its commitment under the settlement to resolve the garbage problem.

RCLC appreciates the Commission's consideration of the concerns we have outlined in this and previous communications regarding the replacement of the retaining wall and its possible impact on the Gualala Bluff Trail. Representatives from our organization will be available at the May 12th hearing to provide further information on these issues of concern.

Signature on File

Laurie Mueller
President

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May 5, 2010

To Robert Merrill and Commissioners
FAX: 707-445-7877

RE: Item **W 16a** for May 2010

We noticed that the two attachments to our March 30, 2010 were not included with that letter.

We ask you to please add the following 8 pages to the record. These are copies of the 11/14/07 Letter to Mendocino County Planning and the 8/21/08 Letter to California Coastal Commission (Merrill).

Thank vou.

Signature on File

Bob Rutemoeller
RCLC Treasurer

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November 14, 2007

Raymond Hall, Coastal Permit Administrator
Teresa Beddoe, Project Coordinator
Mendocino County Planning and Building
790 South Franklin Street
Fort Bragg, CA 95437

Re: CDP #55-2006, Gualala, Mendocino County
Applicant: Bower Limited Partnership

Dear Mr. Hall and Ms. Beddoe:

As stewards of the public access easement and Gualala Bluff Trail affected by the referenced permit application, Redwood Coast Land Conservancy ("RCLC") appreciates your consideration of our views in this important matter.

In the Settlement Agreement, dated February 16, 2007, between Bower Limited Partnership ("BLP"), John H Bower, Redwood Coast Land Conservancy, and the California Coastal Commission, RCLC agreed not to oppose the applications for a coastal development permit by BLP for retaining walls but did reserve the right to comment, without limitation, on impacts of the proposed retaining walls on public pedestrian access and enjoyment of the easements created on the subject parcels. Accordingly, as permitted by the Settlement Agreement, we want to take this opportunity to express our great concerns, as set forth below, about the potential impacts of the proposed retaining wall.

Before addressing those impacts, RCLC wishes to state that the Gualala Bluff Trail does not require the protection of the proposed, or any, retaining wall, since the legal document that conveys and defines the easement allows it to move, if necessary, in response to movements in the "daily bluff edge". We emphasize this point because protection of the Bluff Trail is cited in the Staff Report as a principal justification for allowing the proposed retaining wall.

Impacts of Proposed Retaining Wall on the Use and Enjoyment of the Easement

Extended Closure of the Trail

The Staff Report states that the proposed project would result in "temporary" disruption of public use of the trail. However, construction of the retaining wall would cause this segment of the Trail to be closed to public use for an extended period of perhaps six months, if not longer, since after the retaining wall is finished the Trail would still have to be restored. Because this segment is in the middle of the Trail and there is no current access to it except through the Surf Motel parking lot, this would in effect close all of the

Bluff Trail south of the Surf Motel. Accordingly, we do not believe that such disruption of use of the Trail can fairly be described as "temporary".

Drainage

RCLC strongly supports creation of a drainage system that would protect the Trail from rainwater runoff. However, the drainage system as proposed in the application would at times adversely impact the use of the Trail.

At present, because drainage from the current commercial "parking area" was never properly addressed, water from this parking area flows down to the bluff and ponds on the easement. If the low spot were located east of the easement, rainwater would drain in the other direction and could be collected and treated before it empties into the estuary. The proposed design, however, would place the collection area in the middle of the easement, allowing water to continue to inundate the easement and the Bluff Trail. Installing the drain in this location would also undo some of the improvements to the Trail. Furthermore, it would be disruptive to use of the Trail when maintenance is necessary. Ultimately, the Trail would be better protected by locating a drainage system in a buffer zone east of the easement, so that water would not drain onto the easement from the parking lot and the Trail improvements would not be damaged. This would also serve to eliminate drainage as a factor that would otherwise potentially cause the easement and the Trail to be moved in the future.

