Staff Report to the Planning Commission

Application Number: 00-0797

Applicant: County of Santa Cruz Redevelopment Agency and Department of Public Works
Owner: County of Santa Cruz
APN: East Cliff Drive public right-of-way and APNs 032-182-01, 032-182-02, 032-242-10, 032-251-01, 032-251-02, 032-251-08, 032-251-10 & 032-251-11

Agenda Date: January 24, 2007

Agenda Item #: 8
Time: After 9:00 a.m.

Project Description: Proposal to reconstruct a portion of East Cliff Drive, add pedestrian, bicycle and vehicle parking facilities, construct improvements at an existing park site, and perform grading to construct roadway improvements and shoreline protection structures. Project requires a Coastal Development Permit for roadway and parkway improvements, park site improvements, and to recognize existing shoreline protection structures authorized by Emergency Coastal Development Permit 04-0307; a Park Master Site Plan approval for the Pleasure Point park/overlook; a Variance to construct a public restroom facility at an existing park within the 30-foot required side and street side setbacks; a Grading Approval for about 4,200 cubic yards of grading for roadway and bluff protection structures and roughly 6,000 cubic yards of beach riprap and rubble removal; and, certification of an Environmental Impact Report.

Location: The project is located within and adjacent to the East Cliff Drive right-of-way between 32nd Avenue and 41st Avenue in the Pleasure Point area of Live Oak.

Supervisoral District: First District (District Supervisor: Jan Beautz)

Permits Required: Coastal Development Permit, Park Master Site Plan, Variance, and EIR Certification.

Staff Recommendation:

- Recommend to the Board of Supervisors to certify the Revised Final East Cliff Drive Bluff Protection and Parkway EIS EIR (Nov. 2006) under the California Environmental Quality Act, based on the attached EIS/EIR CEQA Findings, Conditions, and Mitigation Monitoring and Reporting Plan.
- Recoinmend to the Board of Supervisors **APPROVAL** of Application **00-0797** based on the attached Findings and Conditions, with acknowledgement that the parkway project design as proposed is contingent upon approval of bluff protection structures by the California Coastal Commission.

Exhibits

A. Revised Final EIS/EIR (Nov. 2006)
B. Findings
C. Conditions
D. Mitigation Monitoring and Reporting Plan
E. Project Plans
F. RDA Project Description Letter w/Background
G. RDA Public Notification Letter w/Chronology
H. Emergency Permit with Attachments

I. Coastal Commission Extension Letter
J. Zoning & General Plan Maps
K. Assessor's Parcel Maps
L. Aerial Photos of Project Area
M. Agency and Public Comments & Correspondence

Parcel Information

Parcel Size:	N/A
Existing Land Use - Parcel:	Roadway, Undeveloped County Property, Informal County Park
Existing Land Use - Surrounding:	Residential Single Family, Multi-Family, & Commercial
Project Access:	Pleasure Point Drive/32nd Avenue and 41st Avenue
Planning Area:	Live Oak, Pleasure Point Area
Land Use Designation:	O-R (Parks, Recreation and Open Space)
Zone District:	PR, PR-D (Parks, Recreation and Open Space District-Park site)
Coastal Zone:	_X_ Inside __ Outside
Appealable to Calif. Coastal Comm.	_X_ Yes __ No

Environmental Information

Geologic Hazards:	Not a mapped constraint. Geostructural Engineering Reports regarding the failing crib walls and bluffs have been reviewed and accepted by the County. (See Exhibit A, EIS/EIR Geological Resources and Coastal Processes Chapter 6 discussion.)
Soils:	Marine Terrace deposits and Purisima sandstone/siltstone (por. is artificial fill).
Fire Hazard:	Not a mapped constraint. Emergency access accommodations satisfied with roadway improvement design. (See discussion in EIS/EIR Emergency Services Chapter 10.)
Slopes:	Parkway site is essentially flat. Steep coastal bluffs in failing condition will be protected by the emergency wall repairs and by the proposed project walls.
Env. Sen. Habitat:	Portion mapped biotic & portion mapped floodplain. (See discussion in EIS/EIR Biological Resources Chapter 8 and Water Resources Chapter 7.)
Grading:	Project includes grading approval for roughly 4,200 cubic yards for roadway improvements and up to 6,000 cubic yards of beach rubble and riprap removal.
Tree Removal:	No trees proposed to be removed.
Scenic:	Yes, within East Cliff Drive scenic roadway corridor and visible from the beach. (See discussion below and in EIS/EIR Visual Resources Chapter 5.)
Drainage:	Project improves drainage conditions. (See discussion below and in the project EIS/EIR.)
Archeology:	Not mapped. (See EISEIR discussion on Cultural and Paleontological Resources for walls in Chapter 11 and Section 15.2.10.)

Services Information

Urban/Rural Services Line:	_X_ Inside __ Outside
Water Supply:	Santa Cruz Water District
Sewage Disposal:	City of Santa Cruz Sanitation
Fire District:	Central Fire Protection District
Drainage District:	Zone 5

Background

Until the mid 1990s, East Cliff Drive between 32nd and 41st Avenues was a two-way road that extended along the bluff tops adjacent to Monterey Bay. During the winter storms in the late 1980s and mid 1990s, the bluffs had eroded far enough inland to threaten the road and public improvements. After the winter of 1994-1995, a section of East Cliff Drive near Larch Lane collapsed and the road was closed to through traffic. In 1995 the

Board of Supervisors designated portions of East Cliff Drive as a one-lane, one-way (eastbound) road, reducing traffic to one direction, weight limits were imposed, and an informal pedestrian/bicycle path was created in the former eastbound lane. The area of East Cliff Drive in the vicinity of Larch Lane was repaired in 1996. Improvements were made for public parking and park facilities at the end of 41st Avenue at the "Hook" area in 1998. The County Redevelopment Agency acquired the park site at the west end of East Cliff Drive at 32nd Avenue in 1995.

Continued erosion has caused the partial collapse of the bluff top edge of East Cliff Drive between 32nd and 36" Avenues. The bluff erosion has caused the deterioration and partial collapse of the curb and guardrail, requiring certain areas of the pedestrian/bicycle path to be fenced off for public safety. A recent threat analysis by Sanders & Associates Geotechnical Engineers has determined that nearly 65% of the road edge in this area has been lost or is threatened. **A** stability analysis of the bluffs has determined that significant portions could be lost as a result of a seismic event.

Since 1995, the County Redevelopment Agency (RDA) and Department of Public **Works** (DPW) have explored numerous options to protect the coastal bluffs from further erosion, to improve public coastal access and safety, and have generated dialogue with numerous public agencies, consultants and the community with regard to vehicle, pedestrian and bicycle circulation and environmental issues in the area. For more details on the project process and background see the RDA Project Description Letter with Project Technical Reports and Background Documentation summary, Exhibit F. (See also the RDA Public Notification Letter with East Cliff Bluff Protection and Parkway Chronology Highlights, Exhibit G.)

This development application (00-0797) was originally submitted to the Planning Department in December of 2000 for bluff protection and roadway improvements. ***An*** Environmental Impact Statement and Environmental Impact Report (EISEIR) was initiated and by the fall of 2003 a joint bluff protection proposal co-sponsored by the U.S. Army Corps of Engineers was submitted to the California Coastal Commission for a Federal Consistency Determination. The proposal failed to receive Commission approval at that time. Since then, the County has become sole sponsor of the project. (See also the following Environmental Review discussion in this report for more details of the EISEIR process and timing.)

Numerous public meetings were held throughout the project design and EISEIR process with notices sent to over 700 addresses. See Exhibit G for a summary of neighborhood and community meetings. The EIS/EIR includes a discussion of the public involvement and public review process in Section 1.7. A long list of federal, state and local public agencies, organizations, and individuals provided comments on the EIS/EIR. The latest public open house was held on June 8,2006. Chapter 21 of the Revised Final EISEIR contains the public comments received along with the responses to those comments. (See also EIS/EIR Appendix B - Public Involvement, and Appendix C – Public Scoping Letters.)

In the spring of 2004, the geotechnical engineers alerted the County that there were cribwalls in the area that had deteriorated and were in danger of collapse. These areas were posted as restricted to the public, the public stairway at 35th Avenue was closed, and the County undertook emergency bluff stabilization measures to repair and eliminate the danger (authorized by Emergency Grading and Coastal Development Permit 04-0307, Exhibit H). These stabilization efforts consisted of the construction of four sections of soil nail wall, totaling 290 linear feet, between 32nd and **36"** Avenues (see Emergency Wall Repairs discussion below for more detail on the soil nail walls that were installed). The work was conducted over a period of three months during July, August and September of 2004, using the same techniques described in the EISEIR Project Description in Section 2. These walls differ from the proposed project walls in that only the top marine terrace deposits were protected. The Purisima Formation along the base of the bluffs adjacent to the beach was not armored. The Coastal Development Permit and Grading Approval for the emergency crib wall repairs are part of this permit application (as follow up to Emergency Coastal and Grading Permit 04-0307).

Permit History

East Cliff Drive and associated right-of-way improvements were originally constructed before the enactment of the Coastal Act and the subsequent requirement for coastal development permits. Repairs within the right-of-way have routinely been done by the Department of Public Works crews as needed to maintain the road and utilities, with permits not required for this work. Concrete rubble placed on the beaches to provide some erosion protection, appear in aerial photographs as early as the 1960's, also predating the California Coastal Act. The cribwalls were constructed within the right-of-way between 1970 and 1987 (from aerial photos review). These walls were completed as roadway maintenance activities by County public works crews. As well, shoulder and bike lane improvements were constructed in the mid-1980s with grants from the California Coastal Conservancy. The construction for the road improvements and Larch Lane area walls were completed under permits #96-0024 and 96-0029 by the Department of Public Works. The Hook area parking lot was completed by the Redevelopment Agency in 1998 under permit #97-0846. Drainage improvements were completed in 2002 in the area of Pleasure Point Park and 30th, 32nd, and 33rd Avenues under County Permit #99-0842 and Coastal Commission Coastal Development Permit #A3SCO-00-076. See Table 15-1 in the project EIS/EIR for information on bluff protection, armoring, pedestrian, bicycle, beach access, road, and parking improvement projects in the area.

The Emergency Crib Wall repairs were performed under an emergency grading and coastal permit with a CEQA exemption approved in July of 2004, under Emergency Permit #04-0307 (see attached Emergency Grading and Coastal Development Permit and Conditions, Exhibit H). Code section 13.20.090 requires that emergency permits be followed up with a regular Coastal Development Permit for the work performed. The follow-up to Permit 04-0307 was scheduled for a Zoning Administrator hearing on October 1,2004, and then continued to a hearing on November 5,2004. However, the Coastal Commission and County agreed at that time that it would be best if the Coastal Permit for that work was part of this larger permit application, so the 04-0307 follow-up Coastal Development and Grading Permits are incorporated into this more comprehensive application #00-0797. (See Coastal Commission Extension Letter, Exhibit I.)

Besides the County issued Coastal Development Permit, this project will also need California Coastal Commission approval for those improvements within the Coastal Commission's jurisdiction, including the seawalls, stairs, abandoned restroom demolition, and riprap removal. As well, County approvals for the road, parkway, and park improvements, crib-wall repairs and grading elements of the entire project can be appealed to the Coastal Commission. Construction of the project will also require a federal **US** Army Corp of Engineers Nationwide Permit under the Clean Water Act Section 404 and National Oceanic and Atmospheric Administration, Monterey Bay National Marine Sanctuary special use permits for any work below the mean high water mark within the National Marine Sanctuary and State Lands Commission review. (See Project permit and approval requirements in the EIS/EIR Table 2-5.)

Project Setting

The project area is on and adjacent to a portion of East Cliff Drive that extends from the intersection of East Cliff Drive and 32nd Avenue/Pleasure Point Drive (the Pleasure Point Park location) to the intersection of East Cliff Drive and 41st Avenue (The Hook park location) in the Pleasure Point coastal neighborhood. The project site is located in an urban residential area, which is virtually built-out, adjacent to the Monterey Bay coastline. The project area represents one of the few unobstructed stretches of urban public roadway directly adjacent to the coastline in the County, and the longest one in Live Oak. (See Exhibit A, EIS/EIR Appendix A for photographs of the site.)

Land uses immediately adjacent to the project area are predominantly single-family homes, with some two-story multi-family apartment buildings and condominiums, and a small market on the southwest comer of East Cliff Drive and Pleasure Point Drive. The majority of the homes in the surrounding neighborhood are located on the inland side of East Cliff Drive, roughly 50 feet from the top of the coastal bluffs, except for three

private residences located on the ocean side of East Cliff Drive, constructed directly on the coastal bluffs (the O'Neill house at 36th Avenue, the Breidenthal house near Larch Lane, and the Clanton/Kengle house at 41st Avenue). Private bluff armoring has been constructed along most of the privately owned parcels on the ocean side of this stretch of East Cliff Drive.

Developed public recreational facilities in the project area include stairways for beach access at 35th Avenue, 38th Avenue, and The Hook, as well as abandoned restrooms adjacent to the 35'' Avenue stairs. The Pleasure Point park/overlook site located at the intersection of 32nd Avenue at East Cliff Drive and Pleasure Point Drive is largely undeveloped with small tables, benches and minor landscaping. As a note, this park is referenced in this report as ''Pleasure Point Park" for consistency purposes (whereas it has also been referred to in the past by locals as ''Night Fighter Park"). The overlook area at the eastern end of the East Cliff Drive project area at the terminus of 41st Avenue known as ''The **Hook'' is** developed with picnic tables, benches, and a wood fence, with a 64-space parking lot with restrooms and outdoor shower facilities across East Cliff Drive.

Proposed Project Discussion

ln general, the East Cliff Drive Bluff Protection and Parkway Project consists of a proposal by the County Redevelopment Agency and Department of Public Works to reconstruct a portion of East Cliff Drive to add a pedestrian and bicycle access parkway along the roadway and to provide bluff protection structures. There are two segments to the project approval requirements. The first segment includes County permits to construct the roadway, parkway and path improvements that extend from 32nd Avenue to 41st Avenue with landscaping and drainage improvements, new parking, retaining wall, park improvements at 32nd Avenue including a new bathroom, and as-built emergency bluff cribwall repair construction per Permit 04-0307 (see Project Plans, Exhibit E, Emergency Repairs at Existing Crib Walls, and Emergency Permit, Exhibit **H).** The County permitting also includes grading approval for the earthwork associated with the road, parkway, park, wall improvements, and beach rubble and riprap removal. The second segment under California Coastal Commission permit jurisdiction includes construction of 1,100 feet of bluff protection (soil nail walls) between 33rd and 36'' Avenues and 300 feet of bluff protection at the **Hook** area at 41st Avenue, one new and two replacement beach access stairways, and demolition of an abandoned restroom building at the stairs between 35'' and 36'' Avenues. The Planning Department has determined that no other local permits are required for the second segment other than the grading approval and EISEIR certification.

An EIS/EIR (Exhibit A) was done for the total project including both jurisdictional segments. The Revised Final East Cliff Drive Bluff Protection and Parkway EISEIR document addresses all of the potential impacts and alternatives analysis for the entire project. See EISEIR project description discussions in Chapters 1 and 2 for the entire proposed project. The EIS/EIR **further** breaks up the entire project into 3 smaller projects consisting of the Main Bluff Protection Structure, the Parkway, and The **Hook** Bluff Protection Structure. The proposed project as referenced in this report is analyzed in the EISEIR under Alternative 1: Full Bluff Armoring (Preferred Alternative). This report addresses only the segment of the project under County jurisdiction except under the specific CEQA EISEIR discussions, however, in some instances such as in the findings, elements of the second segment are referenced because the elements of the individual segments are so closely linked within the entire project proposal. The road and parkway project as proposed can likely not occur without the bluff stabilization portion **of** the project, which is under coastal jurisdiction.

The discussions under the following underlined headings address individual elements of the project proposal under the County's jurisdiction. The EIS/EIR analyzed many issues in detail, which are also relevant to the County's development permit review, therefore, rather than providing lengthy discussions in this staff report particular aspects are highlighted and the EIS/EIR is referenced for more detailed discussions.

Road Improvement

East Cliff Drive is proposed to be configured as a single, 16-foot wide one-way vehicular travel lane in the eastbound direction from 32nd Avenue to 41st Avenue, similar to the existing alignment. A new asphalt

surface travel lane will, in most cases, coincide with the paved surface of the existing roadway. The width of the right-of-way varies and the useable area is as narrow as 34 feet. In order to provide adequate room for pedestrians and bicyclists, the travel lane is proposed to be 16 feet wide. This is sufficient for one way vehicular travel and for ingress and egress of the driveways on the inland side of the road. Pedestrian and bicycle paths (each typically 8 feet wide) are proposed to be constructed adjacent to the roadway on the ocean side with additional public parking added where there is room. **A** curb will be provided between the roadway and the pedestrian/bicycle path to provide a grade separation from vehicular traffic and to provide control for surface drainage. Because the travel lane is narrower than the State Fire Code requirements a rolled or battered curb is proposed between the road and the paved path, thus providing for emergency vehicles to mount the asphalt portion of the path if necessary during critical times for emergency access. This results in 24 feet of paved surface for emergency access along the road and accommodates fire access standards. Access ramps through the rolled curb and pedestrian crosswalks will be installed at the avenue intersections and to access the parking lot at 41st Avenue. Traffic guardrails will be removed and a new pedestrian guardrail will be installed where necessary.

In some areas where the opportunity arises the road **is** shifted inland **3-4** feet where existing right-of-way is available and the alignment is compatible with roadway design standards. This occurs mostly at the west end at the intersections of the transverse streets (33rd and 34th Avenues). The roadway is also broadened at the street intersections to accommodate left turn radius requirements onto'eastbound East Cliff Drive. Minimal changes are anticipated for the inland side of the road. Neighbors at numerous community meetings have expressed the desire for maintaining the character of the area as it is – not upgrading, over designing or creating too many "improvements". The road improvements have been planned to incorporate as much of the existing paved road surface as feasible. The project does not preclude the possibility of additional development and improvements on the inland side in the future should they be needed and funding is available. Total length of the proposed roadway (from 32nd to 41st Avenues) is 2,800 lineal feet, or about one-half mile in length.

Transportation/Traffic

The proposed project does not contain any traffic generating land uses and would not contribute to cumulative long-term traffic volumes in the area. (See EIS/EIR Transportation and Emergency Services Sections 9 and 10, and 15.2.8 and 15.2.9.) The proposed project would result in short-term traffic impacts related to all construction phases, including temporary increases in traffic in the area and lane closures or blockages along East Cliff Drive. The project would provide 8 additional parking spaces, including two new accessible spaces, therefore improving parking and public access to the coast. Pedestrian and bicycle access and safety would also be improved along East Cliff Drive with the proposed project, and contribute to an improved network of bicycle and pedestrian facilities with the development of the Monterey Bay Scenic Trail and various other sidewalk and path widening projects.

Parkway

The parkway portion of the project located between the vehicular travel lane and the bluff top, consists of pedestrian and bicycle pathways, drainage and landscape improvements, and new and replacement parking along the edge of the roadway. These improvements are planned for the entire length of East Cliff Drive from 32nd Avenue to 41st Avenue.

The pedestrian and bicycle paths will be constructed on the south (ocean) side of East Cliff Drive. The bicycle path will be separated from the car lane by a curb and elevated six inches above the car lane. The bicycle and pedestrian improvements will consist of two parallel paths, one eight feet wide of continuous asphalt and the other up to eight feet in width of stabilized decomposed granite. This material has been used in several other locations in the Live *Oak* area and is more in character with the beach community. It provides a softer, more beach-like appearance compatible with the area, but it is a hard stable surface meeting the requirements **and** standards for accessible access. Where sufficient width is available, a landscaped buffer, composed of coastal vegetation, will be installed along the pedestrian and bicycle paths.

Bicycle parking is provided in several locations along the length of the road within the public right-of-way and at Pleasure Point Park. Streetlights at the intersections of the avenues with East Cliff Drive will remain. No other project lighting is proposed except for restroom security lighting as needed at the park. Some roadside, accessible access and trail signs will be necessary, but overall signage will be minimized in the project area. Parkway furniture including benches, tables, trash and recycling containers will be provided along the parkway as shown on the Parkway Plans, sheets S1 to S6, and will be maintained by the Parks Department.

Where there is a landscape separation of the walk from the bluff top, low split rail fencing is proposed similar to that currently used at Pleasure Point Park. In areas where the path is immediately adjacent to the top of the bluff/wall it is necessary to install pedestrian safety railings. The railings are proposed to be constructed of galvanized metal tubing with wood timber posts and top rails.

Areas between the paths and the tops of the walls will be utilized as landscape buffer. At an average width of 5 to 10 feet, the area of landscape improvements along the edge of the roadway is estimated at roughly 13,500 to 27,000 square feet of landscaping. Native and coastal compatible plantings will be used to soften the bluff tops and cascade as much as possible over the top of the walls. In some locations, additional native Monterey Cypress trees are proposed to provide a vertical canopy similar in character to the area at the end of 41st Avenue. The landscaping shall be planted with native and coastal adapted plantings and irrigated with drip or low water use automatic irrigation system.

Access to the beach and surf area is a public priority at this location. The three existing stairways in the project area would be either replaced or repaired and a new stairway is proposed to be built with the bluff protection portion of this project. The abandoned restroom under the landing at the stairs between 35th and 36th Avenues will be demolished and a new restroom built at Pleasure Point Park.

Monterey Bay National Marine Sanctuary Scenic Trail

The project area is a designated segment of the Santa Cruz County portion of the Monterey Bay National Marine Sanctuary (MBNMS) Scenic Trail. Therefore, visual quality is a priority. A signage plan and trail marker plan will be prepared and installed along the parkway path. Pre-designed trail markers as identified in the MBNMS Trail Standards Manual will be located at various intervals to identify the route along the bluffs. Interpretive elements will also be installed as part of the MBNMS Scenic Trail.

Parking

The project proposes to relocate and reconfigure existing parking spaces and to add new parking spaces, resulting in a net gain of 8 new parking spaces, for a total of 35 on-street public parking spaces in the project area. The parking breakdown includes approximately 15 existing spaces along the inland side of East Cliff Drive with no changes proposed with this project, and 6 existing parking spaces along the ocean side of the road near 36'' Avenue to be removed, with 20 replacement and additional spaces proposed, including three accessible spaces.

The breakdown includes some new diagonal parking between 32nd and 33rd Avenues and between 36'' and 38th Avenues. East past 36'' Avenue, approximately 6 existing parking spaces will be removed. These will be replaced with parallel spaces and eleven diagonal spaces (including two accessible spaces) located inland of the pedestrian/bicycle path next to the road. This arrangement will allow pedestrians and bicycles to have a continuous route on the ocean side of the road and not have to cross behind vehicles as they park or leave the spaces. No changes to the existing parking along the inland side of the road are planned at this time other than to continue to insure that these are available for public use. The parking near Pleasure Point Park utilizes existing paved road area not required for the one-way travel width. Up until the one-way designation in the mid 1990's this area was used for parallel parking. The project adds spaces for accessible parking, currently unavailable in the area.

Park Development

This project includes a Master Plan review for the park Coastal Priority Site pursuant to General Plan Land Use Policy 2.23.2 and Figure 2-5 and a park Master Site Plan review pursuant to the PR zone requirements in Code Section 13.10.355 Special Standards and Conditions. These requirements are addressed by the project plans. No additional phasing or future land uses are proposed with this project. Park site maintenance will be performed by the County Parks Department with maintenance conditions as noted in the EIS/EIR Mitigations for Visual Resources **5.1** and 5.2.

Pleasure Point Park is approximately 7,635 square feet in area and is located at the westemmost end of the proposed project site at the southeast comer of the 32nd Avenue/Pleasure Point Drive and east Cliff Drive intersection. This park has in the past been referred to as Night Fighter Park. It serves as a primary viewing area for the beach and the surf below and is heavily used by surfers as an access point to the beach. Proposed improvements to the park include the construction of a small restroom with an outdoor shower, landscaping, and outdoor seating and picnic tables. This would also be the location of a new beach access stairway (Stairway 1).

Pleasure Point Park will be improved with a new public restroom building **and** outdoor shower, constructed in a style similar to that of the Hook Parking lot at the end of **41st** Avenue. Natural cobble walls will support a wood roof structure located midway along the south property line approximately 15 feet from the existing fence. Additional improvements will include storm drainage connected to existing facilities in East Cliff Drive, natural landscaping and park furnishings, including picnic tables and benches. The large palm trees on the site will be retained. Additional diagonal vehicular and bicycle parking is proposed along the East Cliff street frontage as discussed in previous sections.

This park site has been identified as a location for a major Marine Sanctuary Trail interpretive element as designated in the Monterey Bay National Marine Sanctuary Trail Design Standards Manual. A design has yet to be developed but indications are that it would be similar in approach to the two interpretive areas completed at the Santa Cruz Yacht Harbor where tiles and sculpted metal railings provide a marine resource focus. **A** location for that element has been shown on the plans. The exhibit for this **area** will most likely focus on recreational surfing as it evolves from additional community discussions and input. Proposed new sidewalks and stabilized decomposed granite paving will be **an** upgrade from the existing dirt paths in the park.

Park Public Restroom Variance

The proposed public restroom at the Pleasure Point Park requires a variance for the setbacks. The PR zone requires that all yards maintain a 30-foot setback (pursuant to County Code Section 13.10.353). This park is located on a small lot relative to typical PR park sites and there are limited opportunities to situate the small building on this corner parcel (with no location option that would not require a variance). It is important with siting this restroom that it be located back from the adjacent public roadway and that it not disrupt views of the adjacent coast. The public restroom is provided to replace the existing portable restrooms. No other permanent facilities will be located at the park and the semi-permanent features such as picnic tables, benches, some signs, fences, and art features are allowed within the setbacks. (See Variance Findings, Exhibit B).

Grading/Riprap Removal

Large amounts of existing concrete rubble and riprap will be removed from the beach area between 32nd and 36th Avenues, except at the east end to protect the adjacent private parcel. Any boulders or rocks left on the beach will be pieces of the natural purisima sandstone, a natural feature of the beaches in the area. Removal will be done with cranes and dump trucks staged from the road above the beach. The only equipment allowed on the beach is hand tools and equipment necessary to assist the rubble removal. It is estimated that roughly 4,000 to 6,000 cubic yards of rock and concrete rubble will be removed from the beach during this part of the work. This work would result in more beach area available to the public **and** improve aesthetics. If possible, the rubble will be ground down (at an off site location) into smaller sizes and reused. If this is not possible,

the rubble will be disposed of at the County landfill. The rock riprap in areas where the protection structures are proposed will either be removed or relocated to the proposed stairways for protections during large storms. The riprap in the vicinity of the stairs at The Hook will remain as a protective armoring to the stair supports.

Drainage

The roadway improvements include upgrades to the major street drainage outfalls with improved storm water treatment devices and consolidation of the storm drain outfall units where feasible. The project includes capping and replacing several old storm drain outfalls with pipes that protrude near the top of the bluff. The road sections and park site are designed to drain away from the top of the bluff into new catch basins. New catch basins will be equipped with improved filtration and water quality mechanisms, as per best management practices. New "CDS" filtration units will be installed for all new outfalls in the project area as part of the parkway improvements. (See EIS/EIR Table 2-4 on page 2-48 for a list of proposed drainage improvements.) No significant impacts were identified in the EIS/EIR for storm water runoff or water quality.

The new storm drain lines are designed to be embedded in the bluff and will release water at the base of the cliff through the bluff protection structures. These drains will discharge water over an energy dissipater in the base of the bluff structure to prevent erosion and to minimize turbidity. The outfall pipes will also be partially covered by the bluff and are designed to blend with the surrounding bluff structure. Street storm drain outfalls will be shortened and angled, with the ends incorporated into the sculpted face of the walls. The outfalls will be shielded from views from the bluff top above and from distant views along the beach, making them less obtrusive and more compatible with the visual character of the area. This design approach was used for the emergency repair of the first cribwall near the intersection of 33rd Avenue.

As a back up system for the new surface drains proposed with the parkway along the bluff top, a series of vertical channel drains will be placed behind the bluff protection walls prior to reinforcing. These drains reduce the hydrostatic pressure behind the walls, maintain and stabilize the terrace deposit material so that it no longer washes out during periods of saturated soil conditions, and provide stability during periods of high ground water in the rainy season. The drains outlet the walls in small diameter pipes with locations placed in a staggered pattern along the base of the bluff. They are angled and covered with colored concrete to minimize their visibility.

Emergency Wall Repairs

Coastal erosion and deterioration of the reinforcement of the walls had severely damaged four crib-retaining walls between 33rd and 36* Avenues along the bluff adjacent to East Cliff Drive. An inspection by Sanders & Associates Geostructural Engineers (SAGE) revealed an immediate need to repair these existing walls to avoid failures of the walls and adjacent bluff. The County Department of Public Works completed the repairs to the crib walls in emergency failing condition in 2004 pursuant to **Permit** 04-0307. This work was completed by removing portions of the existing crib walls, installing approximately 300 linear feet of soil nail walls to the existing crib walls, then adding primary and secondary shotcrete facing and finish facing with sculpting and staining to create a naturalized finish appearance and mimic natural bluffs. This work also involved temporarily removing and replacing portions of the beach access stairway between 35th and 36* Avenues, and approximately 733 cubic yards of grading.

The crib wall repairs are designated as Walls 1, 2, 3, and 4, progressing from west to east (see Emergency Repair Plans, Exhibit E). The geostructural engineers concluded that Walls # 1, 2, and **4** were in advanced stages of failure and that collapse should be considered imminent. The Wall **3** repair consisted of installing soil nails and infilling below and around an existing drainpipe outfall which had been severely undercut. The repairs to the existing crib walls were designed as solid faced structures of gunnited concrete with soil nails constructed over the face of the old cribs in order to mitigate the loss of fill during periods of high ground water in the rainy seasons. The "soil nails" are formed by drilling with a hollow anchor steel rod using a sacrificial bit through which cement grout is injected. With this approach the contractor is able to drill and install structural elements without generating extensive spoil materials or dust. Behind the walls a series of

channel drains were installed at approximately six feet on center, extending vertically down behind the face of the walls. These are wrapped in filter fabric to prevent the fine material from washing out. The resulting emergency soil nail walls with shotcrete facing and finishing resemble the natural bluff closely (see EIS/EIR Existing Conditions Photos, Figures 5-1a and 5-1b).

One of the primary considerations for the repairs to the crib walls was utilization of a construction approach that would be the least disruptive to the environment and the local community. The work needed to be done quickly with little or no adverse impact to the beach environment. The design and technology of soil nail structures allowed for construction from drilling equipment suspended over the bluffs therefore no mechanical equipment was needed on the beach and no large footings or foundations were required to maintain the stability of the structure. All work was staged from the roadway above and all construction work and equipment operations were performed above the mean high water line. The Purisima rock formation and the beach at the foot of the soil nail walls were protected through construction. The contractor laid out tarps and collection areas so that construction debris was kept off the beach area. A continuing monitoring and maintenance program is also required (Condition III.E). The option of removing the crib walls and re-grading slopes would have required extensive excavation and sloping back of the bluffs to the point of leaving very little area for access for the roadway above. Rip rap or other armoring mechanisms like gravity walls would have required a large footprint or foundation for the structure to be placed on the beach, which also would have reduced access along the base of the bluffs in the intertidal zone.

The emergency determination was made based upon two reports by SAGE (Exhibit H) that concluded that due to erosion, undermining, loss of infill and support, and resulting destabilization, the project walls were in advanced stages of failure and that collapse was considered to be imminent due to the potential of sudden collapse triggered by numerous factors including seismic shaking, further **bluff** erosion, vibrations from severe storm waves or vehicles on East Cliff Drive, human interaction, or further disintegration of the wall elements. It was determined that should failures occur, they could result in losses such as the elimination of the walls and the ground adjacent to them, or the loss of the roadway and buried utilities, and present an immediate threat to public safety with potential for injury or loss of life should portions **of** a wall collapse. (See also later SAGE reports that provided additional bluff evaluation, threat and stability analyses in EIS/EIR Appendix G.)

Based on these factors, the project qualified under both the emergency coastal and grading provisions. The work met the criteria of Chapter 13.20.090 (Emergency Projects) of the Santa Cruz County Code in that the wall repairs were an emergency measure to prevent further damage to the existing walls and bluff and to protect life and health of pedestrian, bicycle, and vehicular users of the public East Cliff Drive roadway above the slope and recreational users of the public beach below. Further, the applicant submitted plans, technical reports and information sufficient to comply with the requirements for a regular Coastal Permit. Grading permit approval is required, as provided herein, for the approximately 733 cubic yards of soil moved in conjunction with the project and for shoreline protection structures where **fill** (including concrete) is placed within a Coastal Hazard Zone (16.20.115). The Emergency Grading Permit was granted pursuant to County Code Section 16.20.116 in conjunction with the Emergency Coastal Permit.

Scenic/Visual Resources and Design Review

East Cliff Drive is a significant stretch of coastal bluff in the Live *Oak* area that offers a continuous unobstructed view of Monterey Bay. The adjacent area is also considered **an** important coastal scenic resource in the General Plan. The length of the project area offers exceptional public views and vistas and, because East Cliff Drive between 33rd Avenue and 41st Avenue is designated as a "County Scenic Road," public vistas along this road are afforded the highest level of protection. The General Plan specifically designates Pleasure Point Park and The Hook, as "Coastal Priority Sites" to preserve coastal access and views. The proposed Sanctuary Scenic Trail also designates the Pleasure Point Park site, the area near 35" Avenue, and The **Hook** area as minor or major interpretive and viewing sites for Monterey Bay. ***See*** attached Coastal Development Permit Finding #5 and Development Permit Finding #6 for further discussion on project compatibility with

General Plan and LCP visual resource policies.

A discussion of Visual Resources was presented in the EIS/EIR in Chapter **5.** Existing views of the project area as shown in EISEIR Figures 5-1a and 5-1b were used as a basis for comparison of changes in the visual character of the site. This EISEIR chapter presents a visual impact assessment of the project area, including visual simulations of the proposed project from a bluff view and an ocean view in Figures 5-2a and 5-2b. Potential impacts on visual resources from the proposed project were assessed by estimating the amount of visual changes to the basic visual resource components, water, landform, vegetation, and man-made elements, as a result of the project. The surrounding residential uses present a wide range of design elements and are not visually cohesive. Improvements to the parkway and bluffs would be visually compatible with the surrounding development and may provide some visual unification to the overall area. There may also be long-term beneficial impacts form the project on scenic views form the parkway improvement and beach clean-up as described in the EISEIR on page **5-1**4. See also CEQA Findings under Visual Resources.

The proposed parkway and park improvements and completed emergency crib wall repairs comply with the requirements of the County Design Review Ordinance, in that the existing walls and proposed parkway and park project minimize visual impacts and incorporate design features such **as** low railings and split rail fencing with wood and natural appearing materials to reduce the visual impact of the proposed project on surrounding land uses and the natural landscape. The emergency repaired walls (and proposed new walls) are only slightly visible from the adjacent portion of East Cliff Drive above the bluff, but are visible from the beach. The walls are designed to cover the bluff face without requiring significant grading or alteration of natural landforms thereby creating a more natural appearance. The walls also incorporate design features including installing finish facing on the soil nail walls, with sculpting and staining to create a naturalized finish appearance and to reduce the visual impact of the walls.

Zoning, General Plan and Local Coastal Plan Consistency

The subject property is a combination of road right-of-way and individual parcels, which are primarily located in the Parks, Recreation and Open Space (PR) zone district. The proposed project uses and activities including public roadway and parkway improvements, recreational uses, open space, parking, drainage improvements, park, and public restroom are all allowed uses within this zoning. The project's primary open space and recreational uses are principal permitted uses within the zone district. The site (APN 032-242-10) at the west end of the project area known as the Pleasure Point Park is zoned PR-D with a "D" Designated Park Site Combining District to denote that it is to be developed for public park and recreational facilities. This property was purchased by the County in the mid 1980's for this purpose. The plans and project description attached in Exhibits **E** and F address the park Master Site Plan requirements of the PR zone district (Zoning Ordinance section 13.10.355). The park and open space areas will be managed by the County Department of Parks, Open Space and Cultural Services.

The project is consistent with the site's Existing Parks and Recreation (0-R) General Plan designation. The project is also in conformance with the County's certified Local Coastal Program, in that the proposed improvements are sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. The project site is located between the shoreline and the first public road. A portion of the site is identified as a priority acquisition site in the County's Local Coastal Program. The proposed project will also improve public access to the beach and ocean.

The potential impacts of the proposed project were assessed in the EISEIR, Land Use Chapter 3, based on the consistency of the project activities with the relevant objectives and policies of the General Plan and based on the compatibility of the project improvements with the existing and proposed land uses in the surrounding area. The project was determined to have beneficial impacts, consistency with the General Plan and LCP, compatibility with uses in the project area, and compatibility with adjacent uses.

The General Plan/LCP Land Use Chapter 2 contains objectives and policies to which the proposed project is subject. The proposed project would be consistent with and, in many cases, would implement specific programs in Chapter 2 of the General Plan and LCP. The following General Plan/LCP Polices apply to the project: 2.22.1 – Priority of Uses within the Coastal Zone; 2.22.2 – Maintain Priority Uses; and 2.23.2 – Designation of Priority Sites. These policies are addressed by the project in that: the recreational priority use for the project area would be maintained and coastal priority sites would be reserved with specific programs implemented for these designated sites. The Pleasure Point Park site on the west end (032-242-10) and the East Cliff Drive overlook and parking area on the east end at The Hook (032-181-04) are listed in Figure 2-5 of the General Plan as Coastal Priority Sites. The proposed project with parkway and park improvements for public use is consistent with the specific development standards, circulation and public access criteria identified for the priority sites.

The Public Safety and Noise, Chapter 6, of the General Plan includes Policy 6.2.16 – Structural Shoreline Protection Measures. This policy allows (but also limits) the construction of bluff protection projects to locations where they are needed to protect existing structures that are threatened, and to protect public works, public beaches, and coastal dependent uses. (See additional discussion in EISEIR Geological Resources and Coastal Processes, Chapter 6, and coastal bluff evaluation reports by Sanders & Associates Geostructural Engineering in EISEIR Appendix G, as well as Exhibit H relative to the emergency crib wall repairs.)

See Coastal Development Permit Findings #'s 1, 4 & 5 and Development Permit Finding #6 for additional discussion on the project's consistency with Zoning requirements and General Plan and Local Coasta Plan objectives, policies and programs.

Environmental Review/CEQA Compliance

Environmental review was required and performed for the proposed project per the requirements of the California Environmental Quality Act (CEQA). Initially, the proposed East Cliff Drive Bluff Protection and Parkway Project was to be co-funded by the County Redevelopment Agency and Army Corps of Engineers and, as such, was subject to compliance with both the National Environmental Policy Act (NEPA) and CEQA. Consistent with NEPA and CEQA, which encourage coordinated environmental reviews, it was decided to prepare a joint environmental impact statement/ environmental impact report (EISEIR). After completing an Initial Study, the County Planning Department issued a Notice of Intent to prepare an environmental impact report (EIR) for the proposed projects in January 2001. A Notice of Intent (NOI) to prepare an environmental impact statement (EIS) was also published in the Federal Register in March 2001.

A Draft EIS/EIR was prepared and released for public comment from March 21 through May 12,2003. The County conducted an informal public meeting to discuss the project proposal and Draft EISEIR on April 7, 2003; and the Army Corps held a formal public meeting to receive comments on April 30,2003. A Final EIS/EIR was prepared and released in October 2003. Ordinarily, under NEPA, there would be a 30-day comment period following distribution of the Final EISEIR, after which, the Army Corps would issue its Record of Decision (ROD) for the project. However, on November 7, 2003, the California Coastal Commission determined that the proposed project was not fully consistent with the California Coastal Management Act (CCMA), and objected to the Army Corps' consistency determination on the project. Consequently, the Army Corps never issued a ROD for the project and the County never certified the Final EISEIR.

The current bluff protection and parkway project is now totally funded and sponsored by the County Redevelopment Agency and Department of Public Works. In an effort to fully address all of the issues raised by the Coastal Commission on the original EISEIR, a Revised Draft EISEIR was prepared and released for public comment from May 8 through June 26,2006. The main differences between the revised draft and the original EIS/EIR are: 1) inclusion of a systematic geotechnical evaluation and threat analysis that more explicitly documents the threat that coastal erosion poses to East Cliff Drive, associated utilities, road as a

public improvement, and the County right-of-way, 2) an expanded alternatives discussion that more fully explains why non-structural alternatives were initially considered but eliminated from further study, and 3) updates to the project description and portions of the impact analysis to reflect the emergency cribwall repairs that were constructed in 2004.

Changes were also made to the Revised EISEIR to reflect that the project no longer includes any federal funds, and would be financed entirely by the Redevelopment Agency. As a result, the Corps' involvement is now limited to authorization of the bluff protection structure under Section 404 of the Clean Water Act, Nationwide Permit #13. This nationwide permit has already undergone NEPA review, so the NEPA analysis included in the Revised Final EIS/EIR is essentially superfluous, and CEQA requirements prevail. However, in an effort to conserve funds and avoid potential confusion over this procedural change, references to the EISEIR have not been changed to refer only to an EIR. Deleting the language at this point in the planning process could be problematic, while retaining the terminology is not detrimental.

The November 2006 Revised Final EISEIR identifies 17 potentially significant impacts associated with the proposed project (Alternative 1) in seven resource categories including: recreation, noise, visual resources, geological resources, biological resources, traffic and transportation, emergency services, utilities, and paleontological resources. The Revised Final EISEIR also identifies mitigation measures that would reduce all of the potentially significant impacts from the proposed project to a less-than-significant level and adequately address these issues. The required CEQA Findings have been prepared explaining how each significant impact was addressed (Exhibit **B).** A Mitigation Monitoring and Reporting Plan (MMRP) was also written as a companion document to the Revised Final EISEIR and will be used to assure that all of the mitigation measures are implemented (Exhibit D). Additionally, all of the EISEIR mitigation measures have been included as enforceable Conditions of Approval for the project (Exhibit C).

Additional California Coastal Management Act (CCMA) Issues

Although the Revised Final EISEIR and MMRP fully satisfy CEQA requirements, Coastal Commission staff submitted comments and recommendations that go beyond the scope of CEQA or do not accommodate all of the project objectives as defined by the applicant. The County Coastal Development Permit Findings conclude that the project within the County's jurisdiction is consistent with the General Plan/Local Coastal Plan, which implements the Coastal Management Act. Regardless, it is anticipated that these topics may come up later in the Coastal Commission review process within the context of the CCMA. These topics can be grouped into three general categories.

1. Project Alternatives or Permutations: Coastal Commission staff requested that the Revised EISEIR more fully evaluate additional project alternatives or permutations. Additional project alternatives and alternative components were further considered and included in the Revised EIS/EIR. Examples such as soft solutions for arresting coastal bluff erosion, reversing the East Cliff Drive traffic direction, closing East Cliff Drive to vehicles to create a linear park, and separated parkway paths were evaluated. However, though these alternatives were considered, they were deemed unsuitable because they were either infeasible, would not accomplish the project objectives, or went beyond the scope of the project proposal. The discussion of alternatives considered but eliminated can be found in the Revised EIS/EIR Chapter 2.4.

2. The Significance of Impacts and Appropriate Mitigation: In compliance with CEQA, the Revised EIS/EIR evaluates anticipated impacts based on changes to the existing environment, and proposes mitigation that will reduce significant impacts to a less than significant level. Some comments on the Revised Draft EISEIR submitted by Coastal Commission staff are more from the perspective of the CCMA, which is fundamentally different from CEQA in some ways. For example, rather than evaluating impacts in relation to the existing environment, the baseline for impact analyses is established by environmental conditions in 1972 when the CCMA was enacted coupled with permitted

projects since that date. Differences between CEQA and the CCMA and staff interpretations have resulted in differing conclusions about the significance of some of the project impacts and the appropriate level of mitigation. Specific areas of differing conclusions include project impacts to: visual resources, sand supply, surfing, and long-term beach loss due to sea level rise.

Nonetheless, the applicant has attempted to address these concerns to the extent possible. Most notably, they have commissioned the U.S. Geological Survey to collect offshore and nearshore bathymetric information and other data to further the understanding of physical conditions and processes that affect wave breaks and surfing in the area. While the Revised EIS/EIR concluded that the proposed project would not significantly impact surfing in the Pleasure Point vicinity, this work was initiated in a good faith effort to recognize and respond to concerns raised by Coastal Commission staff and others with regard to potential changes to the area over time.

3. Use of the Public Right-of-Way (ROW): Consistent with the CCMA, the proposed parkway is designed to maximize public access to and use of coastal resources in the project vicinity. As part of the EISEIR review, some questions were raised however about more fully utilizing the public ROW and whether some of the parkway features, such as the roadway and bicycle path, could be expanded. This additional use of the ROW issue is believed to be outside the scope of the EIS/EIR. However, expansion of the parkway features are constrained by space limitations in some cases and, in others, cannot be accomplished without affecting other parkway amenities. As well, additional changes to the inland side are not necessary to achieve the goals and objectives of the project or to construct the parkway. Finally, during project community meetings local residents expressed concerns about unnecessary development on the inland side of the roadway and changes to the character of the area. The current parkway design reflects a number of changes that were incorporated as a result of the extensive public review process. It is recognized that private encroachments exist into the public ROW and that reduction of these is an important long-term objective. The current design represents a balance that maximizes public access to the shoreline while being responsive to community concerns.

Conclusion

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

Staff Recommendation

- Recommend to the Board of Supervisors to certify the Revised Final East Cliff Drive Bluff Protection and Parkway EISEJR (Nov. 2006) under the California Environmental Quality Act, based on the attached EIS/EIR CEQA Findings, Conditions, and Mitigation Monitoring and Reporting Plan.

- Recommend to the Board of Supervisors **APPROVAL** of Application **00-0797** based on the attached Findings and Conditions, with acknowledgement that the parkway project design as proposed is contingent upon approval of bluff protection structures by the California Coastal Commission.

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

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

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California Environmental Quality Act Findings

East Cliff Drive Bluff Protection and Parkway Project - Environmental Impact Report

When an environmental impact report (EIR) has been completed for a project, the California Environmental Quality Act (CEQA) and County Environmental Review Guidelines require that written findings be made for each significant impact identified in the EIR prior to agency approval of the project. These findings are as follows:

1. Changes or alterations have been required or incorporated into the project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency.

3. Specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final EIR, and that such significant effects are acceptable due to overriding considerations because specific benefits from the project outweigh the policy of reducing or avoiding significant environmental impacts of the project.

The CEQA Findings for the proposed East Cliff Drive Bluff Protection and Parkway Project (Application 00-0797) are presented below. **Project design features and/or mitigation measures have been identified in the Revised Final EIS/EIR[1] that would reduce all potentially significant impacts to a less-than-significant level.** All mitigation measures have been compiled in a Mitigation Monitoring and Reporting Plan (MMRP) and are included as permit conditions for the proposed project.

Recreation

1. Impact: Public access to and use of the shoreline and ocean would be disrupted in the project vicinity during construction.
   Finding: Mitigation **4.1** requires that at least one stairway to the beach be kept open at all times during construction and, to the maximum extent feasible, that access be maintained to key viewing sites (e.g., Pleasure Point Park and The Hook). Mitigation 9.1 includes additional measures to maintain public access during construction, such as prohibiting construction activities on weekends and holidays and scheduling use of construction vehicles, to the extent feasible, to avoid peak commute hours (i.e., 7 AM to **9** AM and **3** PM to 6 PM).

Visual Resources

2. Impact: The proposed bluff protection structure would impact views, particularly from the ocean, by creating a bluff face that is more uniform in appearance than the natural cliff face.
   Finding: State-of-the art technology would be used **to** reduce visual impacts. The soil nail wall would be covered with cement shotcrete, which would be sculpted and stained to mimic the natural contours of the cliff face. In addition, Mitigation 5.1 requires that native vegetation be planted along the bluff top to cascade over the cliff face, **and** that the ends of the bluff protection structure be designed to blend into the bluff face or existing walls to minimize visually distinct meeting points.
3. Impact: The proposed parkway improvements would include features such as benches, railings and signs that would be definite and regular in shape and contrast with the natural forms of the bluff and beach.
   Finding: Mitigation 5.2 would minimize the visual effects of the parkway by requiring: a) use of decomposed granite in pedestrian areas, wherever feasible; b) use of wood and other natural materials

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where appropriate for stairways, benches, railings and signs; c) development and implementation of a signage plan to assure that signs are minimized, designed to be compatible with the surrounding area, and located to avoid obstruction of scenic views; and d) that trees planted along the bluff edge be located to preserve scenic views and, wherever possible, shield man-made features from view.

Geological Resources

4. Impact: The ends of the bluff protection structures are a potential focus of continued or enhanced erosion (outflanking), which could cause failure of the structures over time or result in damage to neighboring properties.

Finding: **As** recommended in the geotechnical engineering report, the ends of the bluff protection structures would be terminated with a tapered catenary (a type of smooth curve). This would maintain the natural geometry of the existing bluff face which, in turn, would prevent outflanking and wave deflection that could undermine the structures or damage adjoining properties. This design feature would be further strengthened by implementation of Mitigation **6.1,** which requires an annual inspection program, with particular attention given to the ends of the walls, followed by any necessary maintenance and repairs.

Biological Resources

5. Imuact: Construction activities could adversely affect intertidal habitat and associated fish and wildlife species through habitat loss, physical disturbance (e.g., crushing, desiccation), increased siltation, or fuel spills.

Finding: Construction impacts would be reduced by accomplishing as much work as possible from the bluff top using bucket trucks and cranes. Impacts from activities that must be done at the base of **the** bluff, such as installation of the soil nail wall scour apron, would be minimized through implementation of Mitigation 8.1. This mitigation incorporates several measures including: a) plan review and periodic monitoring of construction activities by a qualified biologist to ensure that habitat loss is minimized; b) installation of a silt fence or other barrier to minimize sedimentation of the intertidal area; and c) implementation of additional best management practices to prevent and reduce sedimentation and pollution, including specific fuel spill prevention and cleanup measures.

6. Impact: Construction activities that result in increased siltation or spilled fuel could also adversely impact subtidal and nearshore habitat.

Finding: Implementation of Mitigation 8.1, particularly the silt fence barrier and spill pollution plan, would also minimize impacts to subtidal and nearshore habitat.

7. Impact: Construction noise could disturb special status wildlife species, such as the southern sea otter and California brown pelican that occur in the project vicinity.

Finding: Implementation of Mitigation **8.3** would adequately address this potential impact by requiring: a) wildlife surveys prior to and during construction to detect the presence of sensitive species, b) reducing construction-related noise by limiting the number of heavy equipment in any one area and maintaining maximum feasible distances from sensitive species, and c) use of other **BMPs** for noise reduction (e.g., temporary soundproof structures to house portable generators). While special status birds are not likely to nest in the project area, Mitigation 8.3 also requires bird nest surveys prior to and during construction so any nests can be removed (if empty) or protected with a buffer (if eggs present), as appropriate.

Traffic

8. Impact: Construction vehicles (e.g., dump trucks and cement trucks) could disrupt local traffic and roadway use.

Finding: Construction-related traffic impacts would be minimized through Mitigation 9.1, which requires development and implementation of a traffic mitigation plan. Elements of the plan would

include limiting construction vehicles to primary arterials and collector streets, prohibiting weekend construction, limiting equipment use during peak commute hours (i.e., 7 AM to 9 AM and 3 PM to 6 PM), posting a phone number for registering complaints, and other appropriate measures.

9. Impact: Establishing a construction staging area could require narrowing a section of East Cliff Drive between 32nd and 41st avenues. During certain construction activities, such as crane operation, it would likely be necessary to completely close off a segment of East Cliff Drive, requiring traffic to detour around the construction zone.
Finding: The traffic mitigation plan called for under Mitigation 9.1 would also address these impacts by requiring temporary fencing or barricades around the staging area(s), development of detour plans, installation of signs to alert motorists to lane closures, limiting lane closures to non-commute hours (i.e., 8:30 AM to 4:30 PM), providing a public safety monitor or flag person to direct traffic during lane closures, and other similar measures. The plan would also include provisions to ensure that local residents have continued access to their property.

10. Impact: The parkway improvements could compromise bicycle safety because bicyclists traveling westbound would be required to cross to the ocean side of East Cliff Drive at 41st Avenue to access the pathway then cross back to the inland side of the road at 32nd Avenue to connect to existing bike lanes.
Finding: Implementation of Mitigation 9.3 would minimize bicycle safety impacts by requiring installation of a sign(s) at the intersection of 32nd Avenue/Pleasure Point Drive/East Cliff Drive stating "Bikes Must Cross" to the inland side of the road. A similar sign is already located at the intersection of 41st Avenue and East Cliff Drive to direct bicyclists to the ocean side of the roadway.

Emergency Services

11. Impact: Closing segments of East Cliff Drive during construction could adversely impact emergency services in the project area by limiting access to structures, fire hydrants, and the beach.
Finding: The traffic management plan required in Mitigation 9.1 would address this impact. The traffic plan must be designed to ensure emergency vehicle access along East Cliff Drive at all times, and the local fire and police departments must be notified of planned lane closures and detour routes at least 48 hours in advance. In addition, Mitigation 10.1 requires that a copy of the traffic mitigation measures be provided to the Central Fire Protection District and American Medical Response.

12. Impact: Closing segments of East Cliff Drive during construction could also delay emergency services and increase response times by requiring emergency vehicles to use a less direct route or by increasing traffic congestion in the project area.
Finding: This impact would also be addressed through implementation of the traffic management plan required in Mitigation 9.1, and by providing a copy of the applicable mitigation measures to the Central Fire Protection District and American Medical Response, as required in Mitigations 10.1 and 10.2.

Paleontological Resources

13. Impact: Construction of the bluff protection structure would disturb and cover over important paleontological resources.
Finding: Mitigation 11.1 would address this impact by requiring preparation of a specific mitigation plan, which would have to be approved by the Planning Department, prior to any ground disturbance. The plan must include the following, or comparable, measures: a) a paleontological survey and collection of surface fossils prior to construction; b) preservation of fossiliferous boulders and cobbles that have educational value and, if possible, placement in interested institutions (e.g., museum or university); c) monitoring throughout construction of the bluff protection structure, and salvage and placement of any additional important fossil materials uncovered; and d) preparation of a final report upon completion of construction describing what fossils were salvaged, where they were placed, and other related information.

Noise

14. Impact: Construction noise would cause short-term impacts on nearby residences and other sensitive land uses in the project area.
Finding: This impact would be lessened through implementation of Mitigation 13.1, which restricts use of motorized equipment to Monday through Friday from 7:30 AM to 4:30 PM, and requires the posting of a phone number for registering complaints about noise problems. In addition, Mitigation 8.3 requires limiting the number of heavy equipment used in any one area and implementation of other noise reduction BMPs.

Utilities

15. Impact: Drilling into the face of the cliff to install the bluff protection structures could disturb or damage underground utility pipelines and disrupt service to those served by the affected utility.
Finding: Mitigation 14.1 addresses this impact by requiring coordination with local utilities prior to construction to determine both the horizontal and vertical locations of all underground pipelines. The specific drilling locations for the soil nail walls will then be designed to avoid all underground utilities.

Cumulative Impacts

16. Impact: Construction of the bluff protection structures, in combination with existing and other proposed seawalls, could result in cumulative impacts to visual resources.
Finding: The project's contribution to cumulative visual impacts would be offset by several design features including: a) use of state-of-the*art* shotcrete surfacing to mimic the appearance of the natural bluff face; b) replacement of the existing, more visually obtrusive, cribwall near the end of 35th Avenue; c) removal of rubble and riprap on the beach along the base of the bluff, d) removal and replacement of the old, crumbling restroom; and e) removal of the "temporary safety barricades" and replacement with new railings.

17. Impact: Construction of the bluff protection structures, in combination with existing and other proposed seawalls, could result in cumulative impacts to paleontological resources.
Finding: Santa Cruz County General Plan Policy 6.2.12 requires that new developments be set back from coastal bluffs. This policy should limit the need for future bluff protection projects, and any associated impacts, along coastal cliffs in currently undeveloped areas. In other coastal areas, where development and paleontological resources exist, the cumulative impact of future bluff armoring projects could be reduced through implementation of measures like those included in Mitigation 11.1 The County of Santa Cruz and California Coastal Commission can and should require this or similar mitigation for future bluff protection structures that could impact paleontological resources.

Coastal Development Permit Findings
East Cliff Drive Bluff Protection and Parkway Project

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

The East Cliff Drive right-of-way and project site area is zoned Parks, Recreation and Open Space District (PR). The purpose of the PR district is to preserve and protect the County's undeveloped lands and public lands as open space. This finding can be made, in that the proposed project furthers the purpose of the PR district and serves to preserve, protect, maintain and implement the recreation, open space, and park uses of the public coastal access road, beach areas below, stair accesses to the beach and surf, and the bluff-top parkway and park. The PR designation allows public facilities and open space uses, including the proposed project uses with public roadway and parkway improvements, recreational uses, open space uses, parking, drainage improvements, park improvements with public restroom, and repair of the coastal bluff crib walls.

The site (APN 032-242-10) at the west end of the project area will be developed as a small public park with recreational facilities consistent with the PR-D zoning and "D" Designated Park Site Combining District. The "D' Designated Park Site denotes parcels designated in the General Plan and Local Coastal Program Land Use Plan to be developed as proposed park sites. PR district principal permitted uses in the Coastal Zone include open-space uses not involving permanent structures and public open-space recreational uses, including appurtenant uses and structures, on developable lands. The major elements of the project are principal permitted uses within the PR zone district; however, elements such as the public restroom are not. The PR zone and PR-D combining districts implement and are consistent with the site's (O-R) Parks, Recreation and Open Space General Plan designation and proposed park and regional park overlays.

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

This finding can be made, in that the proposal does not conflict with any known public access, utility, or open space easement or development restrictions that encumber the site. Rather, the project serves to protect public access, utilities, and open space by shoring up failing crib walls along the bluff to protect the coastal access roadway with significant public utilities, maintain beach access, and protect bluff-top and beach open space areas. Existing public utility facilities within East Cliff Drive will be better protected with the project improvements. As well, the larger project improves public access to the beach and surf with the installation of new and replacement stairways from the upper parkway. This includes a new stairway to be constructed near the end of 33rd Avenue at Pleasure Point Park, replacement of an existing stairway between 35" and 36" Avenues with new stairs just east of its current location to provide easier surfing access. The project also preserves the existing beach stairway accesses near the end of 38th Avenue and at the Hook overlook.

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

Section 13.20.130 of the County Code establishes the design criteria for coastal zone development. This section requires that new development be sited, designed and landscaped to be visually compatible and integrated with the character of the surrounding neighborhood. Subject to concurrent approval of the proposed variance, the proposed project is consistent with all applicable regulations under County Code Section 13.20.130 for development within the Coastal Zone. The project includes developing facilities that are compatible with adjacent residential and commercial uses and the natural environment. Enhancing recreational use in the project area and stabilizing the road would have a beneficial impact on the surrounding uses. The proposed project will be visually compatible and integrated with the character of the surrounding neighborhood and natural environment by maintaining the existing character of the site, as well as, in how the

project is sited, designed and landscaped. Project design characteristics will minimize impacts on the site and the surrounding neighborhood. See additional discussion under Coastal Development Finding #5 below with regard to project consistency with the Visual Resource policies in the General Plan and LCP. .

The project includes design elements to make it consistent with the surrounding neighborhood and natural environment in terms of materials and colors. Though the project site is located along the bluff top and the walls along the face of the bluff will be visible from the small beaches below, the colors and materials are natural in appearance and complementary to the site. The project minimizes impacts to the neighborhood and natural environment as it includes open railings, low split rail fencing, and bluff walls that will be textured, sculpted and stained to mimic natural coastal bluffs. The design of the walls minimizes visual intrusion by incorporating materials and finishes which will be compatible with and harmonize with the character of the area, and that will appear natural when finished. The restroom facility has also been sited and designed to be least intrusive in the coastal scenic corridor by utilizing earth tone colors and materials and by landscape screening of the structure from the scenic corridor and adjacent development.

Site disturbance was minimized in that grading, earth moving, and removal of major vegetation is minimized. Special landscape features such as prominent natural landforms and tree groupings were retained. Site disturbance is minimized by the proposed work being performed from the top of the bluff to minimize disturbance to the beach and natural marine environment. Large beach rubble and rock riprap is proposed to be removed from the base of the bluff; however, this is not a natural feature and was placed there some time ago for bluff protection. All mature trees in the project area will be retained, including large Monterey Cypress and palm trees (planted years ago by community volunteers), and existing tree groves adjacent to the proposed parkway. No major vegetation will be removed with this project. Existing vegetation was preserved where possible and replaced where removal was necessary with new enhanced planting.

New and replacement vegetation is compatible with the surrounding vegetation and suitable to the climate, soil, and ecological characteristicsof the area. The proposed plantings are primarily native plants. The plantings were chosen to ensure plant species that would grow, withstand the intensity of public use to be generated by the project, and survive in this extreme coastal environment where successful planting options are limited. This is a relatively urban environment that is not adjacent to wetlands, lagoons, or other sensitive habitats with respect to plant types, which could particularly suffer from the use of non-native or invasive plant species. The proposed plantings will also serve to minimize the visual impacts of the wall project, with new planting used along the parkway to cascade over the bluff walls. New evergreen trees will also be planted including Monterey Cypress, Catalina Cherry, and Coast Live Oak trees that blend with the neighborhood and coastal environment. The new Monterey Cypress trees proposed along the project and at the overlook at the **Hook** area will supplement the existing mature Monterey Cypress trees in those areas.

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

This finding can be made, in that the project site is located between the shoreline and the first public road and it will conform to the relevant public access and recreation policies of the General Plan and Local Coastal Program (GP/LCP) and of Chapter 3 of the Coastal Act. In fact, the proposed project will improve public access to the beach and ocean. A portion of the project site is identified as a priority acquisition site in the County LCP. This site has been acquired by the County and is being developed with this proposal to the land use and development standards prescribed by the GP/LCP.