Vegetation

The Staff Report suggests that, in the event this permit is approved, RCLC should participate in a revegetation attempt necessitated by the removal of existing established plants. In addition, the botanical survey submitted in connection with the application, instead of emphasizing protecting the native vegetation that has slowly established itself over time, actually advocates the retaining wall project as an opportunity for removing exotic vegetation. RCLC does not presently have the resources to take on such projects, and our participation as suggested should therefore not be presumed. Moreover, our experience attempting to reestablish appropriate native vegetation below the area where our pedestrian bridge was installed has shown it to be extremely difficult. We also seeded and tried to add mature plants, but only some of the mature plants have survived and few if any of the seeds. Plants added to a steep slope cannot be easily weeded and watering is difficult. There is no close source of water to establish plants below the proposed retaining wall, and a drip irrigation system for the area is impractical. We suspect that adding a retaining wall would, in fact, result in more invasive weeds replacing established native plants because of the disturbance caused by excavating so much soil. Lastly, we are amazed that the proposed removal of 7795 square feet of shrubs and herbaceous vegetation could be characterized as a "minor" disturbance.

Loss of Existing Improvements

As set forth in the letter of September 12, 2007 from RCLC's Project Coordinator to Teresa Beddoe, more than $17,000 of public money has been spent, along with a considerable amount of volunteer time and some donated professional time, in developing a permanent addition to the Trail on a portion of the easement. None of this

is reflected as a consideration in the Staff Report and recommendations. Therefore, to reiterate from our letter, public money has been spent excavating to remove fill so gravel, weed cloth, and pipes for the watering system for the plants for the Trail could be added. Large boulders were purchased and very carefully placed so that planting mounds could be created that would insure that the organic soil that was added after some of the fill was removed would not wash onto the easement. Planting mounds were needed to separate the trail from the commercial "parking area" and to give users of the Trail the feeling that they were walking on a trail instead of through a parking lot. The contractor took great care to add the boulders so that visitors to the trail could sit on them and admire the view. Low growing native plants adapted to bluff conditions were added to the mounds underneath weed cloth, along with a drip irrigation system, and were mulched. Volunteers watered each week during the summer months, which entailed dragging a long hose to attach to the watering system, since there was no close source of water. Weeds have been removed and the plants are thriving. A few other plants were added to areas of the easement that would provide an attractive visual break, including three shore pines next to the septic tanks where limited Trail improvements are possible. A bench was installed where there would be an attractive view. After the contractor dug holes, volunteers added bollards and chains over much of the parcel to keep cars from driving on the easement. We are attaching pictures of the trail on the Bower parcel to illustrate what has been accomplished.

These improvements are generating very positive comments from visitors and the community. If the requested permit is approved in its current form, the improvements made to the Trail on parcel 13 would be undone during construction of the retaining wall. It is unlikely that the plants would survive, as they would be dug up during the beginning of the dry season. All of the time expended by volunteers to establish them would be lost, and the process would have to be repeated more than two years later. In addition we disagree with the staff conclusion that it would be easier to establish plants in newly engineered compacted fill, and we believe that having plants to soften the effect of the "parking area" is essential to the enjoyment and use of the Trail.

Relocation of the Septic Tanks

RCLC was unaware until reading the Staff Report that there is a plan to relocate and upgrade the underground septic systems, as this was not included in the original permit application that we and other agencies were given to comment on. It is not listed in the project description on Page 3 of the Staff Report and was not discussed at the GMAC meeting. Neither the applicant nor county planning staff brought it to our attention or asked for input before the Staff Report was written. The drawing in the Staff Report makes it difficult to determine if this expansion of the application is consistent with the design of the Gualala Bluff Trail (CDP 22-2003). Landscaping is an important component of the use and enjoyment of the Gualala Bluff Trail. If this application is approved and the Trail improvements are dismantled in the process, we request that RCLC be included in the determination of where the septic tanks are relocated before the Trail is restored.

Reinstallation of Amenities

Finally, we remind the staff that the Settlement Agreement provides, in the case of damages caused by BLP to the public pedestrian access amenities installed by RCLC, that "BLP will expeditiously repair such damage at BLP's expense". Therefore, if this application is approved, RCLC requests that a condition be included in the permit requiring BLP to use its best efforts to complete such repairs expeditiously and that BLP's obligation to do so be secured by a performance bond or other financial assurance satisfactory to RCLC.

Our concerns in this regard are prompted by the significant delays RCLC has experienced to date in completing the Gualala Bluff Trail since receiving our CDP for Phase Two in May 2004. It was first delayed by the lawsuit filed by BLP to stop construction and to question the validity of the easement. It was next delayed by the failure of the retaining wall that was supposed to protect the easement. Unfortunately, neither the retaining wall nor the drainage behind it were ever properly maintained. Approval of this permit application would likely cause completion of the Trail to be further delayed until late 2008 or perhaps even 2009. The Gualala Bluff Trail is quickly becoming one of the most treasured features of Gualala. The extension of the Trail has restored views of the Gualala River and the ocean that were obstructed by buildings on the BLP property. In the event the retaining wall is approved and built, there must be assurance that the Trail and its amenities will be promptly restored.