The project conforms to the GP/LCP land use plan in that it is consistent with and implements the goals of Land Use Chapter 2. This project achieves Land Use Objective 2.22 that prioritizes coastal-related development on the coast. The improvements for a public park and enhanced coastal recreational access with public safety provisions address the land use priorities within the Coastal Zone as identified in Policy 2.22.1. The Pleasure Point "Overlook" park site (APN 032-242-10) is designated as a Coastal Priority Site pursuant to GP Land Use Policy 2.23.2 and Figure 2-5. The proposed project is consistent with and implements the designated priority use of "Existing Park, Recreation and Open Space: Development of coastal overlook and access with supporting improvements". The proposed park site design with new public restroom, park furniture, public art, and landscaping satisfies this policy. The priority use development standards are satisfied in that the new public restroom facility at the park is situated toward the west end of the parcel to preserve views of the coastline and public coastal access at this parcel is preserved and enhanced with the new stairway. The circulation and public access requirements are also satisfied in that the County owned coastal overlook and access is being improved for public use with the proposed park, additional parking improvements, and new beach access stairway. This project includes a park master plan review as part of the development permit for the park priority site pursuant to Policy 2.23.3. These requirements are addressed by the project plans. The plans demonstrate an integrated design providing for full utilization of the park site. This is a small park site with limited facilities and no additional phasing program or future land uses are proposed with this project, as there is no room for additional park features nor any anticipated unmet infrastructure availability or projected demand. The County Parks Department will perform regular park facility management and landscape maintenance.

No changes are proposed with this project to "The Hook" coastal priority site (APN 032-181-04) at 41st Avenue and East Cliff Drive, which was previously developed by the County Redevelopment Agency and Public Works Department as a beach access parking facility. The "East Cliff Drive Overlook" priority site (APN 032-251-02) is designated as an existing park, recreation and open space use with development of a coastal overlook with supporting improvements. That parcel is undeveloped except for a few benches and is privately owned. Site improvements are not proposed for that parcel with this project other than parkway path improvements and a portion of public parking along the top of the bluff; however, development of this project does not preclude the possibility of additional public coastal overlook improvements in the future.

The project is consistent with the General Plan Chapter 7 Parks, Recreation and Public Facilities in that numerous objectives, policies, and programs of this section are implemented by the proposed project. The proposed project includes completion of the blufftop Pleasure Point Outlook regional park and enhances the overlook area across from the existing developed parking facility at The Hook in conformance with the objectives of the Chapter 7, Public Parks and Recreation Facilities Figure 7-2 the major policies, objectives and programs relative to the project are addressed as follows:

Policy 7.1a Parks and Recreation Opportunities – with the proposed pedestrian and bicycle parkway, increased safety conditions, accessible improvements and added parking, the project implements and enhances the range of public opportunities for the access to, and enjoyment of, park, recreation, and scenic areas, including the use of active recreation areas and passive natural open spaces by all ages, income groups and people with disabilities.

Policy 7.5.7 Beaches as Regional Parks – access is improved to the coastline and beach area to enhance regional recreational opportunities for County residents.

Programs:

a. Live Oak Primary Public Access Facilities are implemented in the development of the regional park facility, parking, and other support facilities provided in association with the Pleasure Point Overlook.

Objective 7.6 Trails and Recreation Corridors – the proposed parkway project enhances the countywide

system of hiking and bicycling trails, which provide access to and connect the various parks, recreation areas, beaches and urban areas.

Programs:

h. The project includes evaluation and implementation of the one-way street system on East Cliff Drive to facilitate a wide, safe pedestrian and bicycle promenade. The project includes construction of a facility including landscape enhancement and coastal bank protection as designated.

Objective 7.7a Coastal Recreation – by improving the pedestrian parkway for pedestrians and bicyclists, improving accessible access measures along the parkway, providing new and replacement stairways to the ocean for surfers and other recreational users, and shifting the one-lane traffic to the east side of East Cliff Drive to reduce the load on the bluff side, the project maximizes public use and enjoyment of coastal recreation resources for all people, including those with disabilities, while protecting those resources form the adverse impacts of overuse.

Objective 7.7b and 7.7c Shoreline and Beach Access – the project maintains, improves and adds new shoreline and beach access to the coast with adequate improvements to serve the general public and the coastal neighborhoods which is consistent with the Coastal Act, meets public safety needs, protects natural resource areas from overuse, protects public rights and the rights of private property owners, and minimizes conflict with adjacent land uses. Visual and physical access to the beach is maintained, enhanced, and provided with the project.

Policy 7.7.1 Coastal Vistas – the project encourages and enhances pedestrian enjoyment of ocean areas and beaches by the development of vista points and overlooks with benches and railings at Pleasure Point Park, the overlook at The Hook and along the parkway, as well as improving facilities for pedestrian access to the beach.

Policy 7.7.4 Maintaining Recreation Oriented Uses – the project maximizes protection of the coastal bluff top areas and beaches from intrusion by non-recreational structures and incompatible uses.

Policy 7.7.5 Coastal Bicycle Route – the project provides for safe bicycle travel along the Pleasure Point coastal corridor by developing a coordinated, continuous bicycle route parallel to the shoreline.

Policy 7.7.6 Hiking and Biking Trail Network – the project implements the hiking and bicycle trails system that provide access to and connect the various parks, beaches, recreation and urban areas.

Programs:

a. Associated project provides new and replacement stairs to improve beach access and safety.
b. This project increases standard and accessible parking opportunities to serve visitors to the Live Oak coastline in the limited locations where they are feasible and compatible with the neighborhood and natural setting.
c. The project provides for the development and maintenance of vista points and overlooks with benches and railings at various points along East Cliff Drive including the west end at Pleasure Point Drive, the promenade along east Cliff Drive between 32nd and 41st Avenues, and the eastern end at 41st Avenue.

Policy 7.7.10 Protecting Existing Beach Access – the project proposes to preserve, protect and enhance existing pedestrian access to all beaches to which the public has a right of access.

Programs:

a. The project maintains and improves public access stairs at all primary access points along this portion of East Cliff Drive and maintains local access to all neighborhood access points.

e. The project implements this program to improve, widen, and complete pedestrian/hikeway along East Cliff Drive between 32nd and 41st Avenues where right-of-way permits exist and includes the installation of additional benches and landscaping.

Policy 7.7.13 Access Maintenance Responsibility and Liability – the project implements the policy to complete, open and maintain coastal access ways before the first public road and the shoreline.

Programs:
e. The project implements the program to improve, widen, and complete pedestrian/bikeway along East Cliff Drive between 32nd and 41st Avenues with the installation of additional benches and landscaping.
f. The project includes a sign program for the project area with public access signage.

Policy 7.7.15 Areas Designated for Primary Public Access – the project maintains the Pleasure Point/East Cliff Drive and end of 41st Avenue primary public access points.

Programs:
d. The project enhances pedestrian connection from the Hook parking lot at the intersection of 41st Avenue and East Cliff Drive and enhances the landscaping compatible with the surrounding area.
e. The lot at the intersection of East Cliff Drive and Pleasure Point Drive is County owned and the project proposes to improve the park facility as part of the pedestrian/hikeway system, as a vista point, and for a staging area for surfing.

Policy 7.7.18 Areas Designated for Neighborhood Public Access – the project maintains a system of neighborhood access points appropriate for access by local residents at the stairway between 35th and 36th Avenues, at 38th Avenue, and at 41st Avenue.

Policy 7.7.19 Improvements at Neighborhood Access Points – the project provides improvements appropriate to neighborhood access points including: path improvements and bicycle parking, and provides for future maintenance, recycling, and garbage collection in the project area.

Policy 7.7.24 Environmentally Damaging Trails – the project proposes to reduce the number of trails to destinations where the present level of use is causing deterioration to sensitive habitats or serious erosion problems.

Policy 7.7.25 Unsafe Trails – the project discourages public use of access trails, which are hazardous because safety improvements have not been provided or cannot be built due to physical limitations.

Objective 3.8a System Development Policy – the project develops a bikeway network maximizing the safety and convenience of users of all levels of experience within that system. The network includes the opportunity for recreational use.

Programs:
a. The project provides for bicycle use in the planning, designing, and constructing of this County project.
f. The proposed bikeways were planned, designed, and will be constructed consistent with the adopted Bikeway Plan.

Policy 3.8.7 Recreation – the project includes the improvement of bicycle routes to facilitate access to recreational areas including regional parks and beach areas.

The project also implements the Monterey Bay Sanctuary Scenic Trail through the project area. The Scenic Trail is a recreational and interpretive coastal pathway that links existing and new trail segments into a

continuous coastal trail around Monterey Bay, accommodating pedestrians, bicyclists, and accessible travel. The purpose of the trail is to enhance appreciation and protection of the marine sanctuary by promoting public use and enjoyment at its shoreline. The project also includes three interpretive and viewing sites for Monterey Bay as designated for the Pleasure Point Park site, the area near 35th Avenue, and at the Hook area.

As well, East Cliff Drive is designated as a portion of the Santa Cruz County's Master Bikeway Plan. The Bikeway Plan defines a network of regional bikeways, which serve the County and adjacent cities. The improved bicycle access through the project will help formalize the bikeway connections between Capitola, southern portions of the County, and the City of Santa Cruz.

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

Road, public facilities, park, recreational and open space uses are allowed uses in the PR and PR-D (Parks, Recreation and Open Space District, with "D" park site combining designation) zone district of the site, as well as the General Plan and Local Coastal Program O-R (Parks, Recreation and Open Space) land use designation with proposed park and regional park overlays. The proposed project is consistent with development standards applicable to parcels within the Coastal Zone. Additionally, the proposed project is sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding residential neighborhood and natural coastal environment.

The project site is located between the shoreline and the first public road. This project as proposed and conditioned will conform to the public access and recreation elements of the GPLCP. In fact, the proposed project will improve public access to the beach and ocean. A portion of the project site is identified as a priority acquisition site in the County Local Coastal Program. This site has been acquired by the County and is being developed with this proposal to the land use and development standards prescribed by the GP/LCP land use chapter.

The proposed project is also consistent with General Plan/LCP Chapter 3, Circulation policies, objectives, and programs in that pursuant to Bikeway System Development (Program b.) bicycle-parking facilities are located at all primary public access points to the beaches and at the park. Pursuant to Policy 3.8.7, bicycle route improvements are proposed to facilitate access to recreational areas such as the beach areas, regional park, and major tourist recreational facilities along this stretch of the Monterey Bay coastline, thereby promoting recreational bicycle use as eco tourism. Recreational Access Objective 3.14 is also satisfied in that the project improves access to the County's recreational resources, using multiple means. Capacity on East Cliff Drive is reserved for recreational traffic. A separated portion of the right-of-way is designated for the exclusive use of bicycles and pedestrians. As well, the project implements Policy 3.14.2 regarding road improvements which provide access to recreational resources as a transportation improvement priority.

The proposed project is consistent with, and in many cases implements specific objectives and policies of the General Plan/LCP Visual Resources, Chapter *5* including the following Policies: 5.10.3 – Protection of Public Vistas; 5.10.6 – Preserving Ocean Vistas; 5.10.7 – Open Beaches and Bluff Tops; 5.10.8 – Significant Tree Removal Ordinance; 5.10.10 – Designation of Scenic Roads; 5.10.12 – Development Visible from Urban Scenic Roads; 5.10.13 – Landscaping Requirements; 5.10.15 – Design Review for Public Projects Visible from Scenic Roads; and 5.10.18 – Signs Visible from Scenic Roads. See EIS/EIR Chapter *5* Visual Resources for additional discussion. These polices are adhered to in that the project: preserves scenic vistas in the project area along East Cliff Drive; is designed to minimize visual impact and improves the scenic viewshed by using natural appearing materials and finishes, such as decomposed granite for the path, cobble stone veneer for the public restroom, and wood for the fences, which would blend with the character of the area; includes bluff stabilization structures that conform to the natural contours and are stained to match the natural landscape and integrate with the natural landforms; proposes no removal of significant trees or major vegetation; includes enhanced landscaping using native and characteristic species appropriate to the area; and

minimizes signage.

The project area is within the East Cliff Drive scenic road corridor of the coastal zone. The crib wall repairs are visible from the beach, but the new walls are an improvement fiom the old failing crib walls, which appeared as long gray horizontal beam structures and were not naturalized **or** blended with the existing bluff in any way. The scenic resource preservation policies of the Local Coastal Program require that development minimize visual intrusion from the beach and fiom scenic roadways (GP/LCP Objective 5.1Ob). New permanent shoreline protection structures visible fiom a public beach must use natural materials and finishes to blend with the character of the area and integrate with the landform. The proposed finished surface contours are blended with the adjacent natural terrain to achieve a smooth transition and natural appearance. The finish sculpting and coloring of the concrete also results in a naturalized bluff appearance that integrates with surrounding natural bluffs. Potential visual intrusion is minimized and the project has no adverse impact upon the surrounding visual resources. As well, the walls are on the bluff face and are not readily visible from East Cliff Drive and all existing public ocean vistas fiom the roadway are preserved. Disturbed areas are required to be revegetated for erosion control purposes with a seed **mix** consisting of native plants and wildflowers wherever possible.

Chapter 6 of the General Plan/LCP, Public Safety and Noise, includes objectives and policies aimed at protecting the community from natural hazards, as well as fiom hazards from the built environment. Section 6.2 includes policies relating to slope stability and includes specific policies for Coastal Bluffs and Beaches. Policy 6.2.16 establishes structural shoreline protection measures and certain design and study requirements, including monitoring and maintenance programs. The Geologic Resources and Coastal Processes associated with the project are analyzed in the EISEIR Chapter 6. The coastal bluff evaluations in the Sanders & Associates Geostructural Engineering (SAGE) reports included in EISEIR Appendix G, together with the Geological Resources review in the EISEIR and the associated Mitigations 6.1a and 6.1b and Conditions III.D and III.E address the applicable General Plan coastal bluff policies.

The crib wall repairs are consistent with the structural shoreline protection measures policy (GP/LCP 6.2.16). This policy limits structural shoreline protection measures to structures that protect public works, public beaches, or coastal dependent uses. These walls serve all three uses in that they help preserve the public roadway and associated utilities above and the public beach below with associated coastal dependent uses. Removal of the failing crib-walls would have created environmental impacts and potentially weakened the bluff more as opposed to protecting it. There are no feasible non-structural measures to adequately protect the bluff, beach and roadway above (from either an engineering or economic standpoint). The walls are located against the bluff face above the beach, above the high water mark, and do not reduce or restrict public beach access, adversely affect shoreline processes or sand supply, increase erosion on adjacent properties, or cause harmful impacts on wildlife and fish habitats or archaeological or paleontological resources. The wall repairs do not impact recreational opportunities along the beach and minimize any visual intrusion. The location of the walls are based on existing County benchmarks as referenced on the plans. The structures were designed and constructed pursuant to prevailing building technologies, engineering standards, and materials performance standards (such as ASTM, AASHTO, ACI, and CALTRANS specifications) to insure the optimum in safety and stability. The project is also conditioned such that a permanent monitoring and maintenance program is instituted. As well, all of the work was performed from the top of the bluff and no construction equipment was permitted on the beach.

Though the proposed project site **is** not mapped as archaeological or geologic paleontological resources, due to the extent of bluff work and associated grading for the bluff protection structures, potential Cultural/ Archaeological and Paleontological Resources impacts by the project were analyzed in the EISEIR (Chapter 11) consistent with Chapters 5.19 and 5.9 of the General Plan/LCP. No archaeological or historical resources eligible for the National Register were identified within the project area, but there is the potential for undiscovered sites beneath the surface and possibly under East Cliff Drive. Conditions III.N and IV.E were

included to accommodate this in the case these resources are found during construction. The project must comply with General Plan/LCP Chapter 5.9 to protect paleontological resources which stand out as rare or unique and representative in Santa Cruz County because of their scarcity, scientific or educational value, aesthetic quality or cultural significance. **As** the coastline is rich in fossil resources and the sedimentary rocks in the area have high potential for containing significant nonrenewable paleontologic resources, EIS/EIR Mitigations were included to insure that these resources are accommodated and no significant impacts occur. The project results in a beneficial impact on paleontological resources in that it would eliminate the public disturbance of these resources in the project area, and lessen the probability of the destruction of fossil resources that may occur during future emergency repairs such as the construction of retaining walls.

For additional discussion regarding the proposed project's conformity with **the** certified local coastal program, see the discussion above under #4., as the GP/LCP objectives and policies noted above with regard to public access, public recreation, land use, and development along the shoreline, also apply to this finding as well.

Development Permit Findings
East Cliff Drive Bluff Protection and Parkway Project

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made in that the project is located in an area designated for park and open space uses. The proposed project will improve the health, safety and welfare of pedestrians, bicyclists, and coastal recreational users by widening and improving pedestrian and bicycle paths, improving accessible access along the coast, and protecting the safety of recreational users by securing the dangerous coastal bluffs and adding and improving stairway accesses to the beach and surf. These improvements will serve persons residing and working in the neighborhood as well as the general public with increased access to the coastline. The proposed pathway improvements are expected to enhance overall bicycle and pedestrian circulation in the area, help reduce bicycle-pedestrian conflicts by providing separate pathways, and generally increase the number of people who walk and bicycle to and within the project area. The formalization and increase in public parking proposed with the project will also be beneficial to the public with regard to coastal access opportunities, may reduce circulation through the neighborhood side streets, and increases accessible parking adjacent to the coast. **A** new stairway at Pleasure Point Park will also improve public access to the ocean, where surfers currently climb down the cliff to the water, and the replacement and relocation of the stairway near 36th Avenue should also improve access safety.

Construction will comply with prevailing County Public Works and California Department of Transportation standards as well as, where applicable, prevailing building technology, the Uniform Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources. The proposed roadway and parkway improvements include a 16-foot one-way eastbound travel lane with slight grade separated bicycle and pedestrian pathways up to **8** feet wide each (and of differing materials for distinction). This design will result in improved roadway safety for passenger vehicles, pedestrians, and bicyclists traveling along the coast. New crosswalks will also be provided at side street intersections. The travel lane width with adjacent rolled curb path also fully accommodates emergency vehicle access. The proposed improvements are consistent with and implement Transportation System Goals, objectives, policies and programs of the General Plan, Chapter 3 - Circulation. See additional Transportation discussion in Chapter **9** of the EISEIR. The potential project construction traffic impacts on the local circulation network were evaluated in the EISEIR. Mitigations were included with the EISEIR where necessary to insure that design, construction, and operational impacts are minimized. For example, Mitigation Measure 9.1 is designated to minimize impacts of construction-related traffic and staging on normal vehicle traffic and area roadway use; Mitigations 8.3 and 13.1 require that noise reduction techniques be utilized during construction; and, Mitigation **4.1** insures that recreational opportunities are maintained during construction of the project.

The proposed project will not be materially injurious to properties or improvements in the vicinity in that the project complies with all development regulations applicable to the site, subject to the concurrent approval of the proposed variances for the public restroom at the park. The variances allow a reduction in the required PR zone 30-foot side setbacks for the public restroom, however the structure as proposed will not deprive adjacent properties or the neighborhood of light, air, or open space with the granting of the variances (see attached Variance Findings). The park will also be regularly maintained by the County Parks Department.

This project increases the safety for motorists, bicyclists and pedestrians along East Cliff Drive and for beach-goers below in that the crib walls were in an emergency state of disrepair **and** there was serious risk of failure that could have impacted the use of the public road and underground utilities and the safety of the users of the road or along the adjacent public beach. The walls that were repaired are located within the road right-of-way down the bluff face and do not affect any public or private buildings. Construction complied with prevailing

building technologies (including performance standards for the materials such as ASTM, AASHTO, ACI, and CALTRANS specifications) to insure the optimum in safety. The repaired crib walls will not deprive adjacent properties or the neighborhood of light, air, or open space, as they are vertical walls located along the face of the bluff. **As** well, all of the work was performed from the top of the bluff and no construction equipment was permitted on the beach.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

The proposed project and conditions under which it will be maintained will be consistent with all pertinent County ordinances and the purpose of the PR (Parks, Recreation and Open Space District) and PR-D zone districts in that the primary use of the property will be parks, recreation and open space. This project includes a park Master Site Plan review pursuant to the PR zone requirements in Code Section 13.10.355 Special Standards and Conditions. This requirement is addressed by the project plans. No additional phasing or future land uses are proposed with the project. The project also complies with all applicable design criteria and site standards for the PR zone district, with the inclusion of the variances for the required 30-foot setbacks for the public restroom building (see attached Variance Findings).

The project satisfies the intent of the PR District criteria for the retention of open space (Code Section 13.10.354) in that unlike most PR parcels, this project site is primarily located within the East Cliff Drive right-of-way, and as such the project has retained as much open space as possible, while maximizing public access opportunities. The only building is a new public restroom at the park to replace the existing portable restroom and an old abandoned restroom at the 36'' Avenue stairs. **As** well, most of the development elements of the project replace previously developed and disturbed areas associated with the road and old crib walls.

The project site is primarily located within the East Cliff Drive road right-of-way and on County owned land. The primary use of the road right-of-way remains a roadway that is designed to be consistent with current site standards, County Public Works Design Criteria, and State Department of Transportation standards and consistent with the purpose of a roadway. The public road and pedestrian and bicycle paths will be maintained by the Department of Public Works. The park site will be regularly managed and maintained by the County Parks Department, with additional landscape maintenance as required in the EIS/EIR Mitigations for Visual Resources 5.1 and 5.2.

The crib wall repair locations and the conditions under which they will be maintained will also be consistent with pertinent County ordinances and the purpose of the PR (Parks) zone district. The primary use of the associated properties above and below these walls is public access. The repair of the crib walls supports that use. The crib wall repairs will result in increased safety for users of East Cliff Drive, the public beach, and the public stairs down to the beach. This is consistent with the purposes of the PR (Parks) zone district. As well, the walls will improve coastal stability in compliance with General Plan requirements (GP 6.2). The crib wall repairs are consistent with General Plan policy 6.2.16 and Zoning Code Sections 16.10.070(h) and 16.20.115. In that, these structural shoreline protection measures are necessary to protect the existing adjacent public roadway with vital public facilities and associated improvements (including sewer, water, gas, electric and telephone services), the public beach and access stairway, and coastal dependent uses from a significant threat. ***An*** analysis of reasonable alternatives to the proposed structures was provided in the EIS/EIR. Non-structural measures would not be feasible and would be inadequate in place of the crib wall protection measures. These shoreline protection measures were placed as close as possible to the old crib walls and the access road requiring protection. These protection measures will not reduce or restrict public beach access, adversely affect shoreline processes and sand supply, adversely impact recreational resources, increase erosion on adjacent property, create a significant visual intrusion, or cause harmful impacts to wildlife or fish habitat, archaeologic or paleontologic resources. The crib wall repairs minimize visual impact by employing materials

that blend with the color and texture of natural materials in the area. The design of the soil nail walls followed approved engineering standards. A construction staging strategy and schedule were also provided in conjunction with issuance of the emergency coastal and grading permit to minimize disturbance to the beach. The proposal prohibited any work from the beach, specified access and staging areas, and provided a plan for repairs that included recovery of material potentially dislodged onto the beach. As well, Condition III.E and Mitigation 6.1b require a permanent monitoring and maintenance program for the project walls.

3. That the proposed use is consistent with all elements of the County General Plan and with any specific plan which has been adopted for the area.

The majority of the parkway project will be located within **the** East Cliff Drive public right-of-way and County owned land. The proposed development of the Pleasure Point Park including a public restroom and pedestrian and bicycle pathway with additional landscaping, public viewing areas, and parking is consistent with parks, recreation, and open space uses allowed in the Parks, Recreation and Open Space (O-R) land use designation in the County General Plan. The project is also consistent with the "Proposed Park" future land use and "Regional Park" overlay designations for the park site and does not preclude future development of public park improvements on parcels 032-251-02 and 032-251-10 under private ownership. This project includes a park master plan review for the Live Oak Coastal Priority Site (Pleasure Point Overlook) consistent with General Plan Land Use Policy 2.23.2 and the special development standards and public access requirements as established for the priority use in Figure 2-5 for parcel 032-242-10. These requirements are addressed by the project plans and no additional phasing or future land uses are proposed with this project. The future development of coastal overlook improvements for the priority use (East Cliff Drive Overlook) on parcel 032-251-02 is not precluded by this development. Project park site maintenance will be performed by the County Parks Department with maintenance conditions as noted in the **EISEIR** Mitigations for Visual Resources 5.1 and **5.2.** No specific plan has been adopted for this portion of the County.

The proposed project is also consistent with the goals, policies, and objectives of Chapter 3, Circulation, of the County General Plan/LCP. The project is consistent with the Planned Urban Roadway Improvements as referenced in General Plan Figure 3-18 (page 2 of **4)** for East Cliff Drive. The proposed parkway project will maintain the existing roadway use of East Cliff Drive and will not increase roadway vehicular capacity, as there is currently one one-way vehicular travel lane that will be retained as such. The proposed improvements to better accommodate pedestrian, bicycle and accessible access and safety is also consistent with General Plan/LCP Chapter **3.** The General Plan Circulation Goals addressed with the project include transportation system, mode choice, auto use reductions, regional goals, parking, access, bikeway system, safety, and aesthetics goals. The new pedestrian path will connect with existing sidewalks along the ocean side at each end of the proposed project: at Pleasure Point Drive and at 41st Avenue.

The proposed park public restroom building will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties, and with the variance approval will meet site and development standards for the zone district and be consistent with General Plan Policy 8.1.3 (Residential Site and Development Standards Ordinance), in that the structure will not adversely shade adjacent properties, and will meet current setbacks for the zone district that ensure access to light, air, and open space in the neighborhood. **As** well, the proposed public restroom will not be improperly proportioned to the parcel size or the character of the neighborhood as specified in General Plan Policy 8.6.1 (Maintaining a Relationship Between Structure and Parcel Sizes), in that, with the variance approval, the proposed building will comply with the site standards for the PR-D zone district (including setbacks and height) and will result in a low profile structure with materials and colors consistent with the neighborhood and coastal environment.

The crib wall repairs are beneficial to the adjacent public facilities and beach uses consistent with the use requirements specified for the Parks and Recreation land use designation in the County General Plan. The walls are located above the purisima bedrock layer and do not impact the public beach below or available

open space. The walls serve to better protect access to the coast and the health and safety of coastal users. The walls also have a sculpted finish that is colored and stained to be consistent with natural bluffs in the area.

Cultural and Paleontological Resources were analyzed in the EIS/EIR (Chapter 11) consistent with General Plan Chapters 5.19 and 5.9. Mitigations were included to insure that no significant impacts to paleontological resources occur. See additional discussion under Coastal Development Permit Findings #5 above.

4. That the proposed use will not overload utilities and will not generate more than the acceptable level of traffic on the streets in the vicinity.

The proposed project will not overload utilities in that adequate sewer, water, and storm drain capacity is available to serve the project. In addition, the proposed project is not expected to cause a permanent increase in vehicle trips to the project area, as it does not involve any new or expansion of existing traffic-generating land uses. The new road design will also not increase vehicular capacity on East Cliff Drive. **As** such, long-term traffic volumes, existing roads and intersections in the project vicinity should not be adversely impacted by the proposed project. This is consistent with Chapter 3.12 of the County's General Plan/LCP. As well, project construction will not adversely impact existing roads and intersections in the surrounding area. There will be temporary increases in vehicle and truck trips in the project vicinity during construction activities, however as mitigated and conditioned (EISEIR Mitigations 9.1 and 9.2) the impacts of project construction-related traffic and staging on normal vehicle traffic and area roadway use will be minimized. More over, the bluff wall repairs and proposed improvements will further protect the existing public roadway and public utilities in East Cliff Drive.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood.

The proposed project will complement and harmonize with the project area and surrounding uses and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood, in that the proposed project is designed to improve pedestrian, bicycle and accessible access and safety along the coast with the new parkway from 32nd Avenue to 41st Avenue, without significantly changing the character of the existing uses. The roadway improvements are designed to comply with prevailing County Public Works and California Department of Transportation standards to insure the optimum in safety and the conservation of energy. **As** well, the crib wall repairs did not result in any land use density impacts and the walls were finished in a manner to blend with the nearby natural bluffs.

The proposed public restroom structure at the park is located in a residential neighborhood containing a variety of architectural styles. The proposed restroom building will have a low profile at less than 12 feet height and will have an exterior cobble stone veneer to match the restrooms at the Hook and blend with the park and coastal environment. The proposed structure will be compatible with the character of the area given the utilization of natural earth tone materials and colors for the restroom. Furthermore, the proposed landscaping adjacent to the parkway and at the park will soften and screen the new improvements and restroom facility from the scenic corridor and adjacent development.

6. That the proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

The proposed development is consistent with the Design Standards and Guidelines of the County Code (Chapter 13.11) in that the proposed parkway and park improvements and new public restroom building are of an appropriate scale and type of design that will enhance the aesthetic qualities of the surrounding properties and will not reduce or visually impact available open space in the surrounding area or the East Cliff Drive

scenic corridor along the coast.

Design elements are included with the project to minimize visual impacts of the proposal (as demonstrated in the visual simulations of the proposed project in the EISEIR, Visual Resources Chapter 5, Figure 5-2a). The fencing along the parkway is limited to low wood rail fences (or similar natural appearing materials) wherever possible, with the use of steel safety railings with wood posts where necessary for protection purposes next to cliffs. The new public restroom at the park will have a low profile at approximately 12 feet height and is proposed to have a cobble stone veneer to match the restrooms at the Hook and to blend with the park and coastal environment. The building will be compatible with the character of the area given the utilization of natural earth tone materials and colors. The repaired crib walls are also of an appropriate scale and type of design that is compatible with the aesthetic qualities of the surrounding properties and they do not reduce or visually impact available open space in the surrounding area. The walls were finished with a sculpted and textured material that transitions into the natural bluff at the ends and is stained with colors to replicate natural bluff soil and rock formations.

Landscaping is proposed along the parkway to enhance the streetscape, to emphasize the pedestrian pathway, and to blend with the natural coastal environment. The landscape area beyond the pathway at the top of the bluff varies from 3 feet to roughly 20 feet. The proposed landscaping adjacent to the parkway and at the park will also soften and screen the new improvements and restroom facility from the scenic corridor and adjacent development. No trees are proposed to be removed with the project and tree protections will follow an arborist's recommendations during construction.

No exterior lighting is proposed other than minimum security lighting as needed at the park restroom facility. Lighting is required to be directed downward to avoid generation of fugitive light and glare, consistent with County Code Section 13.11.074(d). Signage is kept to a minimum and shall comply with Section 13.10.582 of the County Code. Directional and informational signage along the parkway complies with designs designated by the Monterey Bay National Marine Sanctuary Scenic Trail standards. Outdoor furniture and fixtures shown on the Parkway Plan in the park and along the length of the parkway shall relate to and be integral elements of the project and landscape design in the coastal environment. These include elements such as benches, trash receptacles, raised planters, fencing, lighting, freestanding signs, etc.

Variance Findings
East Cliff Drive Bluff Protection and Parkway Project

1. That because of special circumstances applicable to the property, including size, shape, topography, location, and surrounding existing structures, the strict application of the Zoning Ordinance deprives such property of privileges enjoyed by other property in the vicinity and under identical zoning classification.

The Parks Recreation and Open Space (PR) District requires all yards to meet a 30-foot building setback. The Pleasure Point Park site (APN 032-242-10) is located on a corner parcel that is roughly 7,700 square feet in size and irregular in shape. The site narrows to approximately 41 feet along Pleasure Point Drive with the rear of the parcel adjacent to the coastal bluff at about 74 feet width. The parcel has about 133 feet of frontage along East Cliff Drive. Strict adherence to the required 30-foot setback for all yards would result in no place to locate a permanent structure onsite. A small public restroom (about 250 square feet) is proposed to replace the existing portable toilets onsite provided by the Parks Department. No other permanent structures are planned for this park site other than the new coastal access stairway at the east end of the property.

The public restroom should be located back from the public right-of-way of the intersecting streets and not located too close to the coastal bluff. It is also important to minimize the impacts that could have occurred at other locations on the site, including locating the restroom back fiom the street frontage, minimizing view impacts from the public roadways, and not obstructing views through the site of Monterey Bay. The proposed location of the restroom also provides for protection of three mature palm trees onsite. Therefore, this finding can be made, in that the parameters of the site including the small size, shape, and location on a comer lot adjacent to the coastal bluff does not provide for any placement of a needed public restroom at this park site without variances to the PR zone 30 foot yard setback standard. Other properties under the PR zoning enjoy greater privileges by virtue of a more conventional shape and size than the subject parcel.

2. That the granting of the variance will be in harmony with the general intent and purpose of zoning objectives and will not be materially detrimental to public health, safety, or welfare or injurious to property or improvements in the vicinity.

This finding can be made, in that the proposed location of the public restroom will still be situated about 12 feet off the side property line and about 23 feet off the East Cliff Drive property line. This results in greater setbacks than typically provided in a residential area. The restroom will also have a low profile with a height of approximately 12 feet, will be located about 12 feet from the nearest structure, will be adequately screened, and will be located more in line with the adjacent property's garage than living space. Due to this, the new building will not impact the adjacent property's access to light, air and open space. An existing good neighbor fence between the park parcel and the abutting residential parcel (APN 032-242-09) to the south along Pleasure Point Drive will also minimize potential nuisances to the residential property. This restroom facility is designed to be a low maintenance facility to be managed by the County Parks Department.

3. That the granting of such variances shall not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone in which such is situated.

The granting of a variance for the subject parcel will not constitute a grant of special privilege in that other irregularly shaped park properties under similar limitations would be given similar consideration. This small pocket park is located on a parcel that is more typical of an urban residential parcel in size at about 7,700 square feet. Most PR zoned park sites would typically be located on much larger parcels, in which case the PR setbacks of 30 feet for all yards could more consistently apply. The application of these setbacks for this parcel, which has an average width of less than **60** feet, would result in no place onsite where a public restroom could be located. The public restroom is a key element to this park site and to implementing the General Plan/LCP and would require a variance anywhere on the site. This is a small, low scale building and potential impacts to the neighborhood have been minimized with the proposed design and location.

Conditions of Approval

East Cliff Drive Bluff Protection and Parkway Project

Exhibit E:

- East Cliff Drive Parkway – Preliminary Design Plans prepared by Santa Cruz Redevelopment Agency, dated 7/6/06, 7/28/06, and Revised 11/1/06.
- Conceptual Drawings – Coastal Bluff Stabilization Project prepared by Sanders & Associates Geostructural Engineering, Inc (SAGE), dated 1/6/06.
- East Cliff Drive – Emergency Repairs at Existing Crib Walls prepared by SAGE, dated 5/28/04.

This permit authorizes the applicant to exercise a Coastal Development Permit, Park Master Site Plan, Variance, and Grading Approval to construct the East Cliff Drive Bluff Protection and Parkway Project (00-0797) and includes the follow-up permits for four crib wall repairs/ re-construction completed as authorized under the Emergency Coastal Development and Grading Permit (04-0307).

I. <u>Prior to exercising any rights</u> granted by this permit including, without limitation, any construction or <u>site disturbance</u>, the applicantlowner shall:

A. Present all changes to the project as a result of California Coastal Commission review to the Planning Department for consistency review with this approval prior to start of work. Significant changes to the design or concept that results in increased impacts or intensity of use shall be taken back to the hearing body for review and approval.

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

C. Obtain a Demolition Permit from the Santa Cruz County Building Official as needed for the public restroom and stairs located between 35th and 36'' Avenues.

D. Obtain a Building Department review for accessibility and other elements as needed for the new park public restroom building from the Santa Cruz County Building Official.

E. Obtain a Planning final grading plan review from an Environmental Planning engineer.

F. Conduct a pre-construction meeting prior to any site disturbance of each phase of the project. The meeting shall be organized by the applicant and shall include attendees such as the construction contractor, Department of Public Works inspector, the project engineer, environmental planning staff, the project biologist, the project arborist, archeologist, and any other consultants key to the site disturbance and construction operations. Environmental planning staff shall identify the attendees required for each project phase. The meeting shall take place after the required surveys have been conducted and the disturbance envelope for that phase of the project construction has been fenced, but prior to other site disturbance. All permit requirements and **EISEIR** mitigation measures and monitoring are to be reviewed at this meeting.

G. Ensure that the conditions required with Emergency Permit 04-0307 for the crib wall repairs (Exhibit **H)** were satisfied with the project completion.

11. <u>Prior to start of construction</u> the applicant/owner shall comply with the following conditions:

A. Submit final plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "E" on file with the Planning Department. Changes from the approved Exhibit "E" for this development permit should be

identified with the final plans. Final plans shall include the following additional information:

1. Identify exterior finish materials and colors for the park restroom building, walls and fences for Planning Department approval. Color boards must be in an 8.5" x 11" format.
2. Detailed grading, drainage, and erosion control plans in conformance with County standards.
3. Building plans for the public restroom should include detailed elevations and clearly depict the total height of the proposed structure.
4. Floor plans for the public restroom should identify each room and its dimensions and satisfy accessible criteria.
5. Details showing compliance with fire department requirements.
6. Site plans showing the location of all site improvements, including but not limited to points of ingress and egress, parking areas, accessory structures, parkway furniture, and signage.
7. **A** Final Landscape Plan for the entire site specifying the species, their size, and irrigation plans and meet the following criteria:
   a. Soil Conditioning. In new planting areas, where feasible and appropriate, soil shall be tilled to a depth of **6** inches and amended with six cubic yards of organic material per 1,000 square feet to promote infiltration and water retention. After planting, a minimum of 2 inches of mulch shall be applied to all non-turf areas to retain moisture, reduce evaporation and inhibit weed growth.
   b. Irrigation Management. All required landscaping shall be provided with an adequate, permanent and nearby source of water which shall be applied by an installed irrigation system, or where feasible, a drip irrigation system. Irrigation systems shall be designed to avoid runoff, over spray, low head drainage, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways or structures.

      Appropriate irrigation equipment, including the use of a separate landscape water meter, pressure regulators, automated controllers, low volume sprinkler heads, drip or bubbler irrigation systems, rain shutoff devices, and other equipment shall be utilized to maximize the efficiency of water applied to the landscape.

      Plants having similar water requirements shall be grouped together in distinct hydro zones and shall be irrigated separately.

      The irrigation plans and an irrigation schedule for the established landscape shall be submitted to the Planning Staff for review. The irrigation plan shall show the location, size and type of components of the irrigation system, the point of connection to the public water supply and designation of hydro zones. The irrigation schedule shall designate the timing and frequency of irrigation for each station and list the amount of water, in gallons or hundred cubic feet, recommended on a monthly and annual basis.

      Landscape irrigation should be scheduled between 6:00 p.m. and 11:00 a.m. to reduce evaporative water loss.

B. Submit two copies of the approved Discretionary Permit with the Conditions of Approval attached to Planning.

C. Meet all requirements of the Department of Public Works Drainage and pay Zone **5** County Flood Control and Water Conservation District fees, as applicable to the proposed park improvements.

D. Final planting, irrigation and restroom construction plans and irrigation schedule shall be reviewed and approved **by** the Santa Cruz City Water Department and shall meet department requirements including payment **of** any connection and inspection fees prior to new water service or water connection. Final planting **and** irrigation plans shall also comply with the Water

Conservation Office requirements as stated in their memo dated September 26, 2006.

E. Final plans shall note that Santa Cruz County Sanitation District will provide sewer service and shall be reviewed and accepted by the District. All requirements of the District shall be met including completion of the conditions identified in their memo dated September 19,2006 and payment of any connection and inspection fees relative to the new public restroom. ***An*** abandonment permit shall be obtained as needed for the old restroom building prior to demolition.

F. Meet all requirements and pay any applicable plan check fee of the Central Fire Protection District as stated in their letter/memorandum dated September 11,2006.

G. All new electrical power, telephone, and cable service connections shall be installed underground. Contact AT&T as needed to confirm existing facility locations prior to digging.

H. All improvements shall comply with applicable provisions of the Americans with Disabilities Act and/or Title 24 of the State Building Regulations. Construction plans should be submitted for an accessible plan check review and address items identified in the building accessibility memo dated September 21,2006.

I. Submit 3 copies of a geologic/soils letter prepared and stamped by a licensed Geological/ Geotechnical.Engineer that addresses whether construction plans were prepared in accordance with the previous report recommendations.

J. Consult with the Monterey Bay Unified **Air** Pollution Control District (MBUAPCD) and comply with their requirements relative to project construction equipment and restroom demolition.

K. Consult with the County Parks Department regarding final park plans, planting and irrigation plans, and to define maintenance **and** management responsibilities.

L. Parking spaces should meet dimension standards and curbs or wheel stops provided where needed to prevent vehicles from blocking pathways. Public parking **should** be clearly striped and differentiated from private driveways.

M. Final plans shall be reviewed by the Planning Urban Designer. If water heating is proposed for the public restroom, consider providing solar hot water for the showers (and add changing screening if possible). **As** a part of the *art* component for the county park, consider the Pleasure Point surfing history as a possible theme for the artwork.

N. All permissions, rights, easements and/or dedications shall be obtained as necessary for work performed outside of the public right-of-way or County owned properties on private property.

III. This section of Conditions includes project conditions that reflect the mitigation measures presented for the Revised Final EIS/EIR Alternative 1 (the number reference in the Condition heading corresponds to the mitigation measure numbering). These conditions have elements that must be satisfied prior to start of construction, during project construction, after construction and prior to final inspection. The applicant/owner shall comply with the following conditions:

A. **Recreation 4.1 –** To minimize impacts on recreational use during construction, the Santa Cruz County Department of Public Works (DPW) and its Construction Contractor shall include the following measures in construction planning:

1. Mitigation measures to assure recreational access to the project area shall be implemented, including pedestrian and bicycle use of the path along East Cliff Drive, as described in Mitigation **9.1** (Transportation).
2. The DPW Construction Inspector, in conjunction with the Contractor for the projects, shall ensure that, during construction and to the maximum extent feasible, access is maintained to key locations for viewing, such as Pleasure Point Park, the bluff near 35th Avenue, the overlook near Larch Lane, and the overlook at The Hook.
3. The DPW Construction Inspector, in conjunction with the Contractor for the projects, shall ensure that all stairs remain open, to the extent feasible, and that at least one stairway remains open and accessible at all times during construction.

B. **Visual Resources 5.1** – To minimize visual impacts of the bluff protection structures, DPW and its Construction Contractor shall:

1. Prepare a final parkway design plan that incorporates the measures included in both this mitigation and Mitigation 5.2 below. The final design plan shall be submitted to the County Redevelopment Agency (RDA) and Planning Department for review and approval prior to any ground disturbance.
2. Vegetation shall be planted along the top of the bluff stabilization structures so as to replicate the pattern of natural vegetation that hangs over the bluff. These plantings shall be permanently maintained by the County Parks Department with appropriate drought-tolerant native vegetation.
3. At the ends of the bluff stabilization structure, the color, texture and other design features of the stabilization structure shall be designed to match the bluff face, while minimizing visually distinct meeting points.

C. **Visual Resources 5.2** – To minimize visual impacts of parkway-related improvements, DPW and its Construction Contractor shall incorporate the following design and construction elements into the parkway:

1. Resin stabilized decomposed granite shall be used for paving instead of asphalt wherever feasible, particularly near the bluff.
2. Wood, recycled, and other natural appearing materials shall be used to the extent possible and where appropriate for all stairways, benches, railings, and signs. Although wood has a greater bulk than other materials, such as metal, and its use in construction can result in greater obstruction of views, wood is more visually compatible with the colors and textures of the surrounding natural features and therefore is a more visually integrated building material. The stairs adjacent to the bluff protection structures shall be concrete to better match the structures where feasible. The railing shall also be designed and placed to maximize gaps and openings to avoid obstruction of views. Split rail fencing shall be used where there is landscaping between the path and the top of the bluff; otherwise, wooden posts with metal railings shall be used. Low-growing natural vegetation or setbacks shall be used instead of railings whenever possible.
3. A final sign plan shall be developed for the project area to ensure that the number of signs is minimized, and that signs are appropriately sized, compatible with the surrounding design and natural features, and located to avoid obstruction of scenic views. A single signpost shall be used for all signs, whenever possible, to minimize the placement of multiple signs.
4. New trees planted along the bluff shall be located to preserve scenic vistas and, whenever possible, to obstruct views of surrounding human-made features. New landscape plantings shall be installed as part of the parkway improvements.

D. **Geological Resources 6.1a** – To mitigate potential end effects associated with termination of the bluff protection structure adjacent to the O'Neill property, DPW and its Construction Contractor

shall extend the bluff protection structure as close as is feasible to the edge of the O'Neill property. To protect this termination, the riprap shall be removed, the bluff protection structure shall be completed to the property line, and then the riprap shall be replaced only as necessary to arm the transition area. This will provide a high degree of protection to the bluff in the transition area and reduce the potential impacts of outflanking to less than significant levels. Removing and replacing the riprap will require coordinating with the property owner.

E. **Geological Resources 6.1b** – To minimize bluff or beach erosion problems adjacent to the project area and associated outflanking of the bluff protection structures, DPW shall implement an annual program of inspection, maintenance, and repair (as needed) of the bluff protection structures, with particular emphasis on the ends of the structures.

F. **Biological Resources 8.1** – To minimize impacts to intertidal habitat during construction, DPW's Construction Contractor shall ensure that the following measures are included in the construction plans for the bluff protection structures prior to planning final grading review and start of construction:

1. A qualified biologist shall review final construction plans immediately prior to the commencement of construction and monitor the site periodically during construction to ensure that the loss of habitat due to armoring is minimal.
2. The project biologist shall be present when beach rubble and riprap are removed to determine whether the work is creating a problem by displacing rats. If the biologist determines that a problem exists, a rat removal program shall be implemented by the Project Contractor before any rubble or riprap is further removed.
3. Concrete rubble and rock riprap shall be pulled away from the base of the cliff to construct a temporary rock riprap water barrier to the extent feasible. The purpose of this barrier is to help keep the trench and equipment out of the tidal waters during construction and will ultimately be removed, along with the concrete rubble and a portion of the riprap.
4. A silt fence or other barrier shall be installed to the extent feasible to prevent smaller grained material from affecting intertidal and offshore areas.
5. Best Management Practices (BMPs) shall be implemented as part of a program to reduce and prevent pollutant and sediment discharges. Spill cleanup procedures, prevention measures, and protocols for storing construction materials and wastes shall be developed by the Construction Contractor before work begins in the intertidal area.
6. A construction stormwater pollution prevention program shall also be developed for the projects. This program shall address the BMPs used to prevent, respond, and monitor potential sources of pollution to intertidal and offshore habitats.
7. Any construction equipment used on the beach for the footing shall be scheduled for the dry season (April 15 to October 15) to reduce the risk of fuel or siltation reaching the water column.
8. If a fuel or oil spill were to occur during construction, the spill shall be addressed in accordance to the spill response plan developed by the Construction Contractor for the project area and the following actions shall be taken:
    a. The source and the cause of the spill shall be identified and the spill source stopped.
    b. Spill migration shall be prevented using equipment in the on-site spill response kits (such as absorbent socks, pumps, or floating booms).
    c. The spill shall be cleaned up (emergency response personnel shall be called in for large spills).
    d. Impacts of the spill shall be monitored [by a qualified biologist or other experienced professional].

e. The nature of the spill and corrective actions taken shall be documented, and reported to appropriate agencies.

These measures shall be incorporated into DPW's construction contract for the firm selected to construct the projects [and approved by the Redevelopment Agency].

G. **Biological Resources 8.2 –** To minimize disturbance to subtidal and nearshore habitats during construction, the measures noted above in Mitigation 8.1 shall be implemented.

H. **Biological Resources 8.3** – To minimize construction noise impacts on special status species, DPW and the Project Biologist shall ensure that the following measures are implemented prior to and during construction of the bluff protection structures:

1. To avoid impacts to migratory birds, their young, and nests, a qualified biologist shall survey immediately before and during project activities that occur within the California bird breeding season, which extends from February through August (Tate-Hall 2002). Surveys shall be conducted along the cliff and intertidal project areas. Nests identified on the premises during the pre-breeding season surveys shall be removed, with the exception of eagles' nests, in order to prevent their use during the breeding season. Additional surveys of buildings and natural areas directly affected by project activities shall be conducted throughout the California breeding season. Nests found during these surveys, with the exception of eagles' nests, shall be removed, as long as no eggs were present. If a nest with eggs is found, activities in the immediate vicinity shall be halted until the eggs hatch and the young fledge or until the U.S. Fish and Wildlife Service (USFWS) gives its approval.
2. Surveys to detect the presence of other sensitive species shall be initiated prior to the start of construction and continue periodically during the construction period.
3. BMPs for noise reduction shall be used to minimize and monitor potential sources of noise pollution.
4. Site personnel shall be instructed how to recognize sensitive species (harbor seals for example) and how to manage encounters if they do occur.
5. Construction-relatednoise shall be reduced (limiting the number of heavy equipment in any one construction area, for example) and maximum distances from sensitive species shall be maintained.

These measures shall be incorporated into the construction contract for the firm selected to construct the projects.

1. **Transportation 9.1 –** To minimize interference with normal vehicular traffic, prior to initiation of construction activities, DPW's Construction Contractor shall prepare a construction traffic mitigation plan that includes, but is not necessarily limited to, the following measures:

1. Designated Access Routes. Appropriate construction vehicle routes shall be identified from Highway 1 to East Cliff Drive for each phase of the project. All traffic shall use primary arterial and collector streets to the maximum extent feasible. For construction at the upcoast end of the project area, traffic shall use Portola Drive to 30th Avenue. For construction at the downcoast end of the project area (The **Hook),** traffic shall use Portola Drive to 38th Avenue [and 41st Avenue].
2. No Weekend Construction. Construction activities shall be prohibited on East Cliff Drive on Saturdays, Sundays, and holidays [except for as approved by the DPW Construction Inspector for construction emergencies].
3. Limited Travel During. Commute Times. Construction vehicles shall avoid, to the extent feasible, the peak commute hours of 7 AM to 9 AM and 3 PM to 6 PM.
4. Pedestrian and Bicycle Access. Bicycle and pedestrian access along East Cliff Drive shall be maintained during construction to the maximum extent feasible.
5. Fencing. and Barricades. Construction areas shall be blocked off from vehicle, pedestrian,

and bicycle traffic by such measures as temporary barriers or fencing.

6. Lane Closure/Blockage Timing. Lane closures shall be limited to noncommute times, to the extent feasible, such as between 8:30 AM to 4:30 PM.
7. Lane Closure/Blockage Monitor. **A** public safety monitor or flag person shall be present during all lane closures/blockages to regulate vehicle, pedestrian, and bicycle traffic through the construction zone.
8. Signage. Warning signage shall be visible during construction to alert motorists of potential lane closures/blockages and detours and to alert pedestrians and bicyclists of any safety hazards along the roadway.
9. Lane Closure Detour Plans. Detour plans shall be developed for periods when segments of East Cliff Drive must be completely closed to through-traffic.
10. Local Resident Access. Provisions shall be made to provide vehicular access to residences along East Cliff Drive with minimum delays during construction.
11. Staging Areas. Policies shall be developed for storing construction equipment, materials, and vehicles along East Cliff Drive. To the extent feasible, trucks and vehicles shall not be stored overnight on East Cliff Drive.
12. Phone Number for Complaints. The DPW Construction Inspector shall post at least one sign during active construction containing the name and telephone number of the staff person the public may contact to register complaints about construction traffic or access. DPW shall keep a written record of all such complaints and investigate the problems registered by the public within **48** hours of receiving the complaints.
13. Emergency Vehicle Access. Emergency vehicle access shall be provided along East Cliff Drive at all times during construction. The local fire and police departments shall be notified of the approximate time and duration of planned lane closures and appropriate detour routes at least **48** hours in advance of any road closures or detours.

J. **Transportation 9.2** – To minimize the effects of temporarily narrowing or closing East Cliff Drive during construction, safety measures and detour routes shall be implemented during lane blockages and closures as described above under Transportation 9.1.

K. Transportation 9.3 – To minimize bicycle safety impacts at 32nd Avenue/Pleasure Point Drive, signs shall be installed by DPW at the intersection of 32nd Avenue/Pleasure Point Drive/East Cliff Drive similar to the existing signs at The **Hook** stating "Bikes Must Cross." These signs shall be installed facing east to ensure that bicyclists continuing westbound from the bicycle path obey the stop sign at Pleasure Point Drive before crossing to the existing bicycle lanes across the roadway.

L. **Emergency Services 10.1** – To minimize restricted access to roadway emergency facilities (e.g., fire hydrants) during construction:
1. DPW and its Construction Contractor shall implement the measures to mitigate restricted access impacts described in Transportation 9.1.
2. A copy of those mitigation measures shall be provided to the Central Fire Protection District and to American Medical Response.

M. Emergency Services 10.2 – To minimize delays in emergency services during periods of construction:
1. DPW and its Construction Contractor shall implement the measures to reduce restricted access impacts described in Transportation 9.1.
2. A copy of those mitigation measures shall be provided to the Central Fire Protection District and to American Medical Response.

N. **Paleontological Resources 11.1** – A paleontological mitigation plan shall be prepared by RDA, and approved by the County Planning Department, prior to any ground disturbance. The mitigation measures identified below, or their functional equivalent, shall be included in the plan:

1. A paleontologic survey and surface collection (salvage) shall be conducted by a Qualified paleontologist immediately before construction and after removal of existing riprap. Because coastal erosion in this region is rapid (especially during winter), important new fossils can be exposed at any time. A qualified paleontologist shall re-examine the protection structures and retaining structure building sites shortly before work begins. Furthermore, because extensive riprap presently obscures large sections of the platform and lower cliff in the project area, it is imperative that those bedrock regions are examined after the riprap and debris have been removed. Any significant fossils found prior to construction shall be collected and salvaged according to Society of Vertebrate Paleontology guidelines (1995, 1996).
2. Fossil-rich Purisima Formation boulders from the base of the cliffs between 33rd and 35th Avenues shall be preserved. Numerous, eroded fossiliferous Purisima boulders and cobbles adorn the beach at the southwest end of the project area. Because they are out of place, these rocks do not have great paleontological or biostratigraphic value; however, they may yet be paleontologically and educationally important. A qualified paleontologist shall monitor any removal of smaller, more transportable materials.
3. Those materials deemed to have educational value shall **be** offered to local institutions for teaching or research. The materials could also be set aside for future educational landscaping of a municipal or county site, or may be incorporated into the Pleasure Point Park. An agreement shall be reached between RDA and **a** consulting paleontologist. The consulting paleontologist shall locate and organize the transport of materials to an interested institution (e.g., Long Marine Lab and the University of California, Santa Cruz). Once a recipient for the materials is located, an agreement shall be reached regarding the collection, transportation, and storage costs associated with the materials. Larger boulders and blocks shall be left intact, on the beach area.
4. Paleontologic monitoring and salvage shall be conducted during construction. **A** qualified paleontologist shall monitor the building sites during any cliff or platform excavation. This is especially important at 41st Avenue, 38'' Avenue, and between 33rd and 35* Avenues, where either the Purisima Formation platforms to be excavated for protection structure footings are particularly fossiliferous, or where the exposed Purisima Formation and terrace deposits have previously yielded significant fossils. Construction shall stop as directed by the qualified paleontologist to avoid resources if significant finds are uncovered. Any significant fossils discovered during building activities shall be collected and salvaged. This measure shall be included in the construction contract of the firm hired to construct the bluff protection structures.
5. Salvaged samples shall be prepared. Salvaged materials shall be identified by location, stratigraphic level, and known fossil content, and stabilized before they are removed from the site.
6. Salvaged samples shall be stored. With the understanding that museums and universities are not required to accept all fossil materials (Society of Vertebrate Paleontology 1996), the contracted paleontologist shall attempt to secure both a suitable and willing repository for storing any materials resulting from salvage operations. If a suitable repository is located, RDA shall make every reasonable effort to enter into a curation agreement with the repository that addresses the collection, transportation, and storage costs associated with salvaged materials. RDA shall cover the cost for a qualified paleontologist to monitor which materials are suitable for collection. Alternatively, **if** curation is not possible for all or some of the significant paleontological resources that would otherwise be lost due to

EXHIBIT C

project activities, then RDA shall relocate these resources in local public parks and/or local educational facilities as directed by the contracted paleontologist.

7. A final report shall be prepared. The qualified paleontologist overseeing collection and salvage of fossils from the site shall prepare a final report when construction is complete and fossils have been salvaged, prepared, identified, and stored. The report shall include methods, identity, stratigraphic position, significance, and final resting place of all salvaged fossils. Copies of the final report shall be sent to the County Planning Department and to all relevant California repositories, agencies, or institutions as determined by the qualified paleontologist.

O. **Air Quality 12.1** – Before construction begins on the wall portions of the project, DPW's Construction Contractor shall provide the Monterey Bay Unified **Air** Pollution Control District (MBUAPCD) with information on the number and types of equipment to be used, the ages and sizes of diesel engines, and the anticipated frequency of equipment use during construction. The MBUAPCD will use this information to determine whether a diesel risk analysis is necessary. If so, and it is established that mitigation is necessary to reduce diesel emissions, the measures listed below shall be implemented to ensure compliance with MBUAPCD thresholds of significance and state health standards, unless MBUAPCD approves of comparable alternate mitigation:

1. All pre-1994 model year and older diesel equipment shall be retrofitted with EPA-certified diesel oxidation catalyst filters, or the entire construction and demolition fleet shall be fueled with B20 biodiesel fuel.
2. DPW or it Construction Contractor shall maintain records of all purchases of diesel oxidation catalyst filters or B20 biodiesel fuel identified in #1 above until all construction and demolition work has concluded.
3. MBUAPCD will have the right to inspect the construction and demolition equipment, as well as the records specified in #2 above at any time during construction or demolition.

P. **Noise 13.1** – To minimize impacts associated with short-term construction noise, DPW and its Construction Contractor shall ensure that the following noise control measures are incorporated into the final construction and design plans for the projects:

1. Construction that involves motorized equipment shall be limited to Monday through Friday from 7:30 AM to 4:30 PM to avoid the times of day and the days of the week when noise effects would cause the greatest annoyance to residents **and** to those using the area for recreation;
2. Exceptions to the specified construction hours will be allowed only for construction emergencies and when requested by the DPW Construction Inspector and approved by the County Planning Department.
3. A sign shall be posted that is clearly visible to users on East Cliff Drive that provides the phone number for the public to call to register complaints about construction-related noise problems. **A** single "disturbance coordinator" shall be assigned to log in and respond to all calls. All verified problems shall be resolved within 24 hours of registering the complaint.

Q. **Utilities 14.1** – DPW shall minimize the potential for encountering utility infrastructure by coordinating with the local utility service providers prior to beginning the projects. These providers shall be consulted to determine both the horizontal **and** vertical locations of all underground infrastructure within the corridor of the projects. Design of the structures and the drilling locations shall be planned to avoid the infrastructure beneath the road.

IV. All construction shall be performed in accordance with the approved plans. During project construction and prior to Droject completion and final inspection, the applicant/owner shall comply with the following conditions:

A. All site improvements shown on the final approved project plans shall be installed.

B. All required inspections shall be completed to the satisfaction of the County Building Official and/or other divisions as applicable.

C. The project must comply with all recommendations of the approved geologic/soils reports.

D. Dust suppression techniques shall be included as part of the road and parkway construction plans and implemented during construction.

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

F. Disturbed areas of the bluff top shall be revegetated for erosion control purposes. Where erosion control mixes are used to seed the bare areas, these should consist of only native plants and wildflowers wherever possible. ***An*** alternative that does not have the potential to spread non-native seeds should be used to cover bare surfaces, if feasible instead of straw mulch.

G. The project geostructural engineer should perform periodic inspections during grading and construction. The project geostructural engineer shall inspect the completed project and shall submit to Public Works and Environmental Planning a letter addressing that the improvements have been constructed in conformance with the approved project plans and the geostructural analysis/reports included as exhibits.

H. The final construction shall be in substantial compliance with the approved plans. Final "as-built" road and parkway construction and grading plans shall be filed with Public Works and a copy submitted to Planning to document in detail the final construction. Any variations in final construction from the plans marked Exhibit "E' on **file** with the Planning Department should be identified.

V. Operational Conditions

A. All newly constructed improvements, including walls, drainage and erosion control facilities, and landscaping shall be permanently maintained.

B. New drainage filtration facilities shall be maintained according to the following monitoring and maintenance procedures:

1. The trap shall be inspected to determine if it needs to be cleaned out or repaired at the following minimum frequencies:
   a. Prior to October 15 each year; and,
   b. Prior to April 15 each year.
2. A brief annual report shall be prepared by the trap inspector at the conclusion of each October inspection and submitted to the Drainage Section of County Public Works within 5 days of inspection. This monitoring report shall specify any repairs that have been done or that are needed to allow the facilities to function adequately.

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

VI. Mitigation Monitoring Program

The Final EIR/EIS mitigation measures have been incorporated into the conditions of approval for this project as listed above under Conditions III. in order to mitigate or avoid significant effects on the environment. As required by Section 21081.6 of the California Public Resources Code, a monitoring and reporting program for the above mitigations is hereby adopted as a condition of approval for this project as entirely presented in the Mitigation Monitoring and Reporting Plan (MMRP) with the East Cliff Drive Bluff Protection and Parkway Final EIS/EIR. The required monitoring program is specifically described in the ***MMRP*** document. The MMRP also includes each required mitigation measure, as well as the responsible parties and phases associated with the required monitoring for each mitigation. The purpose of this monitoring is to ensure compliance with the environmental mitigations during project implementation and operation. Failure to comply with the conditions of approval, including the terms of the adopted monitoring program may result in permit revocation pursuant to Section 18.10.462 of the Santa Cruz County Code.

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

Please note: This permit expires five years from the approval date noted below unless you obtain the required permits and commence construction.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Mark M. Deming, AJCP	Melissa Allen
Assistant Planning Director	Project Planner

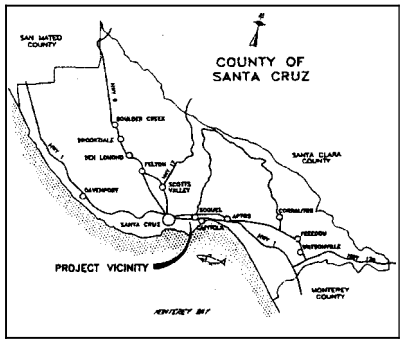
Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Planning Commission, may appeal the act or determination to the Board of Supervisors in accordance with chapter 18.10 of the Santa Cruz County Code.

EXHIBIT D

EAST CLIFF DRIVE BLUFF PROTECTION AND PARKWAY MITIGATION MONITORING AND REPORTING PLAN (MMRP) NOVEMBER 2006

(DOCUMENT ATTACHED AND ON FILE IN PLANNING DEPARTMENT)

EXHIBIT D



LOCATION MAP

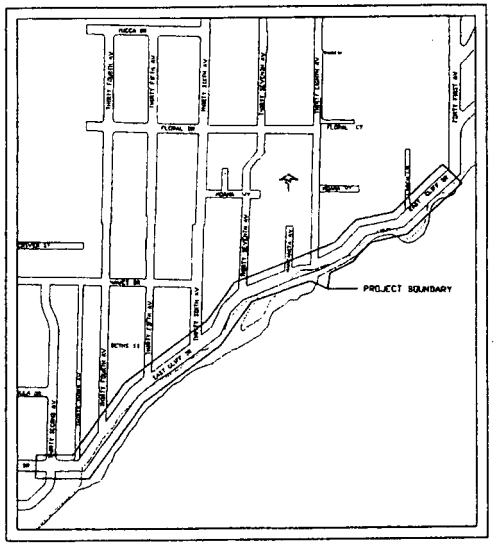
EAST CLIFF DRIVE PARKWAY

PRELIMINARY DESIGN PLANS

32nd AVE TO 41ST AVE

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
DEPARTMENT OF PUBLIC WORKS

701 OCEAN STREET, ROOM 510
SANTA CRUZ, CA 95060
PHONE(831)454-2280 FAX (831)454-3420



VICINITY MAP

APPROX. SCALE: 1"=400'

DRAWING INDEX

PROJECT INFORMATION

Project Area Calculations – all estimates based on preliminary plans, subject to modifications and adjustments based on permit conditions and construction requirements.

Pleasure Point Park			
• Total area:		6,500 sf	(604 m²)
• New stabilized DG paving and building footprint		3,200 sf	(283 m²)
• Landscape area		3,410 sf	(317 m²)
Parkway/Roadway			
• Total existing A/C road & path area		102,546 sf	(9,537 m²)
• New paved surface area		10,580 sf	(984 m²)
• Decreased paved area		2,205 sf	(206 m²)
• Net increase paved area		8,376 sf	(779 m²)
• Total landscape areas		15,462 sf	(1,438 m²)
• Calculated area of new curb & gutter, A/C path & DG path (includes portions of existing A/C road shown above)		42,500 sf	(3,910 m²)
Bluff Protection Structure			
• Soil Nail Wall 32nd to 36th Aves			
Total length		1,100 lf	(335 m)
Length of footing/scour apron		1,100 lf	(335 m)
Upper bluff construction		810 lf	(247 m)
Existing cribwall (emergency repairs)		290 lf	(88 m)
Estimated surface area		37,786 sf	(3,512 m²)
• Hook Area Wall			
Total length		300 lf	(93 m)
Estimated surface area		7,686 sf	(715 m²)

SHEET
A

EXHIBIT E

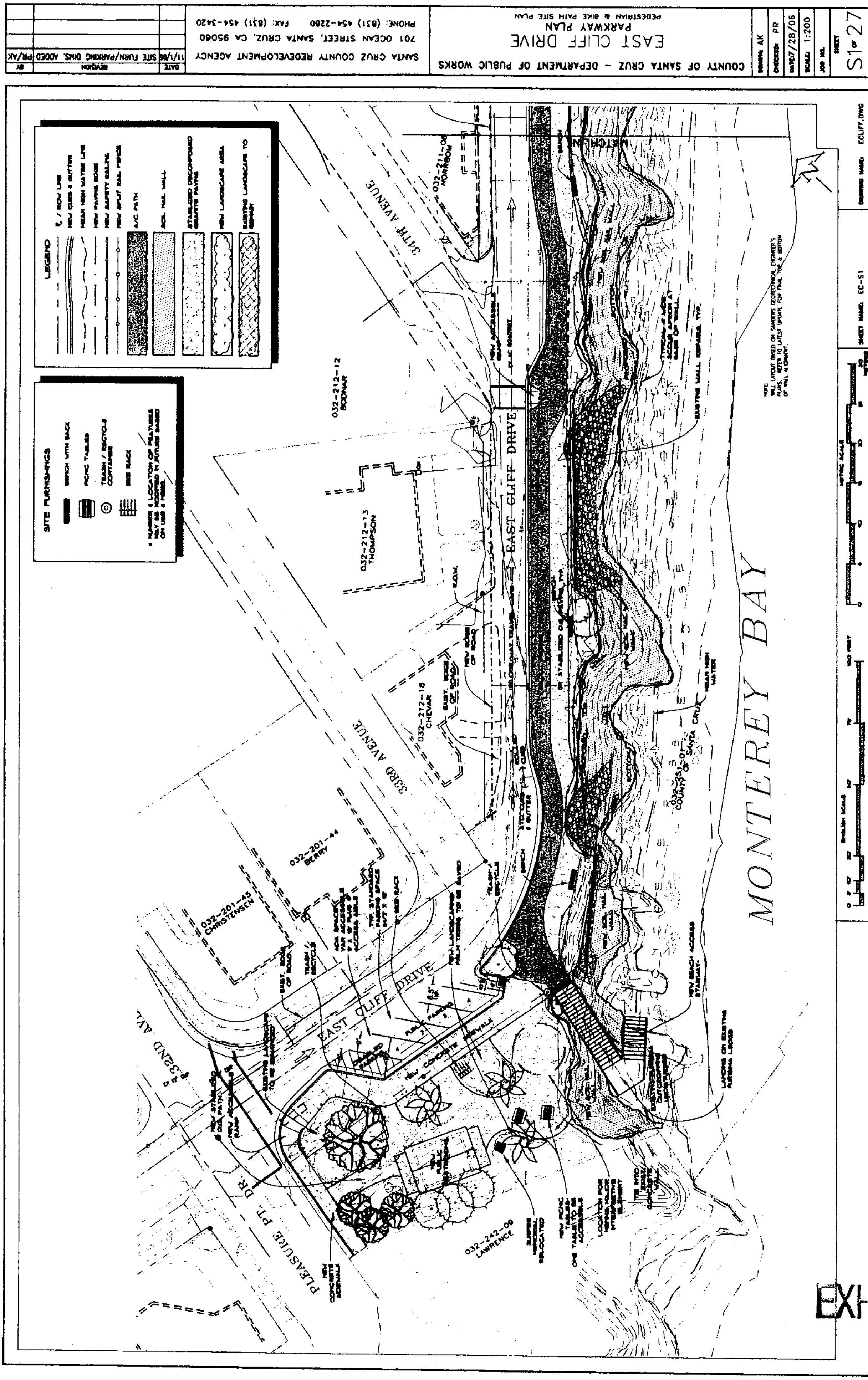

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
PARKWAY PLAN
PEDESTRIAN & BIKE PATH SITE PLAN
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420
DRAWN: AK
CHECKED: PR
DATE: 7/28/06
SCALE: 1:200
S1 of 27
LEGEND
SITE FURNISHINGS
EAST CLIFF DRIVE
MONTEREY BAY
34TH AVENUE
33RD AVENUE
PLEASURE PT. DR.
032-212-12 BODNAR
032-212-13 THOMPSON
032-212-16 CHEVAR
032-201-44 BERRY
032-201-45 CHRISTENSEN
032-242-09 LAWRENCE

EXHIBIT E

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
PARKWAY PLAN
PEDESTRIAN & BIKE PATH SITE PLAN
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420
DRAWN AK
CHECKED PR
DATE 7/28/06
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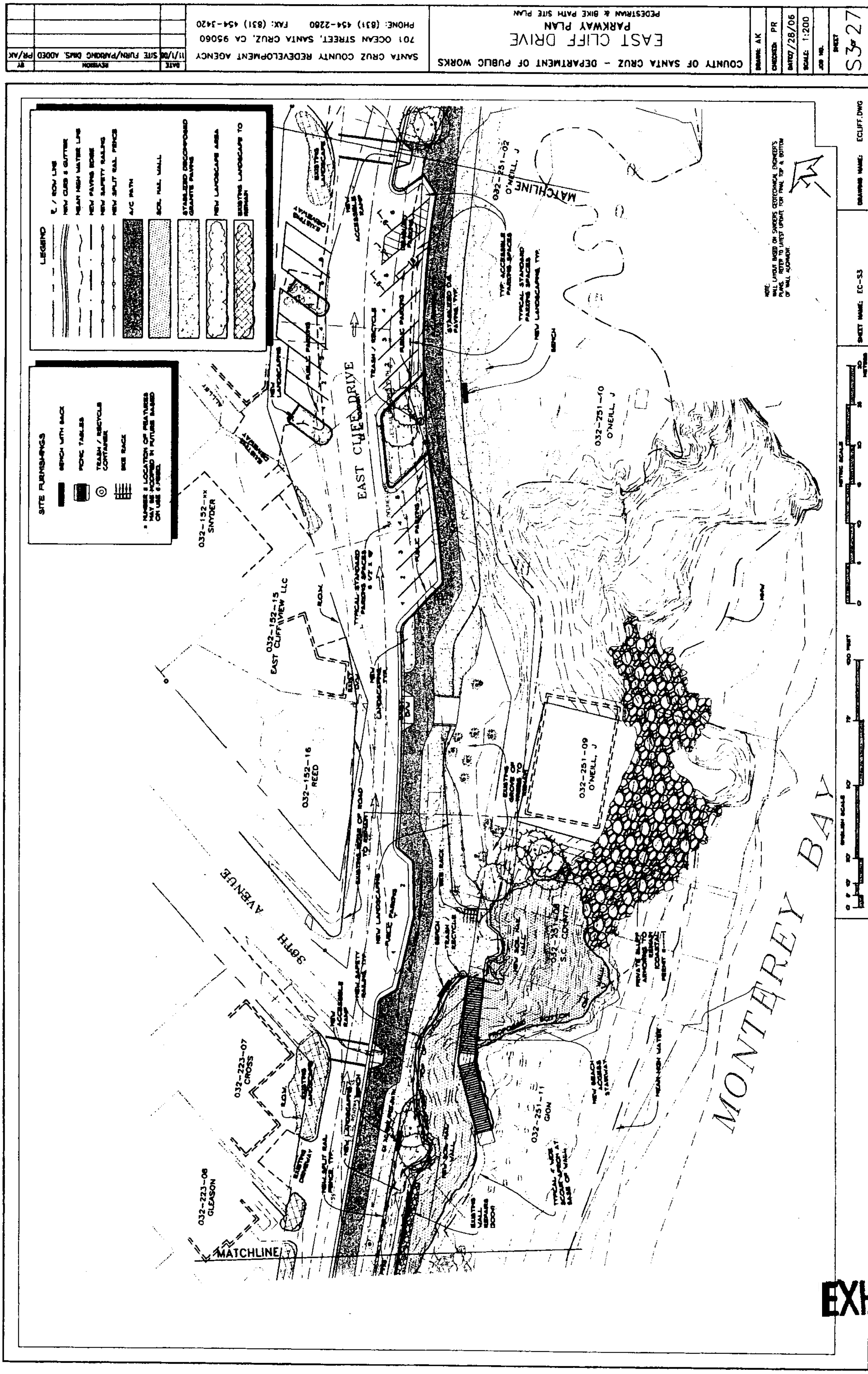
JOB NO.
SHEET S2 OF 27
MATCHLINE
EAST CLIFF DRIVE
MONTEREY BAY
35TH AVENUE
032-223-09 SWINTON
032-223-10 ST LAURENT ENTERPRISES LLC
032-211-33 RIVOIR
032-211-06 BENBOW
032-211-07 STEVENS
032-211-08 MARSHALL
032-211-09 ROOM
032-231-01 COUNTY OF SANTA CRUZ
LEGEND
SITE FURNISHINGS
BENCH WITH BACK
PICNIC TABLES
TRASH / BICYCLE CONTAINER
BIKE RACK

EXHIBIT E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PHONE: (831) 454-2280 FAX: (831) 454-3420
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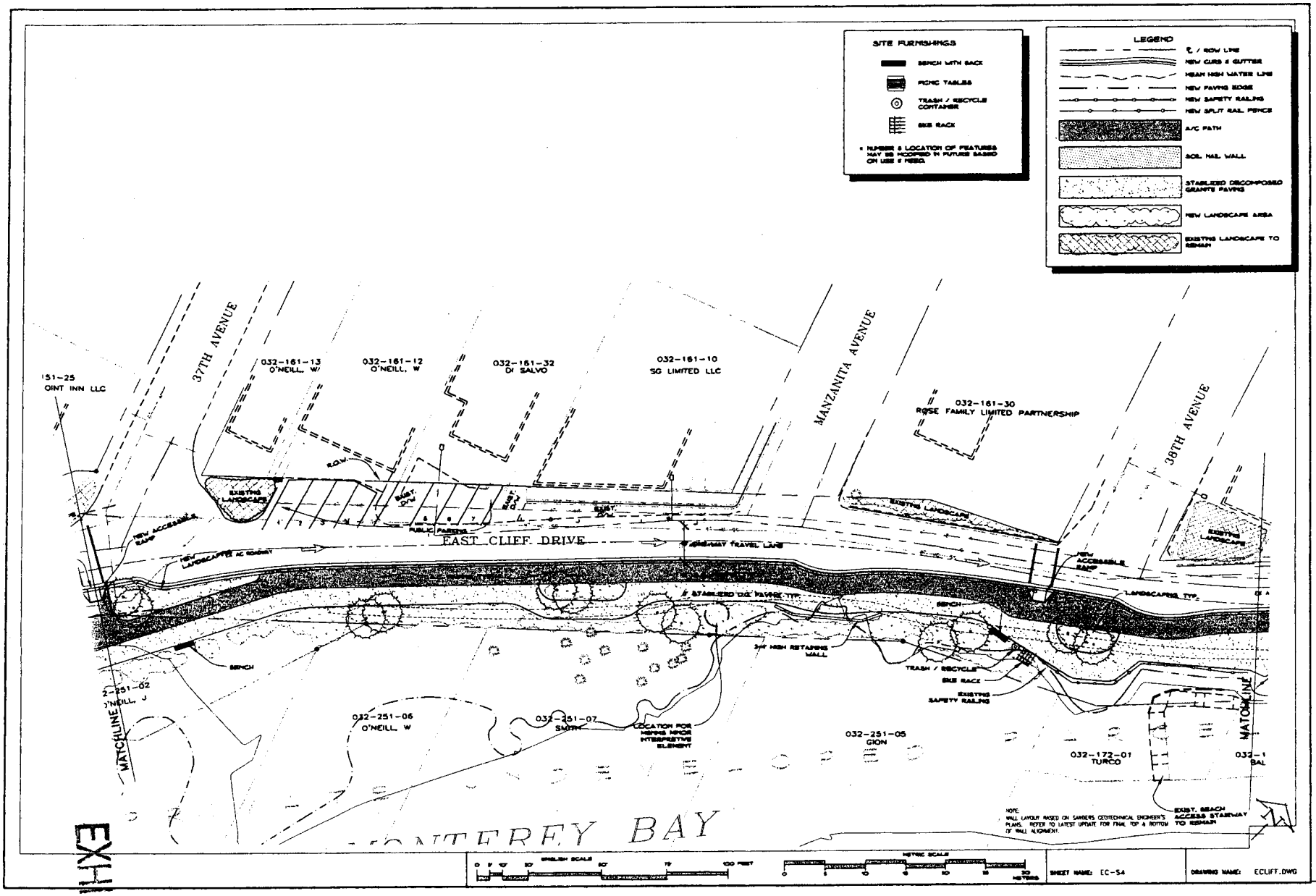
30TH AVENUE
MATCHLINE
MONTEREY BAY

EXHIBIT E



REVISION	DATE	BY
SITE TURN/PARKING DIMS. ADDED	11/7/06	PR/AK

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PEDESTRIAN & BIKE PATH SITE PLAN

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S4 of 27

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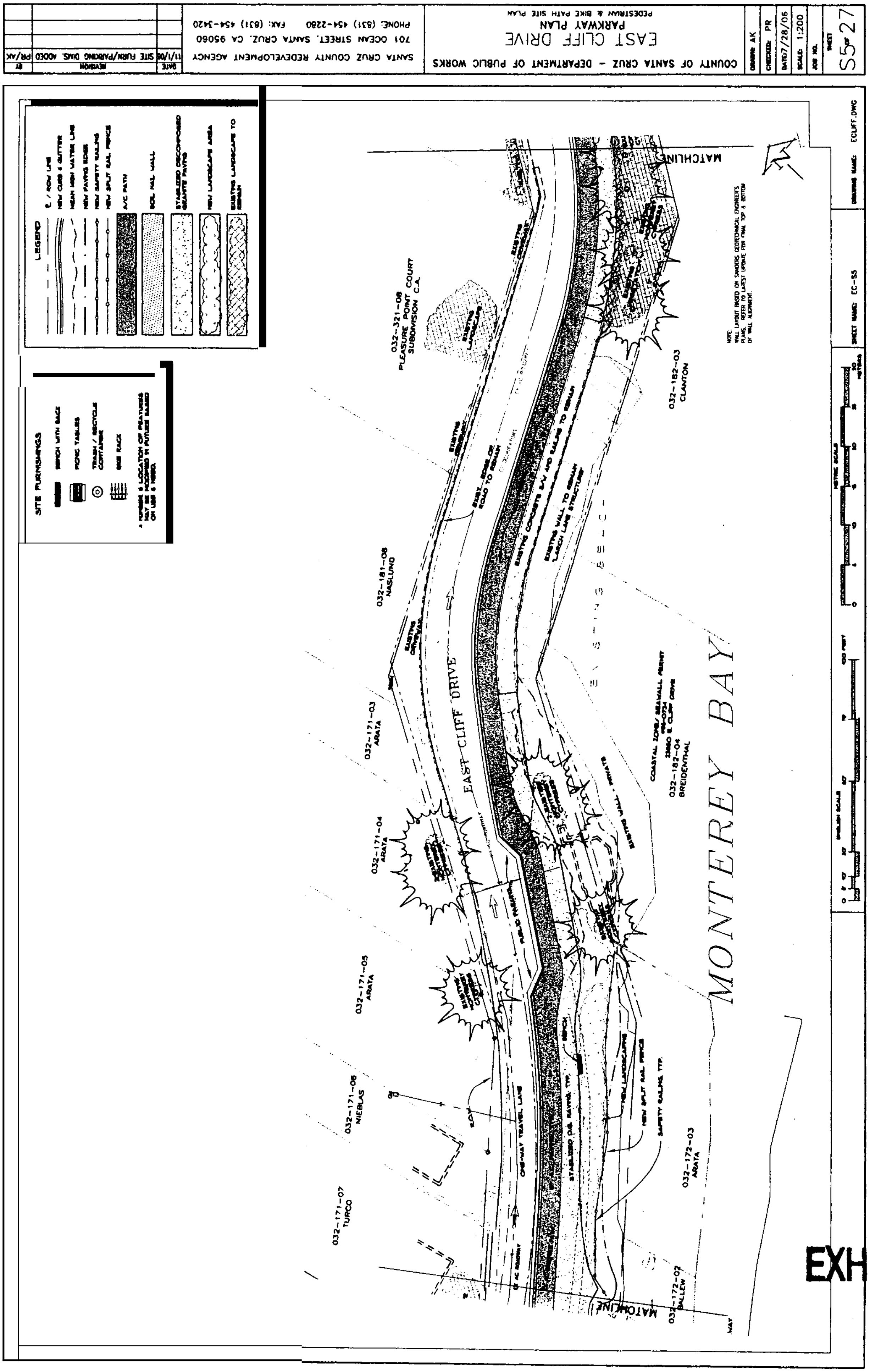
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
PARKWAY PLAN
PEDESTRIAN & BIKE PATH SITE PLAN
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420
DATE: 7/28/06
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S5 of 27
LEGEND
SITE FURNISHINGS
MATCHLINE
EAST CLIFF DRIVE
MONTEREY BAY
032-321-08
PLEASURE POINT COURT SUBDIVISION C.A.
032-182-03
CLANTON
032-181-08
NASLUND
032-171-03
ARATA
032-171-04
ARATA
032-182-04
BREIDENTHAL
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ARATA
032-171-06
NIEBLAS
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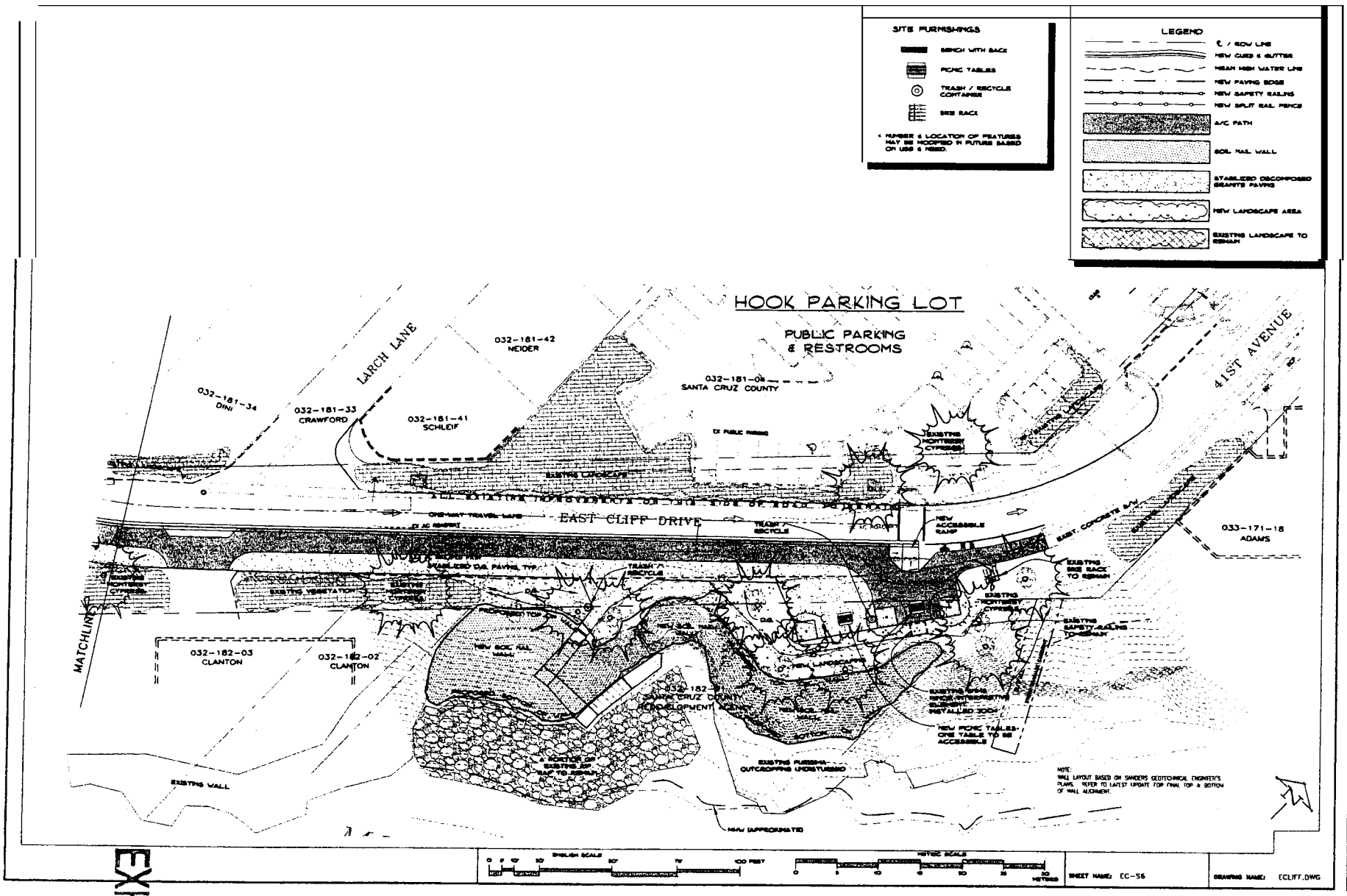
ARATA
032-171-07
TURCO
032-172-02
BALLEW
EC-S5
ECLIFF.DWG

EXHIBIT E



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11/1/06	SITE FURN/PHASING DIMS ADDED	PR/AK

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PEDESTRIAN & BIKE PATH SITE PLAN

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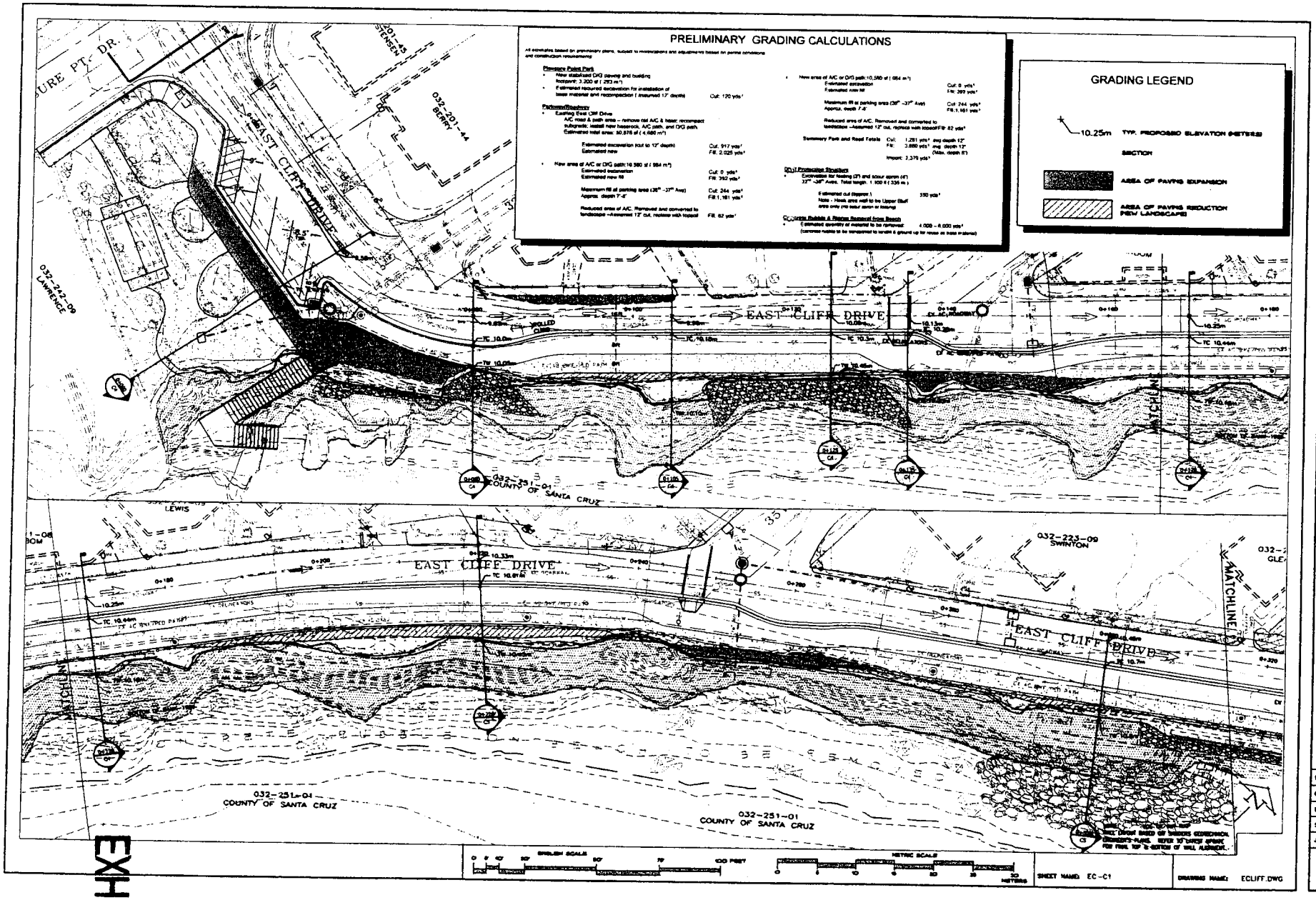

DATE	REVISION	BY
11/1/06	SITE PLAN/PARKING DWG. ADDED	PR/AK

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY GRADING PLAN

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DATE: 7/28/06
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SHEET C1 OF 27

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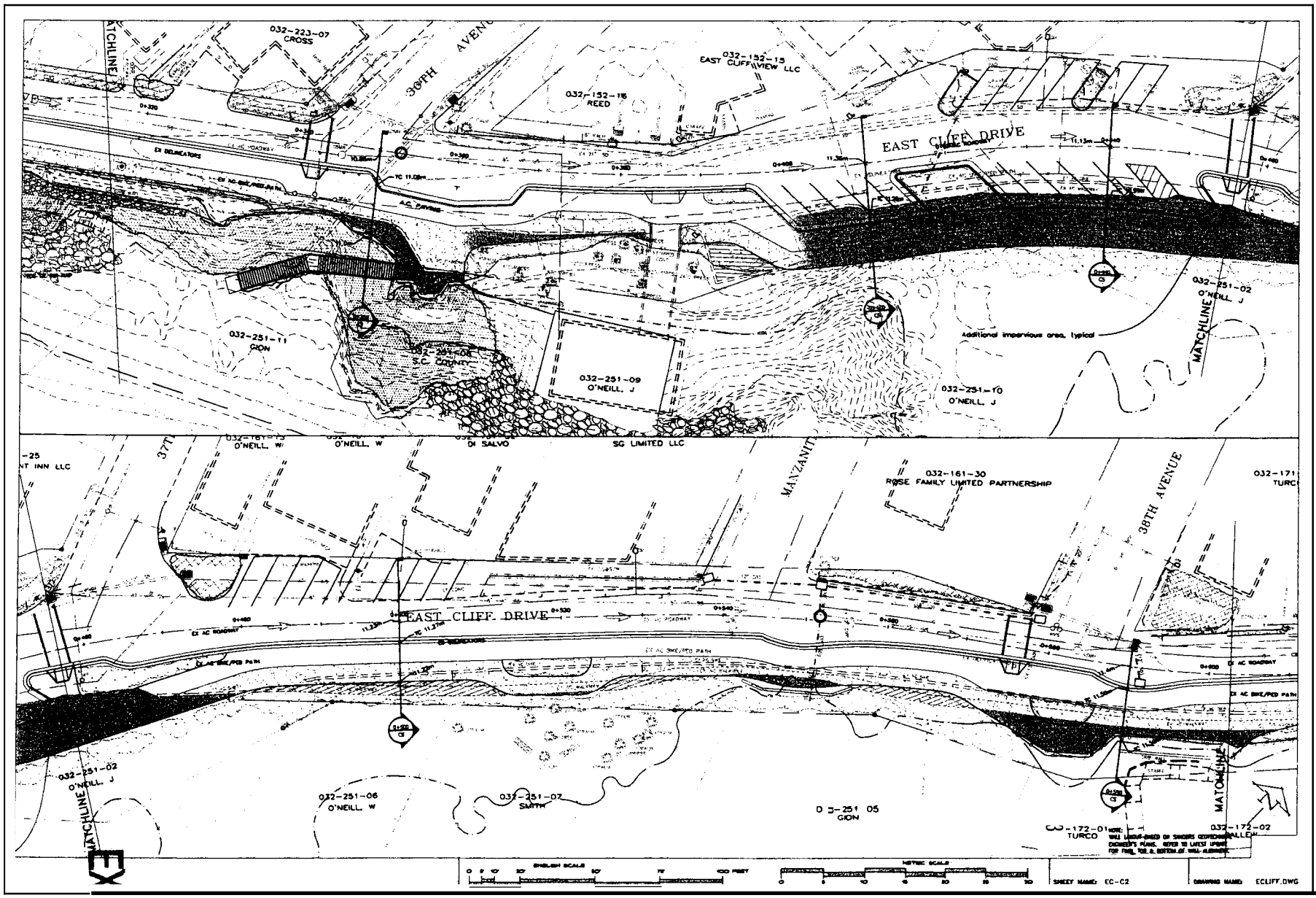

BY	REVISION	DATE
PR/AK	ADDED SITE TURN/PARKING DIMS.	11/1/06

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY GRADING PLAN

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DATE:	7/28/06
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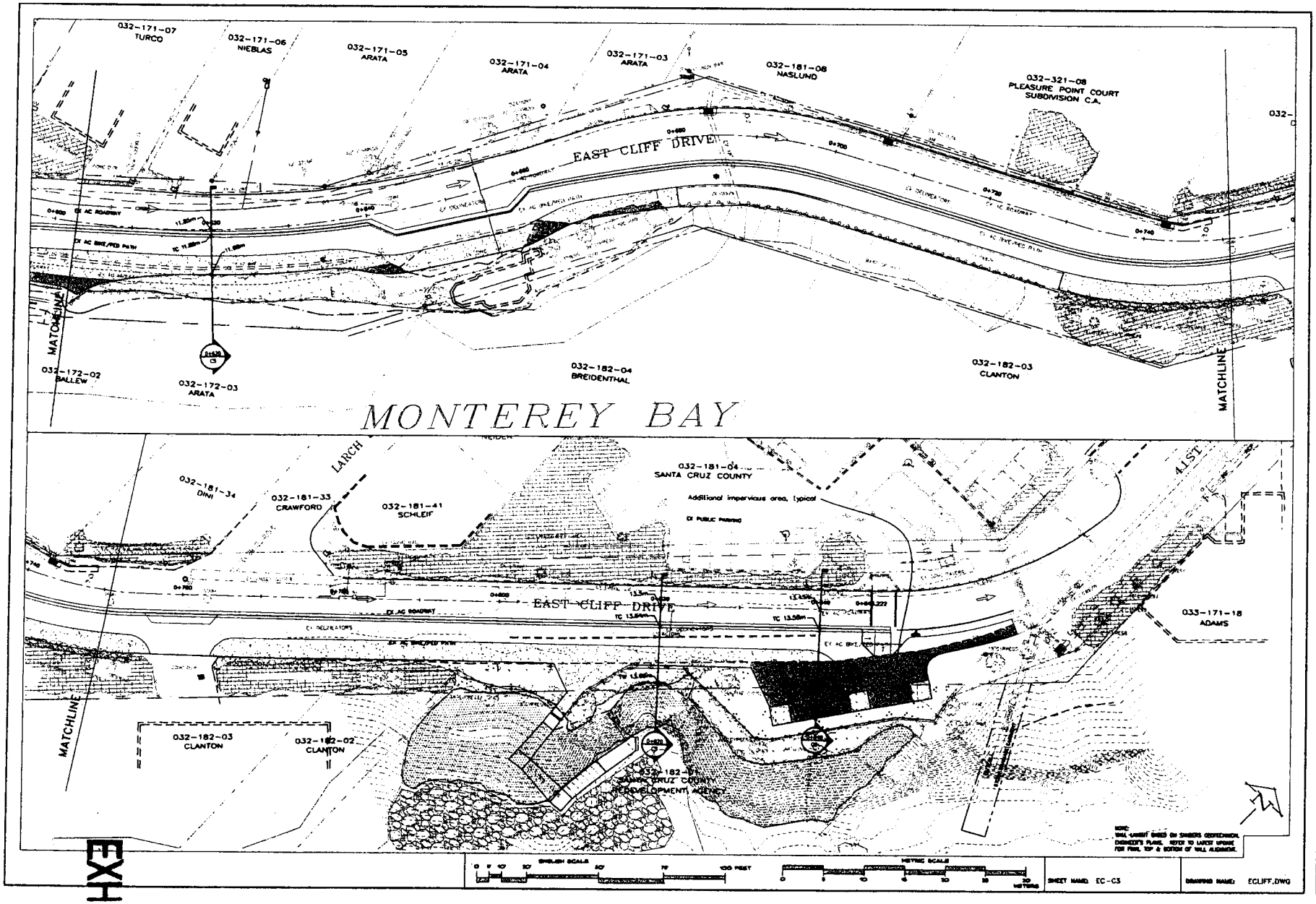
SHEET	C2 OF 27

EXHIBIT E



DATE	REVISION	BY
11/06	SITE PLAN/PARKING DIMS ADDED	PR/AK

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
GRADING PLAN
PRELIMINARY GRADING PLAN

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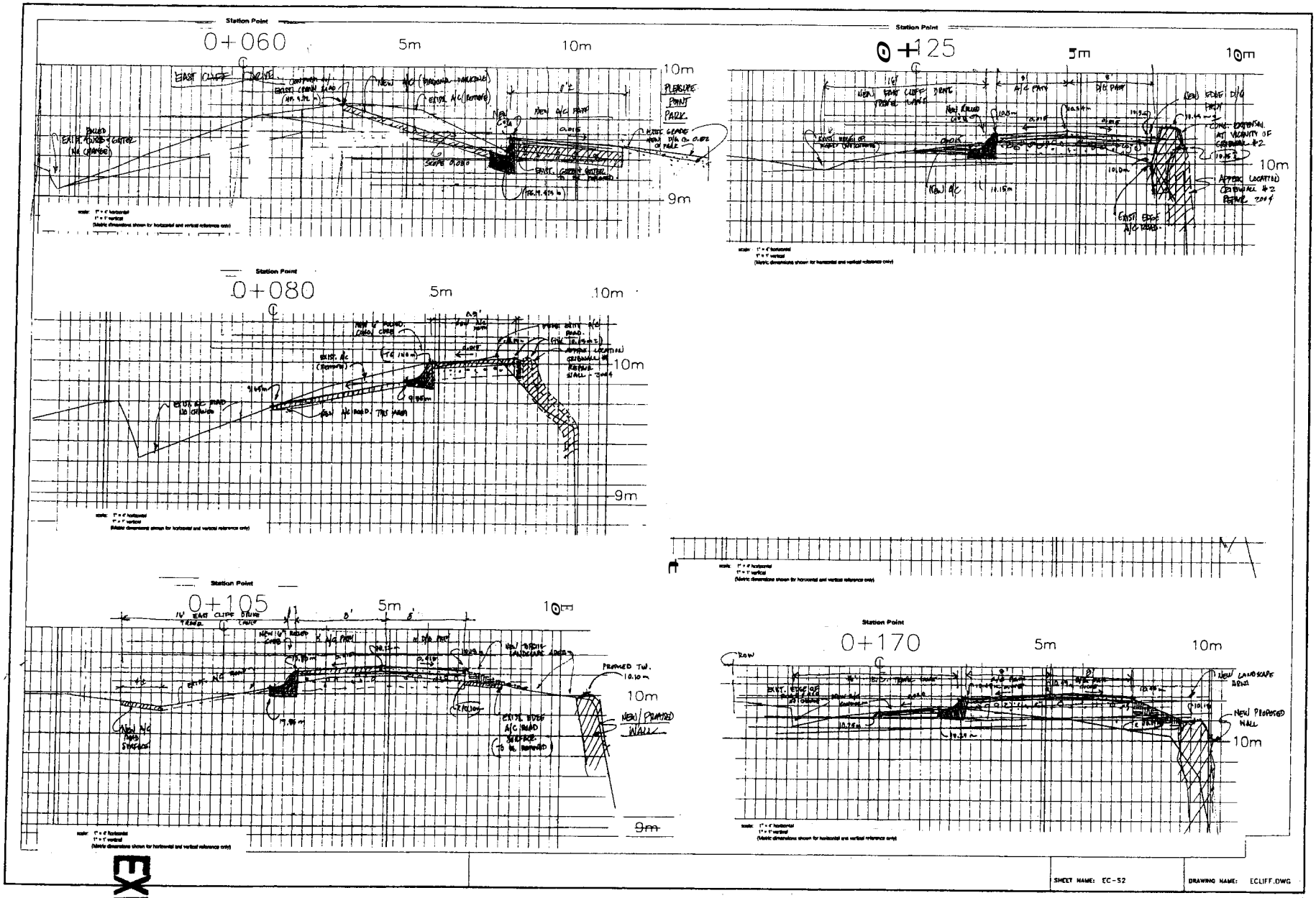
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10m
9m
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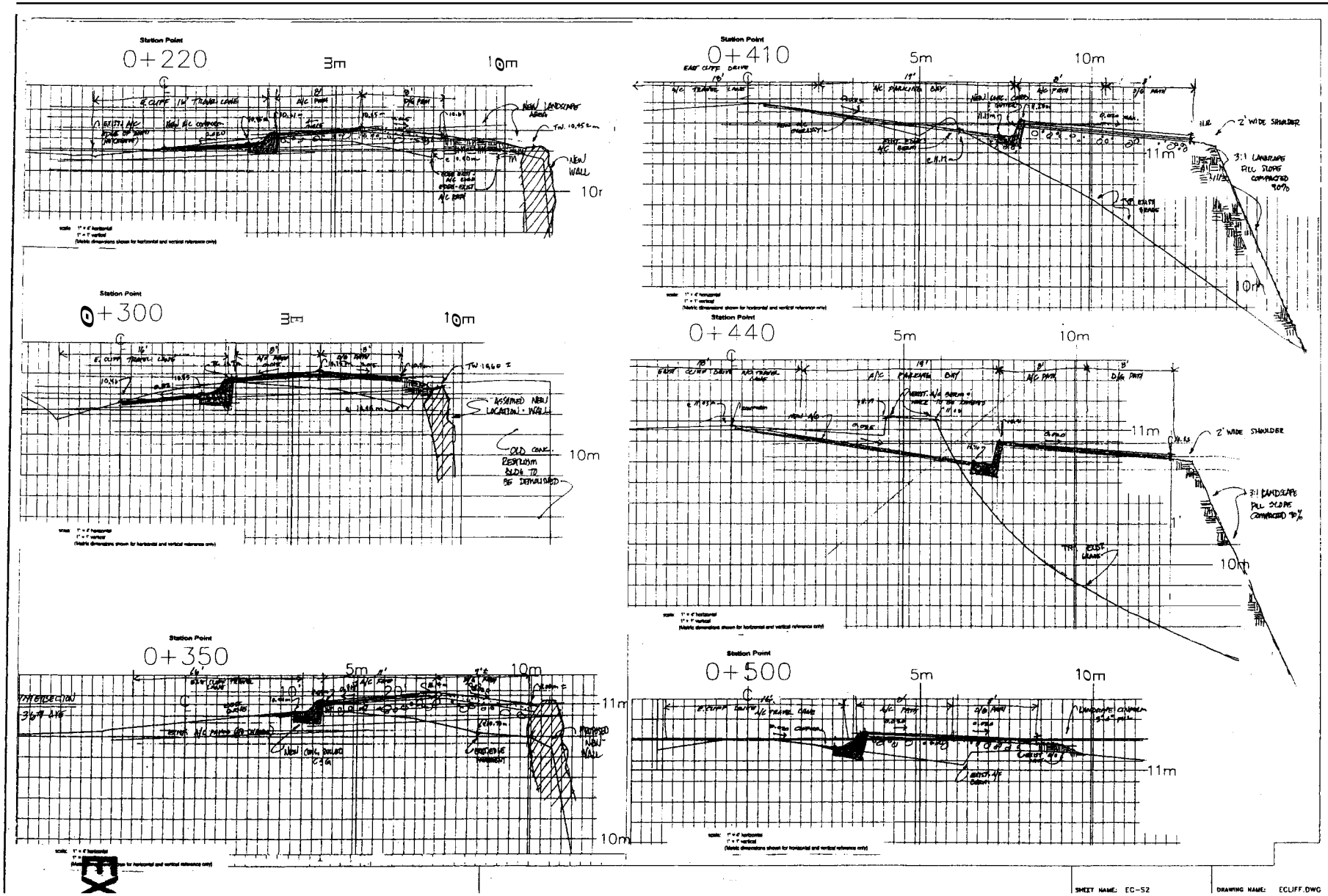
EXHIBIT E



COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
GRADING – SECTIONS
PRELIMINARY

DRAWN: AK/PR
CHECKED: PR/RN
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SCALE:
JOB NO.
SHEET
C-5

SHEET NAME: EC-S2

DRAWING NAME: ECLIFF.DWG

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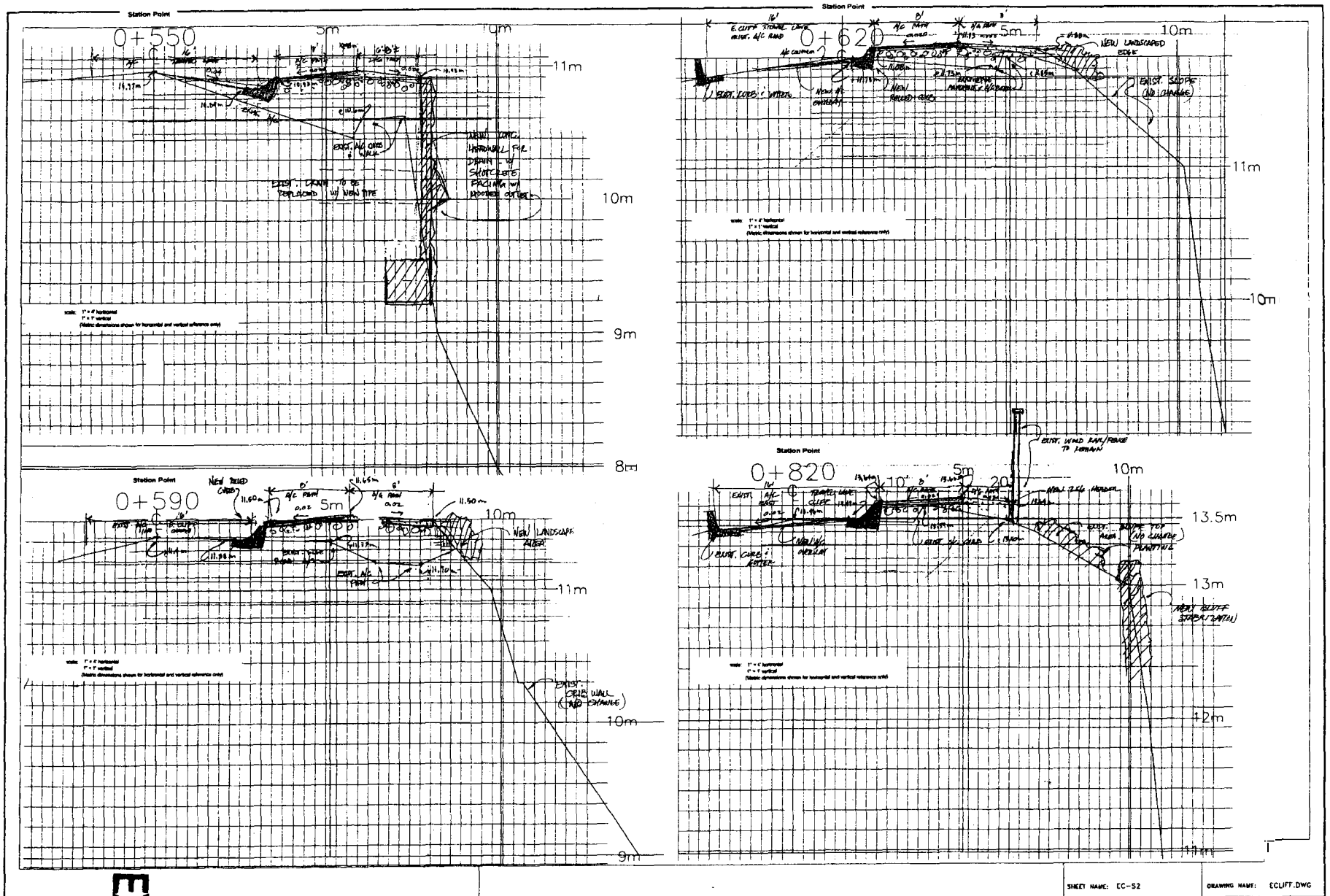

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
GRADING - SECTIONS
PRELIMINARY

BY	REVISION	DATE

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JOB NO.
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C-6

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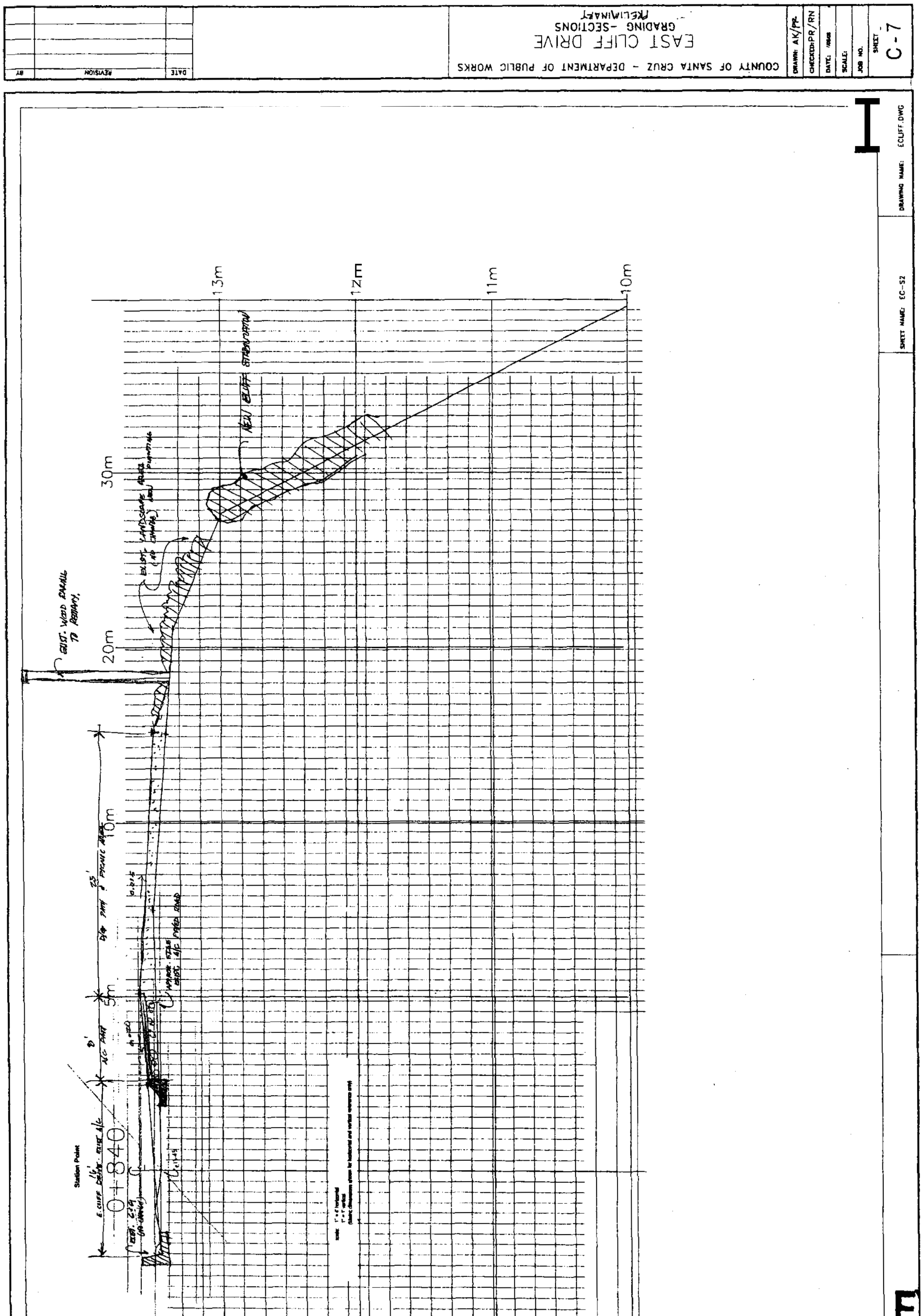
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
GRADING - SECTIONS
PRELIMINARY
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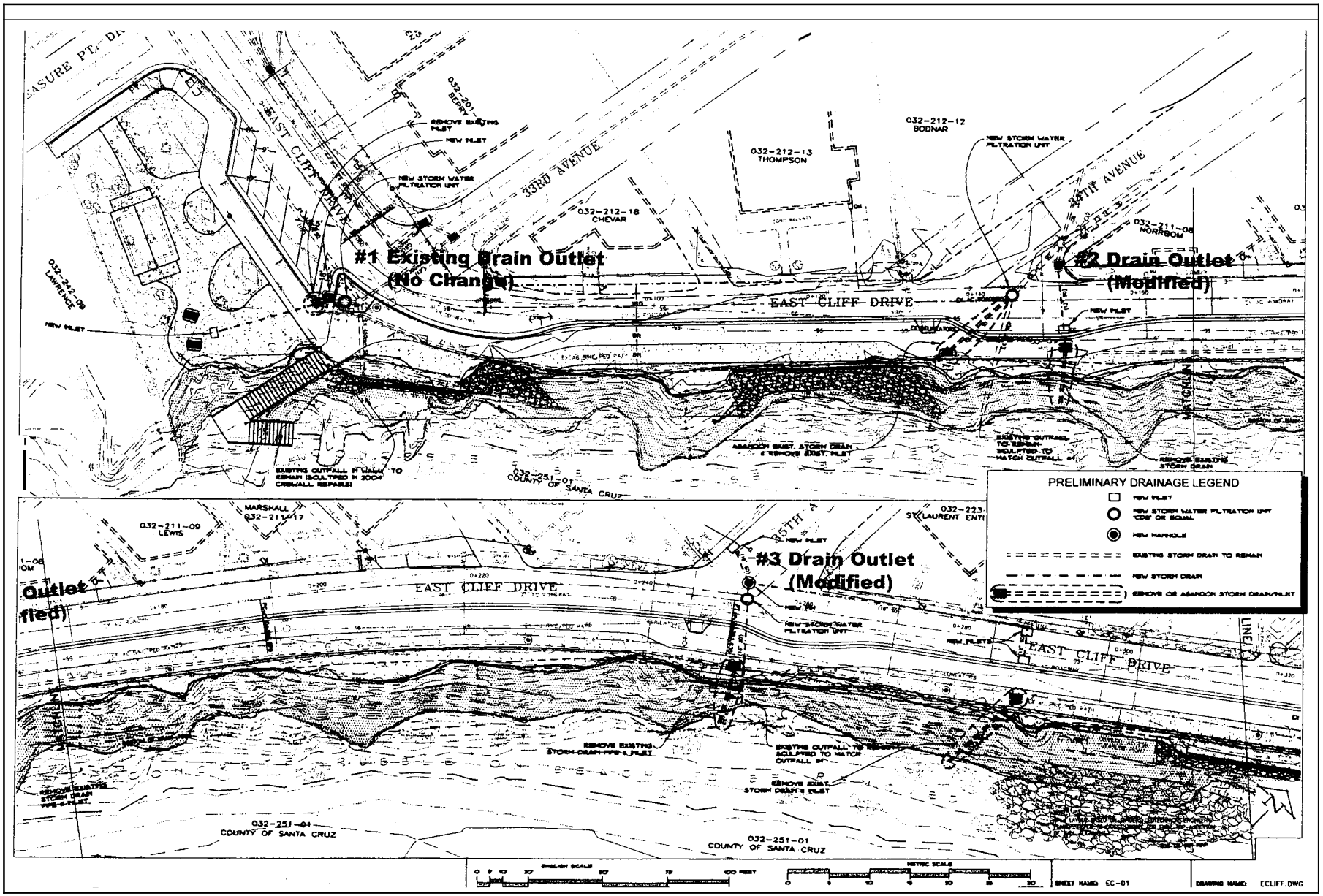
CHECKED: PR/RN
SHEET C-7
DRAWING NAME: ECLIFF.DWG
SHEET NAME: EC-S2
REVISION
DATE
BY
13m
12m
11m
10m
30m
20m
10m
5m
0+840
Station Point
NEW BLUFF STABILIZATION
EXIST. WOOD RAIL TO REMAIN
EXIST. LANDSCAPE AREAS (NO CHANGE) AND PLANTINGS
A/C PATH
PICNIC AREA

EXHIBIT E



COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY DRAINAGE PLAN

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

DATE	REVISION	BY
11/1/06	SITE PLAN/PARKING DIMS. ADDED	PR/AK

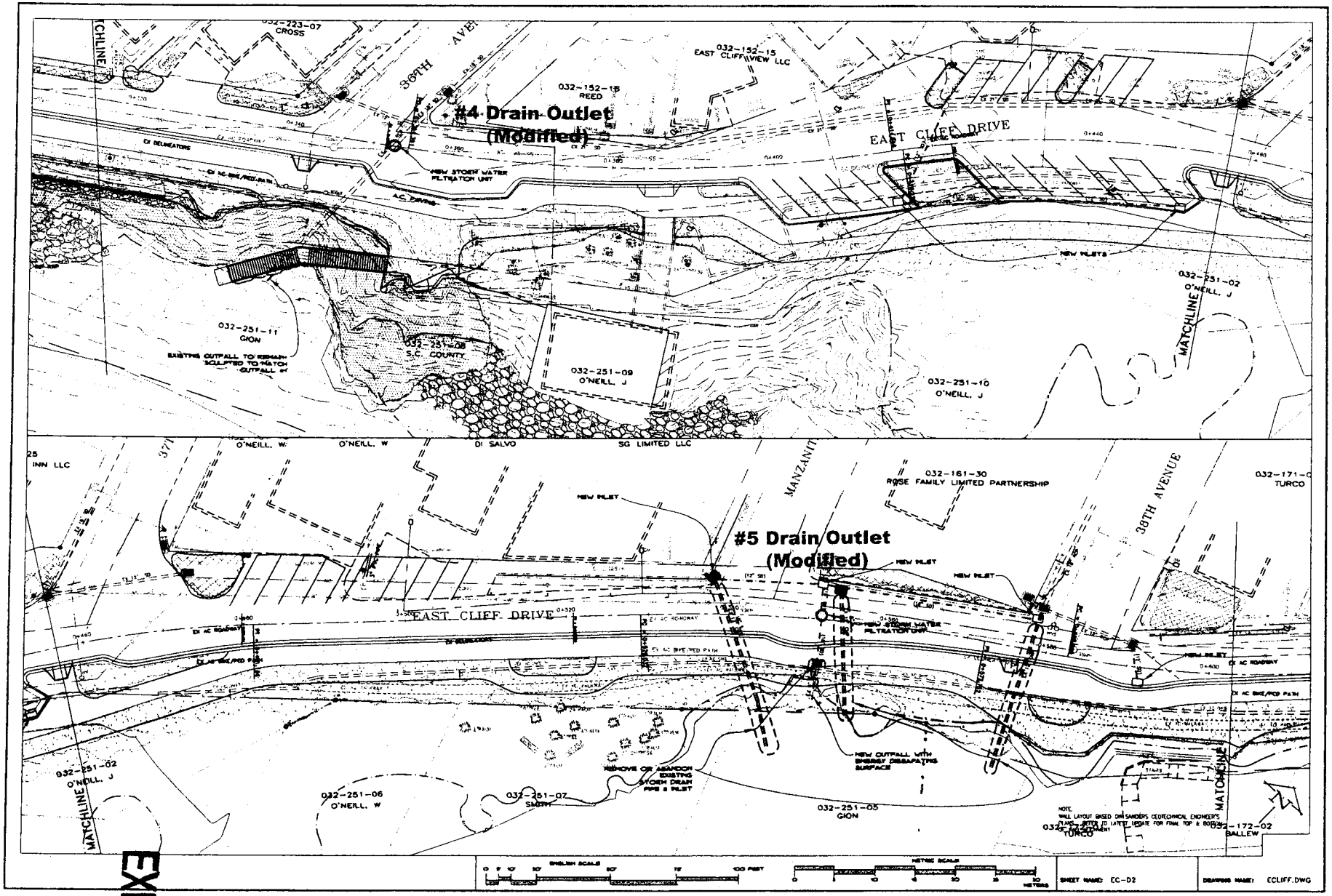
DRAWN: AK
CHECKED: PR/RN
DATE: 7/28/06
SCALE: 1:200
JOB NO.
SHEET
D1 of 27