In conclusion, we have addressed above RCLC's specific concerns about the impacts of the proposed retaining wall on the use and enjoyment of the Gualala Bluff Trail. Above and beyond these, we are concerned that Mr. Bower plans to apply to the Coastal Commission to change the terms of the easement, if the proposed retaining wall is approved. This would surely delay completion of the Trail for a very long time.

We thank you for considering our comments and concerns and would be pleased to respond to any questions you may have.

Sincerely yours,

Signature on File

George Anderson
President, Redwood Coast Land Conservancy

Enclosure

Cc: Robert Merrill, District Manager, California Coastal Commission
David Colfax, Supervisor, County of Mendocino
Deborah Hirst, California Coastal Conservancy

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August 21, 2008

Bob Merrill, District Manager
California Coastal Commission
North Coast District Office
710 E Street, Suite 200
Eureka, CA 95501

Re: CDP Amendment Application No. 1-83-270-A1 (Bower Limited Partnership)
Re: CDP #55-2006 (Bower Limited Partnership)

Dear Mr. Merrill:

We understand that new information from George Rau has been submitted about these two applications that will impact the public access easement and the Gualala Bluff Trail. As stewards for this easement, we would appreciate your consideration of our views about this information.

We continue to support finding a solution for the failed retaining wall that would protect the public access easement and the Surf Market. We are hopeful the portion of our easement that was lost when the retaining wall failed can be restored. On the other hand, we continue to have questions that have not been answered about application 55-2006.

We were given a copy of a site plan dated April 2008 at a meeting 5/23/08 with John Bower and Julie Price. Minutes of this meeting and a letter written by the RCLC President to John Bower are enclosed. I would like to emphasize some of the points made. The site plan includes many changes to the design of the vested CDP for the second phase of the Gualala Bluff Trail and the trail as currently constructed. RCLC was not consulted about these changes in advance and does not endorse this site plan. The trail was designed years ago as part of the permit process. We understand that changes may be needed as a result of the failure of the wall, but feel that changes in the trail design are up to RCLC, not Bower Limited Partnership.

CDP Amendment Application No. 1-83-270-A1 (Parcel 5)

RCLC and BLP have been unable to come to an agreement about how to connect the trail between the Bower and Humber properties. Original drawings for the trail in this area showed stairs descending to the swale area, but these stairs were not engineered, nor were they described in the CDP for the trail which refers to stairs connecting to the Pedestrian Bridge. The first contractor we hired in reviewing the design, suggested a change to the design that would make it easier to build the trail and to maintain it, as well as making it easier for both property owners if there needed to be maintenance of the swale area. He designed a switch back ramp that created a gentler slope, allowing materials to be brought in by wheelbarrow and making it easier for some to walk than steep stairs. In a meeting with the building inspector, RCLC volunteers and contractor, and Mr. Bower, we were told by the building inspector that since the stairs were not engineered that the ramp was an acceptable alternative. We agreed at this meeting to try to find a compromise solution that we both could agree to, but this has been elusive. The site plan shows a

retaining wall that would prevent the access to the swale from the ramp. Mr. Bower wishes for the Gualala Bluff trail to be built close to the western edge of the easement. The CDP for the trail shows the trail being set back from the edge of the easement since that area was felt to be unstable. In the May 2008 meeting when asked to explain about his opposition to the ramp, Mr. Bower said that he has plans to build behind the market and wants the trail routed as far away as possible. The trail easement is a floating one in this area and can float to the edge of the Surf Market. The Market was built on part of the required set back restricting how far the easement can move. RCLC does not feel that possible future development of the Market should be the deciding factor in changing the design of the trail.

RCLC does not have the expertise to analyze the stormceptor and drainage improvements. Building drainage is a potential cause of slope erosion and the Surf Market does not have gutters in the area of the failed wall. Additional water from the adjoining parcel 13 which drains from Highway One is to be directed to this parcel and ultimately to the swale that also receives water from the parking area of the Breakers Inn and Highway One. RCLC would like to be assured that sizing and configuration of critical new drainage improvements is adequate and that the natural swale to which all the storm flows are directed has sufficient capacity.