SHEET NAME: EC-01
DRAWING NAME: ECLIFF.DWG

- 09 -

EXHIBIT E

EXHIBIT E



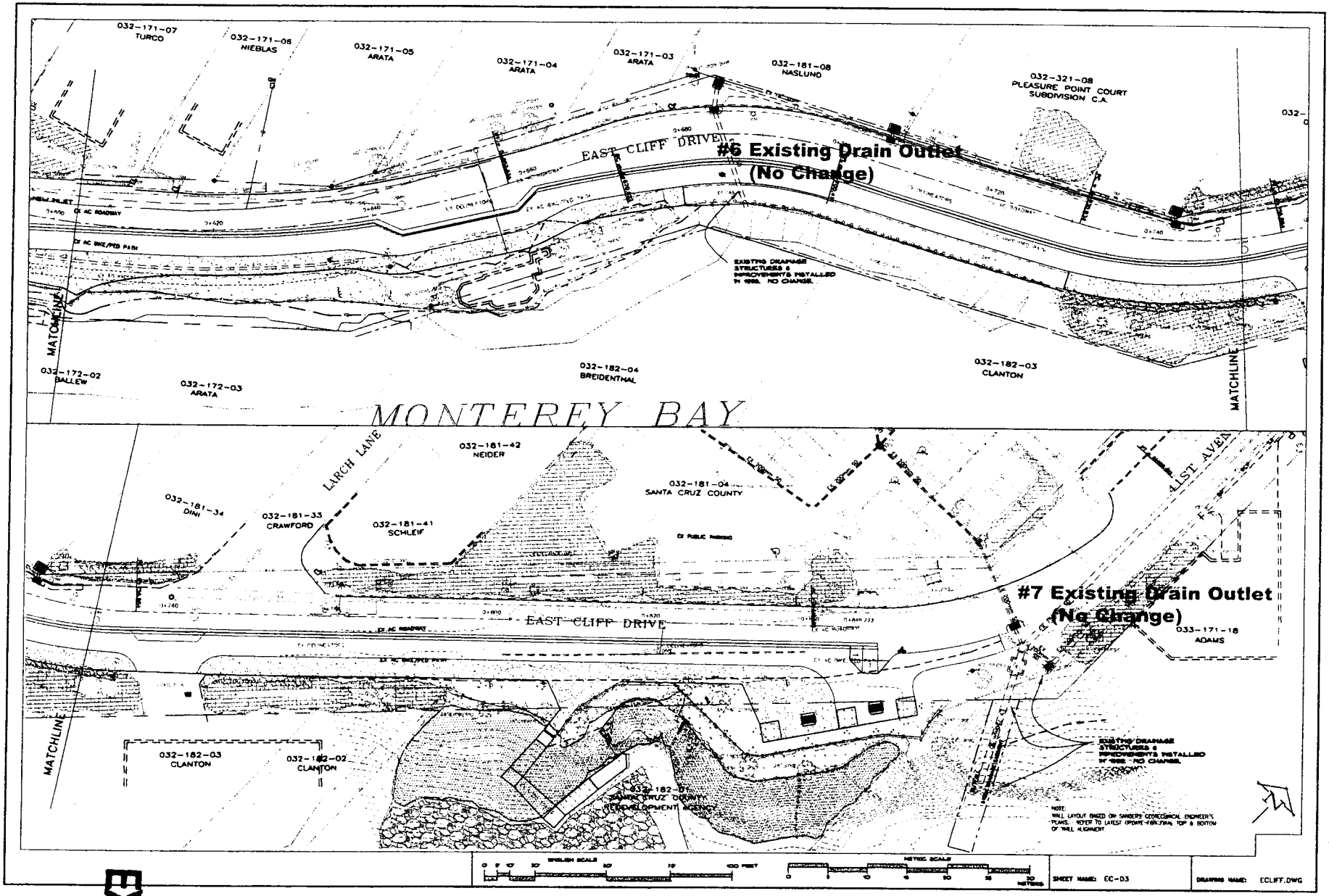
BY	REVISION	DATE
PR/AK	ADDED DMS, SITE TURN/PARKING	11/1/06

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY DRAINAGE PLAN

DRAWN:	AK
CHECKED:	PR/RN
DATE:	7/28/06
SCALE:	1:200
JOB NO.	
SHEET	D2 OF 27



DATE	REVISION	BY
11/1/06	SITE PLAN/PARKING DWG. ADDED	PR/AK

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN

DRAWN:	AK
CHECKED:	PR/RN
DATE:	7/28/06
SCALE:	1:200
JOB NO.	
SHEET	D3 of 27

EXHIBIT E

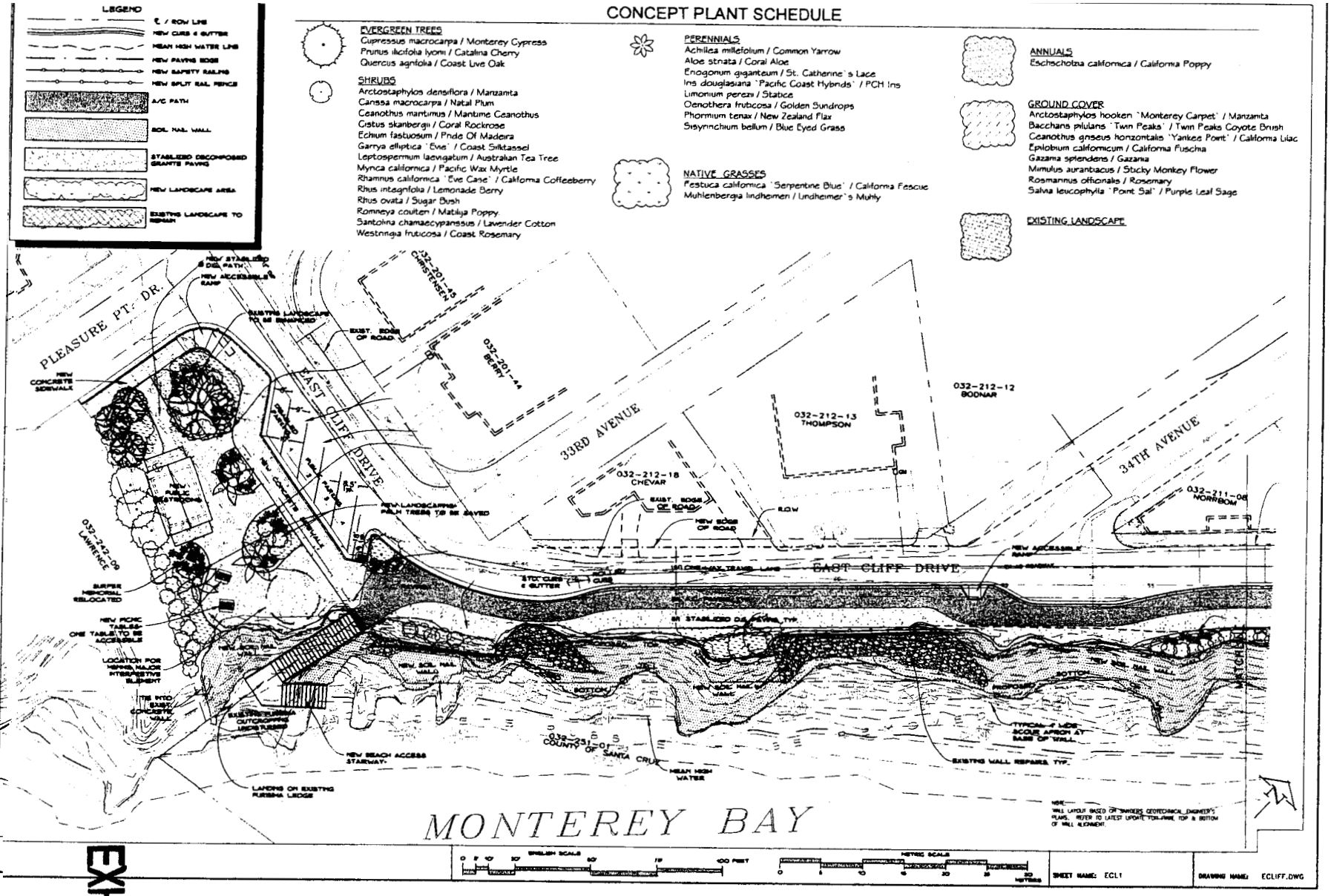
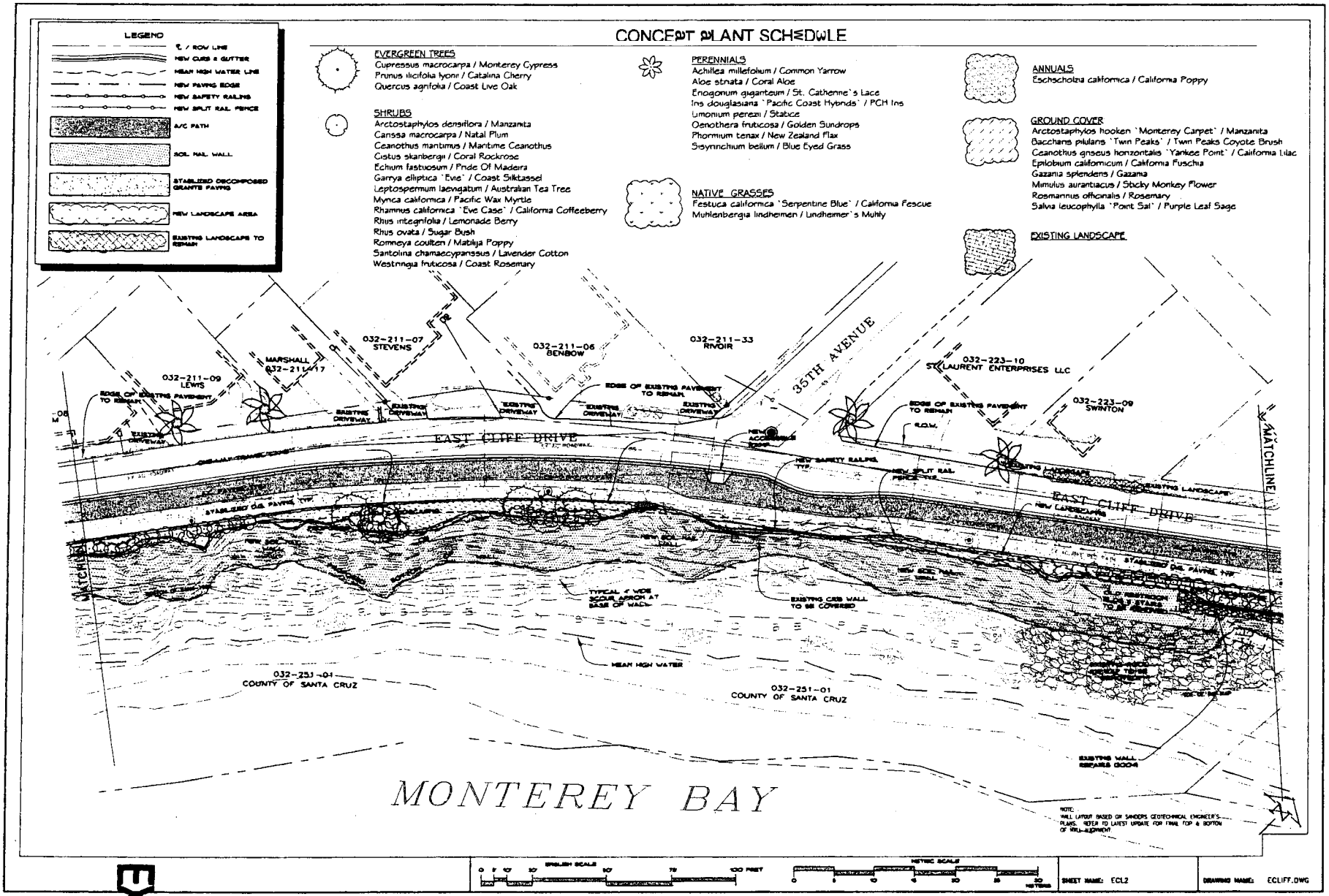

LEGEND
℄ / ROW LINE
NEW CURB & GUTTER
MEAN HIGH WATER LINE
NEW PAVING EDGE
NEW SAFETY RAILING
NEW SPLIT RAIL FENCE
A/C PATH
SOIL NAIL WALL
STABILIZED DECOMPOSED GRANITE PAVING
NEW LANDSCAPE AREA
EXISTING LANDSCAPE TO REMAIN
CONCEPT PLANT SCHEDULE
EVERGREEN TREES
Cupressus macrocarpa / Monterey Cypress
Prunus ilicifolia lyonii / Catalina Cherry
Quercus agrifolia / Coast Live Oak
SHRUBS
Arctostaphylos densiflora / Manzanita
Carissa macrocarpa / Natal Plum
Ceanothus mantimus / Mantime Ceanothus
Cistus skanbergii / Coral Rockrose
Echium fastuosum / Pride Of Madeira
Garrya elliptica `Eve` / Coast Silktassel
Leptospermum laevigatum / Australian Tea Tree
Myrica californica / Pacific Wax Myrtle
Rhamnus californica `Eve Case` / California Coffeeberry
Rhus integrifolia / Lemonade Berry
Rhus ovata / Sugar Bush
Romneya coulteri / Matilija Poppy
Santolina chamaecyparissus / Lavender Cotton
Westringia fruticosa / Coast Rosemary
PERENNIALS
Achillea millefolium / Common Yarrow
Aloe striata / Coral Aloe
Eriogonum giganteum / St. Catherine`s Lace
Iris douglasiana `Pacific Coast Hybrids` / PCH Iris
Limonium perezii / Statice
Oenothera fruticosa / Golden Sundrops
Phormium tenax / New Zealand Flax
Sisyrinchium bellum / Blue Eyed Grass
NATIVE GRASSES
Festuca californica `Serpentine Blue` / California Fescue
Muhlenbergia lindheimeri / Lindheimer`s Muhly
ANNUALS
Eschscholzia californica / California Poppy
GROUND COVER
Arctostaphylos hookeri `Monterey Carpet` / Manzanita
Baccharis pilularis `Twin Peaks` / Twin Peaks Coyote Brush
Ceanothus griseus horizontalis `Yankee Point` / California Lilac
Epilobium californicum / California Fuschia
Gazania splendens / Gazania
Mimulus aurantiacus / Sticky Monkey Flower
Rosmarinus officinalis / Rosemary
Salvia leucophylla `Point Sal` / Purple Leaf Sage
EXISTING LANDSCAPE
PLEASURE PT. DR.
EAST CLIFF DRIVE
33RD AVENUE
34TH AVENUE
032-201-45 CHRISTENSEN
032-201-44 BERRY
032-212-12 BODNAR
032-212-13 THOMPSON
032-212-18 CHEVAR
032-211-08 NORRBOM
032-242-09 LAWRENCE
032-351-01 COUNTY OF SANTA CRUZ
NEW STABILIZED D.G. PATH
NEW ACCESSIBLE RAMP
EXISTING LANDSCAPE TO BE ENHANCED
EXIST. EDGE OF ROAD
NEW CONCRETE SIDEWALK
NEW CONCRETE RAMP
NEW LANDSCAPING/ PALM TREES TO BE SAVED
NEW EDGE OF ROAD
R.O.W.
NEW ACCESSIBLE RAMP
EAST CLIFF DRIVE
STD. CURB & GUTTER
SURFER MEMORIAL RELOCATED
NEW PICNIC TABLES ONE TABLE TO BE ACCESSIBLE
LOCATION FOR POSSIBLE MAJOR INTERDICTIVE SURGERY
TIE INTO EXIST. CONCRETE WALL
NEW SOIL NAIL WALL
NEW BEACH ACCESS STAIRWAY
LANDING ON EXISTING FURSENA LEDGE
MEAN HIGH WATER
EXISTING WALL REPAIRS, TYP.
MONTEREY BAY
NOTE: WALL LAYOUT BASED ON OWNERS GEOTECHNICAL ENGINEER'S PLANS. REFER TO LATEST UPDATE FOR ANGLE, TOP & BOTTOM OF WALL ALIGNMENT.
ENGLISH SCALE
METRIC SCALE
SHEET NAME: ECL1
DRAWING NAME: ECLIFF.DWG
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY LANDSCAPE PLAN
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420
DRAWN: AK
CHECKED: PR
DATE: 2/28/06
SCALE: 1:200
JOB NO.
SHEET
L1 OF 27

EXHIBIT E



BY	REVISION	DATE
PR/AK	ADDED SITE TURN/PARKING DIMS.	11/1/06

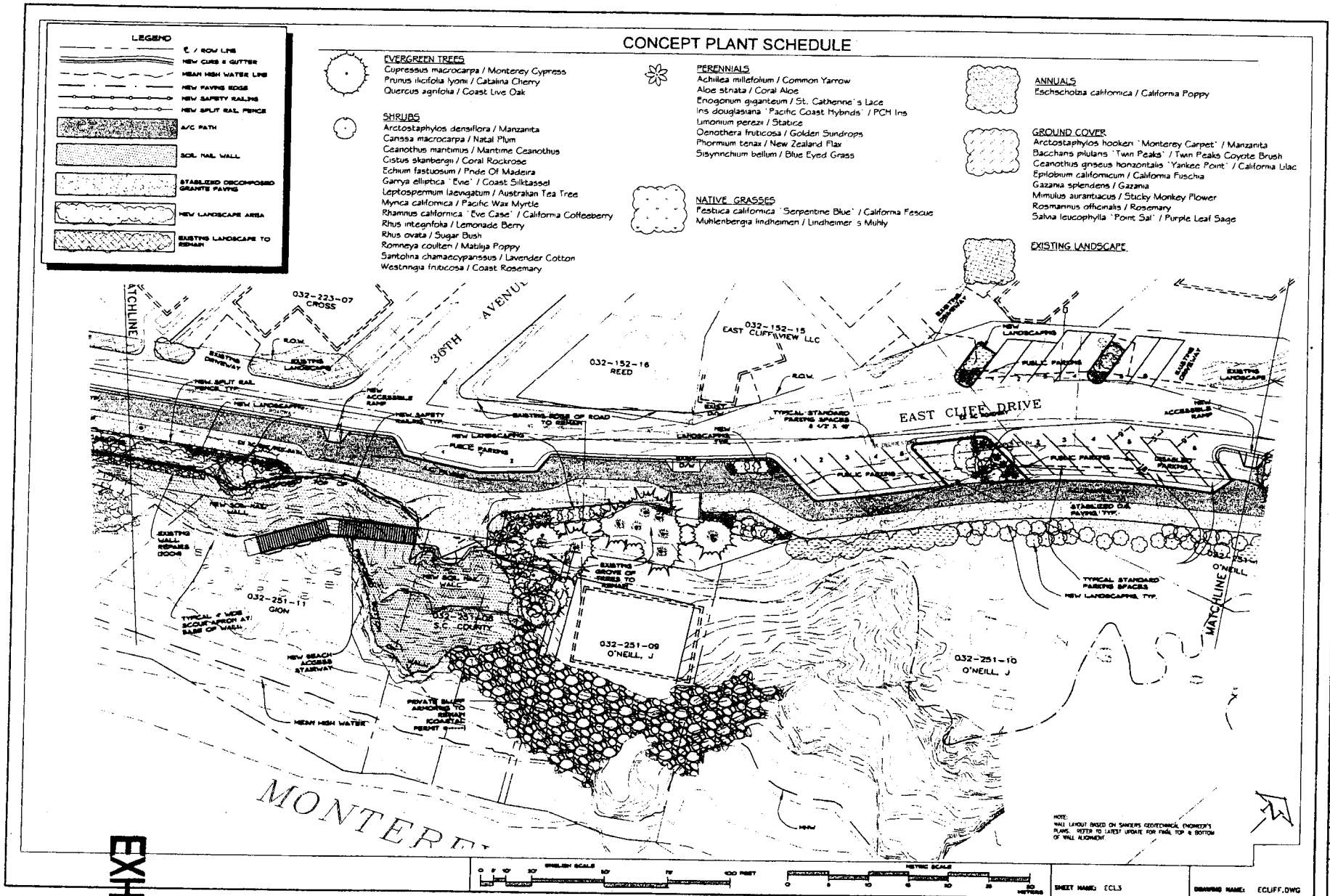
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY LANDSCAPE PLAN

DRAWN: AK
CHECKED: PR
DATE: 7/28/06
SCALE: 1:200
JOB NO.
SHEET L2 OF 27

EXHIBIT E



BY	REVISION	DATE
PR/AK	DWGS. ADDED	
	SITE PLAN/PARKING	11/1/06

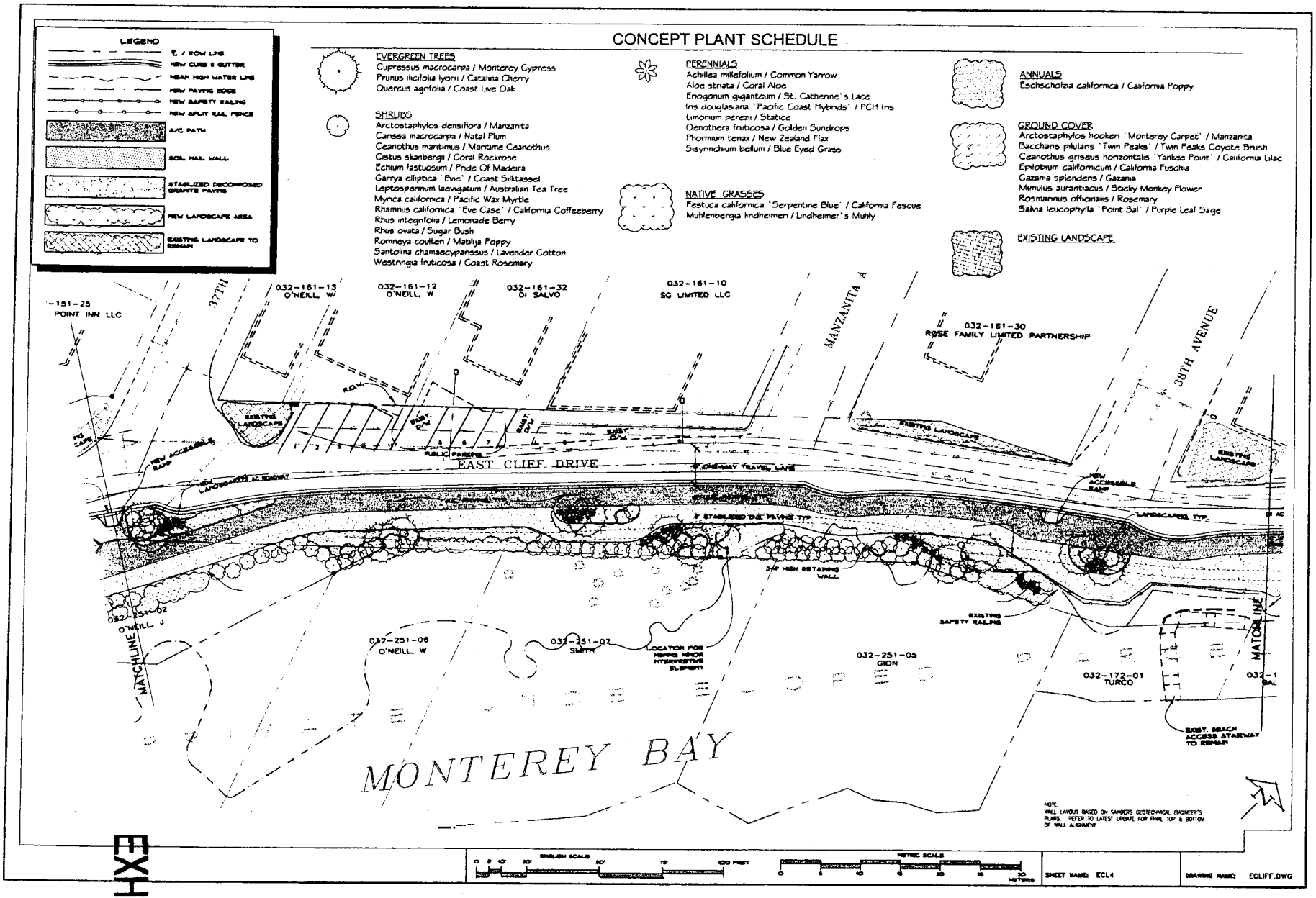
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY LANDSCAPE PLAN

DRAWN:	AK
CHECKED:	PR
DATE:	7/28/06
SCALE:	1:200
JOB NO.	
SHEET	L3 of 27

EXHIBIT E



BY	REVISION	DATE
PR/AK	ADDED DIMS, TURN/PARKING	11/1/06

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY LANDSCAPE PLAN

DRAWN: AK
CHECKED: PR
DATE: 7/28/06
SCALE: 1:200
JOB NO.
SHEET
L4 of 27

J

EXHIBIT 3

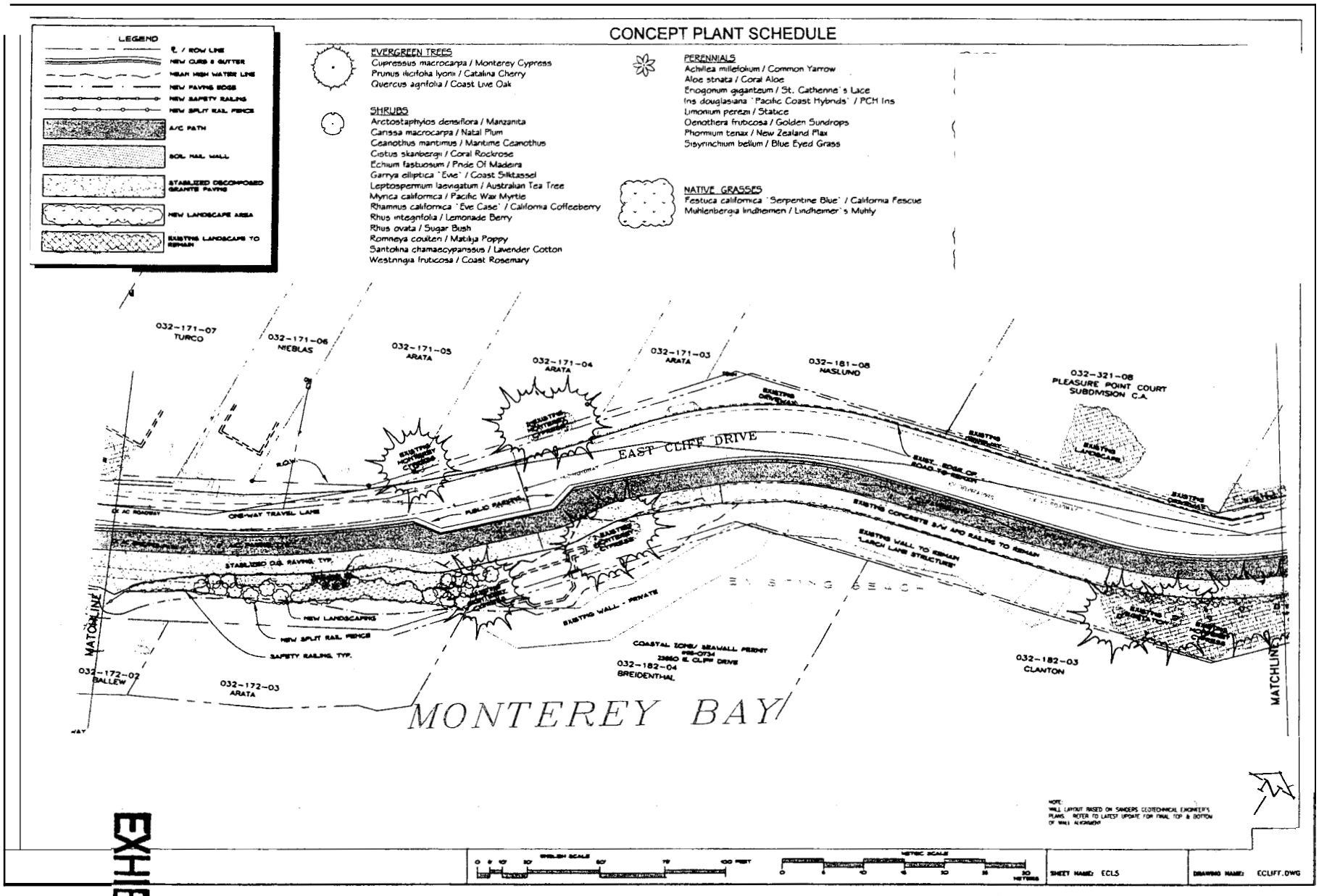

LEGEND
℄ / ROW LINE
NEW CURB & GUTTER
MEAN HIGH WATER LINE
NEW PAVING EDGE
NEW SAFETY RAILING
NEW SPLIT RAIL FENCE
A/C PATH
SOIL NAIL WALL
STABILIZED DECOMPOSED GRANITE PAVING
NEW LANDSCAPE AREA
EXISTING LANDSCAPE TO REMAIN
CONCEPT PLANT SCHEDULE
EVERGREEN TREES
Cupressus macrocarpa / Monterey Cypress
Prunus ilicifolia lyonii / Catalina Cherry
Quercus agrifolia / Coast Live Oak
SHRUBS
Arctostaphylos densiflora / Manzanita
Carissa macrocarpa / Natal Plum
Ceanothus mantimus / Maritime Ceanothus
Cistus skanbergii / Coral Rockrose
Echium fastuosum / Pride Of Madeira
Garrya elliptica 'Eve' / Coast Silktassel
Leptospermum laevigatum / Australian Tea Tree
Myrica californica / Pacific Wax Myrtle
Rhamnus californica 'Eve Case' / California Coffeeberry
Rhus integrifolia / Lemonade Berry
Rhus ovata / Sugar Bush
Romneya coulteri / Matilija Poppy
Santolina chamaecyparissus / Lavender Cotton
Westringia fruticosa / Coast Rosemary
PERENNIALS
Achillea millefolium / Common Yarrow
Aloe striata / Coral Aloe
Enogonum giganteum / St. Catherine's Lace
Ins douglasiana 'Pacific Coast Hybrids' / PCH Ins
Limonium perezii / Statice
Oenothera frutocosa / Golden Sundrops
Phormium tenax / New Zealand Flax
Sisyrinchium bellum / Blue Eyed Grass
NATIVE GRASSES
Festuca californica 'Serpentine Blue' / California Fescue
Muhlenbergia lindheimeri / Lindheimer's Muhly
032-171-07 TURCO
032-171-06 NIEBLAS
032-171-05 ARATA
032-171-04 ARATA
032-171-03 ARATA
032-181-08 NASLUND
032-321-08 PLEASURE POINT COURT SUBDIVISION C.A.
EAST CLIFF DRIVE
R.O.W.
ONE-WAY TRAVEL LANE
PUBLIC PARKING
EXISTING CONCRETE S/W AND RAILING TO REMAIN
EXISTING WALL TO REMAIN "LARCH LANE STRUCTURE"
EXISTING WALL - PRIVATE
STABILIZED D.G. PAVING, TYP.
NEW LANDSCAPING
NEW SPLIT RAIL FENCE
SAFETY RAILING, TYP.
MATCHLINE
032-172-02 BALLEW
032-172-03 ARATA
COASTAL ZONE/ SEAWALL PERMIT #98-0734 2380 E. CLIFF DRIVE
032-182-04 BREIDENTHAL
032-182-03 CLANTON
MONTEREY BAY
NOTE: WALL LAYOUT BASED ON SANDERS GEOTECHNICAL ENGINEER'S PLANS. REFER TO LATEST UPDATE FOR FINAL TOP & BOTTOM OF WALL ALIGNMENT
ENGLISH SCALE
METRIC SCALE
SHEET NAME: ECLS
DRAWING NAME: ECLIFF.DWG
DATE 11/1/06 SITE PLAN/PARKING DIMS. ADDED BY PR/AK
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY LANDSCAPE PLAN
DRAWN: AK
CHECKED: PR
DATE: 7/28/06
SCALE: 1:200
JOB NO.
SHEET L5 OF 27

EXHIBIT E

EXHIBIT E

CONCEPT PLANT SCHEDULE

LEGEND
- ℄ / ROW LINE
- NEW CURB & GUTTER
- MEAN HIGH WATER LINE
- NEW PAVING EDGE
- NEW SAFETY RAILING
- NEW SPLIT RAIL FENCE
- A/C PATH
- SOIL NAIL WALL
- STABILIZED DECOMPOSED GRANITE PAVING
- NEW LANDSCAPE AREA
- EXISTING LANDSCAPE TO REMAIN

EVERGREEN TREES
Cupressus macrocarpa / Monterey Cypress
Prunus ilicifolia lyonii / Catalina Cherry
Quercus agrifolia / Coast Live Oak

SHRUBS
Arctostaphylos densiflora / Manzanita
Carissa macrocarpa / Natal Plum
Ceanothus mantimus / Mantime Ceanothus
Cistus skanbergii / Coral Rockrose
Echium fastuosum / Pride Of Madeira
Garrya elliptica `Evie` / Coast Silktassel
Leptospermum laevigatum / Australian Tea Tree
Myrica californica / Pacific Wax Myrtle
Rhamnus californica `Eve Case` / California Coffeeberry
Rhus integrifolia / Lemonade Berry
Rhus ovata / Sugar Bush
Romneya coulteri / Matilija Poppy
Santolina chamaecyparissus / Lavender Cotton
Westringia fruticosa / Coast Rosemary

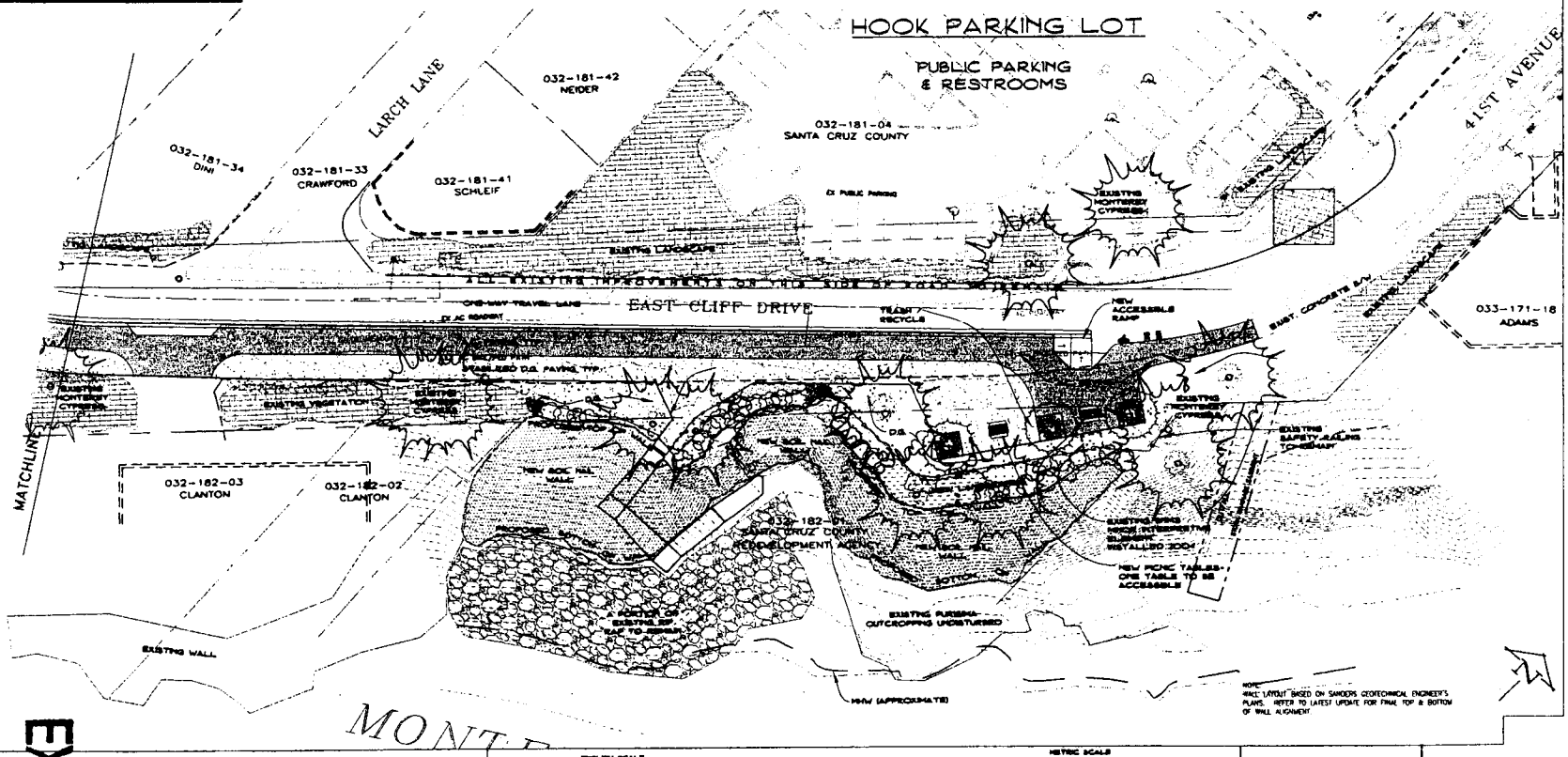
PERENNIALS
Achillea millefolium / Common Yarrow
Aloe striata / Coral Aloe
Enogonum giganteum / St. Catherine`s Lace
Iris douglasiana `Pacific Coast Hybrids` / PCH Iris
Limonium perezii / Statice
Oenothera fruticosa / Golden Sundrops
Phormium tenax / New Zealand Flax
Sisyrinchium bellum / Blue Eyed Grass

NATIVE GRASSES
Festuca californica `Serpentine Blue` / California Fescue
Muhlenbergia lindheimeri / Lindheimer`s Muhly

ANNUALS
Eschscholzia californica / California Poppy

GROUND COVER
Arctostaphylos hookeri `Monterey Carpet` / Manzanita
Baccharis pilularis `Twin Peaks` / Twin Peaks Coyote Brush
Ceanothus gloriosus horizontalis `Yankee Point` / California Lilac
Epilobium californicum / California Fuschia
Gazania splendens / Gazania
Mimulus aurantiacus / Sticky Monkey Flower
Rosmarinus officinalis / Rosemary
Salvia leucophylla `Point Sal` / Purple Leaf Sage

EXISTING LANDSCAPE



ENGLISH SCALE 0 5 10 20 40 70 100 FEET
METRIC SCALE 0 5 10 20 30 50 METERS

SHEET NAME: ECL6
DRAWING NAME: ECLIFF.DWG

BY	REVISION	DATE
PR/AK	SITE PLAN/PARKING DIMS. ADDED	11/1/06

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
PRELIMINARY LANDSCAPE PLAN

DRAWN: AK
CHECKED: PR
DATE: 7/28/06
SCALE: 1:200
JOB NO.
SHEET L6 OF 27

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
PARKWAY PLAN
SIGNAGE & SANTCUARY TRAIL MARKER PLAN
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420
DRAWN: AK
CHECKED: PR/RN
DATE: 7/28/06
SCALE: 1:200
JOB NO.
SHEET
SN# 27
DATE
REVISION
BY
11/1/06 SITE PLAN/PARKING DIMS. ADDED PR/AK
PRELIMINARY SIGNAGE LEGEND *
EXISTING SIGNS TO REMAIN
EXISTING SIGNS TO BE REMOVED, RELOCATED, OR COMBINED W/ NEW
PROPOSED NEW / RELOCATED SIGNS
EXISTING TRAFFIC SIGN
EXISTING WARNING SIGN
EXISTING PEDESTRIAN SIGN
EXISTING PARKING SIGN
EXISTING BIKE SIGN
EXISTING STREET NAME SIGN
EXISTING BEACH/POOR RULES SIGN
EXISTING COASTAL ACCESS SIGN
PROPOSED TRAFFIC SIGN
PROPOSED WARNING SIGN
PROPOSED PEDESTRIAN SIGN
PROPOSED PARKING SIGN
PROPOSED BIKE SIGN
PROPOSED HIKING TRAIL MARKER
FENCE-POST STYLE
IN-GROUND STYLE
SUBJECT TO APPROVAL OF DPW TRAFFIC ENGINEER
EAST CLIFF DRIVE
MATCHLINE
30TH AVENUE
032-201-44 BERRY
032-201-45 CHRISTENSEN
032-212-18 CHEVAR
032-211-08 MORRISON
032-223-09 SWINTON
032-223-10 ST LAURENT ENTERPRISES LLC
032-251-01 COUNTY OF SANTA CRUZ
032-251-07 COUNTY OF SANTA CRUZ
032-211-09 LEWIS
032-211-17 MARSHALL
032-242-09 LAWRENCE
PLEASURE PT.
DRAWING NAME: ECLIFF.DWG
SHEET NAME: EC-SN1

EXHIBIT E

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
PARKWAY PLAN
SIGNAGE & SANTCUARY TRAIL MARKER PLAN
DRAWN: AK
CHECKED: PR/RN
DATE: 7/28/06
SCALE: 1:200
JOB NO.
SHEET
SN2 27
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420
DATE
REVISION
BY
11/1/06 SITE PLAN/PARKING DIMS. ADDED PR/AK
EAST CLIFF DRIVE
MATCHLINE
37TH AVENUE
38TH AVENUE
MANZANITA
TROWBRIDGE
SNYDER
032-251-02 O'NEILL, J
032-251-10 O'NEILL, J
032-161-30 ROSE FAMILY LIMITED PARTNERSHIP
032-171-01 TURCO
032-172-02 BALLEW
032-251-05 GION
032-132-15 EAST CLIFF VIEW LLC
032-132-16 REED
032-251-09 O'NEILL, J
SG LIMITED LLC
032-161-32 DI SALVO
032-161-12 O'NEILL, W
032-161-13 O'NEILL, W
032-223-07 CROSS
032-223-08 GLEASON
032-251-11 GION
032-251-07 SALOMI
032-251-08 O'NEILL, W
LOCATION FOR INTERPRETIVE SIGNAGE
ENGLISH SCALE
METRIC SCALE
DRAWING NAME: ECLIFF.DWG
SHEET NAME: EC-SN2

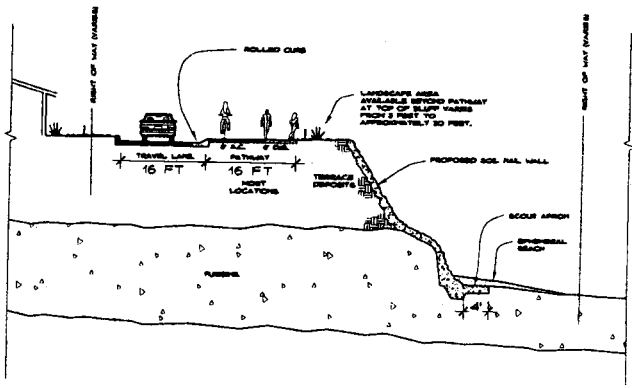
EXHIBIT E

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
PARKWAY PLAN
SIGNAGE & SANCTUARY TRAIL MARKER PLAN
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420
DRAWN: AK
CHECKED: PR/RN
DATED: 7/28/06
SCALE: 1:200
JOB NO.
SHEET
SN3 of 27
DATE
REVISION
BY
11/1/96 SITE PLAN/PARKING DIMS. ADDED PR/AK
SHEET NAME: EC-SH1
DRAWING NAME: ECLIFF.DWG
EAST CLIFF DRIVE
MONTEREY BAY
4IST AVENUE
LARCH LANE
PLEASURE POINT COURT SUBDIVISION C.A.
032-192-04 BREDENTHAL
032-181-04 SANTA CRUZ COUNTY
032-181-42 NEIDER
032-181-41 SCHLEIF
032-181-33 CRAWFORD
032-181-34 DIAZ
032-172-03 ARATA
032-172-02 BALLEW
032-051-03 MUTCHER
033-171-18 ADAMS
MATCHLINE

EXHIBIT E

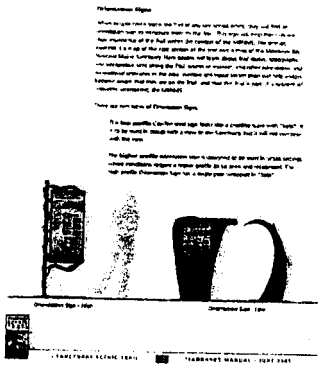
SIGN LOCATION PLAN

MBNMS SCENIC TRAIL

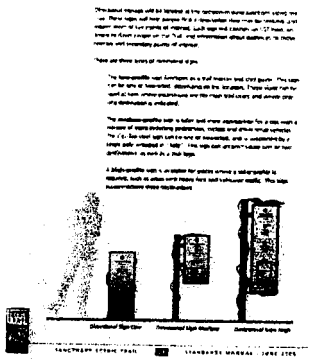


ILLUSTRATIVE SECTION

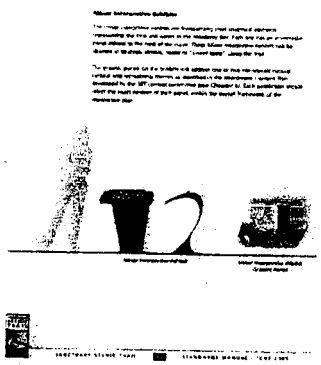
NOT TO SCALE



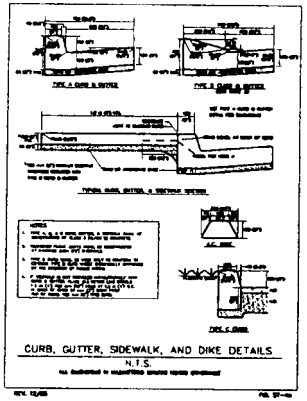
ORIENTATION SIGN
MBNMS SCENIC TRAIL



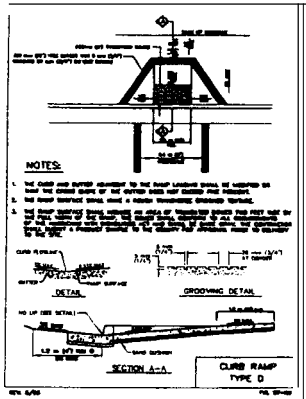
DIRECTIONAL SIGN
MBNMS SCENIC TRAIL



MINOR INTERPRETIVE EXHIBIT
MBNMS SCENIC TRAIL



ROLLED CURB
TYPE B



CURB RAMP
TYPE D

BY	REVISION	DATE
PR/AK	SITE TURN/PARKING DIMS. ADDED	11/1/06

SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

EAST CLIFF DRIVE
PARKWAY PLAN
ILLUSTRATIVE SECTION / MBNMS TRAIL SIGNAGE

DRAWN	AK
CHECKED	
DATE	7/28/06
SCALE	AS NOTED
JOB NO.	
SHEET	DT 27

SHEET NAME: EC-DT1

DRAWING

EXHIBIT E

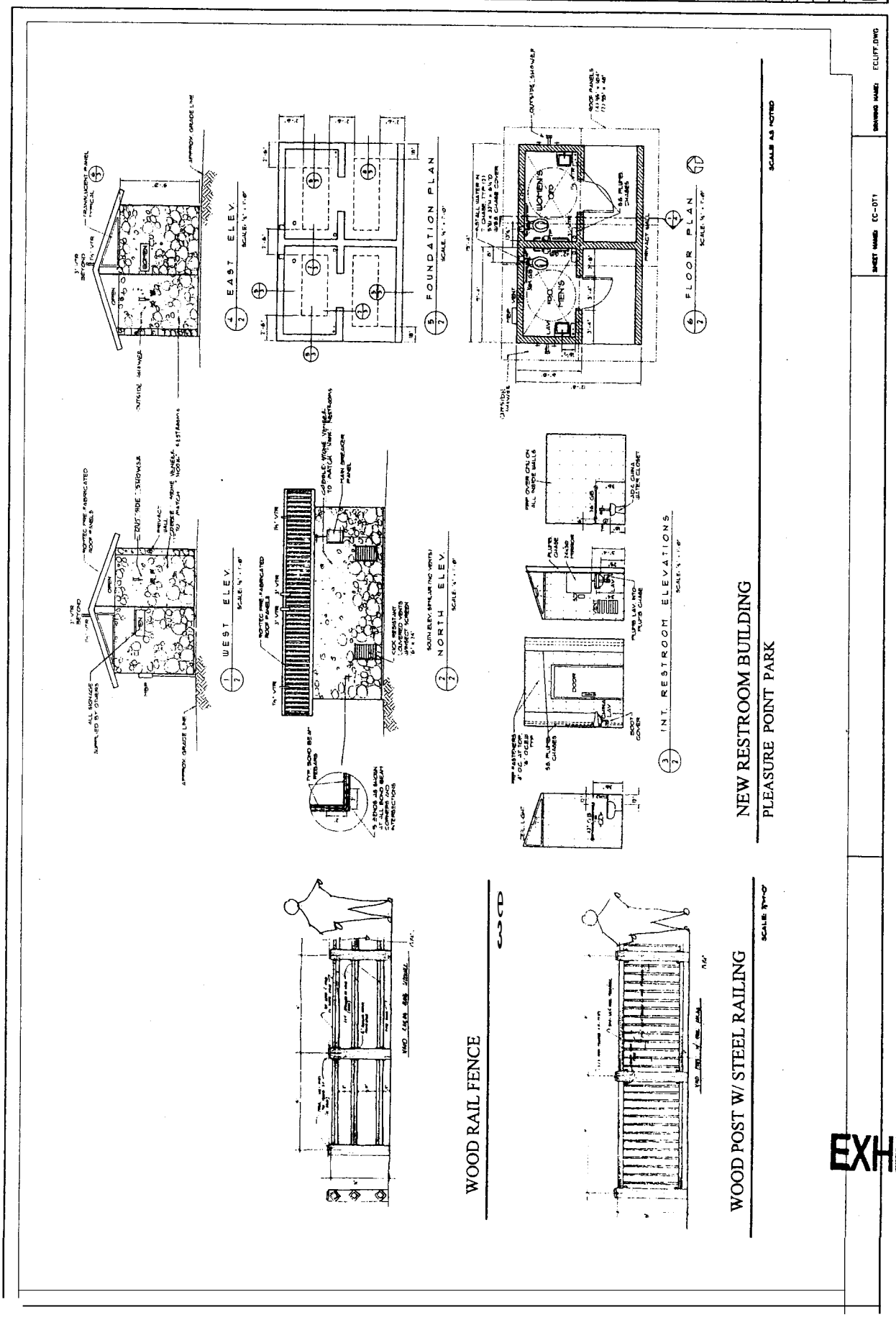

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
PARKWAY PLAN
PLEASURE POINT PARK RESTROOM PLANS / FENCE DETAILS
SANTA CRUZ COUNTY REDEVELOPMENT AGENCY
701 OCEAN STREET, SANTA CRUZ, CA 95060
PHONE: (831) 454-2280 FAX: (831) 454-3420
DRAWN: AK
CHECKED: PR
DATE: 7/28/08
SCALE: AS NOTED
JOB NO.
SHEET
DT2 of 27
DATE
REVISION
BY
11/1/08 SITE PLAN/PARKING DIMS. ADDED PR/AK
EAST ELEV.
WEST ELEV.
NORTH ELEV.
FOUNDATION PLAN
FLOOR PLAN
INT. RESTROOM ELEVATIONS
NEW RESTROOM BUILDING
PLEASURE POINT PARK
SCALE AS NOTED
WOOD RAIL FENCE
WOOD POST W/ STEEL RAILING
SHEET NAME: EC-DT1
DRAWING NAME: ECLIFF.DWG

EXHIBIT E

EXHIBIT E

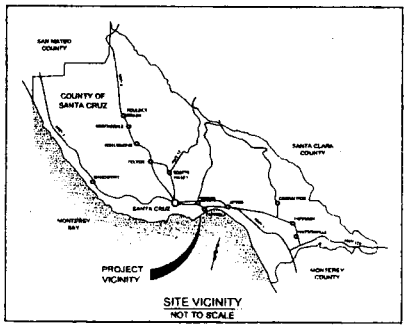
PROJECT PLANS
DIVIDER PAGE

(INTENTIONALLY LEFT BLANK)

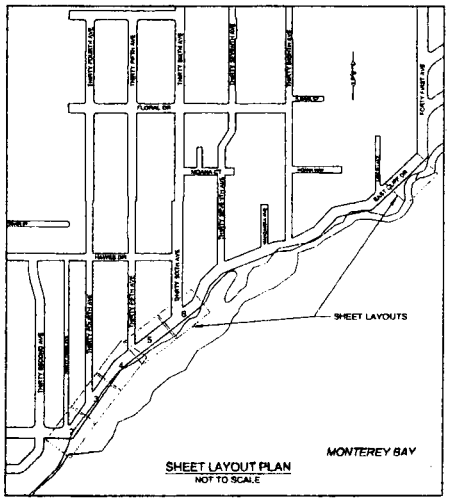
EXHIBIT E

CONCEPTUAL DRAWINGS
COASTAL BLUFF STABILIZATION PROJECT
EAST CLIFF DRIVE PARKWAY
33rd AVENUE TO 41st AVENUE
for
COUNTY OF SANTA CRUZ

CONTENTS

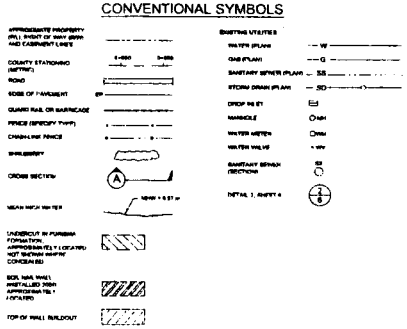


SITE VICINITY
NOT TO SCALE



SHEET LAYOUT PLAN
NOT TO SCALE

CONVENTIONAL SYMBOLS



KEY

TW	TOP OF WALL
BW	BOTTOM OF WALL, WHERE WALL IS CONCEALED
EP	INDICATES EXISTING STRUCTURE
(TYP.)	TYPICAL OF PROJECT
CLR	CLEARANCE
H	HORIZONTAL
V	VERTICAL
AC	ASPHALTIC CONCRETE
(E)	EXISTING GRADE

Underground Service Alert
Call: TOLL FREE
1-800
227-2600

PRELIMINARY - NOT FOR CONSTRUCTION

2.0 SOIL NAIL DESIGN NOTES

2.1 ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE PROJECT CONSTRUCTION SPECIFICATIONS AND SPECIAL PROVISIONS

2.2 THE SOIL NAIL WALL STRUCTURE S HAVE BEEN DESIGNED IN ACCORDANCE WITH THE SLD SERVICE LOAD DESIGN PROCEDURES OUTLINED IN THE FHWA MANUAL FOR DESIGN AND CONSTRUCTION MONITORING OF SOIL NAIL WALLS", REPORT NO. FHWA-SA-96-069, AND THE CALTRANS "SAN-LF DESIGN PROGRAM. STRUCTURAL DESIGN OF ANY RETAINING WALL ELEMENTS NOT COVERED IN THE FHWA MANUAL HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 1998 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND LATEST INTERIM SPECIFICATIONS

2.3 REFERENCE MATERIALS:
1. GEOTECHNICAL INVESTIGATION FOR COASTAL BLUFF STABILIZATION PROJECT, EAST CLIFF DRIVE (PROJECT NO SC3464) BY HARO, KASUNICH & ASSOCIATES, INC., DATED JUNE 1997
2. ADDENDUM TO GEOTECHNICAL INVESTIGATION BY HARO, KASUNICH & ASSOCIATES, INC., DATED MAY 1998.
3. TOPOGRAPHIC BASE MAP BY ANDERSEN, INC., DATED NOVEMBER 2000 (SHEETS 2-6)
4. TOPOGRAPHIC BASE MAP BY COUNTY OF SANTA CRUZ, REVISED JULY 2005 (SHEET 7)

2.4 DESIGN SOIL PARAMETERS (PROVIDED BY HARO, KASUNICH & ASSOCIATES, INC.):

SOURCE / TYPE	FRICTION ANGLE (DEGREES)	COHESION (kN/m²)	UNIT WEIGHT (kN/m³)	DESIGN SURCHARGE (kN/m²)	BOND STRESS* (kPa)
UPPER TERRACE DEPOSITS	39	19.2	19.9	12	97.5
LOWER TERRACE DEPOSITS	41	0	19.6	12	143.4
PURISIMA FORMATION	43	47.9	19.1	12	191.4

* ESTIMATED BY SANDERS & ASSOCIATES GEOSTRUCTURAL ENGINEERING, INC. (SAGE) AND TO BE VERIFIED BY VERIFICATION AND PROOF TESTING DURING CONSTRUCTION.

2.5 SEISMIC COEFFICIENT = 0.19g (1997, DEPT. OF CONSERVATION SPECIAL PUBLICATION 117)

2.6 DESIGN CALCULATIONS AND SPECIFICATIONS ARE PROVIDED SEPARATELY AND ARE AN INTEGRAL PART OF THESE PLANS

2.7 DEEP SEATED GLOBAL STABILITY BELOW AND BEHIND THE SOIL NAIL WALLS, AND SURFICIAL STABILITY OF THE SLOPES ABOVE THE WALLS HAVE NOT BEEN EVALUATED BY SAGE AND ARE THE RESPONSIBILITY OF THE OWNER. THE OWNER MUST COORDINATE WITH THE PROJECT GEOTECHNICAL ENGINEER TO ASSURE THAT GLOBAL AND SURFICIAL STABILITY ARE ACCEPTABLE

3.0 EXCAVATION NOTES

3.1 WALL FACE EXCAVATION SHALL NOT PRECEDE THE INSTALLATION OF NAILS BY MORE THAN 24 HOURS WITHOUT THE PRIOR APPROVAL OF SAGE

3.2 THE MAXIMUM UNSUPPORTED VERTICAL CUT SHALL NOT EXCEED 1.25 m UNLESS WRITTEN APPROVAL BY SAGE FOR A LARGER CUT IS GIVEN

3.3 THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY CONTROL

3.4 ALL WALL EXCAVATION SHALL BE PERFORMED TO THE MINIMUM DEPTH SHOWN INTO BEDROCK OR AS APPROVED BY THE GEOTECHNICAL ENGINEER

3.5 UNSUPPORTED CUTS IN TERRACE DEPOSITS SHALL NOT EXCEED AN INCLINATION OF 1H:4V UNLESS WRITTEN APPROVAL BY THE ENGINEER FOR A STEEPER CUT IS GIVEN.

3.6 INITIAL SURVEY STAKING WILL BE PROVIDED BY THE COUNTY.

3.7 CAUTION: UNREINFORCED CRIB WALLS MAY BE UNSTABLE. CONTRACTOR SHALL SEQUENCE WORK OR TEMPORARILY STABILIZE WALLS AS NECESSARY TO SAFELY PERFORM THE WORK.

4.0 SOIL NAIL CONSTRUCTION NOTES

4.1 NAIL GROUT: TYPE B CEMENT, 20.7 MPa MIN

4.2 NAIL BARS: fy = 517 MPa

4.3 ALL SOIL NAIL ASSEMBLY HARDWARE INCLUDING NAILS, BEARING PLATES, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED PER ASTM 153

4.4 LAYOUT OF SOIL NAILS TO BE PERFORMED BY THE CONTRACTOR BASED ON THE CROSS-SECTIONS, TYPICAL SECTIONS, AND SOIL NAIL SCHEDULE. ADJUSTMENTS MAY BE MADE TO ACCOMMODATE FIELD CONDITIONS AS APPROVED BY SAGE

4.5 NAILS IN A GIVEN VERTICAL SECTION SHALL BE INSTALLED ACCORDING TO THE CROSS-SECTIONS, TYPICAL SECTION DESIGN SCHEDULE AND THE REFERENCED DETAILS FOR THE WALL.

4.6 TOTAL LENGTH OF TEST SOIL NAIL ASSEMBLY (GROUTED LENGTH PLUS EXTRA LENGTH REQUIRED FOR JACKING EQUIPMENT)

4.7 TESTING: PRE-PRODUCTION VERIFICATION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROCEDURES PROVIDED IN THE SPECIFICATIONS. PROOF TESTING OF THE SOIL NAILS SHALL BE PERFORMED ON A MINIMUM OF 5% OF THE NAILS AND AT LEAST ONE NAIL FROM EACH ROW IN ACCORDANCE WITH THE SPECIFICATIONS. BASELINE PROOF TESTS WILL LOADS ARE AS SHOWN ON THE SOIL NAIL SCHEDULE. PROOF TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE PARAMETERS PROVIDED IN THE SPECIFICATIONS.

5.0 SHOTCRETE FACING NOTES

5.1 REINFORCED CONCRETE AND SHOTCRETE
fy (REBAR) = 414 MPa - HOT DIP GALVANIZED PER ASTM 123
fy (WWF) = 448 MPa - HOT DIP GALVANIZED PER ASTM 123
f'c = TYPE B CEMENT, 43 MPa (28-DAY SHOTCRETE COMPRESSIVE STRENGTH) FOR TYPE "N" FACING AND APRONS
f'c = TYPE B CEMENT, 35 MPa (FOR TYPE "S" FACING)

5.2 WATER-TO-CEMENT (W/C) RATIO SHALL NOT EXCEED 0.5 BY WEIGHT

5.3 IN ADDITION TO OTHER SPECIFICATIONS MADE IN THESE PLANS, MINIMUM CONCRETE/SHOTCRETE COVER MEASURED FROM THE FACE OF CONCRETE/SHOTCRETE TO THE FACE OF ANY REINFORCING BAR OR WIRE SHALL BE 150 mm

5.4 FINAL SHOTCRETE LAYERS SHALL BE FINISHED AS SHOWN ON THE AESTHETIC WALL PLAN AND DETAILS AND AS APPROVED BY COUNTY

6.0 MSE INSTALLATION

6.1 CONSTRUCTION OF THE MSE WIRE WALL SHALL CONFORM TO THE MANUFACTURER'S INSTALLATION GUIDELINES AND THE REQUIREMENTS OF THE 1998 AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES

6.2 SOIL BACKFILL SHALL BE ON-SITE OR IMPORTED SOILS WITH THE FOLLOWING MINIMUM COMPACTED STRENGTH CHARACTERISTICS: $\phi' \geq 30°$, $C' = 0$ (ASSUMED). ADDITIONALLY, ANY IMPORT FILL MUST HAVE A FINES CONTENT (PERCENT PASSING THE #200 SIEVE) LESS THAN 35% BY WEIGHT AND A PLASTICITY INDEX LESS THAN 15. ALL SOIL BACKFILL SHALL NOT CONTAIN ROCKS LARGER THAN 6 INCHES

6.3 ALL SUBGRADE AREAS IMMEDIATELY BENEATH THE WIRE MESH SHALL BE LEVEL, FREE FROM DELETERIOUS MATERIALS, LOOSE, OR OTHERWISE UNSUITABLE SOILS. PRIOR TO PLACEMENT OF MESH REINFORCEMENT, SUBGRADE SHALL BE PROOF ROLLED TO PROVIDE A UNIFORM AND FIRM SURFACE. ANY SOFT AREAS, AS DETERMINED BY THE MSE ENGINEER, SHALL BE EXCAVATED AND REPLACED WITH SUITABLE COMPACTED SOILS. FOUNDATION & APRON SHALL BE INSPECTED AND APPROVED BY THE MSE'S ENGINEER PRIOR TO FILL PLACEMENT.

6.4 THE WIRE MESH REINFORCEMENT SHALL BE PLACED IN LONGITUDINAL STRIPS PERPENDICULAR TO THE WALL FACE.

6.5 PLACE ONLY THAT AMOUNT OF WIRE MESH REINFORCEMENT REQUIRED FOR IMMEDIATE PLACEMENT WORK TO PREVENT UNDUE DAMAGE

6.6 BACKFILL SHALL BE PLACED IN 200 mm MAXIMUM UNCOMPACTED LIFT THICKNESSES MAKING HEAVY COMPACTION EQUIPMENT IS TO BE USED AND 150 mm MAXIMUM UNCOMPACTED LIFT THICKNESS WHERE HAND-OPERATED EQUIPMENT IS USED

6.7 BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER TO MINIMIZE DAMAGE AND/OR DISPLACEMENT OF THE WIRE MESH REINFORCEMENT

6.8 REINFORCEMENT FILL SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557. THE MOISTURE CONTENT SHALL BE WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT.

6.9 DENSITY TESTING SHALL BE MADE AT LEAST THREE BETWEEN EACH MESH LEVEL BY THE OWNER'S SOILS ENGINEER. THE CONTRACTOR SHALL MAKE ALL CHANGES FOR THESE TESTS BE DONE.

6.10 TESTING TO VERIFY STRENGTH CHARACTERISTICS OF BACKFILL SHALL BE DONE FOR EACH BACKFILL BORROW SOURCE

7.0 STRUCTURAL OBSERVATION AND SPECIAL INSPECTIONS

7.1 THE PROJECT GEOTECHNICAL ENGINEER SHALL OBSERVE ALL EXCAVATIONS BEFORE CONCRETE OR SHOTCRETE IS PLACED

7.2 SAGE OR THE PROJECT GEOTECHNICAL ENGINEER SHALL OBSERVE ALL TESTING OF PROOF AND VERIFICATION NAILS

7.3 SAGE OR QUALIFIED, LICENSED INSPECTOR SHALL INSPECT ALL REINFORCEMENT PRIOR TO PLACEMENT OF SHOTCRETE OR CONCRETE

7.4 THE CONTRACTOR IS RESPONSIBLE FOR TESTING OF SHOTCRETE IN ACCORDANCE WITH THE PROCEDURES PROVIDED IN THE SPECIFICATIONS.

SAGE
SANDERS & ASSOCIATES GEOSTRUCTURAL ENGINEERING, INC.
Headquarters: 540 E. Colorado Blvd., Suite 200, Pasadena, CA 91101
T (626) 792-4191 F (626) 792-4197
San Francisco: 140 Scenic Drive, Suite 100, Grizzly Bear, CA 94710
T (415) 729-7700 F (415) 729-7799
www.sandersage.com

COVER SHEET
Coastal Bluff Stabilization
East Cliff Drive
SANTA CRUZ COUNTY, CALIFORNIA

REV	BY	DATE	DESCRIPTION
A			

DATE: 11/29/06
SCALE: NOT TO SCALE
DESIGNED BY: YM
DRAFTED BY: CJB
CHECKED BY: SHR
JOB NO: 98-033SCRJ
FILE: 8x11F1

1
SHEET 1 OF 16

- 75 -

EXHIBIT E

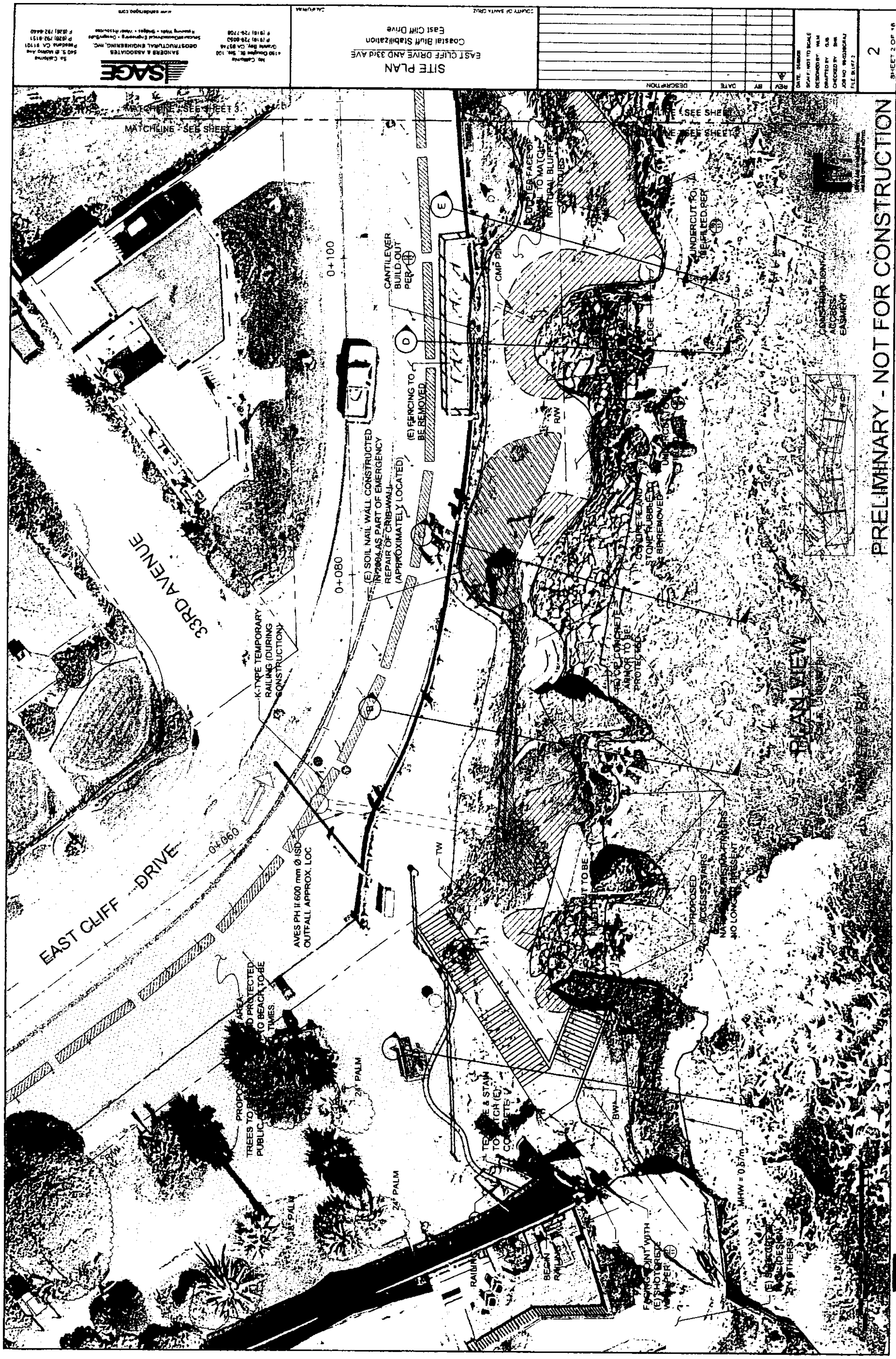

SITE PLAN
EAST CLIFF DRIVE AND 33rd AVE
Coastal Bluff Stabilization
East Cliff Drive
SAGE
PRELIMINARY - NOT FOR CONSTRUCTION
EAST CLIFF DRIVE
33RD AVENUE
0+060
0+080
0+100
K-TYPE TEMPORARY RAILING (DURING CONSTRUCTION)
(E) SOIL NAIL WALL CONSTRUCTED IN 2005 AS PART OF EMERGENCY REPAIR OF CRIB WALL (APPROXIMATELY LOCATED)
(E) FENCING TO BE REMOVED
CANTILEVER BUILD-OUT PER
AVES PH II 600 mm Ø ISD OUTFALL APPROX. LOC
PLAN VIEW
24" PALM
CONSTRUCTION ACCESS EASEMENT
2

EXHIBIT E

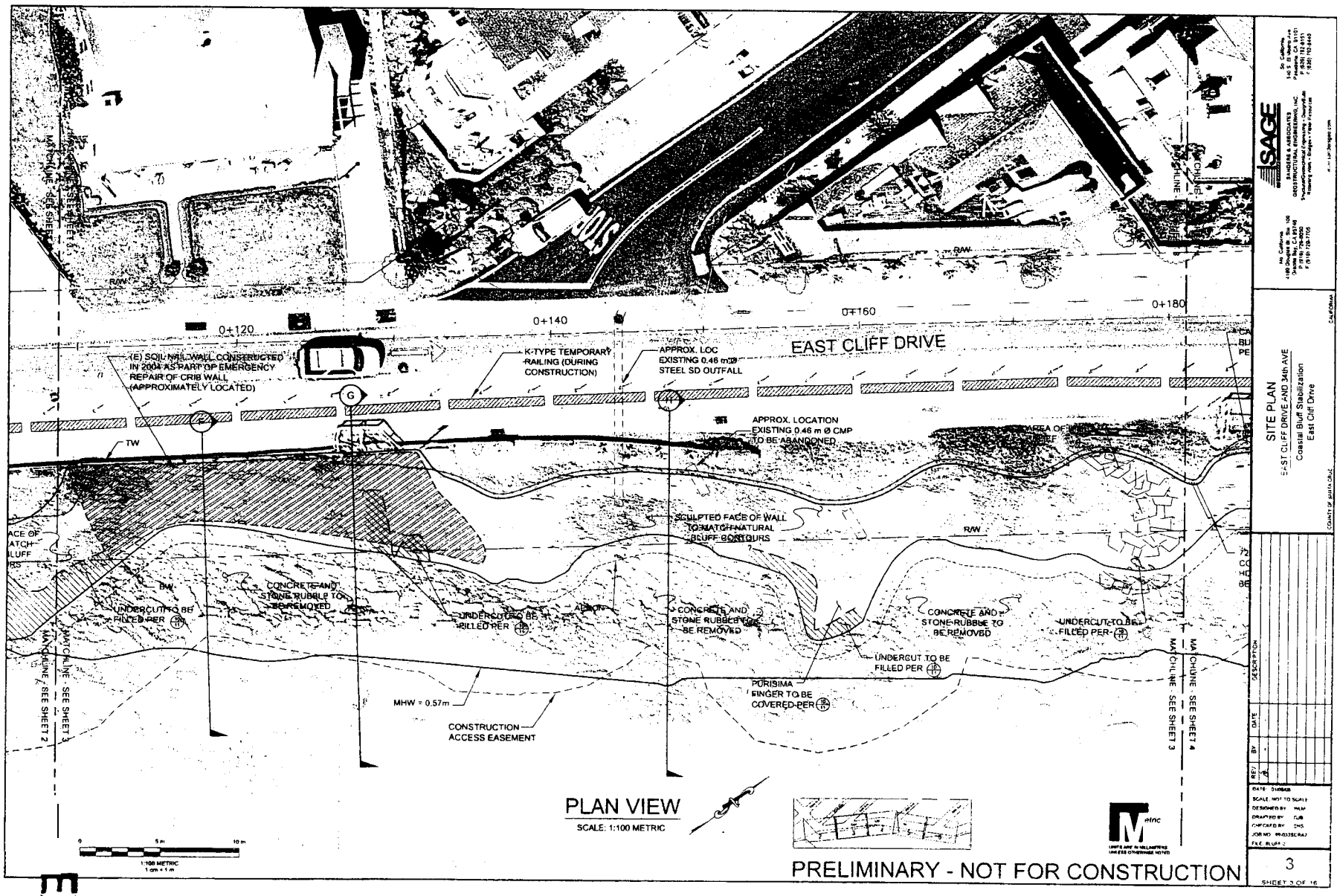

EAST CLIFF DRIVE
0+120
0+140
0+160
0+180
(E) SOIL NAIL WALL CONSTRUCTED IN 2004 AS PART OF EMERGENCY REPAIR OF CRIB WALL (APPROXIMATELY LOCATED)
K-TYPE TEMPORARY RAILING (DURING CONSTRUCTION)
APPROX. LOC EXISTING 0.46 m Ø STEEL SD OUTFALL
APPROX. LOCATION EXISTING 0.46 m Ø CMP TO BE ABANDONED
TW
BW
SCULPTED FACE OF WALL TO MATCH NATURAL BLUFF CONTOURS
R/W
CONCRETE AND STONE RUBBLE TO BE REMOVED
UNDERCUT TO BE FILLED PER
MHW = 0.57m
CONSTRUCTION ACCESS EASEMENT
PORISIMA FINGER TO BE COVERED PER
MATCHLINE - SEE SHEET 2
MATCHLINE - SEE SHEET 3
MATCHLINE - SEE SHEET 4
PLAN VIEW
SCALE: 1:100 METRIC
PRELIMINARY - NOT FOR CONSTRUCTION
SITE PLAN
EAST CLIFF DRIVE AND 34th AVE
Coastal Bluff Stabilization
East Cliff Drive
SHEET 3 OF 16

EXHIBIT E

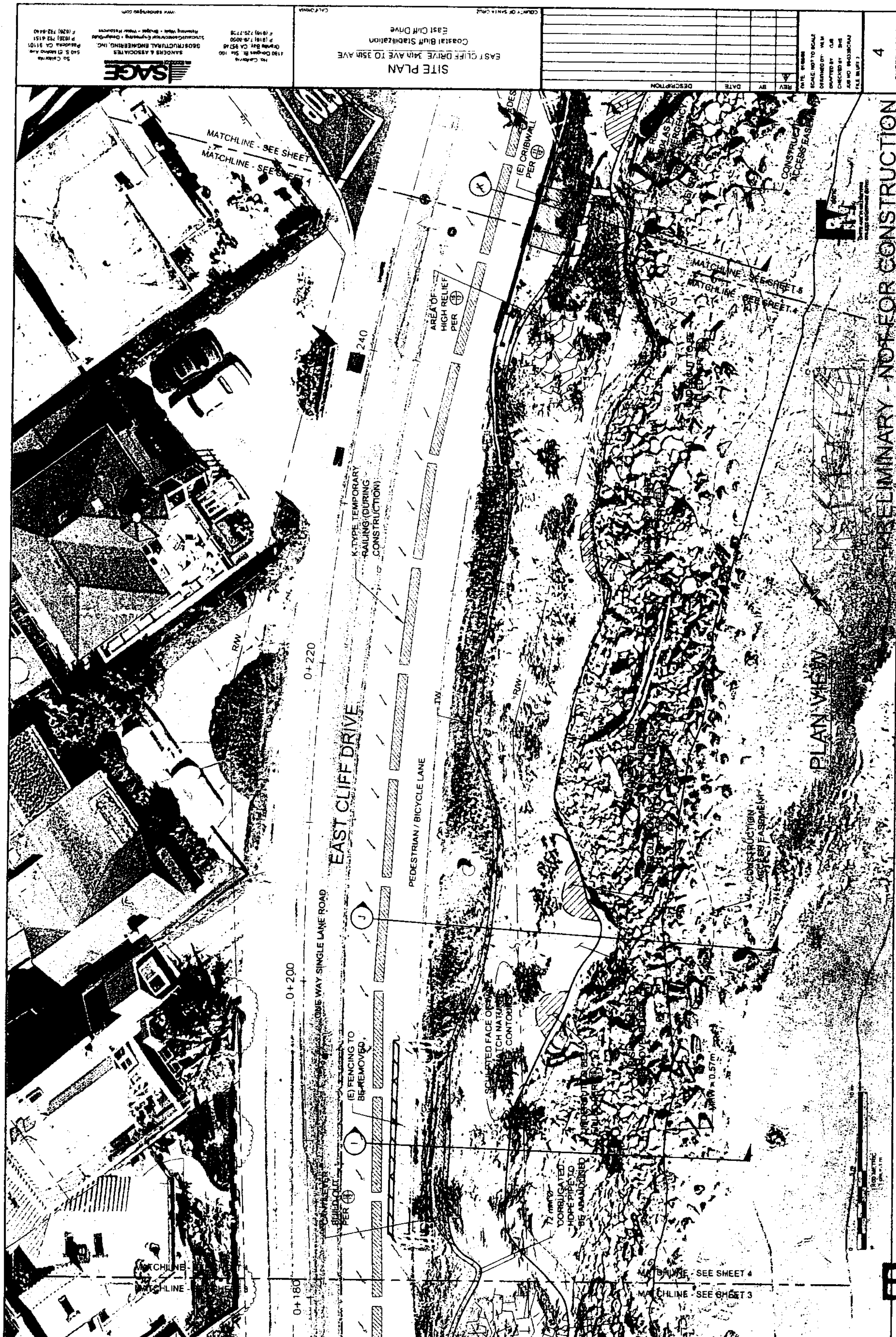

SITE PLAN
EAST CLIFF DRIVE 34th AVE TO 35th AVE
Coastal Bluff Stabilization
East Cliff Drive
SAGE
SANDERS & ASSOCIATES
PRELIMINARY - NOT FOR CONSTRUCTION
PLAN VIEW
EAST CLIFF DRIVE
PEDESTRIAN / BICYCLE LANE
ONE WAY SINGLE LANE ROAD
K-TYPE TEMPORARY RAILING (DURING CONSTRUCTION)
AREA OF HIGH RELIEF PER
(E) CRIBWALL PER
(E) FENCING TO BE REMOVED
CONSTRUCTION ACCESS EASEMENT
MATCHLINE - SEE SHEET 5
MATCHLINE - SEE SHEET 4
MATCHLINE - SEE SHEET 3
R/W
0+180
0+200
0+220
240
4

EXHIBIT E

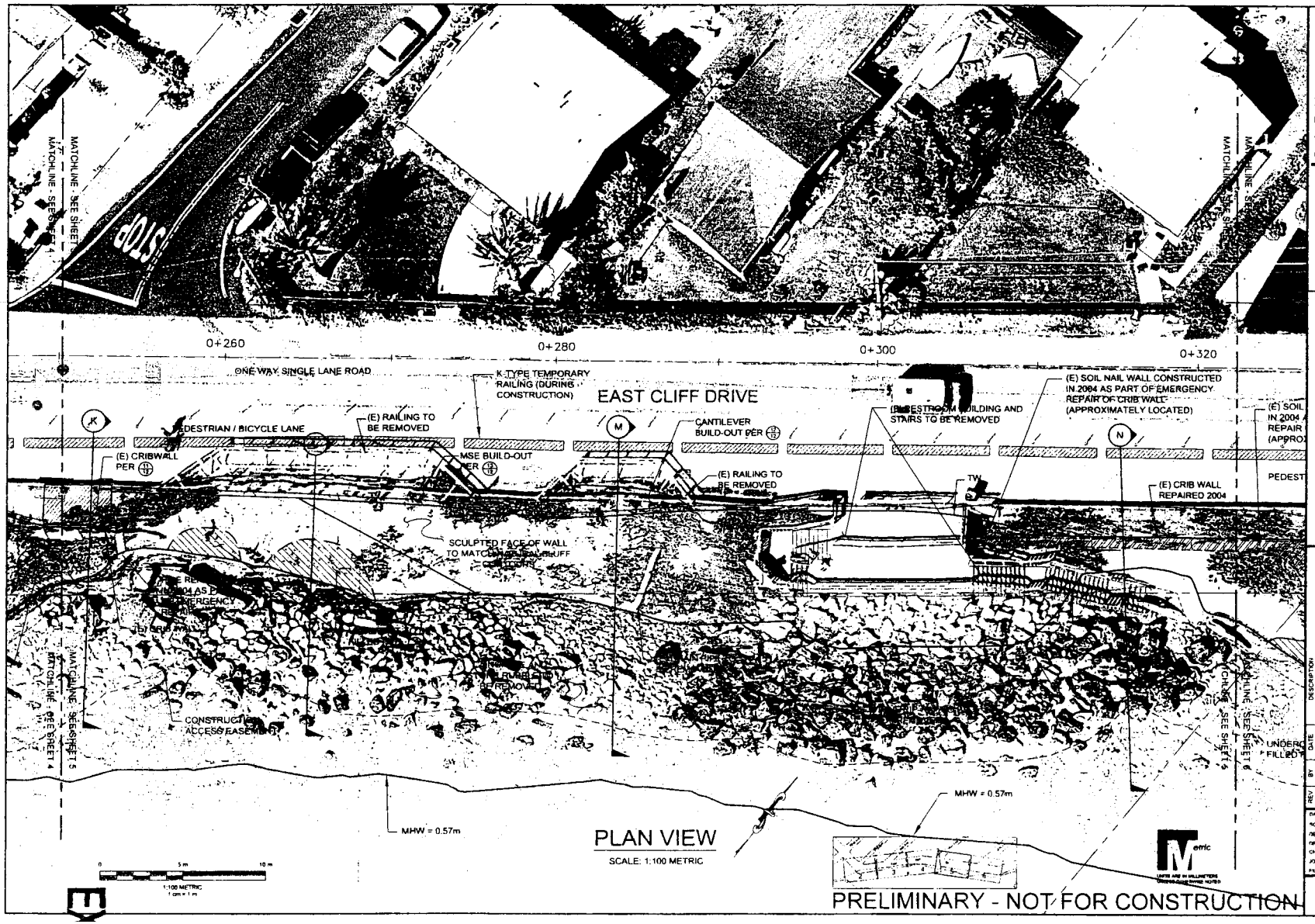

0+260
0+280
0+300
0+320
ONE WAY SINGLE LANE ROAD
K-TYPE TEMPORARY RAILING (DURING CONSTRUCTION)
EAST CLIFF DRIVE
(E) SOIL NAIL WALL CONSTRUCTED IN 2004 AS PART OF EMERGENCY REPAIR OF CRIB WALL (APPROXIMATELY LOCATED)
PEDESTRIAN / BICYCLE LANE
(E) RAILING TO BE REMOVED
CANTILEVER BUILD-OUT PER
(E) CRIBWALL PER
MSE BUILD-OUT PER
(E) RAILING TO BE REMOVED
(E) CRIB WALL REPAIRED 2004
SCULPTED FACE OF WALL TO MATCH NATURAL BLUFF CONTOURS
CONSTRUCTION ACCESS EASEMENT
MHW = 0.57m
MHW = 0.57m
PLAN VIEW
SCALE: 1:100 METRIC
PRELIMINARY - NOT FOR CONSTRUCTION
SITE PLAN
EAST CLIFF DRIVE AND 35th AVE
Coastal Bluff Stabilization
East Cliff Drive
SCALE: NOT TO SCALE
5
SHEET 5 OF 18

EXHIBIT E

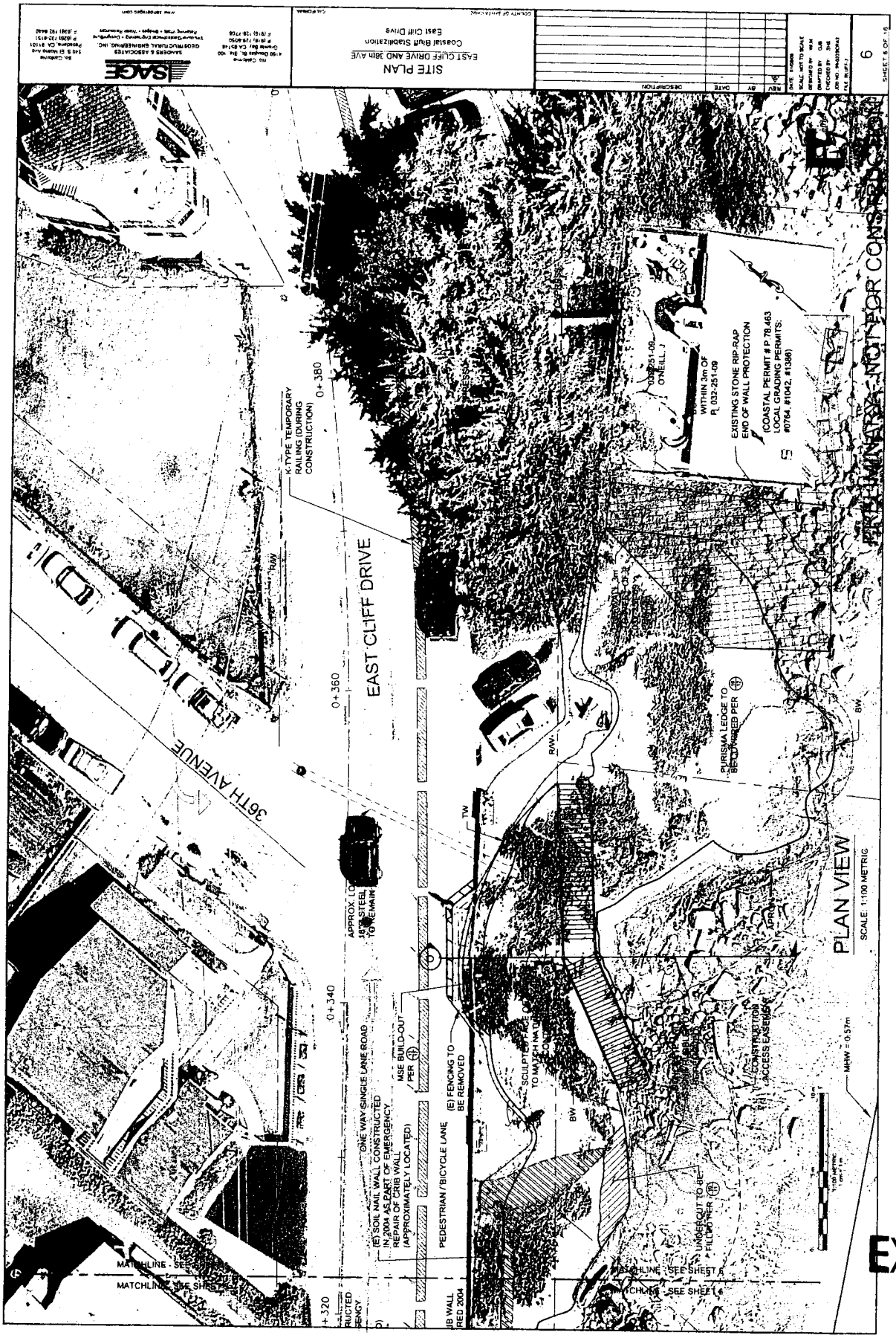

SITE PLAN
EAST CLIFF DRIVE AND 36th AVE
Coastal Bluff Stabilization
East Cliff Drive
PLAN VIEW
SCALE: 1:100 METRIC
EAST CLIFF DRIVE
36TH AVENUE
0+380
0+360
0+340
0+320
K-TYPE TEMPORARY RAILING (DURING CONSTRUCTION)
EXISTING STONE RIP-RAP END OF WALL PROTECTION
(COASTAL PERMIT # P 78.463
LOCAL GRADING PERMITS:
#0764, #1042, #1386)
WITHIN 3m OF
PL 032-251-09
032-251-09
O'NEILL
PURISMA LEDGE TO BE COVERED PER
(E) FENCING TO BE REMOVED
MSE BUILD-OUT PER
PEDESTRIAN / BICYCLE LANE
ONE WAY SINGLE LANE ROAD
CONSTRUCTION ACCESS EASEMENT
MHW = 0.57m
MATCHLINE - SEE SHEET 6
MATCHLINE - SEE SHEET 5
PRELIMINARY - NOT FOR CONSTRUCTION

EXHIBIT E

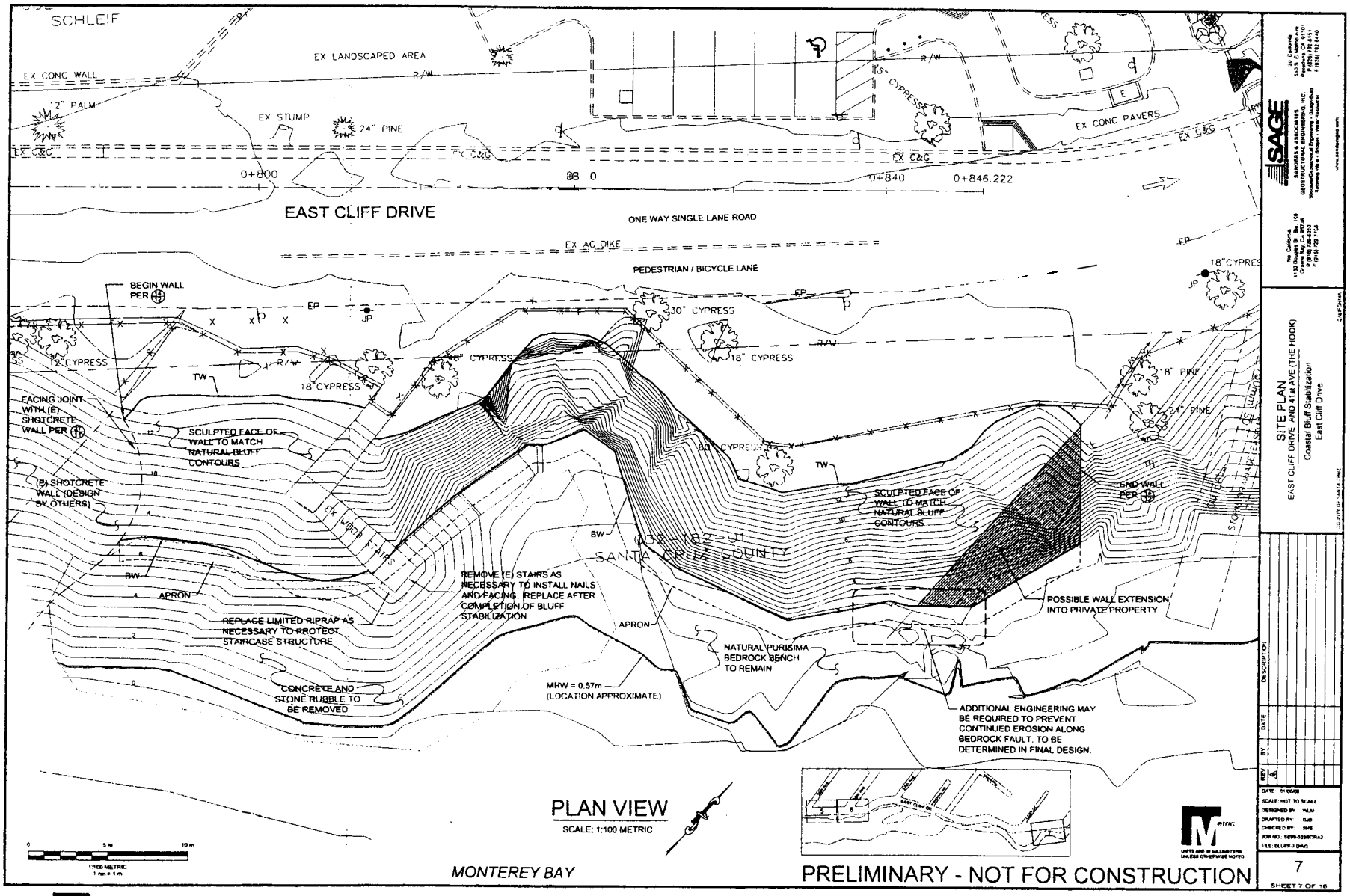

SCHLEIF
EX LANDSCAPED AREA
EX CONC WALL
12" PALM
EX STUMP
24" PINE
EX C&G
0+800
0+840
0+846.222
EAST CLIFF DRIVE
ONE WAY SINGLE LANE ROAD
EX AC DIKE
PEDESTRIAN / BICYCLE LANE
EX CONC PAVERS
BEGIN WALL PER
18" CYPRESS
30" CYPRESS
48" CYPRESS
18" PINE
24" PINE
TW
FACING JOINT WITH (E) SHOTCRETE WALL PER
SCULPTED FACE OF WALL TO MATCH NATURAL BLUFF CONTOURS
(E) SHOTCRETE WALL (DESIGN BY OTHERS)
BW
APRON
REMOVE (E) STAIRS AS NECESSARY TO INSTALL NAILS AND FACING. REPLACE AFTER COMPLETION OF BLUFF STABILIZATION.
REPLACE LIMITED RIPRAP AS NECESSARY TO PROTECT STAIRCASE STRUCTURE
CONCRETE AND STONE RUBBLE TO BE REMOVED
038-182-01
SANTA CRUZ COUNTY
MHW = 0.57m (LOCATION APPROXIMATE)
NATURAL PURISIMA BEDROCK BENCH TO REMAIN
POSSIBLE WALL EXTENSION INTO PRIVATE PROPERTY
END WALL PER
ADDITIONAL ENGINEERING MAY BE REQUIRED TO PREVENT CONTINUED EROSION ALONG BEDROCK FAULT. TO BE DETERMINED IN FINAL DESIGN.
PLAN VIEW
SCALE: 1:100 METRIC
MONTEREY BAY
PRELIMINARY - NOT FOR CONSTRUCTION
SAGE
SITE PLAN
EAST CLIFF DRIVE AND 41st AVE (THE HOOK)
Coastal Bluff Stabilization
East Cliff Drive
DESCRIPTION
DATE
BY
REV
SCALE: NOT TO SCALE
DESIGNED BY YLM
DRAFTED BY DJB
CHECKED BY SHS
FILE: BLUFF-7.DWG
7
SHEET 7 OF 16

EXHIBIT E


PRELIMINARY - NOT FOR CONSTRUCTION
CROSS-SECTIONS
SECTIONS A THROUGH I
Coastal Bluff Stabilization
East Cliff Drive
SAGE
SECTION A
SECTION B
SECTION C
SECTION D
SECTION E
SECTION F
SECTION G
SECTION H
SECTION I
8

EXHIBIT E

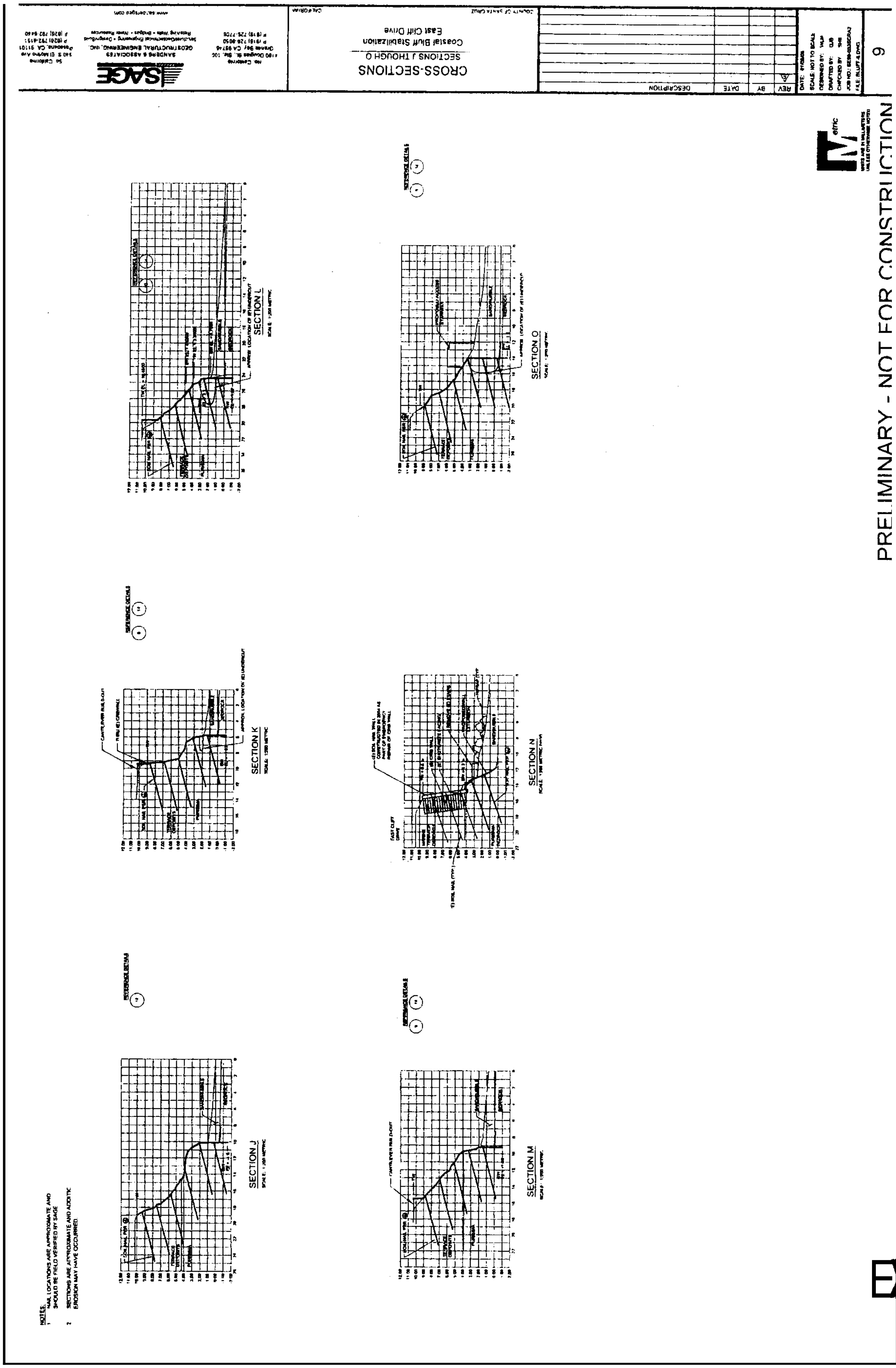

PRELIMINARY - NOT FOR CONSTRUCTION
CROSS-SECTIONS
SECTIONS J THOUGH O
Coastal Bluff Stabilization
East Cliff Drive
SAGE
SECTION J
SECTION K
SECTION L
SECTION M
SECTION N
SECTION O
REFERENCE DETAILS
EAST CLIFF DRIVE
NOTES:
1 NAIL LOCATIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED BY SAGE
2 SECTIONS ARE APPROXIMATE AND ADDITIONAL EROSION MAY HAVE OCCURRED.
9

EXHIBIT E

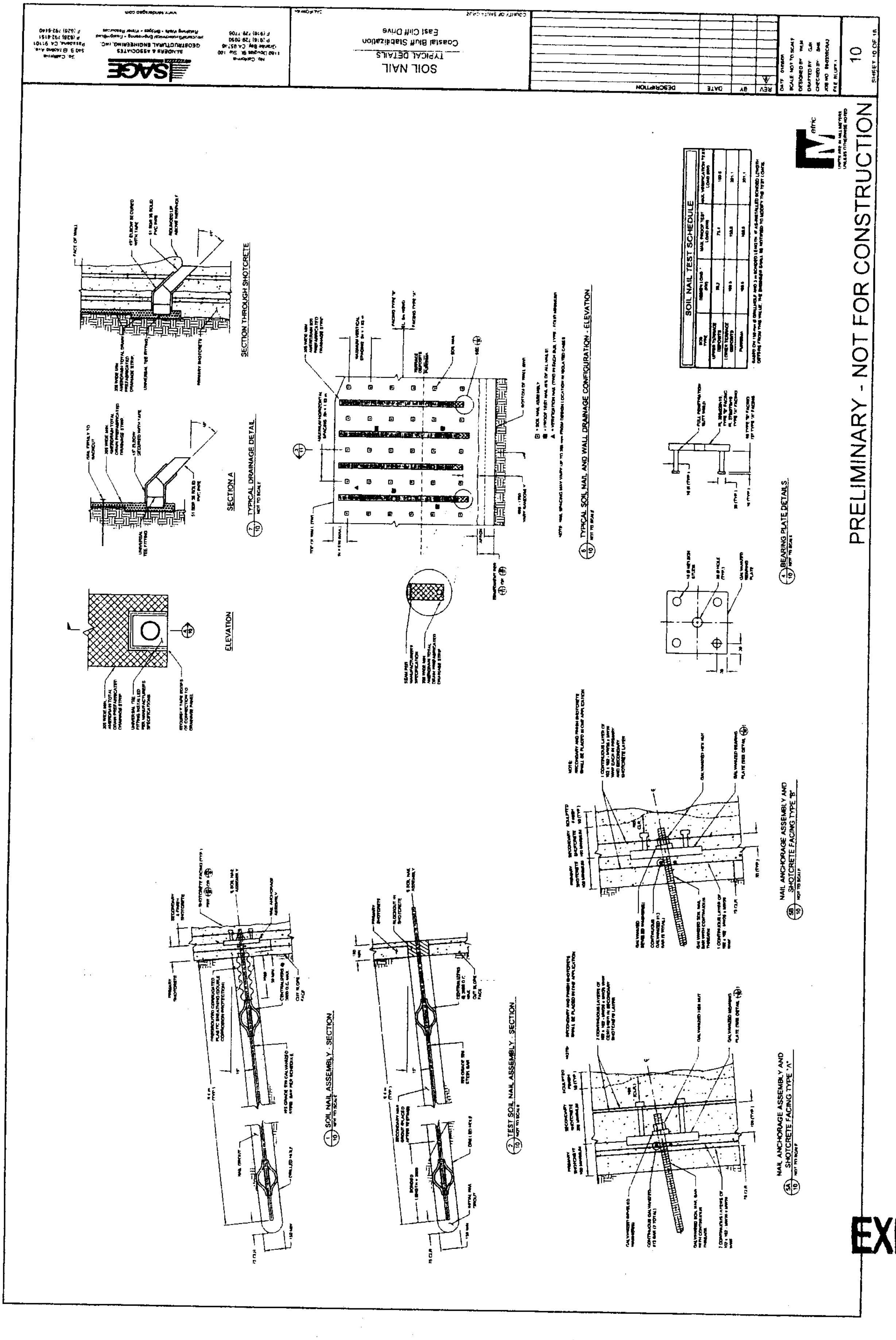

SAGE
SOIL NAIL
TYPICAL DETAILS
Coastal Bluff Stabilization
East Cliff Drive
SECTION THROUGH SHOTCRETE
TYPICAL DRAINAGE DETAIL
SECTION A
ELEVATION
TYPICAL SOIL NAIL AND WALL DRAINAGE CONFIGURATION - ELEVATION
SOIL NAIL TEST SCHEDULE
BEARING PLATE DETAILS
SOIL NAIL ASSEMBLY - SECTION
TEST SOIL NAIL ASSEMBLY - SECTION
NAIL ANCHORAGE ASSEMBLY AND SHOTCRETE FACING TYPE "A"
NAIL ANCHORAGE ASSEMBLY AND SHOTCRETE FACING TYPE "B"
10
PRELIMINARY - NOT FOR CONSTRUCTION

EXHIBIT E

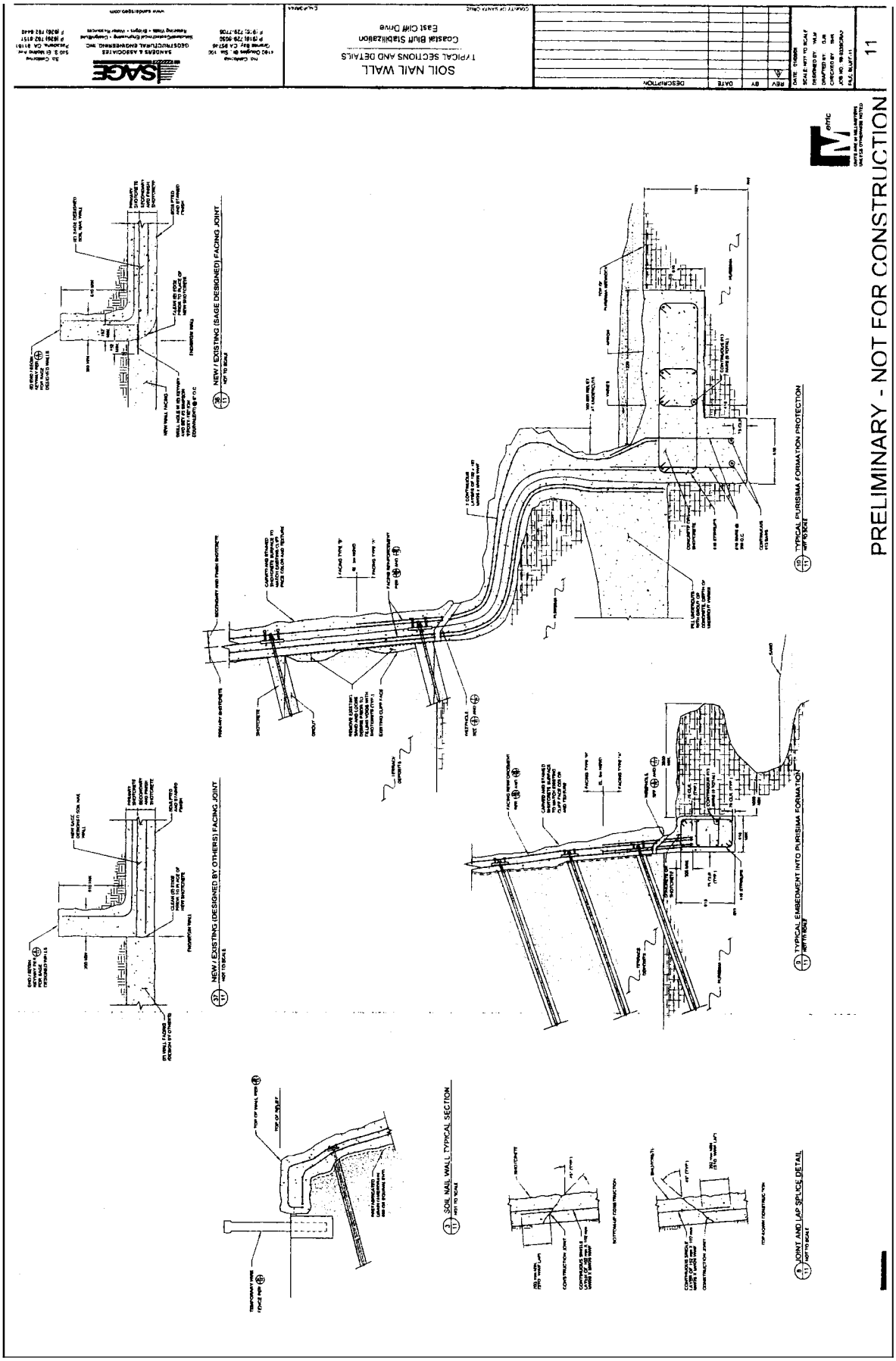

SOIL NAIL WALL
TYPICAL SECTIONS AND DETAILS
Coastal Bluff Stabilization
East Cliff Drive
PRELIMINARY - NOT FOR CONSTRUCTION
NEW / EXISTING (SAGE DESIGNED) FACING JOINT
NEW / EXISTING (DESIGNED BY OTHERS) FACING JOINT
TYPICAL PURISIMA FORMATION PROTECTION
TYPICAL EMBEDMENT INTO PURISIMA FORMATION
SOIL NAIL WALL TYPICAL SECTION
JOINT AND LAP SPLICE DETAIL

EXHIBIT E

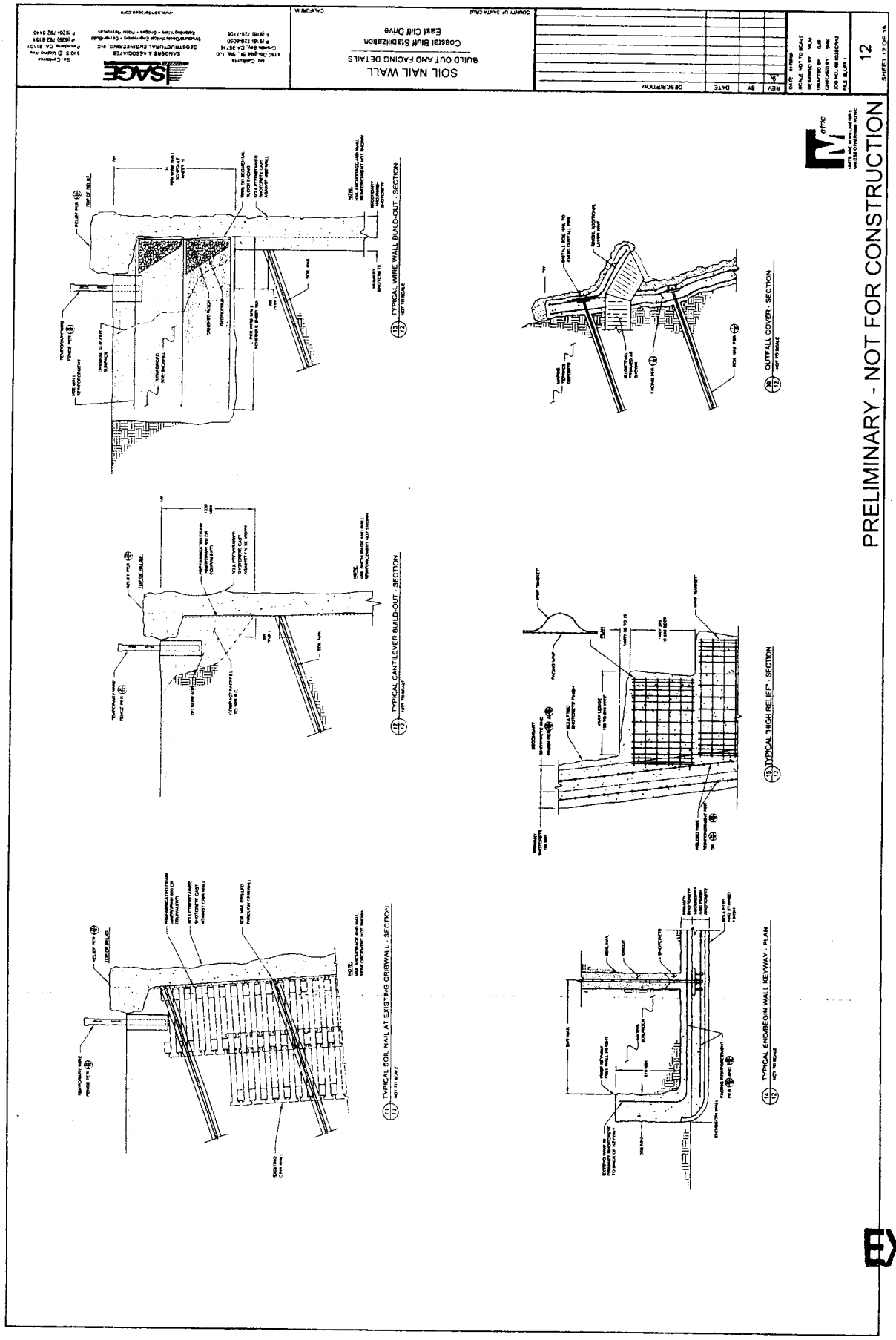
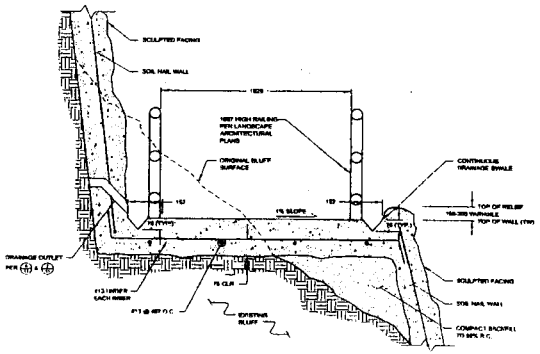
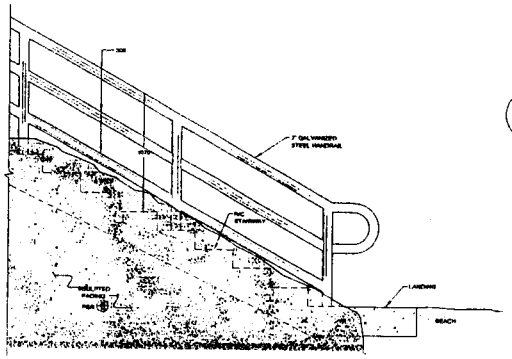

SOIL NAIL WALL
BUILD OUT AND FACING DETAILS
Coastal Bluff Stabilization
East Cliff Drive
SANTA CRUZ, CALIFORNIA
DESCRIPTION
DATE
BY
REV
SHEET 12 OF 16
PRELIMINARY - NOT FOR CONSTRUCTION
TYPICAL WIRE WALL BUILD-OUT - SECTION
OUTFALL COVER - SECTION
TYPICAL CANTILEVER BUILD-OUT - SECTION
TYPICAL "HIGH RELIEF" - SECTION
TYPICAL SOIL NAIL AT EXISTING CRIBWALL - SECTION
TYPICAL ENDREGIN WALL KEYWAY - PLAN

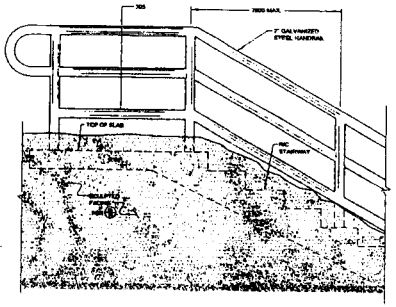
EXHIBIT E



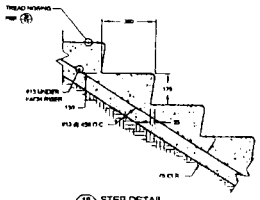
16/13 STAIRWAY CROSS SECTION



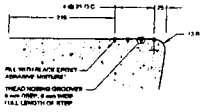
17/13 TYPICAL BOTTOM OF STAIR DETAIL



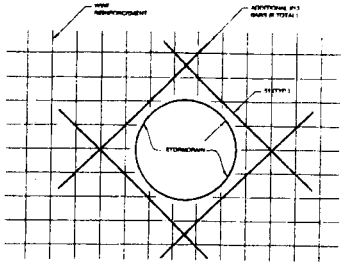
18/13 TYPICAL TOP OF STAIR DETAIL



19/13 STEP DETAIL



20/13 TREAD NOSING DETAIL



21/13 TYPICAL STORM DRAIN OUTLET

PRELIMINARY - NOT FOR CONSTRUCTION

SAGE engineers & scientists

STAIRWAY AND OUTFALL DETAILS

Coastal Bluff Stabilization
East Cliff Drive

COUNTY OF SANTA CRUZ

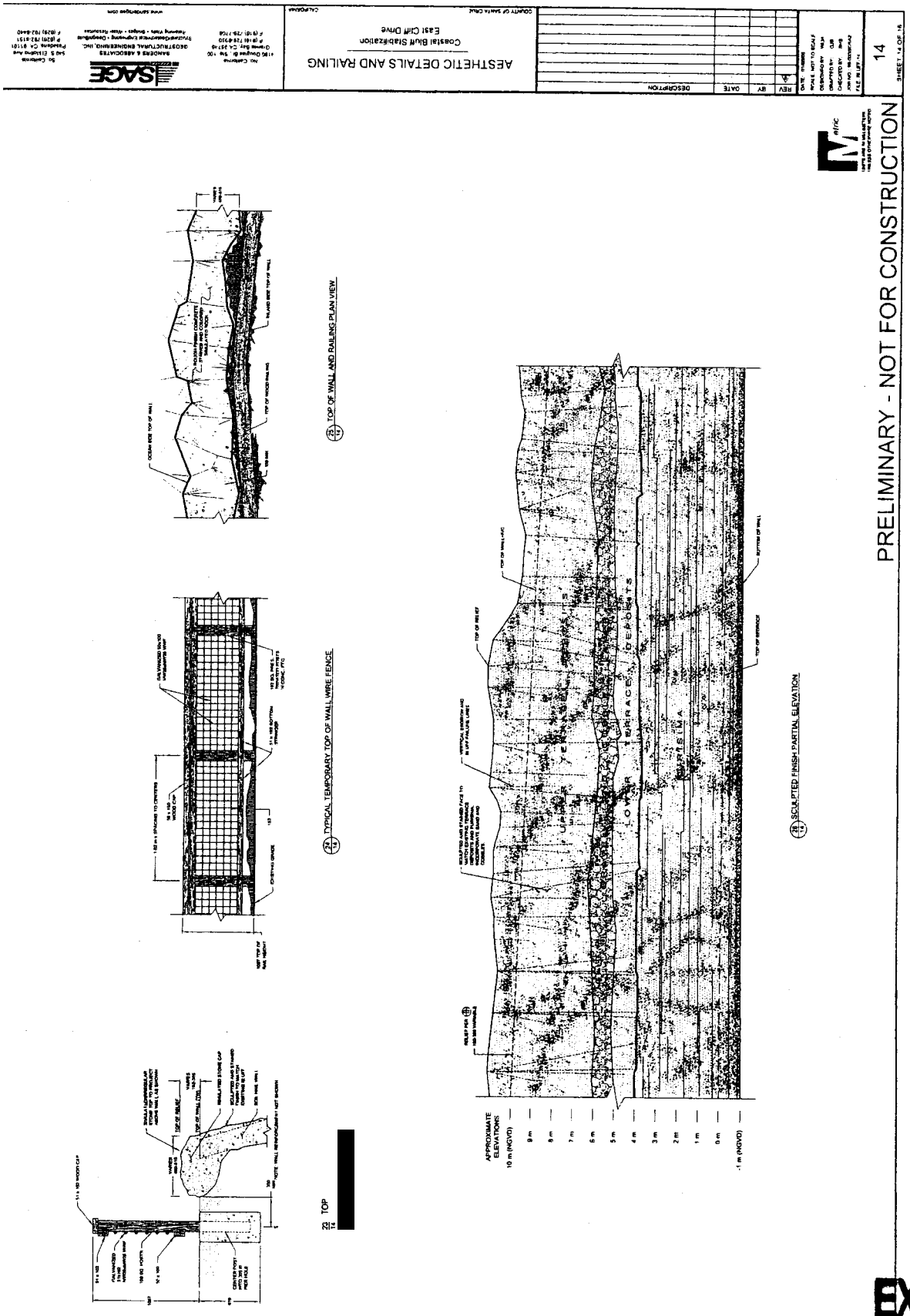
REV	BY	DATE	DESCRIPTION
A			

DATE: 5/4/2016
SCALE: NOT TO SCALE
DESIGNED BY: YM M
DRAFTED BY: CJR
CHECKED BY: RHS
JOB NO.: 65.0535CRA1
FILE: BLUFF-13

13
SHEET 13 OF 16

- 87 -

EXHIBIT E



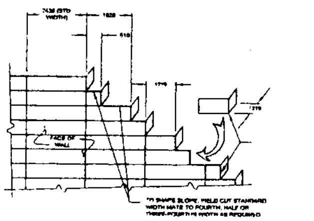
PRELIMINARY - NOT FOR CONSTRUCTION

EXHIBIT E

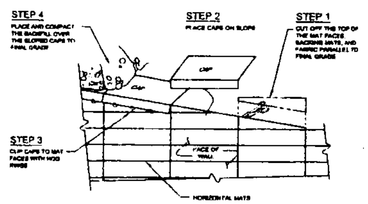
WIRE WALL SCHEDULE

DESIGN CASE			MATERIALS			SURCHARGES	
CASE NO.	MAXIMUM BACKSLOPE CONDITION	MAXIMUM WALL HEIGHT H (m)	MINIMUM MESH LENGTH L (m)	MAXIMUM GEOGRID SPACING S	WIRE MESH TYPE	SETBACK FROM WALL FACE	SURCHARGE KN/m^2
1	LEVEL	1.8	1.8	457 mm	152x152 [illegible]	610 mm	12
2	LEVEL	2.4	7	457 mm	152x152 [illegible]	610 mm	12
3	LEVEL	3	7.3	457 mm	152x152 [illegible]	610 mm	12

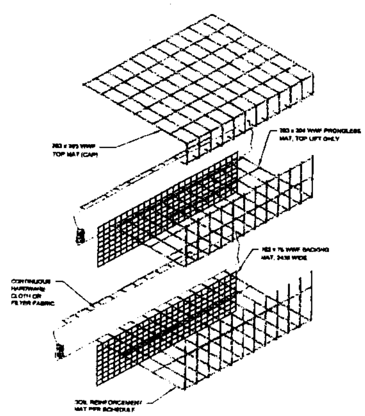
* MEASURED FROM FACE OF WALL.



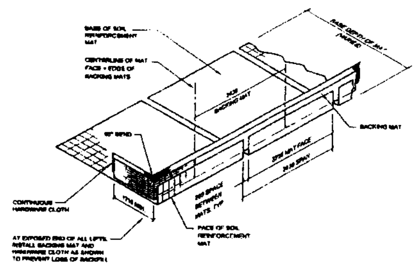
(27/15) PARTIAL TOP MAT DETAILS
CAP MATS ARE NOT SHOWN FOR CLARITY
NOT TO SCALE



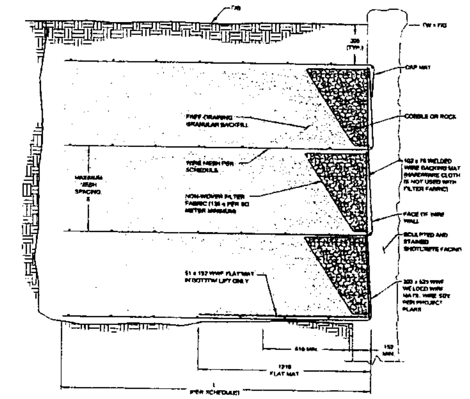
(30/15) SLOPED CAP DETAIL
NOT TO SCALE



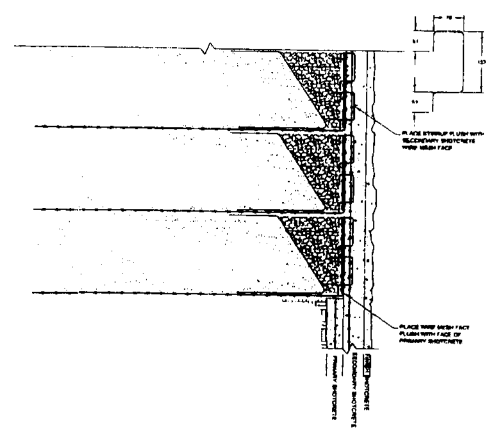
(28/15) WALL COMPONENTS
NOT TO SCALE



(31/15) WALL COMPONENTS DETAIL
NOT TO SCALE



(29/15) WIRE RETAINING WALL TYPICAL SECTION
NOT TO SCALE



(32/15) SHOTCRETE FACING CONNECTION DETAIL
NOT TO SCALE

Metric
UNITS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED

PRELIMINARY - NOT FOR CONSTRUCTION

SAGE
SANDERS & ASSOCIATES GEOSTRUCTURAL ENGINEERING, INC.