There are large trees that are quite dramatic close to the swale and it is not clear whether they can be protected in the current plan. We would want them retained as they add to the enjoyment of the trail and make an attractive green scene when viewed from the Regional Park.

Additional concerns that RCLC has about the site plan on parcel 5 have to do with the propane tank, the relocation of the septic tanks, and the Surf Market dumpsters. We understand that the septic tank that was sited next to the bluff edge that is tilted needs to be relocated and that in the settlement agreement RCLC agreed to uses of the easement that were not inconsistent with a public pedestrian easement and if the necessary permits were obtained. But that does not mean that the tanks and an added grease trap must be on the easement if another location is better. These tanks need to be set back from the ESHA (the Gualala River riparian corridor). We understand that the design for both includes an impervious concrete pad so vehicles can drive over both. Not only is this unattractive, but it contributes to standing water on the trail easement and the possibility of disruption to the trail if repairs are necessary.

The Surf Market dumpsters continue to be an ongoing concern. In the settlement we agreed to work cooperatively on a resolution to this problem. We receive many complaints from the public about the odor and how unsightly this area is. Trail monitors report that this area of the trail generates the most trash. On windy days when the garbage is collected, trash falls out and blows all over the easement. Surf Market tenants have instituted a few changes that have helped to a degree, but have not solved the problem. In addition the dumpsters are often moved to the trail easement for a period of time after they have been emptied. We have been told that once the trail is completed, it will be difficult for the trash to be collected where it is currently located. A solution offered by the company that collects the trash was for a system that replaced the dumpsters with a trash compactor that could be hauled away intact. This would save the Market the cost of multiple pick-ups and we understand would be set back further from the easement. Trash would not blow away during the pick up. This alternative appears to be on hold. We would like to see a solution to the garbage problem be included in this application.

<u>CDP #55-2006</u> (Parcel 13)

We continue to be concerned that under the current plan the trail amenities on Parcel 13 will be deconstructed and the trail will be closed in the middle during construction. We have been told

that the trail would be closed for at least four months. We have not been presented with any viable reroute. This trail is well used and loved by the public. We support as an alternative to the plan presented the creation of a drainage system that would protect the trail, the fill, and the bluff from rainwater runoff from downtown Gualala and would shorten the time the trail would be closed. The current private informal parking area was never the subject of a permit and as a result drainage was never properly addressed. Water from this parking area flows down to the bluff, ponds on the easement, and is directed to the current low spots. The Rau letter does not explain why regrading the site and creating a valley east of the bluff trail easement and installing an intercept drain along that valley that would prevent surface runoff from saturating and scouring the unauthorized fill would not be a solution that would address the problems without deconstructing the trail.

Questions remain unanswered about the loss of native vegetation as a result of adding the Geoweb across the entire bluff. The November 2007 letter from consulting coastal plant ecologist Peter Baye who is an expert on bluff restoration suggests that the revegetation and weed management mitigation presented in the BioConsultant's report is unreliable and infeasible. The revegetation plan will not be formulated unless the application is approved. There are no answers therefore about how to eliminate the weeds certain to appear from overtaking the native plantings on such a steep slope. Even if the fill can be rearranged so the part with the most weeds is on the bottom, there are numerous weedy species in the surrounding areas. The plan calls for removing almost as much bluff soil as fill since the fill was shown to be 5 to 8 feet and the plan is to excavate 12 to 14 feet. It is necessary to create a flat compacted surface for the first layer of the Geoweb. We are concerned that this would damage the special rare bluff vegetation above and below this 'road' in the middle of the bluff and do not see how a 14 foot steep slope could be easily weeded. We are concerned that instead of removing weedy vegetation, the end result would be to increase it.

There continues to be no attempt to consider where the best place is for the relocation of the septic system on Parcel 13 and no explanation why propane tanks needs to be moved to the easement and close to the bluff. The proposal is to upgrade and relocate the septic system on parcel 13 not farther away from the bluff, but north to another location on the easement. If the Coastal Commission decides that development on the bluff is not allowed under the LCP, the relocation should not be allowed to destroy the RCLC amenities and plantings. There has been no justification for why they need to be moved to another location. If the interceptor tanks are upgraded and kept in their current location, we would see no reason that they would need to be protected by an impervious concrete pad. Vehicles are prevented from accessing the easement by bollards and chains. Interceptor tanks adjacent to the easement on the Surf Inn, the Seacliff, and Breakers Inn properties do not have concrete pads over them. The most standing water now during the winter on the easement is adjacent to the concrete pads.