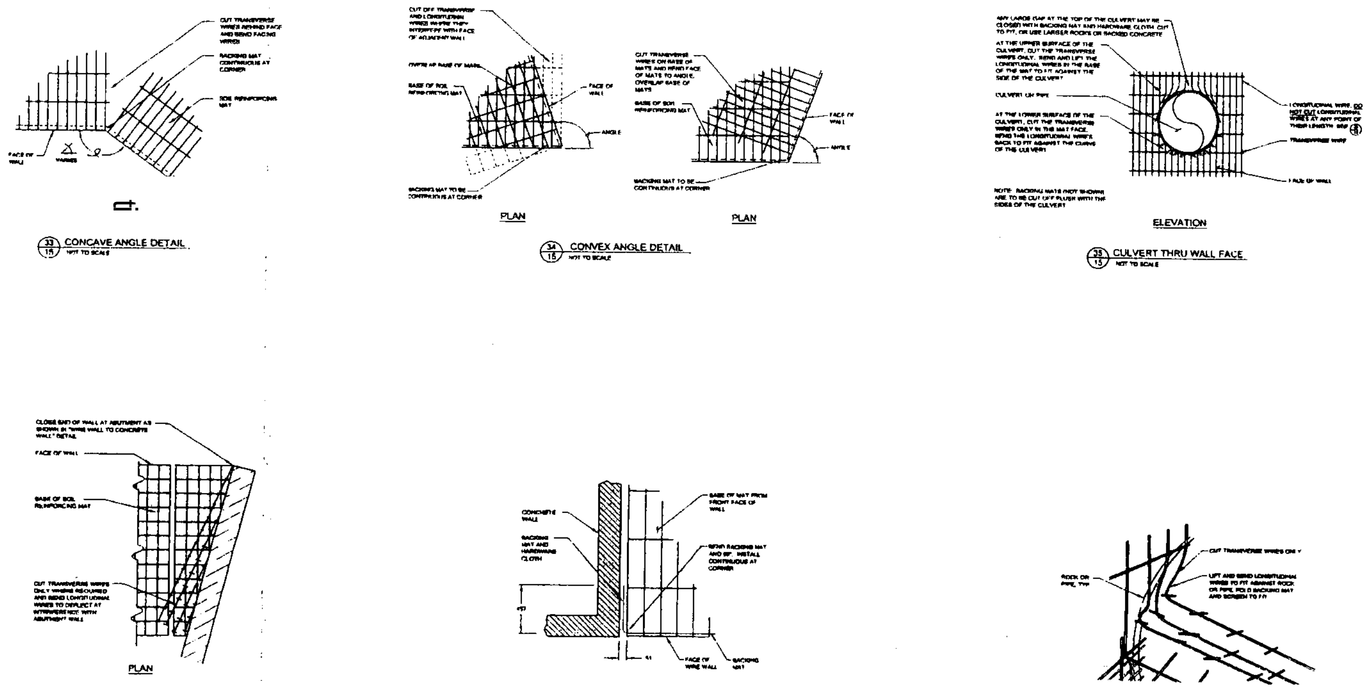
WIRE WALL
TYPICAL SECTIONS AND DETAILS
Coastal Bluff Stabilization
East Cliff Drive
COUNTY OF SANTA CRUZ CALIFORNIA

REV	BY	DATE	DESCRIPTION

DATE: 01/05/06
SCALE: NOT TO SCALE
JOB NO.: [illegible]
FILE: BLUFF-1

15
SHEET 15 OF 16

EXHIBIT E



33 CONCAVE ANGLE DETAIL (NOT TO SCALE)

PLAN — PLAN — 34 CONVEX ANGLE DETAIL (NOT TO SCALE)

ELEVATION — 35 CULVERT THRU WALL FACE (NOT TO SCALE)

PLAN — 36 DEFLECTED MATS AT OBSTRUCTION (NOT TO SCALE)

PLAN — 37 WIRE WALL TO CONCRETE WALL

38 FITTING MATS TO OBSTRUCTION (NOT TO SCALE)

PRELIMINARY - NOT FOR CONSTRUCTION

SAGE
SANDERS & ASSOCIATES
GEOSTRUCTURAL ENGINEERING, INC.
www.sandersgeo.com

WIRE WALL
TYPICAL DETAILS
Coastal Bluff Stabilization
East Cliff Drive
COUNTY OF SANTA CRUZ — CALIFORNIA

REV	BY	DATE	DESCRIPTION

SCALE: NOT TO SCALE

16
SHEET 16 OF 16

EXHIBIT E

EXHIBIT E

PROJECT PLANS
DIVIDER PAGE

(INTENTIONALLY LEFT BLANK)

EXHIBIT E

CONSTRUCTION APPROVAL: | OPERATIONS APPROVAL: | ADA COMPLIANCE: | TRAFFIC ENGINEERING APPROVAL:

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COUNTY TITLE SHEET
2	COVER SHEET
3	WALL 1 – PLAN
4	WALL 2 – PLAN
5	WALL 3 OUTFALL – PLAN
6	WALL 4 – PLAN
7	CROSS SECTIONS A, B, C, AND D
8	SOIL NAIL TEST SCHEDULE & DETAIL
9	TYPICAL SOIL NAIL SECTIONS
10	MISC. SOIL NAIL WALL DETAILS
11	EXISTING UTILITIES
12	TRAFFIC CONTROL PLAN

APPLICABLE STANDARD PLANS

STATE OF CALIFORNIA STANDARD PLANS

A24D	PAVEMENT MARKINGS WORDS
RS1	ROADSIDE SIGN TYPICAL INSTALLATION
RS2	ROADSIDE SIGN WOOD POST

GENERAL NOTES

1. The County of Santa Cruz, Department of Public Works will obtain all permits necessary for this emergency repair project.
2. The construction locations for this project are within a sensitive coastal bluff environment. Care must be taken to minimize impacts to the marine habitat. The contractor shall submit a construction plan to the engineer for review and approval before begining any work. All construction shall be strictly confined to the areas shown on the approved plan. No overburden or wet cement will be allowed to enter into the marine environment. The contractor shall demonstrate the ability to fully contain all overspray before shotcrete operations begin. To prevent further destabilization of the substrate within the project limits care shall be taken with the positioning of all heavy equipment relative to the edge of the bluff. Unstable portions of the existing cribwall shall be stabilized before drilling begins. No vehicles or heavy equipment shall be allowed below the hinge point of the bluff.
3. All Figure references refer to standard drawings in the current edition of the "County of Santa Cruz Design Criteria".
4. No changes in the approved project plans shall be made without prior approval of the Engineer.
5. The existing underground utilities are shown based on information supplied by the utility companies. The Contractor is to field verify any possible conflicts, and notify the Engineer of any conflicts found.
6. All construction activities shall be limited to the hours of 8:00 AM to 5:00 PM weekdays, excluding holidays.
7. Exposed dirt surfaces shall be wetted down periodically to minimize dust generation during the construction.
8. All stationing refers to the control line as shown on these plans.
9. The Contractor is to contact Underground Service Alert (USA) (800)-227-2800 at least 48 hours prior to construction, in order to have the existing utilities marked in the field.
10. Top of grate or cover elevations may be adjusted by the Engineer to fit field conditions.
11. Prior to beginning construction the contractor shall implement the traffic control plan in accordance with the details shown on the plans. One 16' lane for vehicular traffic and an additional 8' lane for for pedestrians and bikes shall be maintained on East Cliff Drive to the maximum extent possible. When this minumum width can not be maintained road closures will be allowed. The contractor shall submit an additional traffic control and local detour plan for written approval by the Director of Public Works 5 working days in advance. The plan must provide an 8' width of the roadway reserved for pedestrians and bikes at all times and shall be designed to use concurrently with the traffic detour provided in the plans.

EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES WILL CONTROL SITE EROSION, PREVENT SEDIMENT TRANSPORT OFF THE SITE, CONFORM WITH THE SANTA CRUZ COUNTY EROSION CONTROL ORDINANCE AND BE COMPLETE BY OCTOBER 15.
2. DISTURBANCE TO NATURAL VEGETATION WILL BE MINIMIZED WITHIN THE AREA OF CONSTRUCTION.
3. LANDCLEARING, GRADING AND EXCAVATING WILL NOT TAKE PLACE BETWEEN OCTOBER 15 AND APRIL 15.
4. ALL DISTURBED AREAS SHALL BE REVEGETATED AS FOLLOWS:

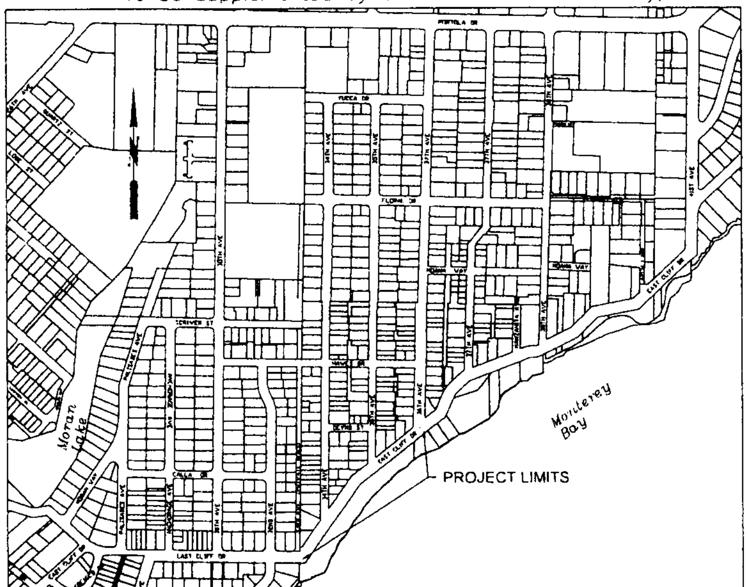
A. REMOVE ALL VEGETATIVE DEBRIS FROM SURFACE.
B. HANDRAKE TO SMOOTH OUT THE DIRT SURFACE.
C. SEED THE ENTIRE BARE SURFACE WITH THE FOLLOWING EROSION CONTROL MIX AT A RATE OF 44 KG PER HECTARE (35 POUNDS PER ACRE): "SEASIDE BROME" BROMUS CARINATUS VAR. MARITIMUS 45%, "BLUE WILD RYE" ELYMUS GLAUCUS 35%, "MARITIME BLUEGRASS" POA DOUGLASII 15%, AND WILDFLOWERS 5%.
D. AMMONIUM PHOSPHATE SULFATE FERTILIZER (16–20–0 WITH 15 UNITS OF SULPHUR) SHALL BE SPREAD AT A RATE OF 580 KG PER HECTARE (12 POUNDS PER 1000 SQUARE FEET).
E. COVER THE ENTIRE SURFACE WITH STRAW MULCH AT A MINIMUM DEPTH OF 50 mm (2 INCHES).

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS

PROJECT PLANS FOR CONSTRUCTION OF A REDEVELOPMENT AGENCY FUNDED PROJECT

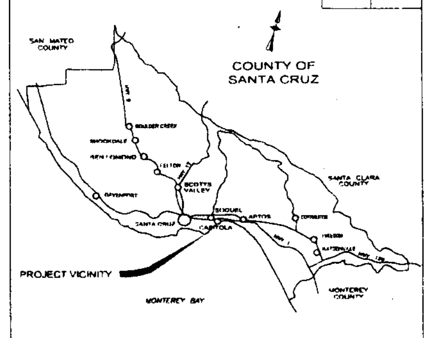
EAST CLIFF DRIVE
33RD AVENUE TO 36TH AVENUE
EMERGENCY REPAIRS AT EXISTING CRIB WALLS

To be supplemented by Standard Plans dated July, 2002



VICINITY MAP

NOT TO SCALE



LOCATION MAP

SHEET No.	TOTAL SHEETS
1	12

ABBREVIATIONS

AB	Aggregate Base
AC	Asphalt Concrete
AS	Aggregate Subbase
BC	Begin Curve
BCR	Begin Curb Return
BVC	Begin Vertical Curve
B/W	Back of Sidewalk
CATV	Cable Television
CI	Cast Iron
C & G	Curb and Gutter
CG & S/W	Curb, Gutter, and Sidewalk
CL	Class
CL	Center Line
CMP	Corrugated Metal Pipe
Conc	Concrete
CPP	Corrugated Plastic Pipe
D/W	Driveway
EC	End Curve
ECR	End Curb Return
EL	Elevation
EP	Edge Pavement
EVC	End Vertical Curve
(E)	Existing
FH	Fire Hydrant
Fig	Figure
FL	Flowline
FS	Finished surface
G	Gas
GB	Grade Break
GP	Guy Pole
GR	Grind
HP	High Point
INV	Invert
JP	Joint Pole
L	Length
LP	Light Pole
Lt	Left of Control Line
MB	Mailbox
MON	Monument Box
OC	On Center
PCC	Point of Compound Curvature
PL	Property Line
PP	Power Pole
PRVC	Point of Reverse Vertical Curvature
PVC	Polyvinyl Chloride Pipe
PVI	Point of Vertical Intersection
R	Radius
RCP	Reinforced Concrete Pipe
Rt	Right of Control Line
R/W	Right of Way
S	Slope
SC	Saw Cut
SD	Storm Drain
SDDI	Storm Drain Drop Inlet
SDMH	Storm Drain Manhole
SS	Sanitary Sewer
SSMH	Sanitary Sewer Manhole
Sta	Station
S/W	Sidewalk
T	Telephone
TC	Top of Curb
TG	Top of Grate
TOF	Top of Footing
TOW	Top of Wall
TP	Telephone Pole
Typ	Typical
UG	Underground
VC	Vertical Curve
W	Water
WM	Water Meter
WV	Water Valve
4/16	Detail 4, Sheet 16

PROJECT BENCHMARK

COUNTY BENCHMARK #244 EL=9.144 METERS NGVD 29

BRASS CAP IN A COUNTY CONCRETE MONUMENT STAMPED "E.C. 3" LOCATED AT THE INTERSECTION OF EAST CLIFF DRIVE AND 30TH AVENUE, 25.7 FEET NORTH OF THE PAINTED C/L OF EAST CLIFF DRIVE AND 22.5 FEET EAST OF THE PAINTED C/L OF 30TH AVENUE

Redevelopment Engineer
Registered Civil Engineer

Assistant Director of Public Works
Registered Civil Engineer

Director of Public Works
Registered Civil Engineer

Chair, Board of Supervisors

Plans Approval Date

Bids Open JUNE 4, 2004

FOR REDUCED PLANS ORIGINAL SCALE IN MILLIMETERS 0 20 40 60 80

Metric

EXHIBIT E

CONSTRUCTION DRAWINGS
EMERGENCY REPAIRS AT EXISTING CRIB WALLS

EAST CLIFF DRIVE
33rd AVENUE TO 36th AVENUE
for
COUNTY OF SANTA CRUZ

1.0 GENERAL NOTES

1.1 SITE CONDITIONS MAY HAVE CHANGED SINCE DATE (2000) OF PHOTO BASE AND TOPOGRAPHY.

1.2 INDICATED LOCATIONS OF CRIB WALLS ARE APPROXIMATE.

1.3 TOP AND BOTTOM OF PROPOSED SOIL NAIL WALLS TO BE STAKED BY THE COUNTY AS INDICATED. FINAL LOCATION MAY BE ADJUSTED BY ENGINEER.

1.4 THE EMERGENCY REPAIR STRUCTURES DEPICTED HEREIN ARE INTENDED TO PROVIDE [illegible] LOCAL CRIB WALL STABILITY AND FLANK PROTECTION FOR THE CURRENT CONFIGURATION OF THE COASTAL BLUFF. THE SUBJECT REPAIRS WILL NOT PREVENT OR DELAY UNDERCUTTING OF THE PURISIMA BEDROCK, NOR THE CONTINUED RETREAT OF UNPROTECTED MARINE TERRACE DEPOSITS. WITHOUT ADDITIONAL PROTECTION OF THE BLUFF, CONTINUED EROSION WILL EVENTUALLY DESTABILIZE THE REPAIRED STRUCTURES, AND FURTHER ACTION WILL BE REQUIRED.

2.0 GENERAL SOIL NAIL NOTES

2.1 IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE PROPOSED REPAIRS DO NOT CONFLICT WITH EXISTING UTILITIES.

3.0 SOIL NAIL DESIGN NOTES

3.1 ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE PROJECT CONSTRUCTION SPECIFICATIONS AND SPECIAL PROVISIONS.

3.2 THE SOIL NAIL WALL STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE SLD (SERVICE LOAD DESIGN) PROCEDURES CONTAINED IN THE FHWA "MANUAL FOR DESIGN AND CONSTRUCTION MONITORING OF SOIL NAIL WALLS", REPORT NO. FHWA-SA-96-069, AND THE CALTRANS "SNAIL" DESIGN PROGRAM. STRUCTURAL DESIGN OF ANY INDIVIDUAL WALL ELEMENTS NOT COVERED IN THE FHWA MANUAL HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 1996 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND LATEST INTERIM SPECIFICATIONS.

3.3 REFERENCE MATERIALS

1. GEOTECHNICAL INVESTIGATION FOR COASTAL BLUFF STABILIZATION PROJECT, EAST CLIFF DRIVE (PROJECT NO. SC[illegible]) BY HARO, KASUNICH & ASSOCIATES, INC., DATED JUNE 1997
2. ADDENDUM TO GEOTECHNICAL INVESTIGATION BY HARO, KASUNICH & ASSOCIATES, INC., DATED MAY 1998
3. TOPOGRAPHIC BASE MAP BY ANDREGG, INC. DATED NOVEMBER 2000

3.4 DESIGN SOIL PARAMETERS (PROVIDED BY HARO, KASUNICH & ASSOCIATES, INC.)

SOIL/ROCK TYPE	FRICTION ANGLE (DEGREES)	COHESION (kN/m²)	UNIT WEIGHT (kN/m³)	DESIGN SURCHARGE (kN/m²)	ULTIMATE BOND STRESS* (kPa)
UPPER TERRACE DEPOSITS	30	19.2	18.9	14.4	57.5
LOWER TERRACE DEPOSITS	41	5	19.6	14.4	57.5
PURISIMA FORMATION	42	47.9	18.1	14.4	239.4

* TO BE VERIFIED BY VERIFICATION AND PROOF TESTING DURING CONSTRUCTION

3.5 PSEUDO-STATIC SEISMIC COEFFICIENT = 0.20g (SEE 1997 DEPT. OF CONSERVATION SPECIAL PUBLICATION 117)

4.0 EXCAVATION AND CRIB WALL PREPARATION NOTES

4.1 UNSUPPORTED CUTS IN TERRACE DEPOSITS SHALL NOT EXCEED AN INCLINATION OF 1H:1V UNLESS WRITTEN APPROVAL BY THE ENGINEER FOR A STEEPER CUT IS GIVEN.

4.2 INITIAL SURVEY STAKING WILL BE PROVIDED BY THE COUNTY.

4.3 KEYWAY EXCAVATION SHALL BE PERFORMED TO THE MINIMUM DEPTH SHOWN INTO BEDROCK OR AS OTHERWISE APPROVED BY THE ENGINEER.

4.4 PORTIONS OF CRIB WALLS AND INFILL THAT EXTEND OUTSIDE OF PROPOSED SOIL NAIL WALL FACING SHALL BE DEMOLISHED AND REMOVED FROM THE SITE.

4.5 VOIDS WITHIN CRIB WALLS LARGER THAN 75 mm IN DIAMETER SHALL BE FILLED BY SLUSH GROUTING, APPROVED CONTROLLED-DENSITY FILL, OR OTHER APPROVED MEANS PRIOR TO INSTALLING SOIL NAILS. SLUSH GROUT SHALL BE MIN. [illegible] SACK MIX.

4.6 CAUTION: CRIB WALLS ARE UNSTABLE. CONTRACTOR SHALL SEQUENCE WORK OR TEMPORARILY STABILIZE WALLS ADEQUATELY TO SAFELY PERFORM THE WORK.

5.0 SOIL NAIL CONSTRUCTION NOTES

5.1 NAIL GROUT: TYPE II CEMENT, 20.7 MPa MIN.

5.2 NAIL BARS: fy = 520 MPA

5.3 ALL SOIL NAIL ASSEMBLY HARDWARE, INCLUDING BEARING PLATES, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED PER ASTM A 123M. NAIL BARS AND FASTENERS SHALL BE GALVANIZED PER ASTM A 153M.

5.4 LAYOUT OF SOIL NAILS TO BE PERFORMED BY THE CONTRACTOR BASED ON THE TYPICAL SECTIONS AND CONSTRUCTION DETAILS. ADJUSTMENTS MAY BE MADE TO ACCOMMODATE FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

5.5 NAILS IN A GIVEN VERTICAL SECTION SHALL BE INSTALLED ACCORDING TO THE APPROPRIATE TYPICAL SECTIONS AND DETAILS IN THESE PLANS.

5.6 TOTAL LENGTH OF TEST SOIL NAIL ASSEMBLY EQUALS EMBEDMENT LENGTH PLUS EXTRA LENGTH REQUIRED FOR JACKING EQUIPMENT.

5.7 NAIL LOAD TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROCEDURES PROVIDED IN THE SPECIFICATIONS. ONE SACRIFICIAL NAIL SHALL BE TESTED FOR EVERY TWENTY PRODUCTION NAILS INSTALLED. AT LEAST 2 SACRIFICIAL VERIFICATION NAILS SHALL BE INSTALLED AND TESTED DURING PROJECT CONSTRUCTION. TEST NAILS SHALL BE TRIMMED AT LEAST 100 mm BEHIND FINISH FACING AND FULLY GROUTED AFTER TESTING.

5.8 NAIL INCLINATIONS MAY BE INCREASED OR DECREASED UP TO 5 DEGREES TO AVOID UTILITIES OR ACCOMMODATE FIELD CONDITIONS.

6.0 SHOTCRETE FACING NOTES

6.1 REINFORCED CONCRETE AND SHOTCRETE:
fy (REBAR) = 414 MPa
fy (WWF) = 448 MPa
f'c = TYPE II CEMENT, 42 MPa (28-DAY SHOTCRETE COMPRESSIVE STRENGTH)

6.2 WATER-TO-CEMENT (W/C) RATIO SHALL NOT EXCEED 0.4 BY WEIGHT.

6.3 FINISH FACING SHOTCRETE SHALL CONTAIN A MINIMUM OF 4.8 Kg OF STRUX 85/40 SYNTHETIC STRUCTURAL FIBER REINFORCEMENT PER CUBIC METER OF SHOTCRETE.

6.4 IN ADDITION TO OTHER SPECIFICATIONS MADE IN THESE PLANS, MINIMUM CONCRETE/SHOTCRETE COVER MEASURED FROM THE FACE OF STRUCTURAL CONCRETE/SHOTCRETE TO THE FACE OF ANY REINFORCING BAR OR WIRE (EXCLUDING FACING TIES) SHALL BE 50 mm.

6.5 SECONDARY SHOTCRETE FACING SURFACE SHALL BE PREPARED WITH TYPE V, GRADE 1, CLASS B EPOXY ADHESIVE BONDING AGENT CONFORMING TO ASTM C881 IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS PRIOR TO APPLICATION OF FINISH FACING. BONDING AGENT SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.

6.6 FINAL SHOTCRETE LAYER SHALL BE FINISHED IN A MANNER CONSISTENT WITH SAMPLE PANELS APPROVED BY COUNTY.

6.7 FACING TIES SHALL HAVE MINIMUM SHOTCRETE COVER OF 50 mm. ALL OTHER REINFORCEMENT SHALL HAVE A MINIMUM TOTAL SHOTCRETE COVER OF 75 mm.

6.8 FACING TIES SHALL BE #10M BARS, HOT DIP GALVANIZED PER ASTM A153M.

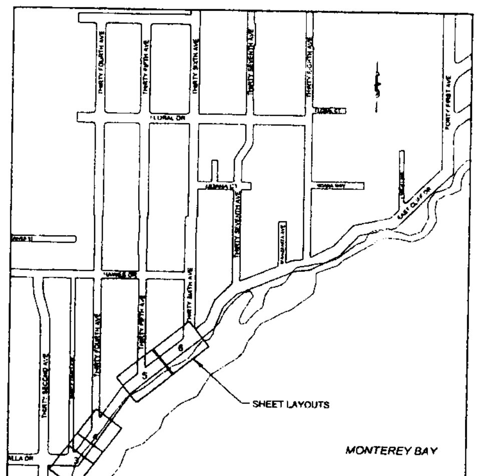
7.0 STRUCTURAL OBSERVATION AND SPECIAL INSPECTIONS

7.1 THE ENGINEER SHALL OBSERVE ALL SLOPES AND EXCAVATIONS TO RECEIVE SHOTCRETE.

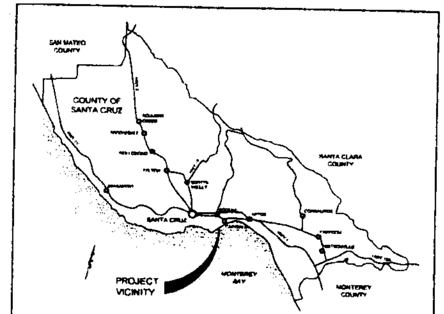
7.2 THE ENGINEER SHALL OBSERVE ALL TESTING OF PROOF AND VERIFICATION NAILS.

7.3 THE ENGINEER SHALL INSPECT ALL REINFORCEMENT PRIOR TO PLACEMENT OF SHOTCRETE OR CONCRETE.

7.4 THE CONTRACTOR IS RESPONSIBLE FOR TESTING OF SHOTCRETE IN ACCORDANCE WITH THE PROCEDURES PROVIDED IN THE SPECIFICATIONS.



SHEET LAYOUT PLAN
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

CONVENTIONAL SYMBOLS

APPROXIMATE PROPERTY LINE, RIGHT OF WAY LINES AND EASEMENT LINES
COUNTY STATIONING (METRIC)
ROAD
EDGE OF PAVEMENT
GUARD RAIL OR BARRICADE
FENCE (SPECIFY TYPE)
CHAIN LINK FENCE
SHRUBBERY
CROSS SECTION
MEAN HIGH WATER

EXISTING UTILITIES
WATER (PLAN) — W —
GAS (PLAN) — G —
SANITARY SEWER (PLAN) — SS —
STORM DRAIN (PLAN) — SD —
DROP INLET
MANHOLE
WATER METER
WATER VALVE
SANITARY SEWER (SECTION)
DETAIL 2, SHEET 6

KEY

WALL NUMBER
DISTANCE ALONG LAYOUT LINE (OUT FROM BEGIN WALL 7)
STATION LINE ALONG EAST CLIFF DRIVE
RIGHT OFFSET DISTANCE FROM STATION LINE
BEARING AT BEGIN WALL
TOP OF WALL ELEVATION
BOTTOM OF WALL ELEVATION

(E) INDICATES EXISTING STRUCTURE
(TYP) TYPICAL OF PROJECT
CLR CLEARANCE
H HORIZONTAL
V VERTICAL
AC ASPHALTIC CONCRETE
EG EXISTING GRADE

Underground Service Alert
Call: TOLL FREE 1-800 227-2600

Metric
UNITS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

REV	BY	DATE	DESCRIPTION
△			

DATE 06/2004
SCALE 1:100 METRIC
DESIGNED BY: TMJM
DRAFTED BY: LME
CHECKED BY: SHS
JOB NO. 98-003 SC PW4
FILE: 98-003-[illegible]

COVER SHEET
Emergency Repairs At Existing Crib Walls
East Cliff Drive

COUNTY OF SANTA CRUZ, CALIFORNIA

Santa Cruz County
Department of Public Works
701 Ocean St., Rm. 410
Santa Cruz, CA 95060-4000
Phone (831) 454-2160
Fax (831) 454-2385

SAGE
SANDERS & ASSOCIATES
GEOSTRUCTURAL ENGINEERING, INC.
Structural/Geotechnical Engineering • Design/Build
Retaining Walls • Bridges • Water Resources
Granite Bay, CA 95746
Phone (916) 729-8050
Fax (916) 729-7705
www.sandersgeo.com

2
SHEET 2 OF 12

EXHIBIT E

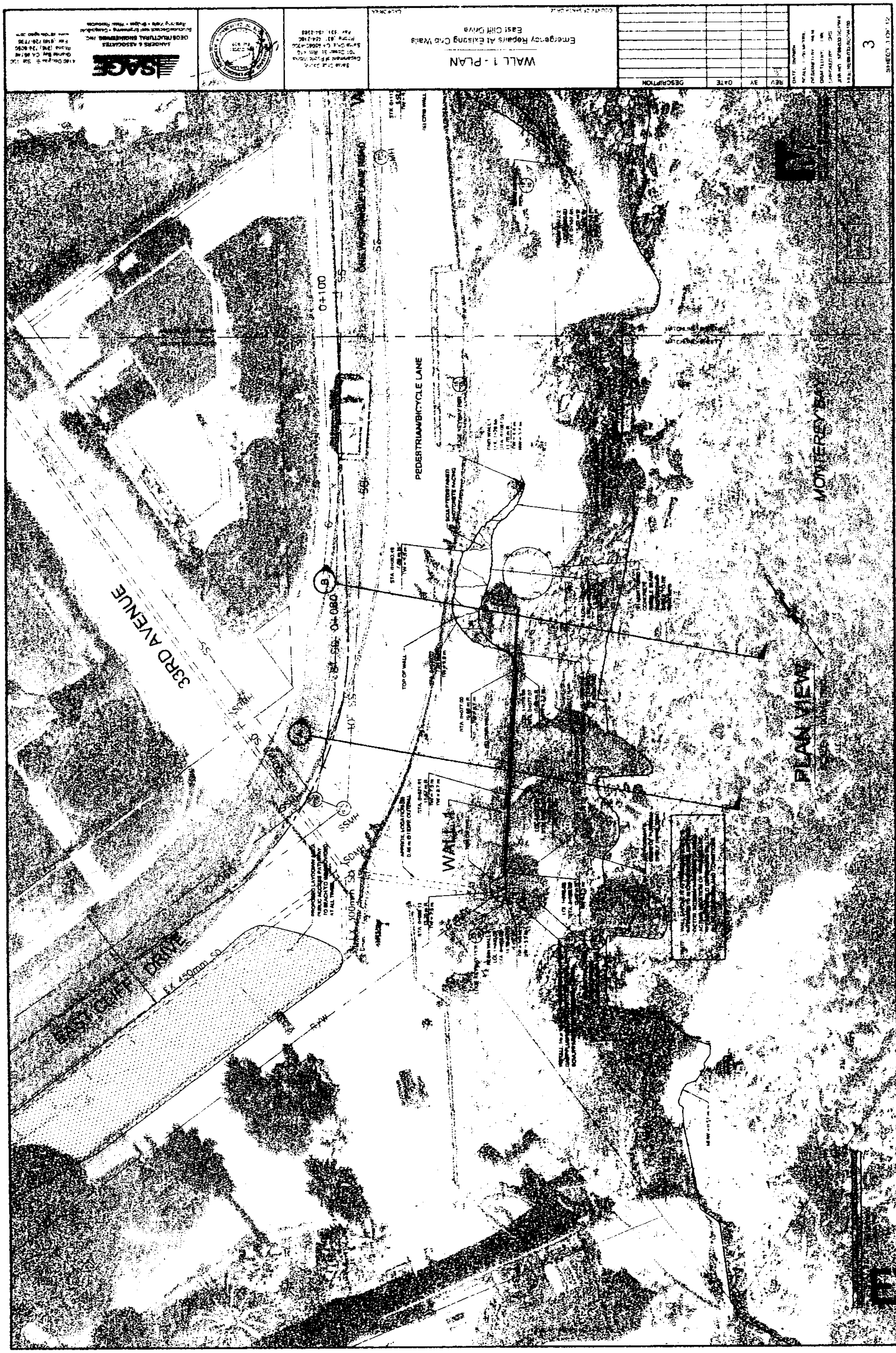

WALL 1 - PLAN
Emergency Repairs At Existing Cliff Walls
East Cliff Drive
33RD AVENUE
EAST CLIFF DRIVE
PEDESTRIAN/BICYCLE LANE
TOP OF WALL
WALL 1
SSMH
PLAN VIEW
MONTEREY BAY

EXHIBIT E

EXHIBIT E

WALL 3 OUTFALL - PLAN
Emergency Repairs At Existing Crib Walls
East Cliff Drive
5
SHEET 5 OF 12
PLAN VIEW
SCALE: 1:100 METRIC
WALL 3
PEDESTRIAN/BICYCLE LANE
38TH AVENUE
0+280
0+260
0+240
0+220

EXHIBIT E

WALL 4 - PLAN
Emergency Repairs At Existing Crib Walls
East Cliff Drive
EAST CLIFF DRIVE
36TH AVENUE
WALL 4
PEDESTRIAN/BICYCLE LANE
PLAN VIEW
SCALE: 1:100 METRIC
0+300
0+320
0+340
0+360

EXHIBIT E

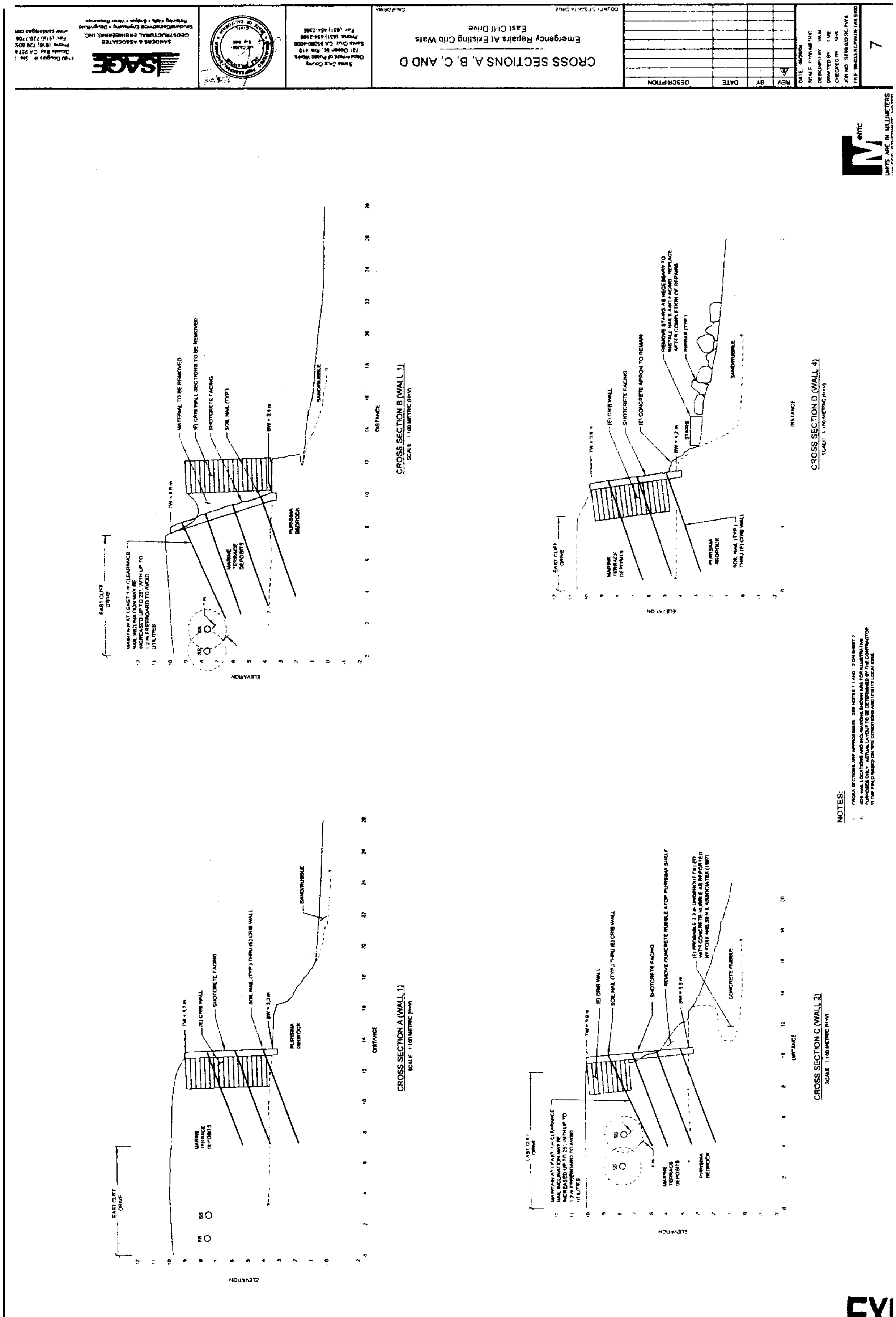
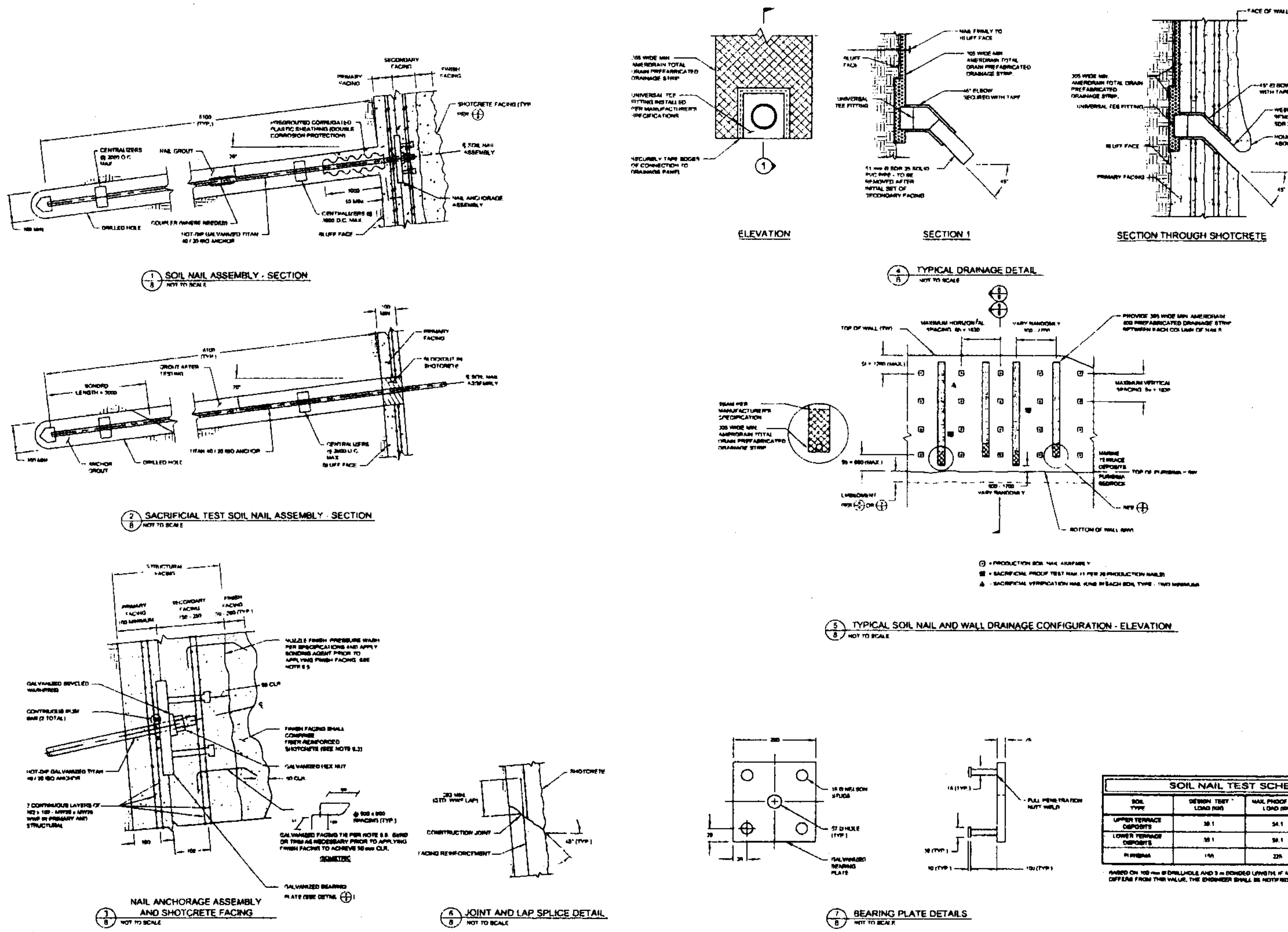

CROSS SECTIONS A, B, C, AND D
Emergency Repairs At Existing Crib Walls
East Cliff Drive
CROSS SECTION A (WALL 1)
CROSS SECTION B (WALL 1)
CROSS SECTION C (WALL 2)
CROSS SECTION D (WALL 4)
NOTES:
SAGE
SANDERS & ASSOCIATES
GEOSTRUCTURAL ENGINEERING, INC.
7

EXHIBIT E



SOIL NAIL TEST SCHEDULE

SOIL TYPE	DESIGN TEST * LOAD (kN)	MAX. PROOF TEST LOAD (kN)	MAX. TEST VERIFICATION LOAD (kN)
UPPER TERRACE DEPOSITS	36.1	54.1	72.2
LOWER TERRACE DEPOSITS	36.1	54.1	72.2
PURISIMA	150	225	300.5

* BASED ON 102 mm Ø DRILLHOLE AND 3 m BONDED LENGTH. IF AS-INSTALLED BONDED LENGTH DIFFERS FROM THIS VALUE, THE ENGINEER SHALL BE NOTIFIED TO MODIFY THE TEST LOADS.

UNITS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

REV	BY	DATE	DESCRIPTION

SOIL NAIL TEST SCHEDULE & DETAILS

Emergency Repairs At Existing Crib Walls
East Cliff Drive

COUNTY OF SANTA CRUZ — CALIFORNIA

Santa Cruz County
Department of Public Works
701 Ocean St. Rm. 410
Santa Cruz, CA 95060-4070
Phone (831) 454-2160
Fax (831) 454-2385

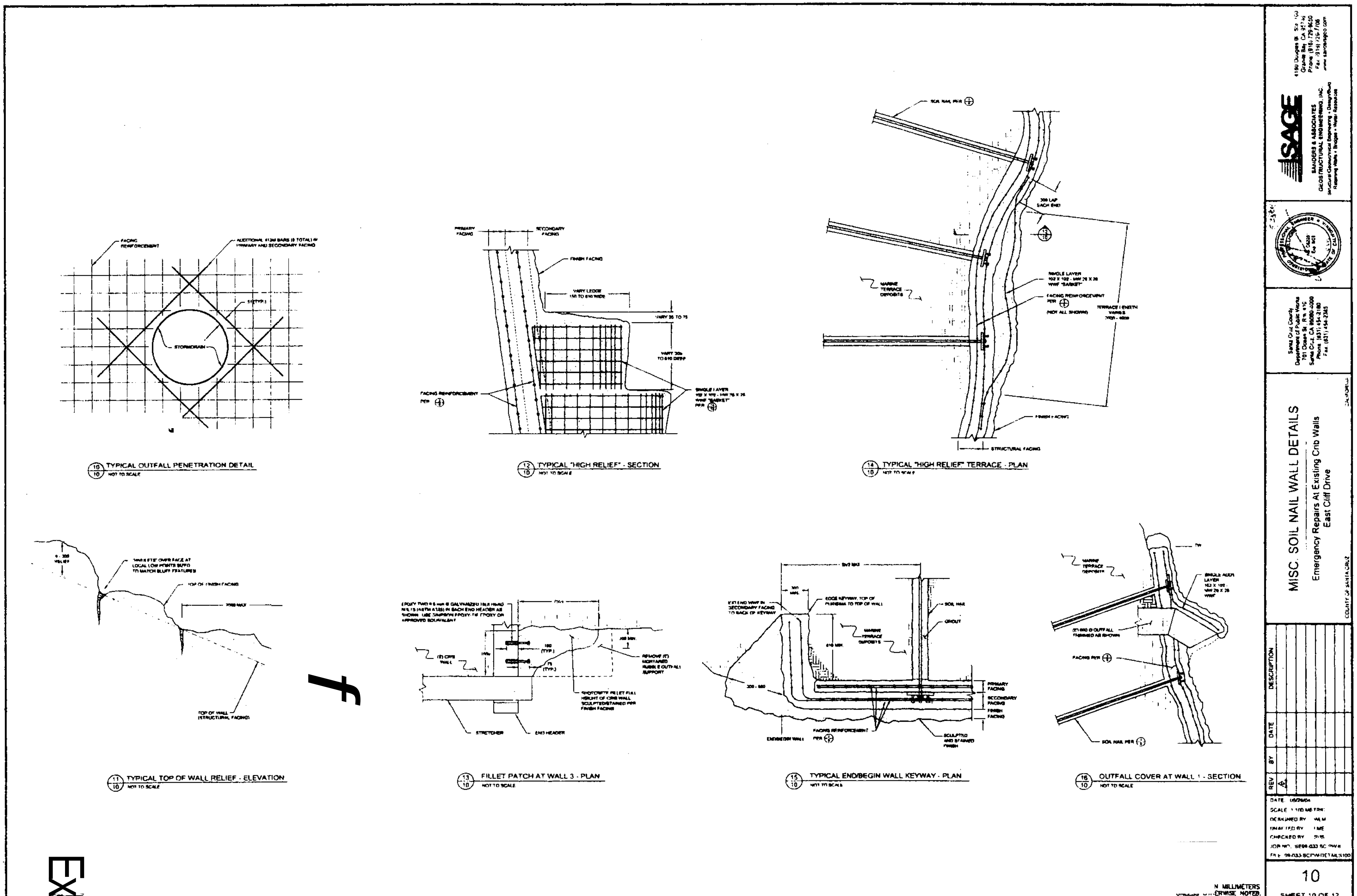
SAGE
SANDERS & ASSOCIATES
GEOSTRUCTURAL ENGINEERING, INC

8
SHEET 8 OF 12

EXHIBIT E

TYPICAL SOIL NAIL WALL SECTIONS
Emergency Repairs At Existing Crib Walls
East Cliff Drive
6
TYPICAL SECTION ADJACENT TO CRIB WALL
TYPICAL SECTION AT CRIB WALL

EXHIBIT E


TYPICAL OUTFALL PENETRATION DETAIL
NOT TO SCALE
STORMDRAIN
TYPICAL "HIGH RELIEF" - SECTION
NOT TO SCALE
PRIMARY FACING
SECONDARY FACING
FINISH FACING
FACING REINFORCEMENT
TYPICAL "HIGH RELIEF" TERRACE - PLAN
NOT TO SCALE
MARINE TERRACE DEPOSITS
FINISH FACING
STRUCTURAL FACING
TYPICAL TOP OF WALL RELIEF - ELEVATION
NOT TO SCALE
TOP OF FINISH FACING
TOP OF WALL (STRUCTURAL FACING)
FILLET PATCH AT WALL 3 - PLAN
NOT TO SCALE
STRETCHER
END HEADER
TYPICAL END/BEGIN WALL KEYWAY - PLAN
NOT TO SCALE
SOIL NAIL
GROUT
PRIMARY FACING
SECONDARY FACING
FINISH FACING
OUTFALL COVER AT WALL 1 - SECTION
NOT TO SCALE
MARINE TERRACE DEPOSITS
SAGE
SANDERS & ASSOCIATES
GEOSTRUCTURAL ENGINEERING, INC.
Santa Cruz County
Department of Public Works
701 Ocean St. Rm 410
Santa Cruz, CA 95060-4000
MISC. SOIL NAIL WALL DETAILS
Emergency Repairs At Existing Crib Walls
East Cliff Drive
COUNTY OF SANTA CRUZ
REV
BY
DATE
DESCRIPTION
10
SHEET 10 OF 12

f

EXHIBIT E

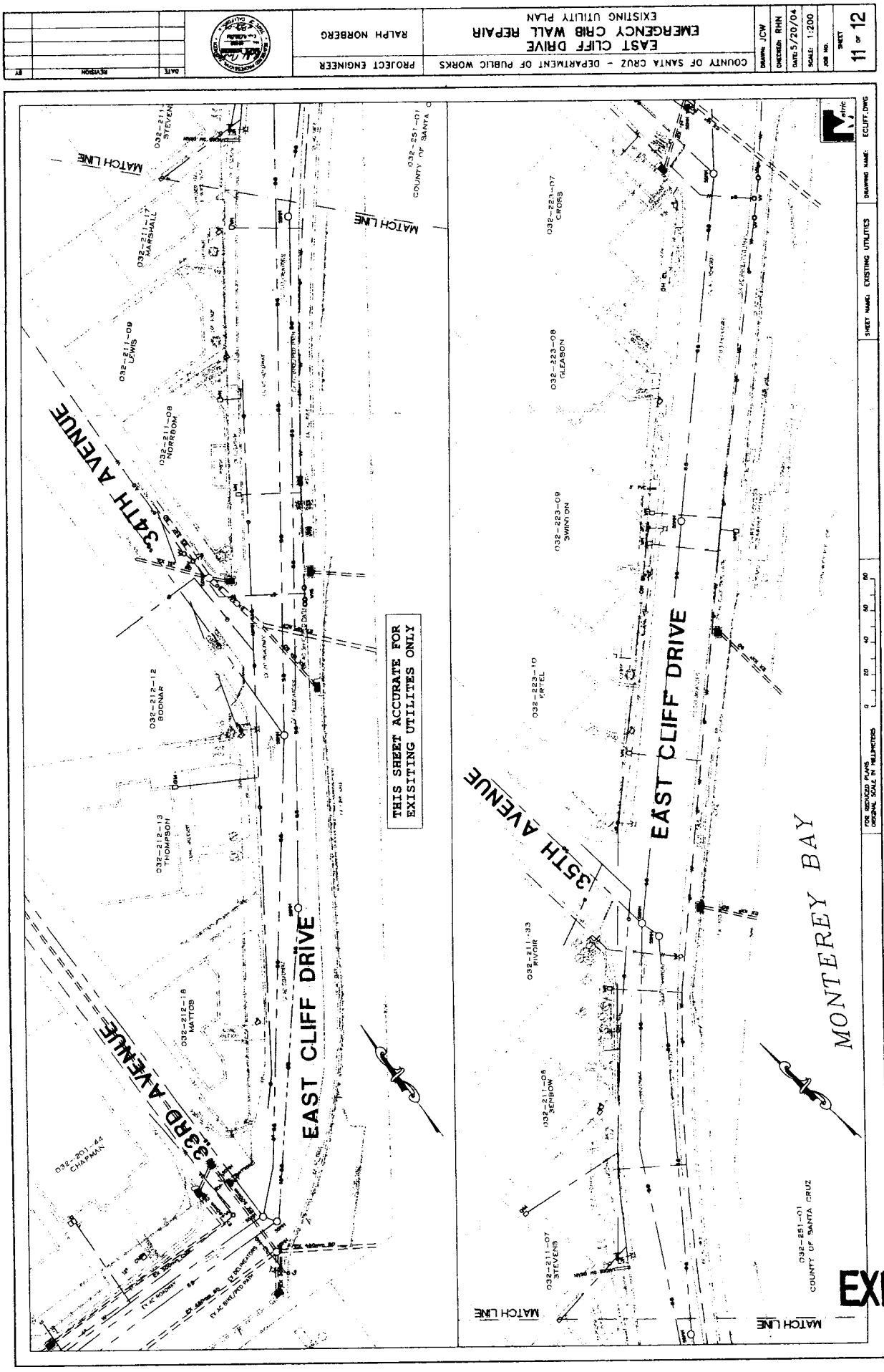
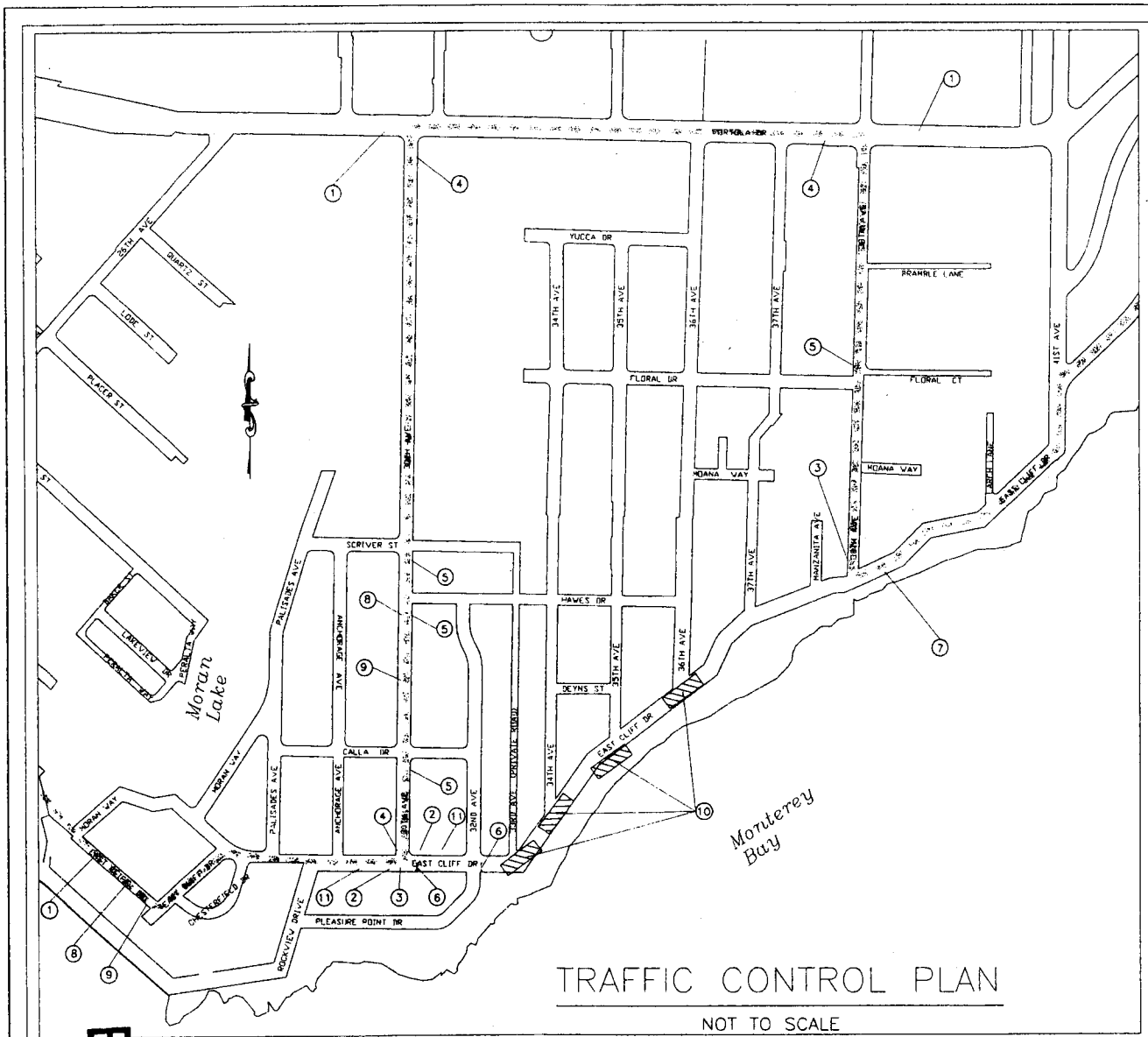

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS
EAST CLIFF DRIVE
EMERGENCY CRIB WALL REPAIR
EXISTING UTILITY PLAN
RALPH NORBERG
DRAWN: JCW
CHECKED: RHN
DATE: 5/20/04
SCALE: 1:200
JOB NO.
SHEET 11 OF 12
DATE
REVISION
BY
SHEET NAME: EXISTING UTILITIES
DRAWING NAME: ECLIFF.DWG
FOR REDUCED PLANS ORIGINAL SCALE IN MILLIMETERS
0 20 40 60 80
EAST CLIFF DRIVE
35TH AVENUE
33RD AVENUE
MONTEREY BAY
MATCH LINE
THIS SHEET ACCURATE FOR EXISTING UTILITES ONLY
032-211-07 STEVENS
032-211-17 MARSHALL
032-211-09 LEWIS
032-211-08 NORROM
032-212-12 BODNAR
032-212-13 THOMPSON
032-212-18 MATTOS
032-201-44 CHAPMAN
032-211-33 RIVOIR
032-211-06 JENSEN
032-223-10 FATEL
032-223-09 SWINTON
032-223-08 OLSON
032-221-07 CROSS
032-251-01 COUNTY OF SANTA CRUZ

EXHIBIT E



TRAFFIC CONTROL PLAN

NOT TO SCALE

TRAFFIC DETOUR SIGN NOTES:

1. INSTALL CJ: "EAST CLIFF DRIVE CLOSED FOR EMERGENCY REPAIRS FROM 30TH AVE TO 38TH AVE "DATE" TO "DATE" LOCAL TRAFFIC ONLY, SIGN TWO WEEKS PRIOR TO BEGINNING CONSTRUCTION.
2. INSTALL R1 STOP SIGN AND TEMPORARY 300mm WHITE LIMIT LINE
3. INSTALL C5 (LT.) DETOUR SIGN
4. INSTALL C5 (RT.) DETOUR SIGN
5. INSTALL SC3 DETOUR SIGN
6. INSTALL CJA ROAD CLOSED TO THRU TRAFFIC ON TYPE II BARRICADE
7. INSTALL C7 END DETOUR SIGN
8. INSTALL C19 ROAD CLOSED AHEAD
9. INSTALL C1 DETOUR AHEAD
10. A DETAILED LOCAL TRAFFIC CONTROL PLAN SHALL BE SUBMITTED FOR EACH CLOSURE LOCATION FIVE WORKING DAY IN ADVANCE. PEDESTRIAN AND TWO-WAY BICYCLE ACCESS SHALL BE INCLUDED IN THE PLAN.
11. INSTALL W17 STOP AHEAD AND TEMPORARY PAVEMENT LEGEND "STOP AHEAD" PER STANDARD PLAN A24D

SIGN INSTALLATION NOTES:

1. ALL SIGNS SHALL HAVE FLASHING WARNING LIGHTS.
2. SIGN SPACING SHALL BE APPROVED BY COUNTY ENGINEER.
3. ALL SIGNS EXCEPT CJA SHALL BE MOUNTED ON 89 mm x 89 mm (4"x4") WOOD POSTS.
4. POSTS SHALL BE PLACED IN HOLES EXCAVATED IN THE GROUND. HOLES SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 915 mm (36"). (CALL USA AT (800) 227-2600).
5. ALL SIGNS SHALL BE INSTALLED USING APPROPRIATE HARDWARE ACCORDING TO STANDARD PLAN RS2.
6. ALL SIGNS SHALL BE INSTALLED TO APPROPRIATE HEIGHTS ACCORDING TO STANDARD PLAN RS1.
7. THE CONTRACTOR SHALL REMOVE ALL SIGNS, POSTS, TEMPORARY LEGENDS AND LIMIT LINE UPON COMPLETION OF THE PROJECT.
8. ALL SIGNS AND POSTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UPON COMPLETION OF THE PROJECT.
8. THIS TRAFFIC DETOUR PLAN SHALL REMAIN IN EFFECT FROM 8:00 AM UNTIL 5:00 PM FIVE DAYS A WEEK UNTIL COMPLETION OF PROJECT. ALL SIGNS EXCEPT R1 AND W17 SHALL BE COVERED BY 5:00 PM PRIOR TO NON-WORKING DAYS.

LEGEND

DETOUR ROUTE

WORK AREA

DRAWING NAME: Traffic Map.dwg

BY	REVISION	DATE

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS

PROJECT ENGINEER: JULIE C. WATSON

EAST CLIFF DRIVE EMERGENCY CRIB WALL REPAIRS

TRAFFIC CONTROL PLAN

DRAWN: JCW

CHECKED: RHN

DATE: 5/21/04

SCALE: NTS

JOB NO. 68053

SHEET 12 OF 12

EXHIBIT E

County of Santa Cruz

REDEVELOPMENT AGENCY

701 OCEAN STREET, ROOM 510, SANTA CRUZ, CA 95060-4073

(831) 454-2280 FAX: (831) 454-3420 TDD: (831) 454-2123

BETSEY LYNBERG, AGENCY ADMINISTRATOR

August 30,2006

Melissa Allen, Project Planner
Claudia Slater, Environmental Planner
Santa Cruz County Planning Department
701 Ocean Street, Rm. 410
Santa Cruz, **CA.** 95060

RE. East Cliff Drive Parkway and Bluff Protection Project

Enclosed please **find** the revised project description and updated project plans for the East Cliff Drive Parkway and Bluff Protection Project. The plans include three sets of documents: Preliminary Plans for the Parkway Improvements prepared by the Redevelopment Agency and the County Department of Public Works, Conceptual Drawings for the Bluff Protection Walls and Emergency Cribwall Repair Plans prepared by Steve Sanders and Associates Geotechnical Engineers.

We expect the Final **EIR** to be completed in about **4** weeks and are ready to proceed with the final permit and approval process for this project. We will provide as many copies of the Project plans as necessary. Please let me know if your have any questions. We look forward to moving this project forward after so many years of work.

Thank you,

Paul Rodrigues

Paul Rodrigues
Project Manager Redevelopment Agency

Enc: Project Description 8/306
East Cliff Drive Parkway Preliminary Design Plans – RDA/DPW, 7/28/06
Conceptual Drawings coastal Bluff Stabilization Project – Sanders 8 Assoaates, 1/8/06
Emergency Cribwall Repair Plans – Sanders 8 Associates, completed in October 2004

EXHIBIT F

East Cliff Drive Cliff Stabilization and Pathway Project
Project **Description**

Rev. 8-31-06

The project includes roadway, bicycle and pedestrian pathway improvements on East Cliff Drive from 32nd Avenue to 41" Avenue, construction of engineered soil nail walls with a sculpted stained shotcrete facing in two locations - 33rd to 36th Avenues and at the "Hook" Area near the terminus of 41st Avenue. Two new beach access stairways will be built, new public restrooms will be constructed at Pleasure Point Park and various landscape and drainage improvements will be included. One-way vehicle traffic along East Cliff Drive is maintained as it currently exists between 32nd and 41st Avenues and a sixteen foot wide combined pedestrian and bicycle path will be constructed along the bluff top for the entire length of the project. Signage and trail markers will be used along the path to implement a section of the proposed Monterey Bay Marine Sanctuary Trail. In addition the proposal includes removal of significant portions of the existing rock rip-rap and concrete rubble from the beaches between 33rd and 36th Avenues.

Introduction

The areas where bluff stabilization walls are proposed experience continued erosion. At present this erosion threatens the integrity of the roadway, underground utilities, and is reducing the width available within the public right-of-way for public use. Access along the bluff top and to the beach is being lost regularly. In order to provide a comprehensive approach to this problem various options have been evaluated by the Redevelopment Agency in conjunction with the other Departments within Santa Cruz County and with various consultants. Many community meetings have been held to obtain public input. Experts in coastal geology and engineering have been consulted and the potential impacts on the local coastal environment have been considered in the EIR prepared by Tetra Tech Inc. of San Francisco. Santa Cruz County General Plan and Local Coastal Plan designates this area as "Parks, Recreation & Open Space". Priorities based on the Coastal Act of 1976 include *"maximizing public access and recreational opportunities"* and to *"protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and man-made resources".* East Cliff Drive is also designated as a "scenic road" in the Santa Cruz County General Plan and various other provisions indicate the county's goals and objectives for this area. The intent of the project is to improve public access and prevent the further degradation of recreational and scenic resources, provide long term structural stability for utilities in the area and to insure that public expenditures for bluff top improvements will have some level of protection over time.

The proposed project is a result of a wide consideration of alternatives, public discussion and professional evaluation of the issues of coastal erosion, public access to recreation, and environmental resource protection. Alternatives considered include various engineered structures, erosion and drainage controls, temporary measures, closing the road, moving the road or doing nothing – allowing natural forces to continue.

EXHIBIT F

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Engineered solutions have the greatest likelihood of feasibility and long term success. Closing the road results in limiting choices and public access with significant impacts to beach use, recreational surfing, and emergency access both for the neighborhood and to the beach areas. It would also increase traffic in the surrounding neighborhoods and limit use of the area by the greater public and Santa Cruz community. Moving the road would require a prolonged public process and debate over costs, raising issues *of* likely benefits to the public versus private property rights and perhaps an open ended commitment of public funds for land acquisition and zoning and development controls into the future. Short term and "soft solutions" simply delay the inevitable need to resolve the issues. Doing nothing – leaving conditions as they are will lead to unplanned, haphazard steps, perhaps a series of emergency measures and an undetermined process whereby the public benefits of access to the Monterey Bay will eventually result in public utility damage and conflict with rights of private property owners to protect their residences.

In developing an approach to bluff protection specific criteria were used to identify the preferred solution:

- It must be a long term design that would insure that the financial investment in bluff top improvements for public access could be assured of remaining in place.
- It would have to minimize construction impacts to the adjacent environment and marine resources and minimize impacts to recreational opportunities in the area.
- It would need to be an approach that it would not require wholesale excavation of the bluff area or relocation of the existing utilities in the roadway.
- It should result in the least visible change to the existing natural character of the bluff face.

Alternatives which included partial bluff stabilization, drainage solutions, landscape stabilization or other *"soft* solutions" were determined to be effective for a problem of this size. They would result in what were effectively short term, "temporary" solutions requiring continuous permitting, funding and maintenance/management decisions beyond the ability of the county to sustain.

Other choices – closing the road, moving the road, "planned retreat", etc. involved changing priorities. They require decisions for options and opportunities which are far beyond the initial project goals. These approaches do not appear to come from a consensus within the community and present the possibility of a prolonged and contentious public debate setting aside the immediate need to protect public infrastructure and maintain access opportunities for this portion of East Cliff Drive. While these may be valid options for less developed areas or where wholesale new development is taking place, this existing community - mostly developed and likely to remain primarily residential would not be an suitable place to consider implementing such a contentious and complicated solution.

The project area falls under the jurisdiction of numerous federal and state agencies, including the California Coastal Commission. Any proposal must meet the strict requirements of permitting and conformance with associated public resource and environmental policies and find a balance between often conflicting public priorities.

EXHIBIT F

Background

East Cliff Drive is the one main east-west arterial road that connects the coastline in the Live Oak area of Santa Cruz County. With Monterey Bay to the south, private residential development exists between the road and the coastline along two thirds of the road's length. In the Pleasure Point neighborhood the road is adjacent to the shore of Monterey Bay and for nearly half a mile it provides views and public access to the beaches and bay. Portions of the road including the length of the roadway in the project area have been designated as a segment of the Monterey Bay National Marine Sanctuary Scenic Trail for Santa Cruz County. The seasonal beaches and world-famous surf breaks in the area provide unique recreation opportunities for a broad segment of the community and the region.

Prior to the 1990's, repairs in response to small bluff failures along East Cliff Drive had been routinely maintained by the County Department of Public Works. Maintenance included repair of curbs, placement of traffic guard rails and walls and associated drainage and bikeway/pathway management. More recently, maintenance has included of the addition of "temporary" pedestrian safety barricades where washouts have occurred and edges of the road have been lost. Warning signs alerting the public to the potential hazards of the steep and eroding cliffs are posted along the bluff tops and conditions continue to degrade. Emergency responses to washouts and hazards continues to be the approach to the problems which occur.

As a result of storms and heavy rainfall in January 1994, a large failure of the bluff top area and roadway occurred between 38th Avenue and Larch Lane at the eastern end of the project area. The area lost was approximately 10-12 feet wide by 50 foot long. A significant portion of the East Cliff Drive travel lane (east bound direction on the ocean side) had collapsed onto the beach. This failure required the closure of a portion of the road to through traffic until repairs could be completed. Traffic was temporarily re-routed from East Cliff Drive around the affected area. The increase of traffic on neighborhood streets generated numerous complaints from residents. The concerns about speeding and increased traffic soon led to the establishment of a local East Cliff Drive Task Force. Its role was to determine the best course of action with regard to traffic and circulation in the area.

While the County Public Works (DPW) proceeded with engineering design for bluff repairs to stabilize the Larch Lane washout, staff also prepared a traffic analysis. The objective was to provide information to assist in reviewing circulation options for the area. The first measure to be agreed upon was to install road bumps on 38th Avenue to slow traffic being re-routed from East Cliff Drive due to the closure. DPW and the County Redevelopment Agency (RDA) staff continued to discuss issues, goals & objectives with the neighbors and the East Cliff Task Force at a series of community meetings. Eventually, the consensus was to limit vehicular traffic along East Cliff Drive to a one-way east bound direction, to impose weight limits for traffic on the road and move the alignment permanently to the inland side of the right-of-way allowing for significantly more space for pedestrians and bicyclists on the ocean side. In a public hearing, in November, 1995, the County Board of Supervisors formally approved East Cliff Drive as a one-way road. The widened pedestrian and bicycle path along the

EXHIBIT F

former ocean side travel lane was delineated with "temporary" plastic traffic diverters separating automobiles from the pedestrians and bicycles. This basic arrangement has continued up to the present, but bluff top erosion continues to reduce the pedestrian areas.

At the time of the one-way designation, the consensus was that the ultimate goal should be to maintain permanent vehicular and pedestrian access in the area, to enhance and improve the pedestrian and bicycle facilities, and to develop a plan to protect utilities in the road which would ensure the long-term stability for the area from coastal erosion. The goal was to prevent another catastrophic failure similar to the Larch Lane incident, and to eliminate the need for emergency actions which generate unforeseen impacts to the surrounding neighborhood streets.

The Larch Lane wall and road repairs were completed in **1996.** The Santa Cruz County Redevelopment Agency and the Department of Public Works then initiated a detailed review of bluff protection options with various geotechnical consultants and coastal experts. The objective was to identify actions necessary to stabilize the failing bluff areas so that permanent pedestrian and bicycle improvements could be constructed. The area to be evaluated was the entire stretch of the roadway that fronts the coastline from 32nd to 41st Avenues. The recommended approach concluded that a comprehensive structural solution was needed, anything less would be a short term measure (2-5 years). Long term non-structural options to move the road or utilities, or buy private properties, wouid require a large commitment of funds and political and legal decisions beyond the scope or ability of the County.

While the County right-of-way in most of the area is sixty feet wide, ten to twenty-five feet of that right-of-way has been lost for use along the bluff top between 33rd and 36th Avenues. This area is the most critical in terms of maintaining vehicular access and utilities. In many cases, the ocean boundary for the right-of-way exists only as an imaginary line suspended in the air over the beach. On the inland side of the road between 33rd and 36th Avenues, the edge of pavement is about four to six feet from the right-of-way boundary. The difference between the inland road edge and the right-of-way varies slightly from one block to the next, but overall because of the location of residences and driveways and the alignment requirements for safe vehicular travel, there is insufficient area to make any additional significant changes to the roadway alignment.

In initial explorations of options in the mid **1990's,** the County obtained the assistance of the **US** Army Corps of Engineers. They undertook a review of the issues and conditions and evaluated the possibility of federal assistance. Initial work on wall design alternatives was begun. **A** detailed feasibility report was completed by the Corps in **1998.** The Corps' concluded that a comprehensive bluff armoring proposal would insure stability for the longest time for the area and would be cost effective from a budgetary standpoint (Corps analysis looked at costs and benefits over a 50 year time frame). Various structural design alternatives were evaluated by the Corps. These included concrete gravity walls, rip-rap, light weight soil nail and tieback walls and combinations of these. The Corps was inclined to the more traditional engineering approaches – gravity walls and rip-rap. However, after further community input, the County RDA and

EXHIBIT F

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DPW staff determined that the technology of soil nail walls with sculpted colored concrete would be the most appropriate design providing an approach more compatible with community expectations and environmental considerations. The Corps agreed to include this approach in its feasibility assessment and by 2001 had updated its analysis.

In December 2000, preliminary project plans and an application for a local development permit were submitted to the Santa Cruz County Planning Department by the Redevelopment Agency. That application and an "environmental initial study" determined the need for the preparation of an Environmental Impact Report. It required nearly two years and three official community meetings for consultants and the Corps to complete the EIWEIS process. By the Fall of 2003 the EIR/EIS was ready and the US Army Corps of Engineers filed a Federal Notice of Completion and had made an application for a Federal Consistency Determination to the California Coastal Commission for the Bluff Stabilization Structure portion **of** the work. That application was rejected by the Commission at a public hearing in November 2003. Their findings were based on a number of determinations and issues. Their main conclusion was that additional information regarding coastal geology, erosion processes was required, and that a more detailed evaluation of alternatives and options should be undertaken'.

In March of 2004, in the course of exploring options for how to develop more detailed geologic information as requested by the Commission, consulting geotechnical engineers advised the County that several of the existing cribwall structures that supported the road and the pedestrian path in the project area were in very poor condition, in danger of imminent collapse, and represented a threat to public health and safety. The Department of Public **Works** immediately posted the area as a public safety hazard, closed the access stairway at 35'' Avenue (it fronts the cribwall near 36th Avenue), and the Santa Cruz County Board of Supervisors proceeded to undertake emergency measures for a permit and contract for the repair of the work. Soil nail wall plans were developed to cover only the upper bluff cribwalls and a contractor was hired to do the work. The construction began in July and was completed in October of 2004.

Project Description

The proposed project consists of three components which would be constructed over a period of two to three years. They would be contracted separately and would be phased in order to accommodate seasonal and construction coordination requirements.

The projects are:

1) Construction of bluff protection and stabilization between 32nd Avenue and 36th Avenue. This work includes a soil nail wall engineered structure, finished with colored concrete sculpted to match the existing bluffs, construction of two new public access stairways to the beach and removal of significant portions of concrete rubble and riprap from the beach area between 33* Avenue and 36th Avenue.

2) Construction of parkway improvements including drainage and parking with a one-way eastbound travel lane, pedestrian and bicycle paths and landscaping between

[1] Coastal **Commission,** January 14, 2004; **Revised Findings;** Permit **Number** CD-021-03

EXHIBIT F

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32nd Avenue and 41st Avenue and improvements to the existing Pleasure Point Park with the addition of public restrooms, new picnic tables and furnishings and additional landscaping.

3) Construction of a bluff protection wall at the Hook area at the end of 41st Avenue and associated East Cliff Drive pedestrian path and landscape improvements as noted for the parkway above.

Bluff Stabilization

The main area where bluff stabilization is needed is between 32nd Avenue and 36th Avenue. This distance is about 1,100 feet along the southerly portion of the East Cliff right-of-way. Of this length, about 300 feet of the upper terrace deposits are areas where existing cribwall emergency repairs were completed in 2004.

The bluffs in this area are characterized by a fractured purisima layer of sandstone/ mudstone baserock to about 10-12 feet elevation. It is relatively hard compared to the upper terrace deposits, but it has many wave undercut notches. Above the purisima are unconsolidated marine terrace deposits. These are quite steep and extend to the tops of the bluffs at about 28-30 foot elevation. A "Threat Analysis" including an assessment of slope stability(under seismic and static conditions) by Steve Sanders & Associates Geotechnical Engineers identified 16 locations between 32nd and 36th Avenues where the road is threatened at this time. This represents about 65% (715 feet) of the distance between 32nd and 36th Avenues and demonstrates the magnitude of the problem needing to be addressed. Of this total, 133 feet or 13% are areas where the shoulder and pieces of the asphalt pavement from the road have already been lost to erosion. In one location an 8 inch water main is only about 3 feet from the edge of the bluff top and parallel sewer lines run the length of the road averaging perhaps 8-10 feet from the edge.

The SAGE analysis mapped over 15 locations where there are cave undercuts along the beach ranging from 3-4 feet to upwards of 12-15 feet in depth. If these areas are not filled or supported the danger *is* that they will lead to large collapses of the purisima baserock layer and result in catastrophic terrace faiiures similar to the Larch Lane collapse. The Hook area at the end of 41st Avenue also has one critical location with the bluff top posing a serious threat to the road.

The construction of the bluff protection structure is proposed as a colored concrete soil nail wall. It will be constructed of two layers of structural shotcrete and steel mesh with drilled soil nails (horizontal steel rods grouted with concrete) placed in a grid pattern across the face of the bluff. The work is conceived and designed to provide the most effective construction methods and costs, while limiting environmental impact to the surrounding marine habitat and resulting in a finish surface that mimics the existing bluff face as much as possible. The proposed method of construction stages the work from the top of the bluff, along the road, and keeps construction and equipment impacts to a minimum on the beach area. The finished structure, colored, stained shotcrete to match the existing terrace deposits, will blend in with the surrounding terrace and bluff

EXHIBIT F

material. The emergency cribwall repair project of 2004 serves as an example of the expected finishes and resulting character for the larger wall project.

The work is to be constructed in four basic stages: **1)** site preparation, excavation and initial stabilization, **2)** drilling, installing and testing the structural soil nails, 3) applying *two* structural layers of wire mesh reinforcing and layers of structural shotcrete, and **, 4)** applying the finish coat of colored shotcrete, sculpting and staining the material to match the surrounding terrace deposits. The first stage of work will be to prepare the site for construction and provide a safe and controlled environment for construction and workers. Areas of vegetation (mostly iceplant and non-native grasses), loose soil and rock material along the bluff face are removed. While this is taking, place the contractor will be required to provide tarps and other catchment devices to ensure that loose material and construction debris is not lost onto the beach below.

The unique nature of the construction method for soil nail installation allows for minimal disturbance to the surrounding areas, reduces sound and other neighborhood impacts and allows for quick stabilization of the terrace deposit materials. The nails themselves, 20 feet to 30 feet long, are hollow steel rods equipped with sacrificial drill ***bits*** (the bits remain in place as the concrete grout is pumped into the terrace materials). The nails and pumped concrete penetrate directly into the surrounding terrace deposits and eliminate the need for extensive removal of excavated material. As the drilling proceeds a concrete slurry grout *is* pumped through the hollow soil nails into the surrounding soil and rock material.

After the soil nails are in place and structural testing is complete the contractor will attach welded wire mesh and steel rebar reinforcing, fastening it to anchor plates at the ends of the soil nails. The reinforcing is then shaped to the contours of the bluff face and provides the basic structural framework for an initial 4"-6" layer of structural shotcrete. The shotcrete mix itself is customized to high strength and corrosion resistant design specifications in order to withstand harsh coastal conditions. Once the mesh is in place a secondary layer of concrete is applied. The result is a completed structural layer of double steel and concrete of approximately 8"-12" thickness.

Drainage behind the walls is a concern for stability during periods of high ground water in the rainy season. Placed behind the walls prior to reinforcing are a series of vertical channel drains approximately six feet on center. These extend down the bluff face and are wrapped in filter fabric to prevent fine soil material from washing through. The drains outlet the walls in small diameter pipes with locations placed in a staggered pattern along the base of the bluff. They will be angled and covered with colored concrete to minimize their visibility. Hydrostatic pressure behind the walls is thus reduced and provides a back up system for new surface drains to be developed in the parkway along the bluff top.

Some of the street storm drain outfalls in the project area will be incorporated into the wall. These outlets will be consolidated where feasible. They will be shortened and angled, incorporating the opening into the sculpted face of the wall. This design approach was used for the emergency repair of the first cribwall near the intersection of 33rd Avenue. This outfall has been shielded from views from the bluff top above and from distant views along the beach, making it less obtrusive and more compatible with

EXHIBIT F

the visual character of the area. The plans call for new CDS filtration units for all new outfalls in the area.

The base of the wall between 33rd and 36th Avenues will have a footing embedded three feet into the purisima sandstone and a four foot wide scour apron in front of the footing. The purpose of this is to reduce scour along the purisima terrace and to extend the life of the wall, reducing the need for minor maintenance and repair over time. This too will be sculpted and colored to match the surrounding sandstone.

Finally, the beach area between 32nd Ave and 36th Ave. will have the large amounts of existing concrete rubble and riprap removed from the beach, except as permited at the east end for the adjacent private parcel. Any boulders or rocks left on the beach will be pieces of the natural purisima sandstone a natural feature of the beaches in the area. Removal will be done with cranes and dump trucks staged from the road above the beach. The only equipment allowed on the beach would be hand tools and equipment necessary to assist the rubble removal. It is estimated that upwards of 4,000 - 6,000 cu.yds of rock and rubble would be removed from the beach during this part of the work.

Soii Nail Wall Details (33rd Ave to 36th Ave):

- Estimated length of top of wall: 1,100 l.ft. (including 300 ft of emergency repairs)
- Surface Area: 37,700 sq.ft. (est. 30'- 35' height above sea level).
- Concrete Rubble to be removed from beaches: 4,000- 6,000 cu.yds (including stone riprap at existing abandoned restroom building).
- Stairways: one existing at abandoned restroom. To be replaced with new stairs just east of this location. New stairs to be constructed at Pleasure Point Park. Existing abandoned restroom building to be demolished and removed. New restrooms to be constructed at Pleasure Point Park.
- New railings along top *of* wall will be a combination of split rail fence in landscape areas and wood post and metal railing where pedestrian path is immediately adjacent to the top of the wall.
- Estimated construction time: 6-8 months.

Hook Area Seawall Details:

- Estimated length of top of wall: 300 l.ft.
- Surface Area: 13,800 sq.ft. (Est. height 46 foot above sea level) Note wall will be constructed over terrace deposits and portions of the purisima, no construction is anticipated base of the purisima layer within the tidal line.
- New guard rail: 300 l.ft. Wood post and metal rail design to replace existing wood railing already in the area.
- Existing stairway structure to be rebuilt after wall construction or to remain if it is possible to work around it during the wall construction.
- Estimated construction time: 2 4 months.

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Parkway

The parkway portion of the project consists of a one-way vehicular travel lane, pedestrian and bicycle pathway, drainage and landscape improvements, with replacement and new parking along the edge of the roadway. These improvements are planned for the entire length of East Cliff Drive from 32nd Avenue to 41st Avenue, not just in the vicinity of the walls. The distance is about one-half mile in overall length.

A new asphalt surface travel lane will, in most cases, coincide with the paved surface of the existing roadway. The width of the right-of-way varies and the useable area is as narrow as 34 feet. In order to provide adequate room for pedestrians and bicyclists, the travel lane is proposed to be 16 feet wide. This is sufficient for one way vehicular travel and for ingress and egress of the driveways on the inland side of the road. Because this travel lane is narrower than the State Fire Code requirements the design includes a rolled or battered curb at the pedestrian/ bicycle path allowing for emergency vehicles to mount the asphalt portion of the path as necessary during critical times for emergency access. This results in **24** feet of paved surface for emergency access along the road. In some areas where the opportunity arises the road is shifted inland 3-4 feet where existing right-of-way is available and the alignment is compatible with roadway design standards. This occurs mostly at the west end at the intersections of the transverse streets (33rd and 34th Avenues). The roadway is also broadened at the street intersections to accommodate left turn radius requirements onto eastbound East Cliff Drive. Minimal changes are anticipated for the inland side of the road. Neighbors at numerous community meetings have expressed the desire for maintaining the character of the area as it is – not upgrading, over designing or creating too many "improvements". **Also,** in order to reduce project costs the road improvements have been planned to incorporate as much of the existing paved road surface as feasible. The project does not preclude the possibility of additional development and improvements on the inland side in the future should they be needed and funding is available.

Between 32nd Avenue and 33rd Avenue and between 36* and 38th Avenues some new diagonal parking is proposed. The parking near Pleasure Point Park utilizes existing paved road area not required for the one-way travel width. Up until the one-way designation in the mid 1990's this area was used for parallel parking. The plan will provide space for disabled parking currently unavailable in the area. Further east, beyond 36" Avenue approximately 6 existing parking spaces will be removed. These will be replaced with parallel spaces and eleven diagonal spaces (including two disabled spaces) located inland of the pedestrian/bicycle path next to the road. This arrangement will allow pedestrians and bicycles to have a continuous route on the ocean side of the road and not have to cross behind vehicles as they are park or leave the spaces. No changes to the existing parking along the inland side of the road are planned at this time other than to continue to insure that these are available for public use.

The pedestrian and bicycle improvements will consist of two parallel paths, one eight feet wide of continuous asphalt and the other up to eight feet in width consisting of stabilized decomposed granite. This material has been used in several other locations in the Live Oak area and has met with positive community response as a material more

EXHIBIT F

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in character with the beach community. It provides a softer, more beach-like appearance compatible with the area, but it is a hard stable surface meeting the requirements and standards for disabled access.

At each of the local avenue intersections pedestrian crosswalks will be provided across the roadway surface and access ramps are provided to the pedestrian paths. Any remaining areas between the paths and the tops of the wall will be utilized as landscape buffer. Native and coastal compatible plantings will be used to soften the bluff tops and cascade as much as possible over the top of the walls. In some locations additional native Monterey Cypress trees are proposed to provide a vertical canopy similar in character to the area at the end of 41st Avenue.

In areas where the path is immediately adjacent *to* the top of the bluff/wall it will be necessary to install pedestrian safety railings. The railing will be constructed of a combination of materials – galvanized metal tubing intermediates with wood timber posts and top rails. Where there is a landscape separation of the walk from the bluff top the railings will be replaced with simple split rail fencing similar to that currently used at Pleasure Point Park.

Because this project is a designated segment of Santa *Cruz* County portion of the Monterey Bay National Marine Sanctuary(MBNMS) Scenic Trail visual quality is a priority. A signage plan and trail marker plan will be prepared and installed along the path. Pre-designed trail markers as identified in the MBNMS Trail Standards Manual will be located at various intervals to identify the route along the bluffs.

Water quality from storm water runoff as noted earlier has also been identified as a concern for the area. Although no significant impacts have been identified in the EIR based on storm water runoff, the roadway improvements will present the opportunity to upgrade the major street drainage outfalls with improved storm water treatment devices. New "CDS" filtration units will be installed as part of the parkway improvements. As well, the project will combine outfalls in some locations, reducing the overall number. Of the six outfalls between 33rd and 36th Avenue these will be combined into four after completion of the project. Further east, five existing drains will be reduced to three.

East Cliff Parkway Details

- Total length of proposed roadway (32nd Ave. to 41st Ave) : 2,800 lineal feet (850 m). Includes 16' roadway section with curbs and gutters between vehicle travel and pedestrian/bicycle path.
- Pedestrian/ Bike Path along edge of road: 16' divided into half (8')A/C paving and half(4'-8') stabilized decomposed granite.
- Estimated area of landscape improvements along edge of roadway. Estimated average width: 5'-IO' = 13,500 - 27,000 sq.ft. Planted with native and coastal adapted plantings. Irrigated with drip or low water use automatic irrigation system. Note: grading calculations shown on the project plans.

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- Parking - existing parking along ocean side of road: 6 spaces to be removed moved. 20 additional spaces including three disabled proposed. Note inland side of road has approximately 15 existing spaces – with no changes proposed at this time
- Street lights at intersections of Avenues with East Cliff will remain. No other project lighting is anticipated.
- Bicycle parking will be provided in several locations along the length of the road within the public right -of- way and at Pleasure Point Park.
- Existing stairs near 38th Ave to remain and new pedestrian path to connect to it.
- Additional site furnishings such as signage and public benches are anticipated but have not all been located on the design plans.
- Estimated construction time: 8-12 months.

Pleasure **Point Park**

Pleasure Point Park will be improved with a new public restroom building and outdoor shower, constructed in a style similar to that **of** the Hook Parking lot at the end of 41st Avenue. Natural cobble walls will support a wood roof structure located midway along the south property line approximately 15 feet from the existing fence. Additional improvements will include storm drainage connected to existing facilities in East Cliff Drive, natural landscaping and park furnishings – picnic tables and benches. The large palm trees on the site will be retained. Additional diagonal vehicular and bicycle parking is proposed for this East Cliff street frontage as discussed in the previous sections.

This park site has been identified as a location for a major Marine Sanctuary Trail Interpretive element as designated in the Monterey Bay National Marine Sanctuary Trail Design Standards Manual. A design has yet to be developed but indications are that it would be similar in approach to the two interpretive areas completed at the Santa Cruz Yacht Harbor where tiles and sculpted metal railings provide a marine resource focus. **A** location for that element has been shown on the plans. The exhibit for this area would most likely focus on recreational surfing and would evolve from additional community discussions and input. New sidewalks and stabilized decomposed granite paving would provide an upgrade to the existing dirt paths in the park.

Conclusion

The project comes under the regulatory authority of the Santa Cruz County Planning Department and its Local Coastal Plan (LCP) and the bluff protection would come under the jurisdiction of the California Coastal Commission. Numerous additional federal and state agencies including the US Army Corps of Engineers, the Monterey Bay National Marine Sanctuary and the State Lands Commission all have regulatory authority or interest in how this project is carried out. Any proposal must meet their permitting criteria and requirements for public resources and environmental policies and regulations. The project has received comments and input from these agencies as well as private organizations and individual members of the public. Their feedback has been valuable in shaping the proposal as it is today. Many **of** the options, alternatives and ideas suggested have been incorporated into the final design.

EXHIBIT F

It is clear that the issues and the problems that the project is intended to address are not going away. This project is unique in the sense that inaction will have greater local consequences than taking actions. Doing nothing postpones inevitable difficult decisions, while the situation continues to deteriorate. Every washout reduces public access opportunities which will be difficult and more costly to regain. The basic questions are: What are the consequences of doing nothing? Should the right-of-way and public access be protected? Is the project feasible and is this proposal the best approach?

The project reflects the best efforts of the County to comply with the need to answer these questions, to maximize public access for coastal recreation and to protect environmental resources while considering the needs of County and the local neighborhood and various other interests and groups. The ultimate goal, to protect public access - recreational, emergency, and local, and to maintain valuable public infrastructure - sewer and water lines while minimizing to change to the character of the community is attainable. To allow coastal erosion to proceed will in bluff top losses, with future limitations on recreational and access opportunities. Eventually, the needs and interests of the public may come into conflict with private property interests, or will lead to less than ideal emergency solutions. This effort is an attempt to reduce potential conflicts with a carefully thought out approach, maximizing the benefits for competing interests while minimizing impacts. Environmental issues have been fully evaluated in the new Environmental Impact Report and appropriate analyses have defined the potential resource impacts and mitigations which will be required. The Redevelopment Agency and the Department of Public Works fully intend to comply with the requirements for monitoring and mitigation of potential impacts.

The County Redevelopment Agency and Department of Public Works recognize that to undertake a project of this nature requires that many diverse views must be considered. In order to achieve a consensus or balance among competing interests compromise is required. Environmental protection, neighborhood preservation, public access and recreational opportunities all become factors in the decision making process. Whatever is proposed must consider global geologic and natural processes which are always changing. The current proposal represents the County's best efforts in reaching such a compromise.

EXHIBIT F

Project Technical Reports and Background Documentation

The following reports and background studies have been used in the process of developing the final design proposal for this project. The previously outlined project description is the basis for evaluating this project. Minor discrepancies in quantities or other described elements of the project reflect preliminary design conclusions which have been refined in the project description.

Steve Sanders & Associates, January & February 2006 Geotechnical Engineers	Threat Analysis - seismic and static evaluation of the areas between 33rd and 36th Avenues and at the end of 41st Avenue
Tetratech Inc., October 2003	Project EIS/EIR
John Gilchrist & Associates, November 2000	With Gerry Weber Geologist. Coastal Geology in Vicinity of Pleasure Point
Sanders & Associates, March 8,2000	Soil Nail Wall Feasibility Study
Sanders & Asociates, April 23,1999	Sample Soil Nail and Facing Calculations
U.S. Army Corps of Engineers, November 1998	Draft Project Study, NEPA Review, Cost/benefit Analysis, Plan Alternatives and Evaluation.
Haro Kasunich, May 1998	Geotechnical Addendum addresing wave run-up, wave forces and impact issues
Fox/ Neilson, May 12,1998	Geological study addendum addressing littoral sand movement, sand production and erosion
Fox/Neilson, May 26,1998	Beach sand supply and littoral sand production

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Haro Kasunich, June 1997	Geotechnical Report Coastal Bluff Stabilization project for East cliff Drive
Fox/ Neilson, March 1997	Geological Mapping Plan View **of area** and Sections
Frank **A.** Perry, December 1996	Paleontological Study.

EXHIBIT *E*

County of Santa Cruz

REDEVELOPMENT AGENCY

701 OCEAN STREET, ROOM 510, SANTA CRUZ, CA 95060-4000

(831) 454-2280 FAX: (831) 454-3420 TDD: (831) 4542123

BETSEY LYNBERG, AGENCY ADMINISTRATOR

October 12,2006

Melissa Allen
Project Planner
Santa Cruz County Planning Department
701 Ocean Street, Fourth Floor
Santa Cruz, CA 95060

Re: East Cliff Drive Parkway and Bluff Protection Public Notification Compliance Application No. 00-0797

Enclosed are materials required to comply with the current Planning Department Public Notification Requirements for Development Permits

Since this project has been in the planning stages for quite a number of years and numerous public meetings and gatherings have been held to take public comments this documentation has focused on the most recent public meeting which was held on June 8 of this year. However, I have also included a project chronology which indicates the dates and time lines for most of the public discussions and milestones which have occurred during the course of the planning for this project.

Since the mailing list for the latest meeting contains over 2500 entries and is over 50 double sided pages, I have simply placed the list in the project files in the offices of the Redevelopment Agency, per your instructions. The list is available for review upon request.

With regard to the description of issues and concerns raised by this public for this project, I have again chosen to briefly characterize them here and have referenced the project Final EIR which contains all public comments and formal responses received during the Draft EIR comment period as required by **CEQA.**

The attached certificate documents the location and dates for the posting the project signs. Thank you for your assistance with a review of the text. I expect that this satisfies the intent of the requirements for project public notification. Please let me know if there are any questions.

Yours truly,

Paul Rodrigues
RDA Project Manager

EXHIBIT G

cc: Ralph Norberg, Senior Engineer
Betsey Lynberg, Agency Administrator

East Cliff Drive Parkway and Bluff Protection

Summary of Neighborhood Meetings 9/29/06

Process

The attached project chronology summarizes the history of neighborhood meetings and public discussions which have been held for this project. The most recent neighborhood meeting was a public workshop/open house held to review the 2006 Draft **EIR** and receive public comments. This meeting was held on June 8, 2006 at Simpkins Community Center in Live Oak. An announcement postcard in English and Spanish was sent out to over 2500 property owners and residents in the Pleasure Point area on May 6, 2006 (copy of map area attached). In addition, over 54 state, federal and private organizations received notification *of* the release of the Draft **EIR** in order that they could provide comments. Copies of the mailing lists and notification information are on file at the County Redevelopment Agency.

Issues & Concerns

Public comments and responses from the latest meeting will be contained in the Final EIR document prepared by the consultant, Tetratech Inc. Issues ranged from concerns about whether an adequate range of alternatives has been considered, to detailed issues such as location of parking areas, and types of landscape plant materials to be used. Overall comments focused on the following:

- Concern over adequate alternatives analysis.
- Support for consideration of "Planned Retreat" as an alternative.
- Improving drainage as a means to slow erosion.
- Moving the road.
- Possible environmental effects related to beach and wave formation, possible sand supply impacts.
- Construction related impacts.
- Some issues raised by members of the public and various agencies fall beyond the scope of **CEQA** requirements and additional project conditions may need to be considered. These relate to: private encroachments into the public right-of-way; whether existing traffic patterns should be changed; and the extent and need for parking.

These issues will be addressed in the Final EIR as required by the California Environmental Quality Act (CEQA) and the consultants will identify potential significant project impacts and appropriate mitigations. Upon certification **of** the Final EIR the mitigations will be implemented. For a more detailed discussion of issues, the project EIR is available on the Planning Department website. Some comments disagree with the consultant conclusions with regard to potential impacts and can be characterized as irresolvable conflicts. Primarily these relate to whether there would be any impacts to the offshore surfing conditions in this area as a result *of* the bluff armoring, the scope and extent *of* construction related impacts and their significance, and predicting possible long range impacts with regard to beach and sand conditions in the area . Some continue to believe that changes to the area would occur and would be a direct result of this project. At the same there are many members of the local neighborhood and community who support the proposal, who continue to believe that this is a valuable project and that improvements to the area are needed.

EXHIBIT G

EAST CLIFF BLUFF PROTECTION AND PARKWAY CHRONOLOGY HIGHLIGHTS

9/29/00

1994	Jan/ Feb	Larch Lane Bluff failure *BDL* Temporary one-way traffic routing and closure at Larch Lane
1995	June/July	Larch Lane Wall Design Contract *BDL/DPW*
1995	Sept/Oct	East Cliff Traffic Study *PM*
1995	November	Final eastbound East Cliff One-Way Adoption *BDL*
1996	August	Larch Lane Construction *TF*
1997	March	Status of Larch Lane Construction *PM*
1998	April	EC Task Force Meeting Status Report *TF*
1998	November	Parkway Design Workshop *PM*
2000	March	Status Report to EC Task Force *TF*
2000	April	Parkway/ Wall Project Public Comments *PM*
2000	October	East Cliff Status Report to Board *BDL*
2000	November	Status Report to neighbors *TF*
2000	December	Formal Planning Department Development Application - Parkway and Full Bluff Armoring ***RDA***
2000	December	Public Meeting for Comments (CEQA Scoping) *PM*
2001	February	Letter to Community re: EIR Scoping ***RDA***
2001	April	Public Meeting by Corps **NEPA** Scoping *PM*
2001	June	EIS/ EIR contract with Consultant ***BDL***
2002	February	Admin. Draft EIS/EIR for internal review ***RDA***
2002-3	Mar-Feb	USACE revises Draft Detailed Project Report (DDPR)
2003	March	Public Release of Draft EIS/EIR 2 public meetings held for comment (4/7/03 & 4/30/03) *PM*
2003	April	USACE applies for CC Consistency Determination, hearing delayed until final EIS/EIR Completion

EXHIBIT G

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2003	October	Final EIS/EIR completed and released to public by Planning Department
2003	November	CC Consistency Determination Public Hearing before CC - Staff recommends acceptance w/ conditions, Commission Objects *PM*
2004	March	Notice of Threat of collapse of Crib Walls *C*
2004	April/June	DPW Board Letter establishes Emergency procedures for repairs. Authorizes Design & Construction Contracts *BDL*
2004	July	Emergency Permit issued by Planning Department
2004	July/October	Construction of Emergency Crib Wall Repairs *DPW*
2005	Fall/ Winter	Consultants prepare additional geotechnical analyses and update environmental impact documents *Planning Department*
2006	May	Draft EIR release. *Planning Department*
2006	June 8	Public Workshop meeting to receive comments. *PM RDA/Planning Department*
2006	September 1	Updated project plans submitted to Planning Department. ***RDA***

Abbreviations:

C - Consultant
CC - Coastal Commission
BDL- Board Letter to County Supervisors
DPW - Department of Public Works
PM - Public Meeting for Community Input
***RDA** - County Live Oak Soquel Redevelopment Agency*
TF - East Cliff Task Force Meeting, Public Meeting

EXHIBIT G

EMERGENCY GRADING AND COASTAL PERMIT

PERMIT No.: 04-0307

County of Santa Cniz **Planning** Department
701 Ocean Street Santa Cruz, CA 95060

Telephone: (408) **454-2260**
Fax: (408) 454-2131

Department of Public Works
Owner's Name
Department of Public Works
Applicant's Name

032-251-01
Assessor's Parcel Number
(831) 454-2160
Telephone Number

701 Ocean Street. Santa Cruz, CA 95060
Address

Location of Emergency Work East Cliff Drive
33rd Avenue to 36th Avenue

Emergency Caused By Failing crib walls

Emergency Status Verified By Evaluation by Sanders and Associates Geostructural Engineering, Inc. and "Existing Crib Wall Conditions Report (see Attachment 1).

Work Authorized Repair of four failing crib walls through installation of soil nail walls (300 linear feet), and removing and replacing portions of a stairway as needed to accomulish the work. Includes approximately 733 cubic yards of grading.

IN ACCORDANCE WITH SECTION 13 20 090 OF THE COUNTY CODE, AN EMERGENCY COASTAL ZONE PERMIT **MAY** BE ISSUED FOR PROJECTS UNDERTAKEN TO PREVENT LOSS OF, OR DAMAGE TO LIFE, HEALTH, OR PROPERTY, OR TO RESTORE. REPAIR, OR MAINTAIN PUBLIC WORKS. UTILITIES, AND SERVICES DURING AND IMMEDIATELY FOLLOWING A NATURAL DISASTER OR SERIOUS ACCTDENT THE PLANNING DIRECTOR MAY REQUEST, **AT** THE APPLICANT'S EXPENSE, VERIFICATION BY **A** QUALIFIED PROFESSIONAL OF **THE** NATURE OF, AND SOLUTIONS TO, THE EMERGENCY SITUATION

CONDITIONS OF ISSUANCE:

1 Only the work specifically described above is authorized Any additional work requires separate authorization If the scope of work authorized by this permit **is** exceeded, a notice of violation resulting in civil penalties may be issued

2. At the time of issuance of this permit, the applicant shall submit a completed application, including the appropriate fees, for a regular permit Within **90 days of this permit issuance,** all required technical reports and project plans must be submitted unless the Planning Director grants a time extension. Failure to submit the required information will **void** this permit.

3. The **work** authorized by this permit **must begin within 15 days** of issuance or the permit will be voided.

4. This permit shall **expire 60 drys** after issuance

5. Other Conditions: Comply with project Conditions of Approval (Attachment 2) and accomplish all work in conformance **with** the protect plans and specifications (Attachment **3)**

Issued by Mark A. Deming
Title Assistant Planning Director

Date: July **1,** 2004

I have read the above permit conditions and limitations and agree to conform to the conditions described above

Tom Bolich
Owner

July 1, 2004
Date

Tom Bolich, Director of Public Works

EXHIBIT H

ATTACHMENT 1

SANDERS & ASSOCIATES GEOSTRUCTURAL ENGINEERING, INC.

4180 Douglas Blvd., Suite 100 • Granite Bay, CA 95746 • (916) 729-8050 • Fax. (916) 729-7706

March 24,2004
Job No. SE99-033

Post-it® Fax Note 7671	Date 3/24	# of pages 6
To Paul Rodriguez	From Bill Millhone	
Co./Dept. S.C.R.A.	Co.	
Phone # 831.454.2280	Phone #	
Fax # .3420	Fax #	

Mr. Paul Rodriguez
Santa Cruz County
Redevelopment Agency
701 Ocean Street, Room 510
Santa Cruz, CA 95060

Re: URGENT: Notice of Unsafe Conditions
East Cliff Drive Beach Retaining Walls
Santa Cruz, California

Dear Paul:

As registered Professional Engineers in the State of California, we are obligated to inform owners of any condition we believe poses a hazard to public safety. Pursuant thereto, we have prepared this letter to inform you of unsafe retaining wall structures along the East Cliff Drive bluff between Pleasure Point and the O'Neil residence.

During our site visit on March 23, 2004, we observed moderate to severe distress, including broken crib elements, loss of crib infill materials, and undermining of the wall foundndons, in the four crib type retaining walls at the site. The walls exhibiting severe distress are in the advanced phases of failure, and collapse should be considered imminent.

For rtferencc purposes, we have designated the subject crib walls as Walls 1, 2, 3, and 4, progressing from west to east. Walls 1, 2, and 4 exhibit severe distress and appear to pose a significant risk to pubhc safety (see attached photos). In our opinion, public acccss should be restricted within at least 10 feet behind, and 40 feet in front of Walls 1, 2, and 4. Wall 3 exhibits moderate distress and only the undermined concrete support for the adjacent outfall appears to be in danger of collapse. W e believe the area within at least 20 feet of the outfall should bc restricted to public access.

If you have any questions regarding this letter, please call me.

Sincerely,

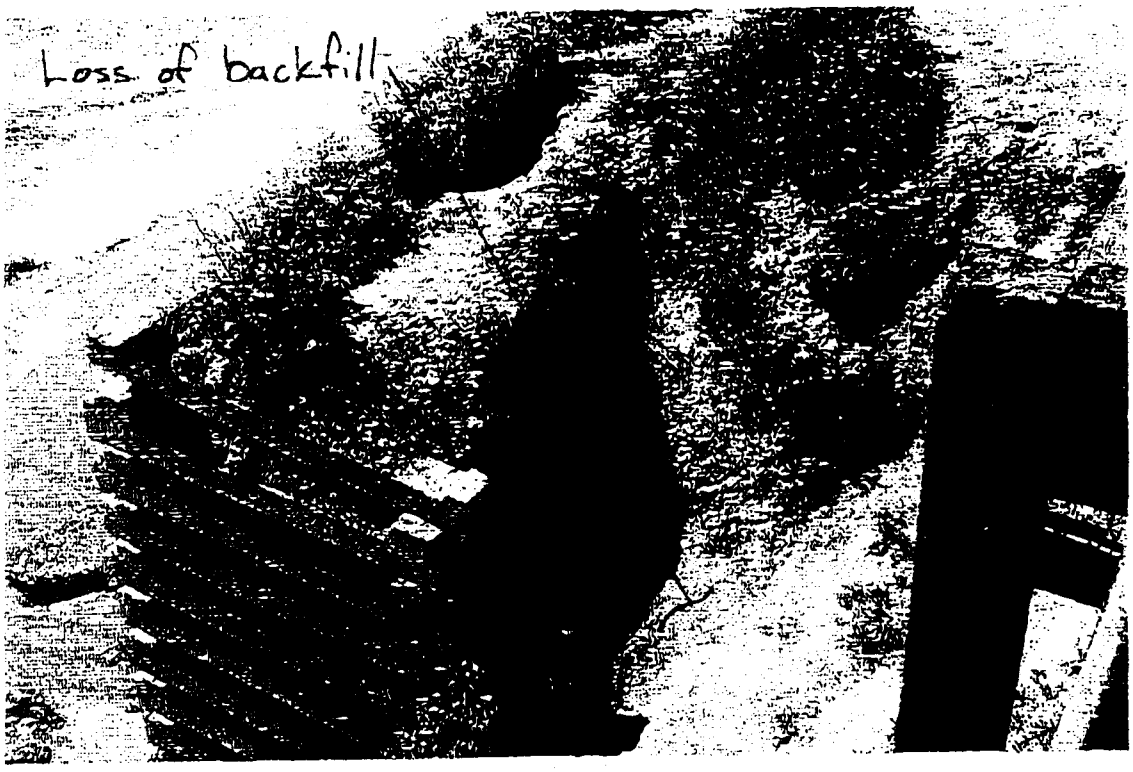
SANDERS & ASSOCIATES GEOSTRUCTURAL ENGINEERING, INC.

Steven H. Sanders, P.E., G.E. (#4[illegible])
President

REGISTERED PROFESSIONAL ENGINEER
STEVEN H. SANDERS
No. C48458
No. GE 2333
Exp. 6/07
CIVIL GEOTECHNICAL
STATE OF CALIFORNIA

EXHIBIT H
SHT. 1 OF 6

ATTACHMENT 1

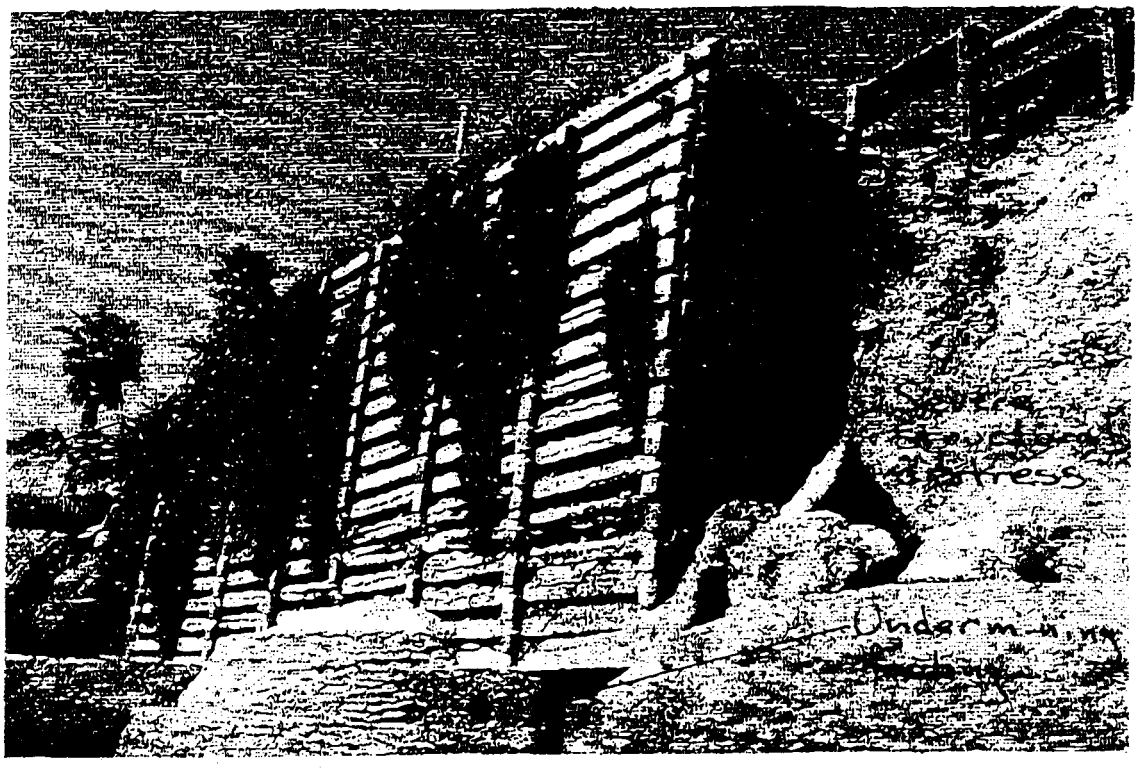


Wall #1

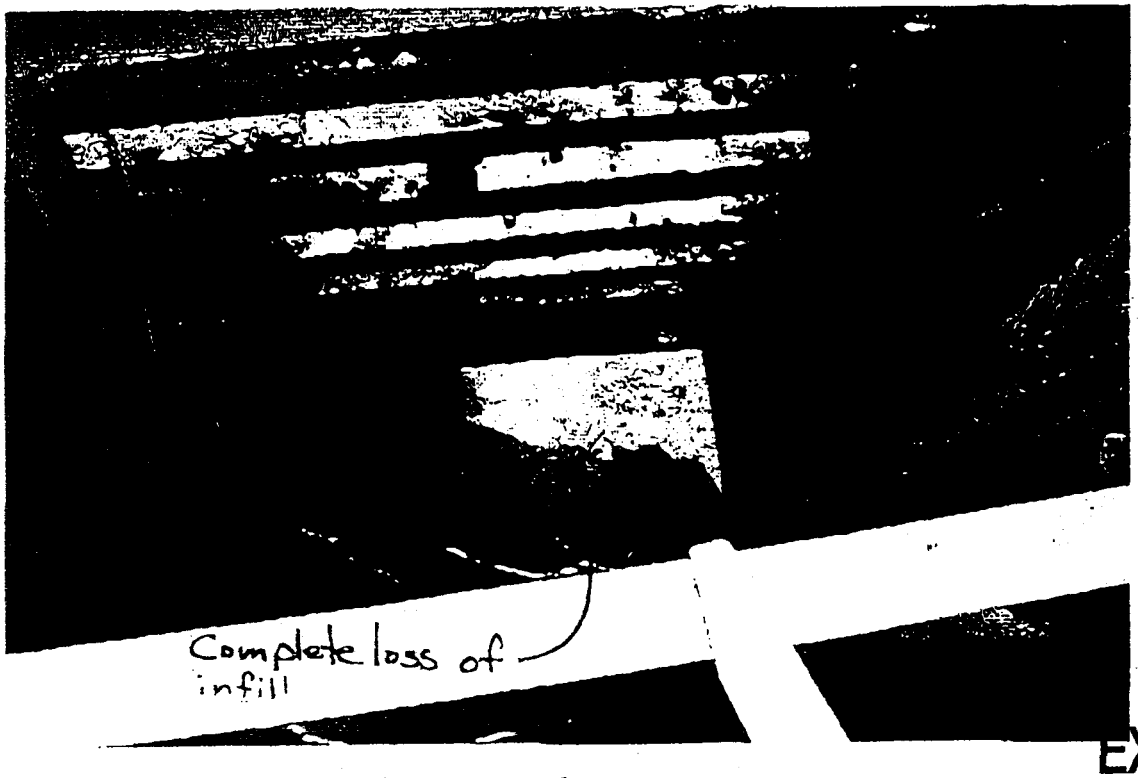
EXHIBIT H

SHT. 2 OF 6

ATTACHMENT 1



Wall # 1



Wall # 2

EXHIBIT H

SHT. 3 OF 6

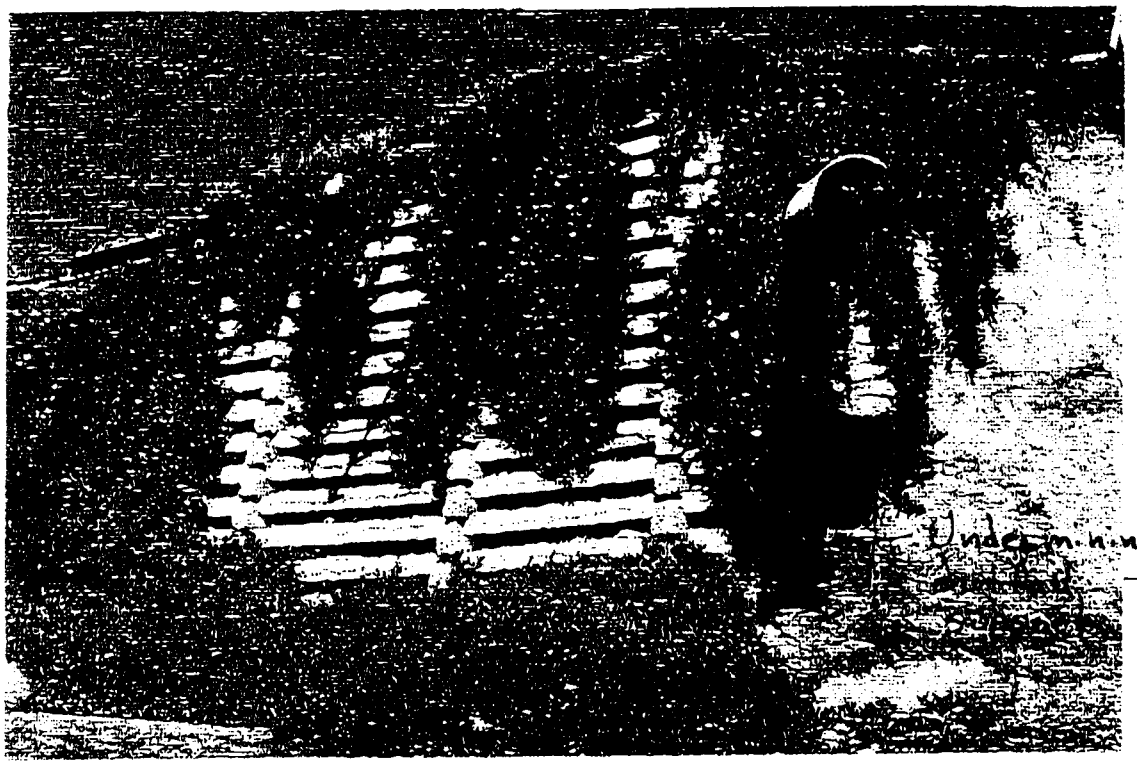
ATTACHMENT 1

Wall # 2

EXHIBIT H

SHT. 4 OF 6

ATTACHMENT 1

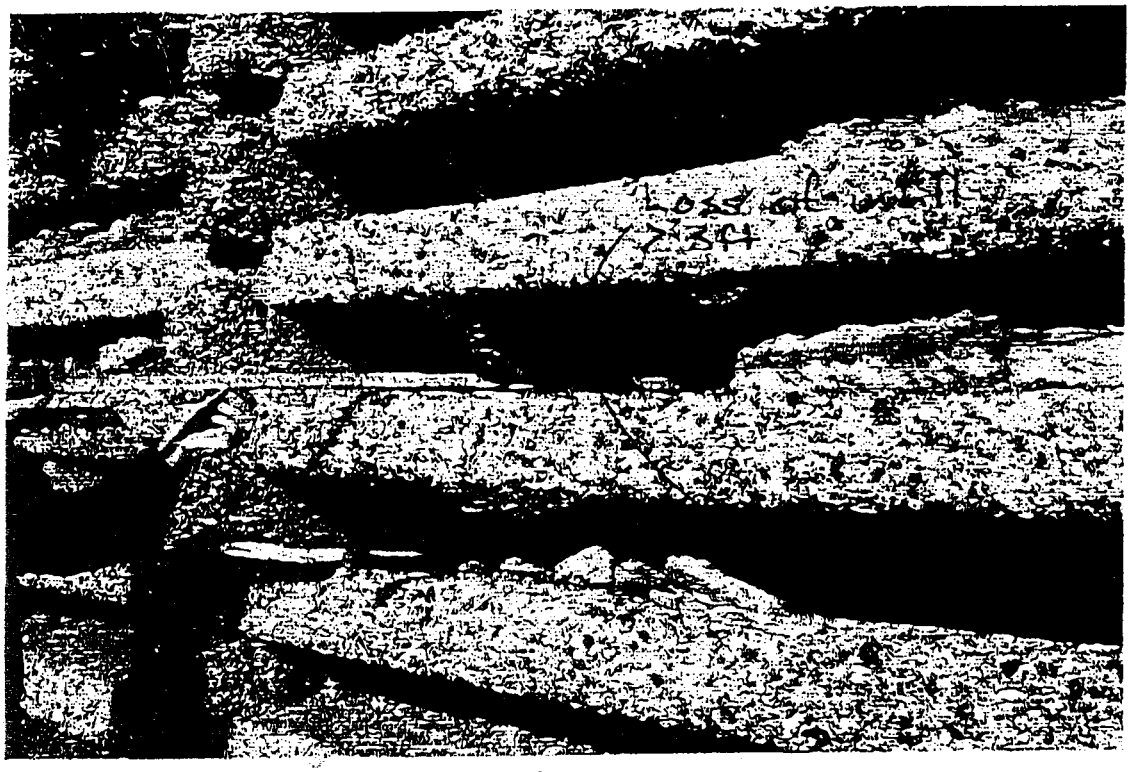


Wall #3

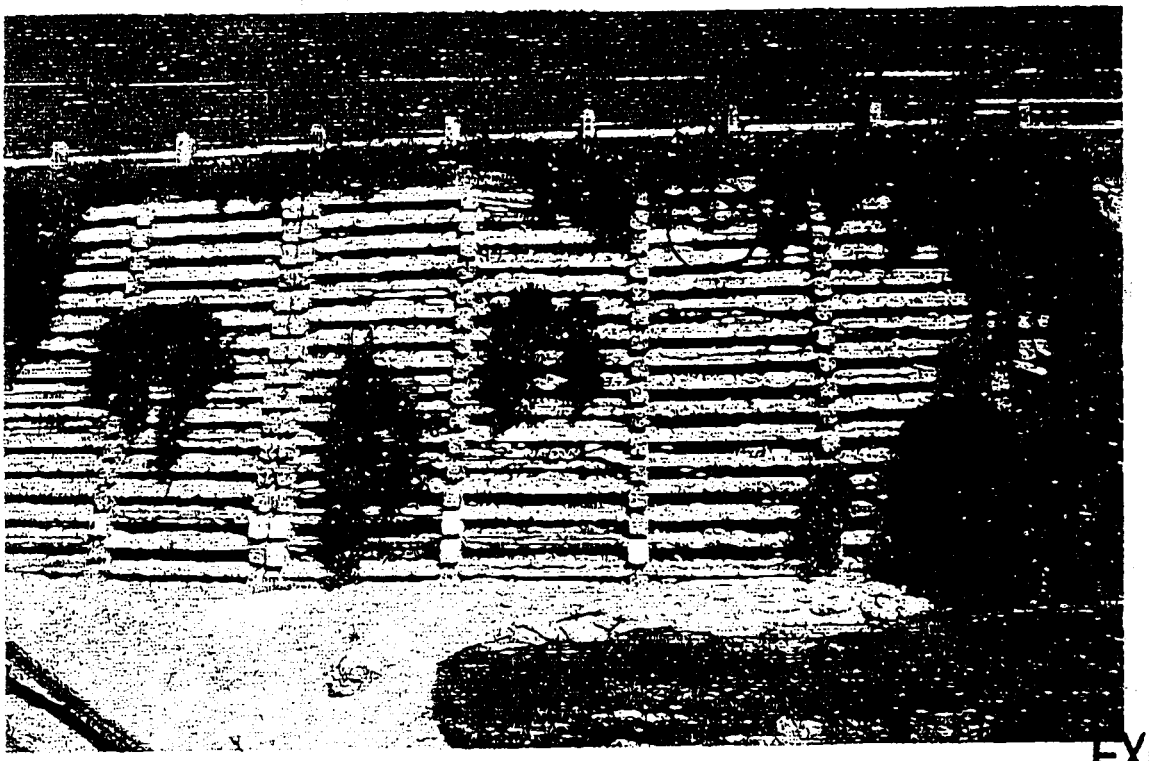
EXHIBIT H

SHT. 5 OF 6

ATTACHMENT 1



Wall # 4



Wall # 4

EXHIBIT H

ATTACHMENT 1

SANDERS & ASSOCIATES GEOSTRUCTURAL ENGINEERING, INC.

4180 Douglas Blvd., Suite 100 • Granite Bay, CA 95746 • (916) 729-8050 • Fax: (916) 729-7706

April 1,2004
Job No. SE99-033 SC-RA2

Mr. Tom Bolich
Santa Cruz County
Department of Public Works
701 Ocean Street, Room 410
Santa Cruz, CA 95060-4000

Re: **Addendum** to Notice **of Unsafe Conditions**
East Cliff Drive Beach Retaining Walls
Santa Cruz County, California

Dear Tom:

We understand that the County of Santa Cruz Redevelopment Agency and Department of Public Works are concerned about the safety measures recommended in our Notice of Unsafe Conditions, dated March 24,2004, which we feel are necessary due to the conditions of the falling crib walls along the East Cliff Drive bluff. Our recommendations included cordoning off portions of the cliffs and beach, which may prevent public access to some areas of the beach. We understand that this is not a pleasant prospect and will not be popular with beach and ocean users. Consequently, as you requested, we have prepared this letter to further clarify and expand our assessment of the unsafe retaining wall conditions described in our previous letter and explain why we feel it is imperative that these minimum safety measures be adopted to reasonably safeguard the public.

WALL CONDITIONS

The conditions of the subject crib walls have deteriorated since our last site visit on September 12, 2002, to the point that some sections of the walls have destabilized and appear to pose significant threats to public safety. Specifically, the crib elements have further weakened and, in some cases, have complerely fractured, loss of crib infill materials has continued, and the **wall** foundations have been locally undermined. **A** brief description of our observations of these walls is presented below. For reference purposes, we have designated the subject crib walls as Walls 1, 2, 3, and **4,** progressing from west to east.

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Wall 1

The crib wall foundation at the eastern end of Wall 1 has been partially undermined, and the terrace deposits adjacent thereto have been lost, effectively removing basal and lateral support for the wall. These conditions, along with the loss of infill matenals, have caused the wall to destabilize (i.e., the wall may not have enough weight to resist lateral ***earth*** forces).

Wall 2

Wall 2 is the only crib wall along the bluff founded entirely on tenace deposits. Erosion of the terrace deposits has undexnined the central portion of the wall, resulting in the complete loss of infill in one section of the crib wall. Consequently, a vertical shaft has formed and daylights in the overlying asphalt concrete. The lower crib elements have ruptured where the wall is undermined, effectively eliminating much of the bluff support in this area, and putting the wall in danger of immediate collapse.

Wall 3

Wall 3 exhibits moderate structural distress, apparently due to coxosion within the fascia, although only the undermined concrete support for the adjacent outfall pipe appears to be in danger of collapse.

Wall **4**

The loss of wall infill at Wall **4** has created voids up to 3 feet from the wall face, which has caused the wall to destabilize. In addition, the crib elements at the top of the wall have disintegrated, and are no longer retaining the infill material. Some infill material and pieces of crumbled fascia are perched precariously on facing elements, and we feel there is a significant danger of raveling rubble injuring stairway and beach users.

WALL FAILURE

We strongly feel that Walls 1, 2 and **4** ate in advanced stages of failure. Sudden collapse could be triggered by any of a number of factors, including seismic shaking, further bluff erosion, vibrations from severe storm waves or vehicles on East Cliff Dive, human interaction, and further disintegration of the wall elements. Based on our observations, it is **our** opinion that the factors of safety against structural failure of the walls are approaching **unity** in many cases. We therefore believe that collapse of Walls 1, 2 and 4 should be considered imminent (i.e., collapse could occur at any time).

POTENTIAL LOSS

Should wall failures occur, losses would include **the** elimination of the walls and the ground immediately adjacent to them. Loss of ground may also include loss of the roadway and buried utilities. Of greatest concern, however, is the immediate threat to public safety and

EXHIBIT H

ATTACHMENT 1

potential for injury or loss of life should portions of a wall fall onto someone. It is specifically because of this danger that we believe access to the areas immediately in front of and behmd the walls should be restricted as described in ow March 24th letter.