At the county level, RCLC argued that it should be in charge of restoring the trail if it was deconstructed with a condition added that BLP set aside a performance bond or other financial assurance satisfactory to RCLC that would allow RCLC to rebuild the trail. In addition it was felt that some allowance needed to be made for all the volunteer hours that were spent in establishing the native plants on the easement. The several year process of watering and weeding until the plants are established would have to start over. The new site plan reinforces why this is so important. The trail has been redesigned, new viewing sites added, vegetated swales incorporated, mowed grassy areas for emergency vehicle access added, etc. It looks like the new plan would increase the maintenance required by RCLC to keep the easement and the trail attractive. Since the Gualala Bluff Trail is used by so many people and is so public, RCLC already puts in many

hours every week to make sure this trail is an asset to our community and does not want to take on more maintenance.

Before building the trail on this parcel, our contractor dug holes to see if the fill would be suitable for native plants we planned to add in our mounds. We concluded that as it had so little air porosity in it because it was so compacted from being driven on and was mostly clay, that native plants that need good drainage would not thrive. It was necessary to remove the fill and haul it away and to bring in new soil. Since we needed to be sure that adding the trail would not make the drainage problems worse, we came up with a solution that has worked well. We added large boulders around the mounds, reduced and changed some of them from the original plans so that water would flow around them and pond in the usual areas. The boulders added a beautiful touch, but also were utilitarian. They kept the soil and mulch from washing out of the mounds, protected the plants and watering system from being walked on by the public before the plants could be established, made weeding easier, and created a place where people could sit to admire the view. If the fill is removed as proposed, added back and recompacted, this will not make a good environment for adding native plants to soften the look and feel of the trail which will continue to be adjacent to an informal parking area. Mr. Bower is opposed to adding back the boulders around the mounds and the new plan does not seem to include them. Letters from Rau refer to replacing the trail "in kind." RCLC would want the trail replaced as it was, not in kind and does not want to have to engage in another battle over the right to build the trail. In the lawsuit settlement the parties agreed that RCLC could proceed with development of pedestrian access as authorized by the CDP issued in May 2004. Having funds to hire someone to put the trail back under our supervision would also mean RCLC could be sure that the trail would be completed as soon as possible. This would eliminate any potential future disagreements that might require revisiting the settlement agreement over when and how the trail was rebuilt.

Thank you for allowing us to address some of our concerns. We hope to be included in the decision making that impacts the public access easement and the trail.

Sincerely,

Signature on File

Mary Sue Ittner, Project Manager,
Gualala Bluff Trail II

Cc: Tiffany Tauber, California Coastal Commission
Deborah Hirst, California Coastal Conservancy

Enclosures

msi

Wednesday Item 16 a
Approve with Conditions

Robert Merrill and Commissioners
California Coastal Commission
North Coast District Office
710 E Street. Suite 200
Eureka. CA 95501
Fax (707) 445-7877

Re: Permit Amendment No. 1-83-270-A

Dear Mr. Merrill and Commissioners:

I am a frequent user of the Gualala Bluff Trail. I also am a volunteer monitor for the trail. I consider the Gualala Bluff Trail to be the gem of our down town area.

I see this permit amendment as the perfect opportunity to address some of the issues that would make the Gualala Bluff Trail even better!

1. The trash situation is really an issue. Having dumpsters right next to the trail makes for a stinky and dirty trail. It would be WONDERFUL if the dumpster could be replaced with a trash compactor and also relocated to a spot that would make for maintenance of the market easier and less likely to impact the Gualala Bluff Trail.

2. Relocating the septic interceptor and propane tank would also be a great thing for the trail – in terms of aesthetics, long term maintenance needs and current drainage. As it is located now water sits on these concrete pads making for puddles on the trail after the rain.

3. Replacing the wall is the perfect opportunity to replant the area with native non-invasive plants that will help stabilize the bluff.

Thank you for your thoughtful consideration of these issues.

In gratitude,

Signature on File

Harmony Susalla
PO Box 892
Gualala, CA 95445

Bob Merrill

From: Steve May [maybers@gmn-usa.com]
Sent: Monday, May 10, 2010 11:57 AM
To: Bob Merrill
Subject: [Possible Spam] Surf Supermarket Inc. RE: Bower Soil Retention Application

Importance: Low

Dear Commissioner.

My name is Steve May. I am writing on behalf of myself, Teri Fagan, and Alan Olesen. Together we own Surf Supermarket in Gualala, California. Surf Market has been in business since 1956. We are the third set of owners.

The purpose of my letter is to ask that you consider affirmatively John Bower, our landlord's, proposal to build a soil retention system on the lot that our business stands and the neighboring lot. I do not understand the nuance of the law, but will try to explain why I think John's plan should be approved.

Surf Market has been in business for 54 years. Since the beginning, Surf Market has played a truly vital role in many aspects of our community.
Now having become the largest employer in town we spend well over a million dollars per year on our local economy in the form of wages. We support numerous not for profit programs in Gualala and our larger community. For example, we donate over $5000.00 per year in free catering services to our local medical center. We provide high school students with their first job, retirees with their last, and real training and career opportunities for unskilled laborers willing to work hard. Our company offers health benefits to all full time employees.
Surf Market also functions as a community hub. Lacking a town square, people socialize, catch up on the latest gossip, sell raffle tickets, send in dry cleaning, and shop for products not available elsewhere. The community has come to rely on Surf Market.

If it is relevant to your decision, I would like to state that the parking area behind Surf Market and the adjoining buildings has been in use since well before the 1970s. I have seen photographs of the same and spoken to old timers from our community and the former owner of the market who spoke of the use of the lot during this time frame.

Parking is critical to the survival of our business. You may be aware that our town plan calls for elimination of parking along Highway 1 in the downtown area. That coupled with the community action plan that is underway to widen the highway will eliminate a number of critical parking spaces from the front of our business. We have a small number of spaces as it is (about 25). We have managed to do a tremendous business for such a small parking area. Our yearly customer count runs over 300,000 which is more than 800 customers per day. We can not afford to lose any of our parking. But the highway widening could eliminate 13 spaces. If this happens, it is not an exaggeration to say our business may not survive.

We need every grain of sand behind our market to stay in place so that we may receive deliveries from our vendors, have a place for our employees to park, and in the future when the highway widening takes place, park our existing customers.

It is for these reasons that I ask you to approve John Bower's plan for a soil retention and drainage system behind Surf Market and the adjoining property.

Thank you for your consideration,

Respectfully,

Steve May

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This e-mail was delivered via satellite phone using GMN's XGate software. Please be kind and keep your replies short.

FORM FOR DISCLOSURE
OF EX PARTE
COMMUNICATIONS

Name or description of project, LCP, etc.:	W16a Permit No. 1-83-270-A (Bower Limited Partnership, Mendocino Co.)
Date and time of receipt of communication:	5/5/10, 1:00 pm
Location of communication:	Board of Supervisor's Offices, Santa Cruz, California
Type of communication:	In person meeting
Person(s) initiating communication:	Grant Weseman Sarah Damron Margie Kay
Person(s) receiving communication:	Mark Stone

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COASTAL COMMISSION

Detailed substantive description of content of communication:
(Attach a copy of the complete text of any written material received.)

I met with a group from ORCA who said that they question whether the retaining wall should be permitted at all. It appears that the retaining wall is only to protect the ability for some future development and not really to protect the trail at all as the trail easement already contemplates the dynamics of coastal bluff erosion. Besides the erosion is primarily caused by poor drainage and the bluff is otherwise fairly stable. What they are asking for is that: a. the bluff should be restored and there should be a vegetation management plan, b. the Redwood Conservancy should be a part of the design of the retaining wall and should have a part in the trail maintenance, c. the Commission should require a performance bond in case the wall fails again and in case the construction takes longer than anticipated and the public is denied access for longer than expected, d. the septic and propane tanks should not be relocated into the easement, and e. the dumpsters should be moved or at least there should be a trash management plan to keep the overflow and loose garbage off of the trail.

Date: 5/5/10 Signature of Commissioner: Signature on File

If the communication was provided at the same time to staff as it was provided to a Commissioner, the communication is not ex parte and this form does not need to be filled out.

If communication occurred within seven or more days in advance of the Commission hearing on the item that was the subject of the communication, complete this form and transmit it to the Executive Director within seven days of the communication. If it is reasonable to believe that the