If you have any further questions regarding this issue, please call me.

Sincerely,
SANDERS & ASSOCIATES GEOSTRUCTURAL ENGINEERING, INC.

Steven H. Sanders, P.E., G.E. (#46456)
President

cc: Mr. Paul Rodrigues, Santa Cruz County Redevelopment Agency

EXHIBIT H

ATTACHMENT 1

EXISTING CRIB WALL CONDITION REPORT
EAST CLIFF DRIVE

Prepared by:

County of Santa Cruz
Redevelopment Agency &
The Department of Public Works

3/22/2004

EXHIBIT H

INTRODUCTION

PURPOSE

The County of Santa Cruz, Redevelopment Agency and Department of Public Works staff has conducted an initial investigation and assessment of the retaining structures along the coastal bluff on East Cliff drive from 33rd to 36th avenue. The evaluation will be used to aid in determining the most appropriate plan for protecting public safety within and directly below the county right of way, by preventing structural failure of the deteriorating crib walls. The condition of the existing structures has been inventoried and rated for deterioration that may be relevant to the strength and serviceability of each structure. **A** preliminary appraisal of non-conformance in geometry and deficiencies in design details with respect to current standards has been incorporated.

SITE SUBSURFACE STUDIES

The geology of the cliff in this area was defined by Cordilleran Exploration Inc. in 1983 as consisting of two distinctly different rock units. Their study was done for proposed seawall construction on adjacent up coast private property. The lower section (bottom 5-10 feet) of the cliff consists of fine-grained silty sandstones of the purisima formation. The upper section consists of sand and gravels of the first marine terrace. Cordilleran Inc characterized the highly jointed nature of the purisima layer as "susceptible to rapid wave erosion". In 1997 Haro, Kasunich and Associates Inc. further defined the soil column after sampling soil borings and testing the soil strengths. Three distinct zones were identified. The upper terrace deposits, lower terrace deposits and the purisima siltstone/sandstone layer. The lower terrace deposit begins at around 9.5 feet below the road surface. This zone contains medium dense rounded gravels that are uncemented in nature having lower shear strength than the upper deposits. Kasunich referenced the study area as "statically stable" in his 1997 geotechnical slope stability analysis. Erosion in the terrace material and slump slides caused by runoff were given as conditions affecting the bluff stability. The other cause of instability cited in this report was episodic collapse of the sandstone purisima shelf due to wave cutting and earthquakes. Kasunich recommended that the bluff be armored with structural shotcrete with grouted tendons down the face of the bluff extending 3 feet below the toe of the bluff.

FEDERAL CONSISTENCY / ARMY CORPS PROPOSED PROJECT

On November 7,2003 the US Army Corps of Engineers presented a project to the California Coastal Commission that proposed to armor the bluff from 33rd Avenue to 36th Avenue using a continuous structural shotcrete wall with grouted soil nails. The 30-foot plus wall was designed to be embedded 3 feet below the toe of the cliff. The Coastal Commission unanimously objected to the consistency determination for the proposed project due to what staff interpreted as "inadequate analysis of less environmentally damaging alternatives".

EXHIBIT H

Presently the County of Santa Cruz **RDA** staff is reviewing other shorter term armoring permutations that would have less environmental impact. This condition report will be used to help lead the Redevelopment Agency on to the next step towards a favorable design solution before failure occurs.

METHOD OF INSPECTION

On March 2nd, 2004, during a one-foot minus tide Department of Public Works staff engineers visited the site and visually inspected the structures and the surrounding bluff area from 33rd Avenue to 36th Avenue. An initial inspection of the stairway and comfort station at 36th Avenue was also performed. Photographs were taken to record the existing condition. The findings are as follows.

EXHIBIT H

CRIB WALL #1 (33rd Avenue) (fig.1)

STA 0+69.25 /12.467m R to STA 0+79.61 /10.991m R
Length = 52 feet (8 crib sections @ 6.5 feet)
Height = 18 feet (18 crib sections @ 1 foot)
Depth = 6.5 feet into slope
Batter = 1:19
Elevation difference from roadway to top of wall = about 4 feet below
Elevation difference from bottom of wall to purisima shelf = 0 feet

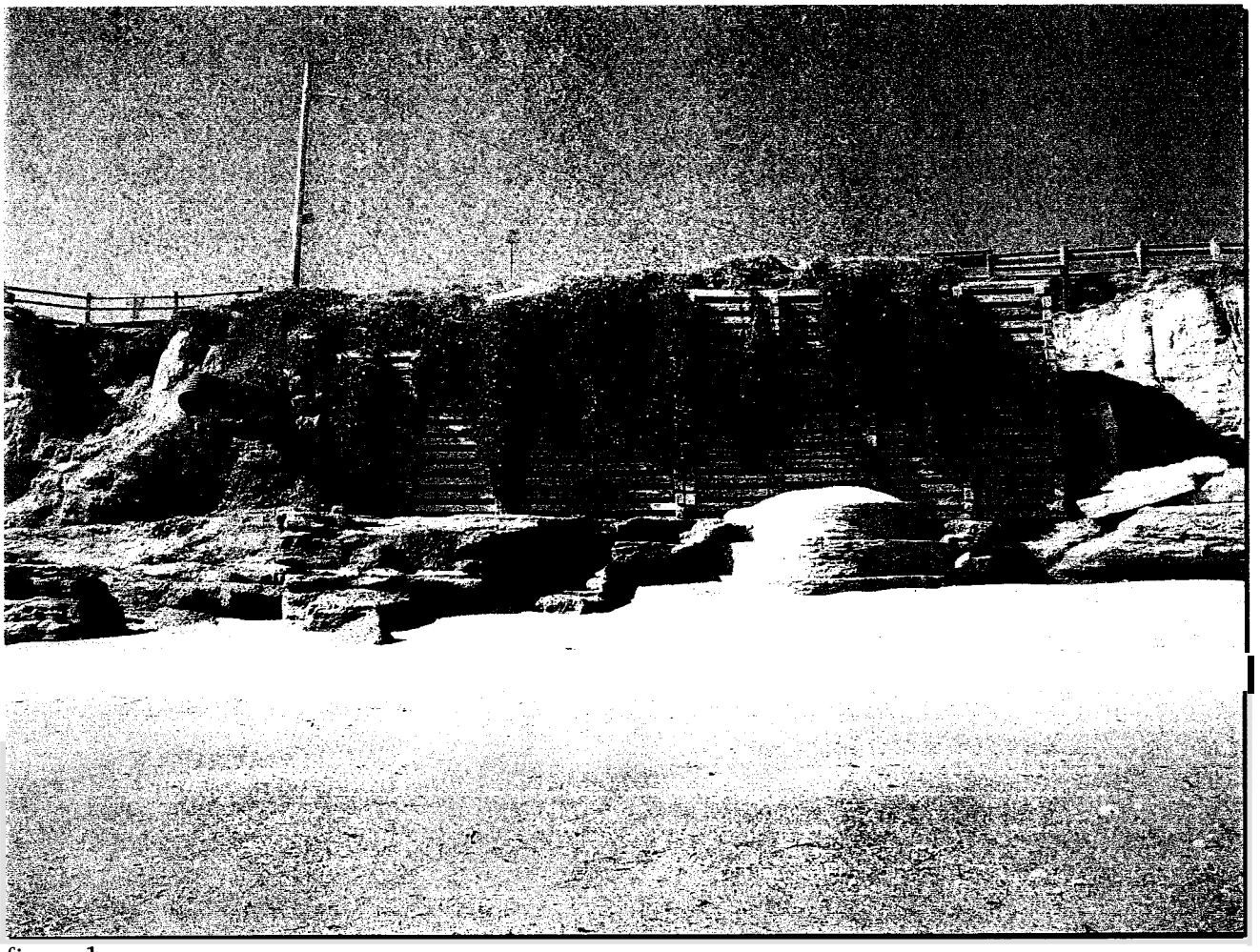

figure 1

GEOMETRY & LAYOUT

The structure consists of two individual walls butted end to end. A 26' wide by 14' high portion constructed from four 6.5' interlocking sections and a 26' wide by 18' high portion, also constructed using four 6.5' sections. The crib structure is a gravity retaining wall that uses the weight of the

EXHIBIT H

structure and the infill material to retain the uncemented bluff deposits of the upper and lower terrace. The top of the wall is located approximately 4' below the edge of pavement. The face of the wall is 25' from the edge of pavement at the western most side and 15' from the edge of pavement on the eastern most side.

FOUNDATION

The crib wall was constructed using the purisima shelf as a platform to bear the load of the wall. The toe of the wall sits at the interface between the lower terrace deposit and the sandstone purisima formation. The bearing capacity of the sandstone formation may be influenced by the highly jointed nature of the undermined shelf. On the eastern end of the wall the purisuma is eroded back leaving the corner of the crib section unsupported.

INFILL

The reinforced concrete crib sections are infilled mainly with six-inch angular imported rock. **A** portion of the fill rock has passed through the six-inch openings at the face of the wall. Voids in the fill extend back into the slope for over 3 feet beyond the wall face in a few areas. In general most of the fill is intact.

STRUCTURE HISTORY

The wall is believed to have been constructed between 1984 and 1986 (visual inspection of aerial photos, UCSC archives). No plans or as-builts could be located. The wall consists of two non-interlocking four section units. The two separate units may indicate it was expanded at a later date.

DEFICIENCIES

A few of the cribs in the bottom eastern portion of the wall sag. The cribs in this section are severely cracked with much of the steel rebar exposed and rusted through (fig. 2). The section of the steel rebar has been reduced in several of the cribs by over 50%. The purisima shelf in this area appears to have broken off after the wall was constructed, undermining the structure. **A** semi-circular, three tiered, 10'x16' concrete platform has been constructed to stabilize and act as a foundation for the wall (fig. 3). An 8.5'x1' concrete end treatment delineated in the 1996 topo survey on the east end of the wall has collapsed and is laying in pieces on the purisima shelf. **A** large void in the backfill exists where the end treatment was located. There is a three-foot diameter circular hole at the eastern end of the wall that can be seen fiom the bluff top (fig. **4).** Runoff flowing through the hole will accelerate the flushing of infill through the face openings. The extent of the concrete erosion in the crib sections appear far advanced for a 20 year old wall. It was noted that the aggregate used in the concrete is not well-graded and over 1.5" diameter (fig2). During this period County operations manufactured cribs using unskilled work crews. The manufacturing process included mix design, pouring and curing the sections. It is not know what the level of quality control was for the manufacturing process.

EXHIBIT H

DESIGN STANDARDS

Using Caltrans current standard plans (July 2002) C7-F the wall height exceeds the maximum allowable wall height for this particular wall type and loading case. This type of wall (type A, single crib section in depth) is only designed to be used to retain 14' of material given a 1:6 batter. For a vertical wall (batter=0) the maximum height would be less than 10'. Crib wall standards have not changed significantly in the last twenty years. Crib sections are designed using a minimum concrete compressive strength of 3250 psi and rebar with a tensile strength of 60,000 psi. The elements would have to be lab tested to determine the present strength of the concrete and steel used in the cribs but the degree of spalling indicates that a lower compressive strength concrete mix design may have been used to construct these cribs.

DRAINAGE

At the west end of the wall an 18-inch HDPE storm drain outlet free flows **9** feet above the purisuma shelf. This outfall was installed in 2000 to replace an 18-inch cmp that terminated above the western end of the wall. A 45-degree elbow was used as an end treatment for this pipe to protect from wave action. The pipe was designed to protrude 5 feet from the face of the bluff as recommended by Haro, Kasunich and Associate. The outlet pipe was placed in a 3.2-foot thick wrapped earth wall section that abuts a 2-foot wide cobble wall, which in turn abuts the crib wall. The earthen wall shows sign of erosion. Some erosion appears to have occurred in the purisuma layer directly below this outfall. The outfall drains the runoff from the road surface along East Cliff, 30th, 32nd and 33rd Avenues. The 25-year flow at the outfall has been estimated at 14.3 cfs. The portion flowing down from 32nd and 33rd avenues runs through advanced storm water filtration units before entering the outfall. The remainder of the runoff occumng locally at the bluff top is drained through the pervious infill behind the wall. The face of the crib wall is open allowing the water to flow through the wall with no pore water pressure build-up.

ADJACENT WASHOUT AREAS

Fifteen feet west of the wall the runoff from the bluff top concentrates into a steep ravine that flows down the slope face (fig. 5). Rechanneling the runoff by extending the wooden batter board and collecting the water into a new inlet could alleviate the situation. Thirty-eight feet east of the wall is another area with an indented purisima shelf (fig. 6). The hinge point at the top of bluff has retreated several feet into the roadway surface. Four guardrail posts are hanging in mid air. Temporary railing and dike have been installed (fig 7). The protrusion of the railing footing has created an irregular flowline where ponding water occurs during high intensity storm events.

RATING

Over 20% of the cribs are in poor condition, 10% of the crib sections are in a state of advanced deterioration. There is sufficient corrosion of reinforcement and loss of concrete section to impact strength. This wall warrants strength analysis. Significant loss of embedment on the eastern end and the loss of infill material may jeopardize the ability of the wall to resist severe wave action during extreme high tides, as well as to withstand lateral forces imposed during seismic events.

EXHIBIT H

CRIB WALL #2 (fig 8)

STA 1+10.42 / 8.506m R to STA 1+26.15 / 8.17m R

Western portion
- Length = 18 feet
- Height = 7 feet
- Depth = 6.5 feet into slope
- No Batter
- Elevation difference from roadway = 2 feet below
- Elevation difference from purisima shelf = 15.3 feet above purisima

Eastern portion
- Length = 33 feet (5 crib section @ 6.6 feet)
- Height = 9 feet
- Depth = 6.5 feet
- Batter = 1:6
- Elevation difference from roadway to top of wall = about 0.3 feet below
- Elevation difference from bottom of wall to purisima shelf = 14 feet above

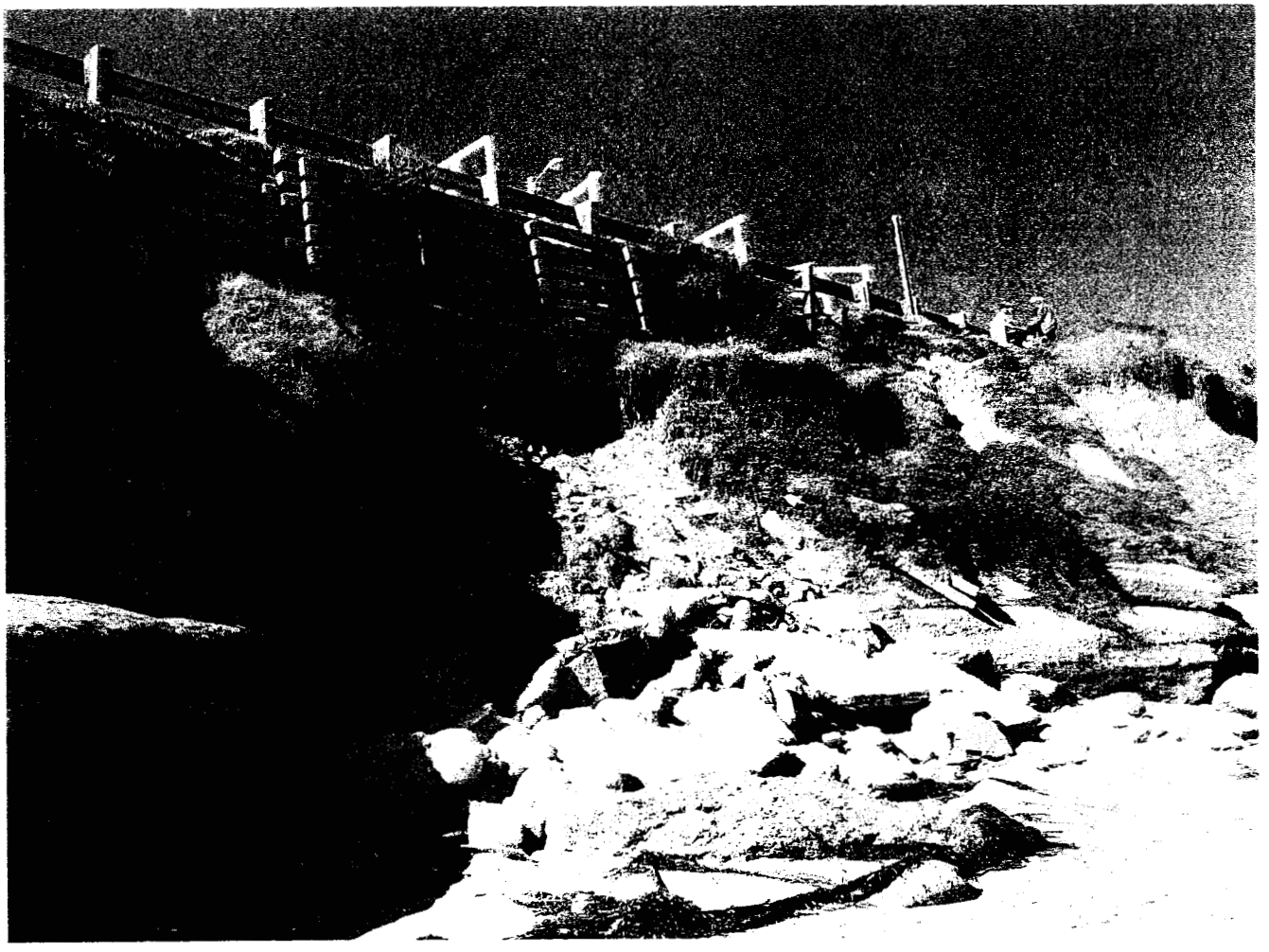

fig. 8

EXHIBIT H

GEOMETRY & LAYOUT

The structure again consists of two individual walls butted nearly end to end. The western most section is an 18.3' wide by 6' high wall constructed from three 6' interlocking sections. The second portion is 33.3' wide by 9' high made from four 8.25' sections. The walls parallel the roadway at about 2.5' off the edge of pavement. The western most section has a 20'x 1.2' wooden retaining wall at the top. The western end of the wall is 2' below the road surface. The eastern end is about 0.35' below the roadway.

FOUNDATION

The crib walls retain the upper terrace deposits. The western portion rests 15.3' above the purisima shelf, on the soil strata classified as very stiff fine sandy silt. The eastern portion sits at the interface between the upper and lower terrace deposits described as coarse silty sand, with rounded gravels. The toe of this wall is about 14' above the purisima formation. The slope below the wall at its mid point is near vertical, since the purisima shelf cuts in almost to the face of the wall.

INFILL

The crib walls are infilled with imported rock which ranges in size from two inch drain rock to quarter ton riprap. Voids in the fill extend back into the slope in one section for the entire depth of the crib (6.5').

STRUCTURE HISTORY

Plans were located that show this wall was originally designed in 1976 as part of a project to widen the road and add a bikeway along East Cliff Drive from 17th to 41st Avenue. At this location the road was widened by 4 feet on the ocean side. The plans show an eighteen-foot long wall that is six feet high which matches the wall on the western end. The other sections of the wall must have been added at a later date.

DEFICIENCIES

The condition of the concrete in the individual crib sections is good with very little deterioration, there is some cracking but no exposed rebar. The eastern portion of the wall was constructed on an unconfined soil zone that contains rounded gravels and has a very low bearing capacity. The material failed leaving no support under three of the eastern most crib sections. The eastern portion of the wall is structurally unstable. The three middle sections of the wall appear to be bridging with a large rock about to slip through. From the top you can see that one entire section is void of fill material. The back of the cribs can be seen. At the toe of the bluff there are approximately five cubic yards of recycled concrete slabs that were hauled from offsite to act as riprap at the toe since the purisima shelf was worn away in this area. The material is undersized and not interlocking. Instead of providing protection to the bluff it most likely moves around and batters the slope during high tide/ big wave periods.

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DESIGN STANDARD

The western portion is standard. The eastern portion is non-standard. The elevation of the wall is too high with respect to the roadway structural section. The asphalt for the road is located directly on the crib structure with no backfill in between. **A** minimum two foot separation backfilled with

95% compacted class II base rock is standard. The voids in the infill drain rock created an unstable base for the roadway. Most likely settlement and cracking occurred in this area creating a sump that would drain onsite road runoff. This runoff may have caused the uncemented material at the toe of the wall to slump.

DRAINAGE

There is a 6" flexible HDPE pipe near the west end of the wall. This pipe outfalls the flow from a single inlet at the edge of pavement (check).

ADJACENT WASHOUT AREA

At the top of the eastern end of the wall in the section without infill the asphalt concrete (ac) dike has broken off. **A** temporary 3' inset dike and wooden railing have been installed. This failed section extends several feet beyond the wall. Two traffic guardrail posts are unsupported.

RATING

Most of the cribs are in good condition. 20% are in fair condition with some minor cracking but no rebar exposed or surface evidence of rebar corrosion. Due to the failure at the toe of the eastern portion of the wall one crib is missing. Structurally the wall is unstable in its present unsupported condition. The purisima has eroded back into the bluff at this point. Immediate steps should be taken to support and fill the wall in order to protect the roadway from further damage and prevent this wall from becoming a hazardous pile of rubble at the base of the cliff.

EXHIBIT H

CRIB WALL #3 (35th Avenue)(fig. 12)

ATTACHMENT 1

STA 2+47.91 / 10.648m R to STA 2+53.58 / 10.357m R

Length = 18 feet (3 crib sections @ 6 feet)
Height = 15 feet (15 crib sections @ 1 foot)
Depth = 6.5 feet (1 crib section) into slope
Batter = 1:6
Elevation difference from roadway to top of wall = about 3 feet below
Elevation difference from bottom of wall *to* punsima shelf = 2 feet

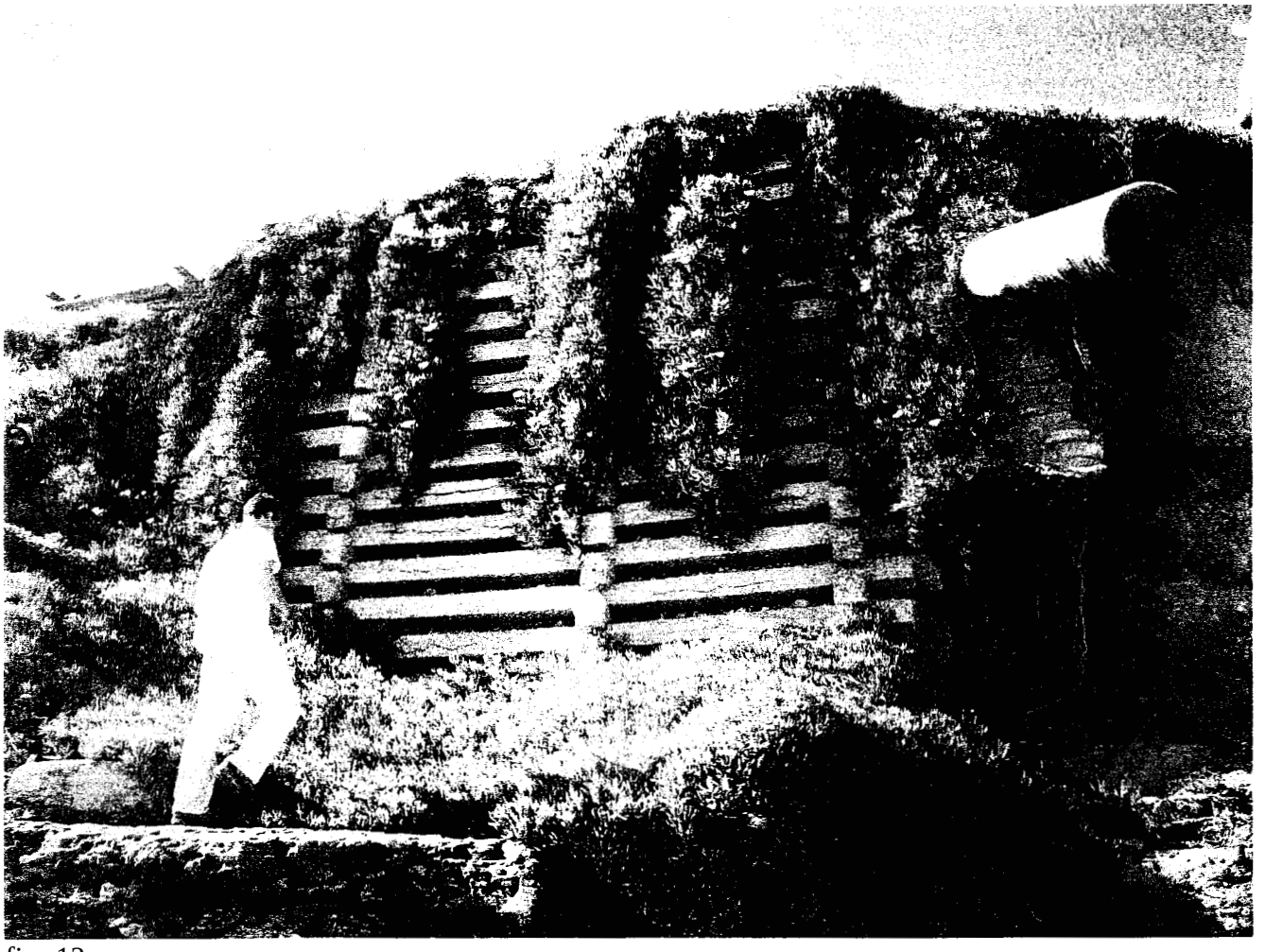

fig. 12

GEOMETRY & LAYOUT

The 18' wide by 15' high structure was constructed using three 6' interlocking concrete reinforced crib sections. The top of the wall is located approximately 3' below the road surface. The wall parallels the edge of pavement at about a 7' offset.

EXHIBIT H

FOUNDATION

The wall sets 2' above the purisima formation with a dense patch of ice plant growing at the toe.

INFILL

The crib sections of this wall are infilled with small rock from 1 to 2 inches in diameter. Voids in the infill extend back into the wall by only about 6 inches.

STRUCTURE HISTORY

No plans could be located for this particular crib wall. As part of the 1976 Bikeway widening project a G1 inlet was installed at the edge of pavement along the top of the wall. No details for the inlet or outfall were included in the plans. The wall was constructed after the 1976 bikeway project and before the 1991 RDA project that redirected the flow at the outfall.

DEFICIENCIES

The condition of the concrete in the individual crib sections is fair. Half of the cribs exhibit deep cracks longitudinal with the face. Spalling of the concrete is present and some reinforcement is exposed. The infill material is relatively undisturbed except in the area of the drainage pipe.

DESIGN STANDARD

Using Caltrans current standard plans (July 2002) C7-F the wall height exceeds the maximum allowable wall height for this particular wall type and loading case by only one foot. The wall embedment (should be 2.5' min) at the toe appears sufficient and undisturbed. Design strength of crib materials is unknown.

DRAINAGE

At the eastem side of the wall an 18-inch cmp outfall free flows 9' above the purisuma formation. The pipe protrudes 8' from the face of the wall and is set in a stone masonry wall support structure that abuts the eastern end of the crib wall. The stone portion of the wall ends 5' from the base of the crib wall and is unsupported. Most likely an earthen mound or another support structure previously existed below the stonewall that eroded away. The cmp pipe is rusted through on the entire bottom half back to the face of the wall. The drainage area for the runoff out flowing at this pipe was modified with a 1991 drainage improvement project. The pipe now drains only a portion of the roadway and a small section of the residential area on 35th avenue. The rest of the flow was diverted to the 34th or 36* avenue outfalls.

ADJACENT WASHOUT AREA

Just beyond the wall on the eastern end the slope has eroded back into the roadway with a cut of 1' plus along a 30' section. Five guardrail posts are hanging in mid air. Chunks of ac are lying on the slope below. A temporary guardrail and ac dike have been installed.

EXHIBIT H

RATING

More than half of the cribs exhibit deep cracking and some spalling with exposed rebar that shows sign of corrosion but loss of section in the concrete and steel is incidental and does not significantly affect the strength or serviceability of this wall. The presence of vegetation at the toe of this wall indicates that wave runup is not a factor jeopardizing the stability of this wall. The poor condition of the outfall pipe and its surrounding foundation is however problematic.

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CRIB WALL #4 (fig.13)

STA 3+09.58 / 10.641m R to STA 3+25.43 / 10.943m R

Length = 52 feet (8 crib sections @ 6.5 feet)
Height = 16 feet (16 crib sections @ 1 foot)
Depth = 6.5 feet (1 crib section) into slope
Batter = 1:25
Elevation difference from roadway to top of wall = about 3.2 feet
Elevation difference from bottom of wall to purisima shelf = 0 feet

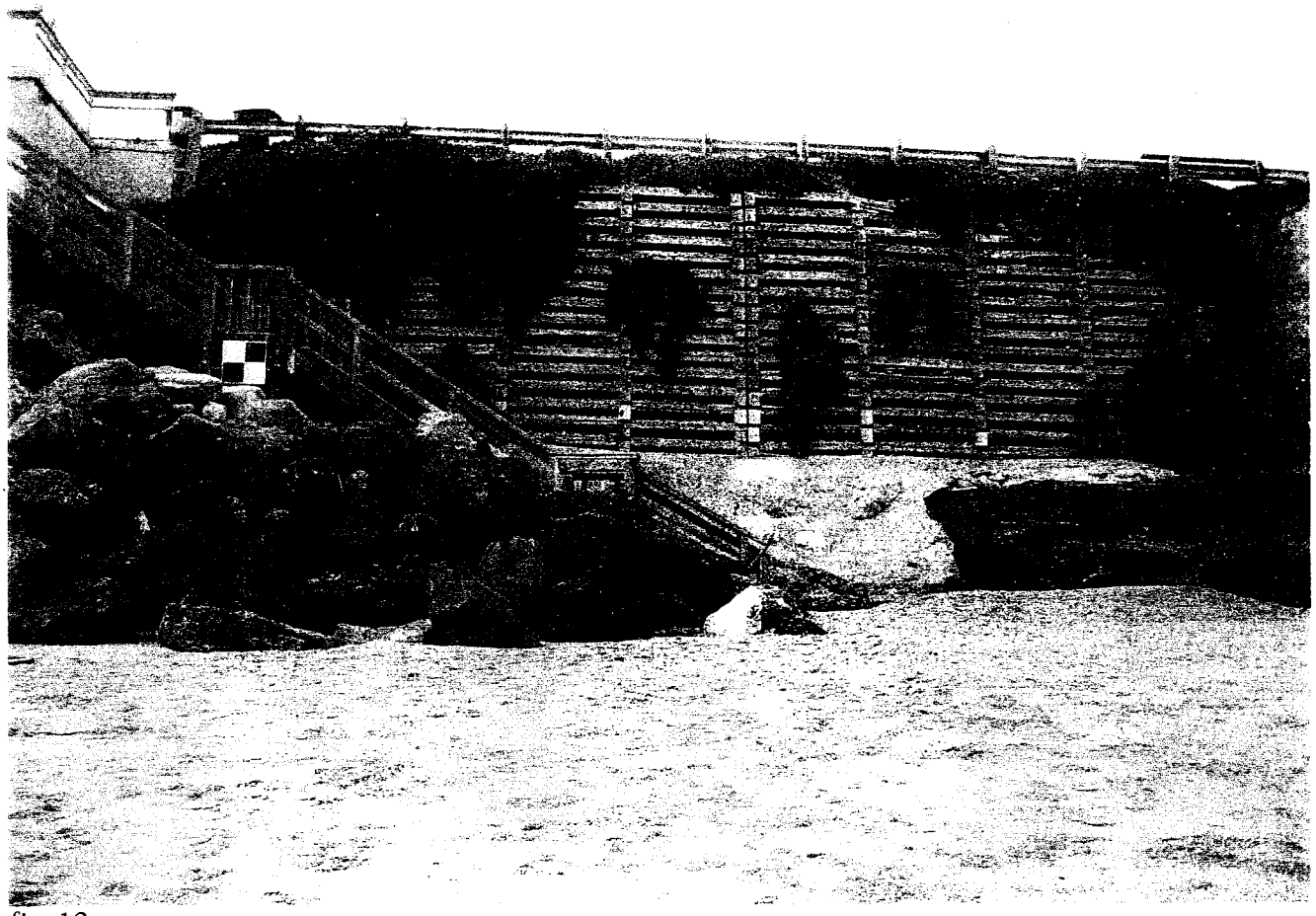

fig. 13

GEOMETRY & LAYOUT

This wall consists of two non interlocking 26' wide by 16' high structures each made from four 6.5' interlocking concrete reinforced crib sections layed out end to end. The top of the wall is located 3.2' below the road surface and runs parallel to the traveled way at an offset of 6.5' from

EXHIBIT H

the edge of pavement. The wall retains the terrace deposits directly east of the comfort station located between 35th and 36th avenue.

FOUNDATION

The wall sits on the purisima formation. The purisima has been altered in front of the middle of the wall. The shelf has been covered with an **8"** layer of concrete in the area. Several large rocks protrude from the concrete but it is not clear how far back the concrete alteration extends back into the purisuma.

INFILL

The crib sections of this wall are infilled with what appears to be native backfill. Voids in 50% of the cribs extend back into the wall by about 2 inches. In the other half of the cribs the voids are about 2 feet deep.

STRUCTURE HISTORY

No plans could be located for this particular crib wall. The comfort station was built in the sixties but no wall design plans were included. The stairway configuration for the comfort station was modified at least twice. The original design had the stairway going straight out from the middle of the structure to the beach. **A** 1989 photo shows the stairway right along the crib wall. Presently there is a jog in the railing not shown in the 1989 photo. Coastal Conservancy funds were used to re-built the stairway in 1983. The wall was constructed after the 1983 comfort station/stairway retrofit project and before the 1989 photo.

DEFICIENCIES

The condition of the concrete in the individual crib sections is poor in several of the sections but fair overall. In some of the crib sections the concrete is eroded away entirely leaving only rusted rebar in the middle. Most of the cribs are in fair condition with minimal exposed rebar but advanced concrete spalling. Voids in the infill extend back in some section by 2 feet.

DESIGN STANDARD

Using Caltrans current standard plans (July 2002) C7-F the wall height exceeds the maximum allowable wall height for this particular wall type and loading case by only two feet. The ends of the wall cannot be seen however and it is possible that this wall extends back into the roadway more than one single crib section. It is not likely however that it would have been constructed in this manor this close to the traveled way because a lengthy road closure would have been required. Design strength of crib materials is unknown. The severe erosion of the concrete indicates a low strength mix design may have been used. Also again poorly graded over sized aggregate was used in the mix.

DRAINAGE

The runoff from the area is collected by way of an ac dike that drains into an outfall at 36th avenue.

EXHIBIT H

ADJACENT WASHOUT AREAS

Seventy-five feet west of the wall above a 12-inch storm drain outfall the ac dike has broken off from the roadway. Again at a location fifty-five feet from the east end of the wall above the 18-inch 36th avenue outfall the edge of pavement has failed. At both locations temporary ac dike and wooden railing have been installed.

RATING

About 5% of the cribs are in poor condition with signs of advanced deterioration, significant corrosion of the reinforcement and severe loss of concrete section. The majority of the cribs have advanced concrete loss but little exposed rebar or significant corrosion. The wall is well supported at the foundation due to the concrete fortified purisuma platform, making it structurally stable.

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COMFORT STATION & STAIRWAY (fig. 14)

STA 2+92.75 to STA 3+16.93

Building footprint = 27.4 x 11.4 feet
Concrete slab = 34.3 x 8.5 feet
Elevation difference from roadway to top of building = 1.3 feet
Elevation difference from bottom of building to purisima shelf approx. = 12 feet

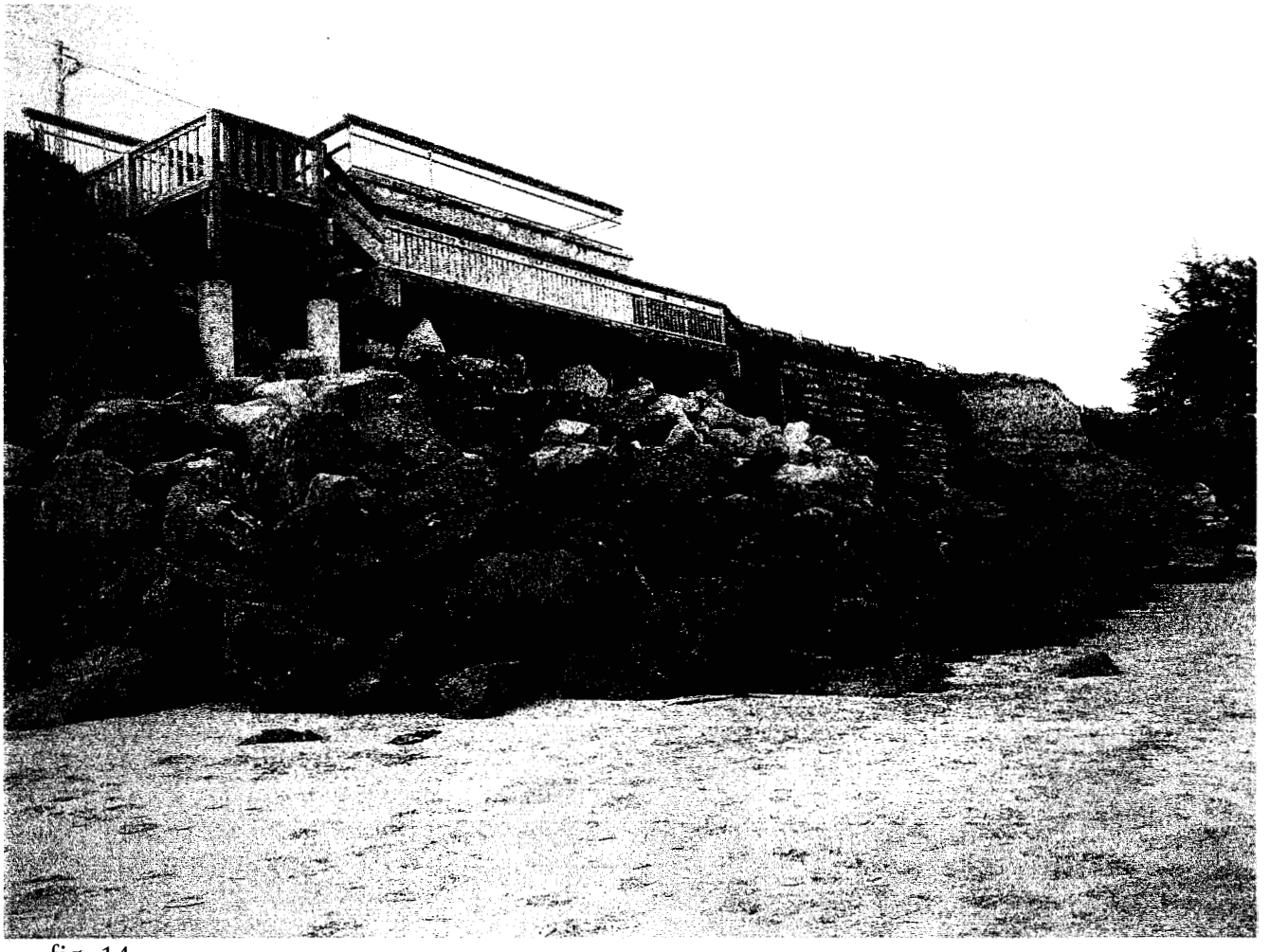


fig. 14

GEOMETRY, LAYOUT, FOUNDATION & HISTORY

A brief visual inspection was conducted of the structural elements of the stairway located at the old comfort station between 35th and 36th avenues. The comfort station is no longer in use. This stairway is the only public access to this highly used stretch of beach and should be assessed and maintained in order to allow continued use.

EXHIBIT H :

The 27.4 x 11.4 foot building was constructed parallel to the roadway at the edge of pavement. The bluff was vertically cut eight feet and a Type 2 cantilever wall was used to retain the soil and act as the back wall and back foundation for the building. A 4" x 14" grade beam running along the opposite side supports the foundation of the front of the building. The foundation was mainly built on cut consolidated material, except for the eastern comer which sets on fill material. In front of the building there is a 34.3 x 8.5 foot slab that was originally poured as a mat over both consolidated native material and engineered fill.

A storm event in 1979 destroyed the original lower stairway and caused the slab to be undercut in the fill section. The comfort station and stairway had to be closed as a result. In 1983, a new support structure for the slab and new stairways were designed and constructed. The retrofitted support is a **34.3** foot long, 12"x18" reinforced concrete girder with two cross beam pile caps at each end extending back to the original grade beam, supported by two **18"** reinforced concrete piers and two 12"x12" reinforced concrete columns equally spaced across the main retrofit beam. The retrofit girder intersects the slab so that a 3.3 foot section of the slab is cantilevered. The columns and piers were designed to be embedded into the purisima formation. Since as-builts were not located, the actual depth of the piers and columns cannot be verified.

As part of the retrofit project an entire new stairway was constructed including twelve 18" reinforced concrete piers and four reinforced concrete columns. The stairway has five sections with three wooden landings, the concrete slab at the restroom level acting as a landing and another concrete landing at the bottom anchoring the base into the purisima. The main section of stairs descending from the building level to the beach has a rise of 25 feet and a run of 45 feet. All of the wooden structural material appears to be ACZA pressure treated Douglas fir. At the base of the stairway an large unspecified amount of 3 to 5 ton rock was placed around the piers and either keyed in 3 feet or placed on the sandstone bedding. The rock was placed on filter fabric.

DEFICIENCIES

The main retrofit concrete girder has large longitudinal stress cracks at the eastern end. The reinforcement is not visible so it is difficult to determine if there is loss of steel section. Some of the cracks in the beam have been patched. The reinforced concrete pier directly below the damaged end of the beam is also cracked. These cracks appear significant. The designer of the 1983 retrofit project (Donald Ifland) inspected digital images (3/15/04) showing the structural condition of the grade beam and piers. In his opinion, the deterioration is from either lateral forces due to slumping material on the uphill side and lack of resisting support on the downhill side. Or the embedded rusting steel tubes inserted in the top of the pier may be expanding the pile from the interior and could have caused the pile to explode outward. Mr. Ifland recommended that a small core be taken at the crack so that the reinforcing steel can be inspected for level of deterioration. If not much rusting is found, he would suggest that; the cracks be epoxy injected, the steel casing be sandblasted and painted with a zinc compound, butyl rubber or urethane tubing be inserted in the space between the steel tube and the pier and that this area be caulked to prevent continued rust formation. If significant rust is present replacement may be necessary.

The concrete slab is also is poor condition. There is a longitudinal crack across the front end facing the ocean. At the crack the concrete is severely spalling and the ends of the rusted rebar exposed.

EXHIBIT H

The **ACZA** pressure treated wood under the structure is in good condition. The deck and railing wood is more worn and in fair condition. **A** majority of the steel connections including the connections at the steps are severely rusted. There is significant peeling and loss of steel section on one of the steel pier connector tubes. More than 50% of the steel **has** rusted through. The concrete slab on the side facing the beach has considerable spalling with the rebar rusted and exposed at the ends. It is recommended that a thorough structural evaluation be conducted so that the level of deterioration can be accessed to maintain public safety.

DESIGN STANDARD

Not enough detail information is available to compare the existing structural elements to current design standards. The rebar exposed in the slab appears

DRAINAGE

A 4-inch PVC storm drain runs from a floor drain located near the eastern back corner of the slab down to the purisima shelf.

RATING

Significant deterioration of the structure elements were noted during our visual inspection. How these deficiencies could affect the structural stability needs further evaluation by a registered structural engineer before a determination can be made about the present and future serviceability.

EXHIBIT ti

ATTACHMENT 2

Conditions of Approval
East Cliff Dr. Emergency Coastal and Grading Permits
(Application 04-0307)

1. **All** work shall conform to the project plans prepared by The Department of Public Works and SAGE Geostructural Engineering Inc. dated June 8,2004, and accompanying Special Provisions.

2. **A** construction plan shall be submitted to the Planning Department for review and approval prior to the initiation of construction. All construction shall be strictly confined to the areas shown on the approved plan.

3. Construction activities shall be limited to the hours of 8:00 am to 5:00 pm weekdays, unless a change to this scheduled is approved in writing by the Planning Director. No work shall occur on holidays.

4. **A** pre-construction meeting shall be held prior to any ground disturbance and shall be attended by representatives of both prime contractors (foreman, superintendent, and representatives of any major subcontractors), and representatives from the Redevelopment Agency, the Department of Public Works, and the Planning Department. Notification of this meeting shall occur at least 48 hours in advance and shall be provided by the Department of Public Works.

5. Traffic shall be routed around the project area according to the Traffic Control Plan, prepared by The Department of Public Works, dated May 28th, 2004 (sheet 12 of project plans).

6. The contractor shall submit a Detailed Local Traffic Control Plan including a Local Detour Plan to address periodic construction-related lane closures to the Department of Public Works for review and approval at least 5 days in advance of any such lane closures.

7. **A** five foot wide pedestrian walkway/ bicycle path shall be kept open at all times.

8. **All** construction shall be staged from above and no equipment or machinery, with the exception of hand-operated equipment, shall be allowed on the beach.

9. Stockpiling of excavated material will not be allowed on the beach.

10. Exposed dirt surfaces shall be wetted down periodically to minimize dust generation during construction.

EXHIBIT H

ATTACHMENT 2

11. To minimize the amount of dust generated by drilling operations, an injection bore anchor system shall be used. This system results in simultaneous drilling and grouting of the soil nail bore holes and greatly reduces dust generation.

12. No overburden or wet cement shall be allowed to enter the marine environment. Authorization to begin drilling or shotcrete operations will not be given until the contractor has demonstrated the ability to fully contain grout backwash and shotcrete overspray.

13. The walls shall be colored and textured to match the adjacent bluff conditions.

14. Bare areas resulting from construction activities shall be treated according to the erosion control notes included on Sheet 1 of the project plans.

EXHIBIT ti

EXHIBIT H
ATTACHMENT 3

EAST CLIFF DRIVE 33RD AVENUE TO 36TH AVENUE
EMERGENCY REPAIRS AT EXISTING CRIB WALLS
PERMIT 04-0307 - PROJECT PLANS AND SPECIFICATIONS

(PLANS ATTACHED WITH EXHIBIT E - PROJECT PLANS)
(SPECIFICATIONS/SPECIAL PROVISIONS ON FILE IN PLANNING DEPARTMENT)

EXHIBIT H

ATTACHMENT 3

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS

SPECIAL PROVISIONS

NOTICE TO CONTRACTORS

PROPOSAL AND

CONTRACT

FOR CONSTRUCTION OF

A REDEVELOPMENT AGENCY FUNDED PROJECT

EAST CLIFF DRIVE
33RD AVENUE TO 36TH AVENUE
EMERGENCY REPAIRS AT EXISTING CRIB WALLS
FINISH FACING

FOR USE IN CONNECTION WITH
STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED JULY 2002,
AND STANDARD PLANS DATED JULY 2002

BIDS OPEN: JUNE 4,2004

EXHIBIT H

CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION

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

Application Number: 04-0307
Assessor Parcel Number: Not APN specific (small portion within APN 032-251-01)
Project Location: Within the East Cliff Drive right-of-way between 33rd and 36th Avenues

Project Description: Proposal to repair four crib walls in emergency failing condition through installation of soil nails (walls), shotcrete facing, and finish facing with sculpting and staining (total 300 linerar feet); removing and replacing portions of a stairway as needed; and approximately 733 cubic yards of grading. The project requires an Emergency Coastal Permit, Emergency Grading Permit, regular Coastal Permit and regular Grading Permit.

Person or Agency Proposing Project: County of Santa Cruz, Department of Public Works, Attention Ralph Norberg

Contact Phone Number: (831) 454-2160

A. ____ The proposed activity is not a project under CEQA Guidelines Section 15378.
B. ____ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060(c).
C. ____ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.
D. X **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

Specify type: CEQA Guidelines Section 15269 – Emergency Projects
(Public Resources Code 21080(b) – Emergency Action)

E. ____ **Categorical Exemption**

F. Reasons why the project is exempt:

Necessary actions to prevent a health and safety emergency that include emergency wall repairs to maintain public service facilities necessary to maintain service for the East Cliff Drive public roadway.

Melissa K. Allen Date: 7/1/04
Melissa Allen, Project Planner

EXHIBIT H

SAGE

SANDERS & ASSOCIATES GEOSTRUCTURAL ENGINEERING, INC.

4180 Douglas Blvd., Suite 100 • Granite Bay. CA 95746 • (916) 729-8050 • Fax: (916) 729-7706

March 28,2005
Job No. SE99-033 SC-PW

Mr. Torn Bolich
santa Cruz County
Department of Public Works
701 Ocean Street, Room 410
Santa Cruz, CA 95060-4000

Re: **Final Letter: Emergency Repairs at Existing Crib Walls**
East Cliff Drive between 33rd and 36* Avenues
Santa Cruz County, California

Ref:

1. *Construction Drawings, Emergency Repairs at Existing Crib Walls, East Cliff Drive, 33rd to 36th Avenue, for County of Santa Cruz,* prepared by Sanders & Associates Geostructural Engineering, Inc., dated May 28,2004, Sheets 2 – 10.

2. *Addendum to Notice of Unsafe Conditions, East Cliff Drive Beach Retaining Walls*, prepared by Sanders & Associates Geostructural Engineering, Inc., dated April 1,2004.

Dear Tom:

This letter summarizes our on-site observation services for the emergency crib wall repairs performed between 33rd and 36th Avenues along East Cliff Drive in Santa Cruz County. The repair work for Walls 1, 2, & 4 (numbered sequentially from west to east) included the application of a sculpted, stained, and textured reinforced shotcrete facing over the crib wall facings and flanks, and the installation of "injection anchor" type soil nails extending approximately 20 feet behmd the shotcrete facing, as shown in the emergency repair construction drawings (Ref. 1). Repairs at Wall 3 included the construction of a reinforced shotcrete "fillet", anchored by two injection-anchor soil nails, beneath the storm *drain* outfall adjacent to the eastern *flank* of the crib wall.

Presented herein is a *summary* of the observations made by Sanders & Associates Geostructural Engineering, Inc. (SAGE) field personnel during the performance of *our* on-site construction monitoring services.

PRE-REPAIR CONDITIONS

The wall conditions we observed during the emergency repairs were generally consistent with the conditions discussed in our addendum to the Notice of Unsafe Conditions (Ref. 2). However, in some cases the extents and severity of the structural distress revealed during the clearing/grubbing and demolition phases of the project exceeded that previously observed. These addiaonal observations are as follows.

EXHIBIT H

Wall 1

Upon clearing of the ice plant from the face of Wall 1, we observed that the tops of the western and eastern halves of the crib wall (placed adjacently, but not apparently connected) were not **flush.** Instead, the top of the eastern section of crib wall projected approximately 6 inches past the top of the western half, which is consistent with an incipient overturning or "rotational" failure of the eastern pomon of the wall. In addition, unanticipated voids were indicated behind the crib structure, evidenced by larger-than-anticipated quantities of grout being injected into the retained matenals during installation of the soil nails (with grout volumes exceeding 35 cubic feet per nail in some cases). In **our** opinion, the voids indicated by the large grout takes are consistent with transport of crib infill and terrace deposit material through the face of the wall due to wave action and/or groundwater seepage.

Wall 2

When repairs were begun at Wall 2, the crib wall had been undermined to such an extent that one crib section had already experienced a complete loss of infill (documented in our notice of unsafe conditions), and a similar loss of infill from an adjacent crib appeared imminent. In addition, unanticipated voids were encountered behmd the crib structure at Wall 2, apparently similar in general sizes and extents to those encountered at Wall 1.

Wall 3

No measures were undertaken at Wall 3 to strengthen or shore the crib facing. However, upon removal of the mortared-rubble outfall support immediately east of the wall, the exposed bluff materials were found to comprise a very loose gravel/cobble backfill, which was subject to significant raveling upon even slight disturbance. Due to this condition, we elected to install two soil nails adjacent to the east end of Wall 3, as well as a layer of primary shotcrete facing. Local voids within the loose backfill were back-grouted through an open hole drilled from the top of the bluff after installation of the shotcrete facing.

wall 4

At the time repairs were begun at Wall **4,** the condition of the crib wall had not changed significantly from that noted in our notice of unsafe conditions, although some minor additional deterioration of the already severely corroded facing elements was evident, particularly at the top edge of the wall. During installation of the soil **nails,** unanticipated voids were encountered behind the crib structure at Wall **4,** apparently similar in general sizes and extents to those encountered at Walls 1 and 2 (with grout volumes exceeding 35 cubic feet per nail in some cases).

Groundwater Seepage

The voids indicated behind Walls 1, 2, & 4 are consistent with the progressive loss of bluff materials through the crib wall facings due in part to groundwater seepage. We understand that significant seepage has been observed across the face of the East Cliff Drive bluff

EXHIBIT H

that significant seepage has been observed across the face of the East Cliff Drive bluff during previous winters. To reduce the build-up of hydrostatic pressures from seepage the contractor has installed horizontal drains extending into the terrace deposits behind Walls 1 and 4, per detail 8, sheet 9, of the project construction drawings (Ref. 1).

AS-BUILT CONDITIONS

Our final construction observation site visit, attended by Paul Rodrigues and Julie Watson, with the County of Santa Cruz, and Bill Millhone of SAGE, was conducted on December 17, 2004. At that time both the soil nail contractor and finish facing contractor had demobilized from the site.

In general, the repair structures at each wall location appeared to be in good condition and performing well. Our observations and comments with respect to some specific aspects of the as-built repair conditions are summarized below:

Wall 1

- There is some minor *soil* erosion along the west edge of the wall facing and some moderate erosion at a steep "goat trail" in the terrace deposits approximately 10 feet west of the facing. Seeding or placing seeded erosion control mats in these areas would help to mitigate such erosion.

- The portions of the metal traffic barrier removed behmd the crib wall during construction have been replaced in kind.

- The pavement in the Wall 1 staging area has been repaired/patched with an asphaltic concrete (AC) slurry seal, approximately 12 feet wide, and a new AC curb has been constructed at the edge of pavement behind the wall.

- The soil berm above and behmd the crib wall, which was partially removed during construction, has been replaced with compacted fill mated. The replaced berm appears to be slightly wider and slightly higher than the original berm.

- Seeded coconut coir erosion control material has been stapled to face of the slope above the wall face.

- A new rough-hewn wooden split rail fence has been placed near the top of the soil slope above the wall. The type and dimensions of the new fence appear nearly identical to those of the fence already in place at Pleasure Point prior to construction. During our site visit, we brought to the attention of the County representatives that the height of the fence is less than 42 inches, which is the California Building Code (CBC) recommended height for handrails typically required for a location such as this. However, we understand that the as-built dimensions of the fence are acceptable to the County for the subject application.

EXHIBIT H

- Some of the weephole outlets in the shotcrete facing appear to be partially blocked with shotcrete. This blockage should be removed from the weep holes to help ensure wall serviceability.

- There exists a zone of minor efflorescence, approximately 3 to 4 inches wide, along the toe of the shotcrete facing.

Wall 2

- There is some minor soil erosion immediately along the west edge of the wall facing. Seeding or placing seeded erosion control mats in this area would help to mitigate such erosion.

- The pavement in the Wall 2 staging area has been repaired/patched with an AC slurry seal, approximately 10 feet wide, and a new AC curb has been constructed at the edge of pavement behind the wall.

- The top surface of the concrete used to fill an empty crib within Wall 2 remains partially exposed and unstained. While this condition does not pose a structural threat to the wall, the appearance of the wall would be improved by staining this concrete, or covering the concrete with an AC slurry seal.

Wall 3

- The PVC replacement pipe, extending from the drop inlet behind Wall 3 to the face of the bluff, has apparently been grouted within the original CMP sleeve, but has not been attached to the upper end of the CMP with lag screws as was recommended to the drilling contractor during construction. In our opinion, there is little danger of the PVC pipe becoming dislodged from its housing if it has been completely grouted within the CMP. However, the installation of 3 or 4 galvanized lag screws to anchor the PVC outfall pipe is recommended as an additional safety measure.

- The blue interior of the new PVC outfall pipe is plainly visible from the beach, which detracts from the appearance of the repairs. Treating the interior of the pipe with a PVC compatible paint or stain would improve this condition significantly.

wall 4

- The pavement in the Wall 4 staging area has been repaired/patched with an AC slurry seal, approximately 12 feet wide, and the AC curb at the edge of pavement behind the wall has been repaired.

- Seeded coconut coir erosion control mated has been stapled to face of the slope above the wall face.

EXHIBIT H

- Some voids exist in the shotcrete facing beneath several of the weep hole outlets. Based on our observations, the voids do not appear to threaten the structural integrity of the wall. We recommend, however, that the voids be cleaned out and filled with a suitable construction grade concrete epoxy to help secure the weep hole pipes and prevent the accumulation of saltwater and debris within the voids.

- Some of the weep hole outlets are partially blocked with shotcrete overspray. This blockage should be removed from the weep holes to help ensure wall serviceability

- White PVC pipes, which unfortunately were not removed by the contractor as prescribed in the plans, are visible at several weep hole outlets due to inadequate shotcrete cover. This detracts from the appearance of the repairs. Treating the interior of the pipes with a PVC compatible paint or stain would help conceal the outlet pipes.

- The shotcrete projections provided at the top of the eastern wingwall do not extend far enough up the face of the terrace deposit slope to divert a significant amount of water over the face of the wall. This condition does not pose an immediate threat to the integrity of the repairs. However, erosion along this edge of the shotcrete facing will progress faster than in areas where water is intercepted more efficiently, unless this area is seeded or provided with erosion mitigation matenals such as coconut coir matting.

- The portions of the wooden stairway removed near the comfort station during construction have been replaced and fitted with new stainless steel lag screws in the ends of the step boards.

- The eastern edge of the lower comfort station landing slab has been patched with concrete to repair some minor spalling/chipping that occurred during construction.

CONCLUSION

Based on our on-site observations, it is our opinion that the emergency crib wall repairs performed in connection with this project have been performed in general conformance with the intent of the emergency repair plans and specifications.

As stated on the plans, the emergency crib wall repairs are intended to provide immediate, local crib wall stability and flank protection for the current configuration of the coastal bluff. The subject repairs will not prevent or delay undercutting of the Purisima Formation bedrock, nor the continued retreat of unprotected marine terrace deposits. Without additional protection of the bluff, continued erosion will eventually destabilize the repaired structures, and further action will be required.

MAINTENANCE

EXHIBIT H

The dimensions, shapes, and material constituents of the subject repair structures were designed to provide reasonable resistance to erosion, abrasion, impact, and salt attack. However, as with any structure in a coastal environment, the repair structures should be regularly monitored and maintained to help preserve proper serviceability. We recommend that the County implement a maintenance program for the subject repairs, consisting of regular observation of the exposed portions of the repair structures and, when necessary, repairs thereto. Specifically, the shotcrete soil nail facings should be checked for:

- Cracking
- Spalling or chipping
- Rust staining
- Clogged weep hole outlets
- Sudden or extreme changes in color
- Excessive or progressive erosion near the facing edges
- Progressive undermining or scour beneath the walls
- Graffiti/vandalism

A qualified person should perform observation of the repair structures at least once annually, with supplemental observation after earthquakes that result in strong to very strong ground shaking at the site, or particularly severe storm events. Any distress or changes such as those listed above should be photographed and documented in **writing,** noting locations and extents. Items noted during observation should be evaluated with respect to the need for repair/ maintenance. When repair or maintenance is required, it should be performed in a timely fashion.

We have enjoyed working with the County of Santa Cruz on this project, and look forward to working with the County in the future. Please let us know if we can be of further assistance, or if you have any questions or comments regarding this letter.

Sincerely,
SANDERS & ASSOCIATES GEOSTRUCTURAL ENGINEERING, INC.

REGISTERED PROFESSIONAL ENGINEER
W. L. MILLHONE
No. C62051
Exp. 9/05
CIVIL
STATE OF CALIFORNIA

W. L. Millhone, P.E. 62051
Senior Engineer

cc: Ms. Betsey Lynberg, Santa Cruz County Redevelopment Agency
Mr. Ralph Norberg, Santa Cruz County Department of Public Works
Mr. Paul Rodrigues, Santa Cruz County Redevelopment Agency

EXHIBIT H

CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ. CA 95060
PHONE (831) 427-4863
FAX (831) 4274877

March 18,2005

Tom Burns, Director
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz, **CA** 95060

Subject: **Coastal Permit Review Process for East Cliff Drive Parkway and Seawall Project at Pleasure Point**

Dear Mr. Burns:

As you know, the County issued emergency coastal development permit 04-0307 on July I, 2004 for seawall work fronting East Cliff Drive at Pleasure Point in four separate locations. Since that time, staff from my office and from the County, including the Planning Department and the Redevelopment Agency, have had a series of meetings and conversations regarding the most appropriate means to review the required follow-up regular coastal development permit (CDP). The purpose of this letter is to summarize the outcome of those discussions for the record.

As we have discussed, the County is in the process of refining their seawall application for the larger (than the emergency work) area, and combining that as an integrated single project with the East Cliff Drive Parkway improvements. In light if this, **we** believe that that the most appropriate tack to take at this point is for all of the combined project to be reviewed at the same time. In this way, the issues raised by the previously proposed seawall can be understood and evaluated comprehensively, and in relation to the proposed Parkway improvements, as opposed to something more piece-meal. We understand the County to be actively developing information for such an overall application at current time.

Thus, we recommend that you extend the time frame within which to act on the follow-up CDP though July i, 2005 as allowed per Local Coastal Program Section 13.20.090(b). We note that the County is proceeding with due diligence towards perfecting an application for the overall project, and understand that additional time is necessary to complete those efforts. It thus seems reasonable that the deadline date could again be extended if needed. We can coordinate and better assess that in the next several months.

In any case, we look forward to working together to bring this matter to resolution as soon as possible, and my staff is available, within existing time constraints, to work with the County in that regard. We appreciate the County's willingness to recast the project and pursue it in this way, and believe that it will ultimately be in all of our best interests, including that of the keenly interested public, for the project review to proceed as described here. **As** always, if you have any questions or would like to discuss this matter more thoroughly, please don't hesitate to contact me at the address and phone number above.

Sincerely,

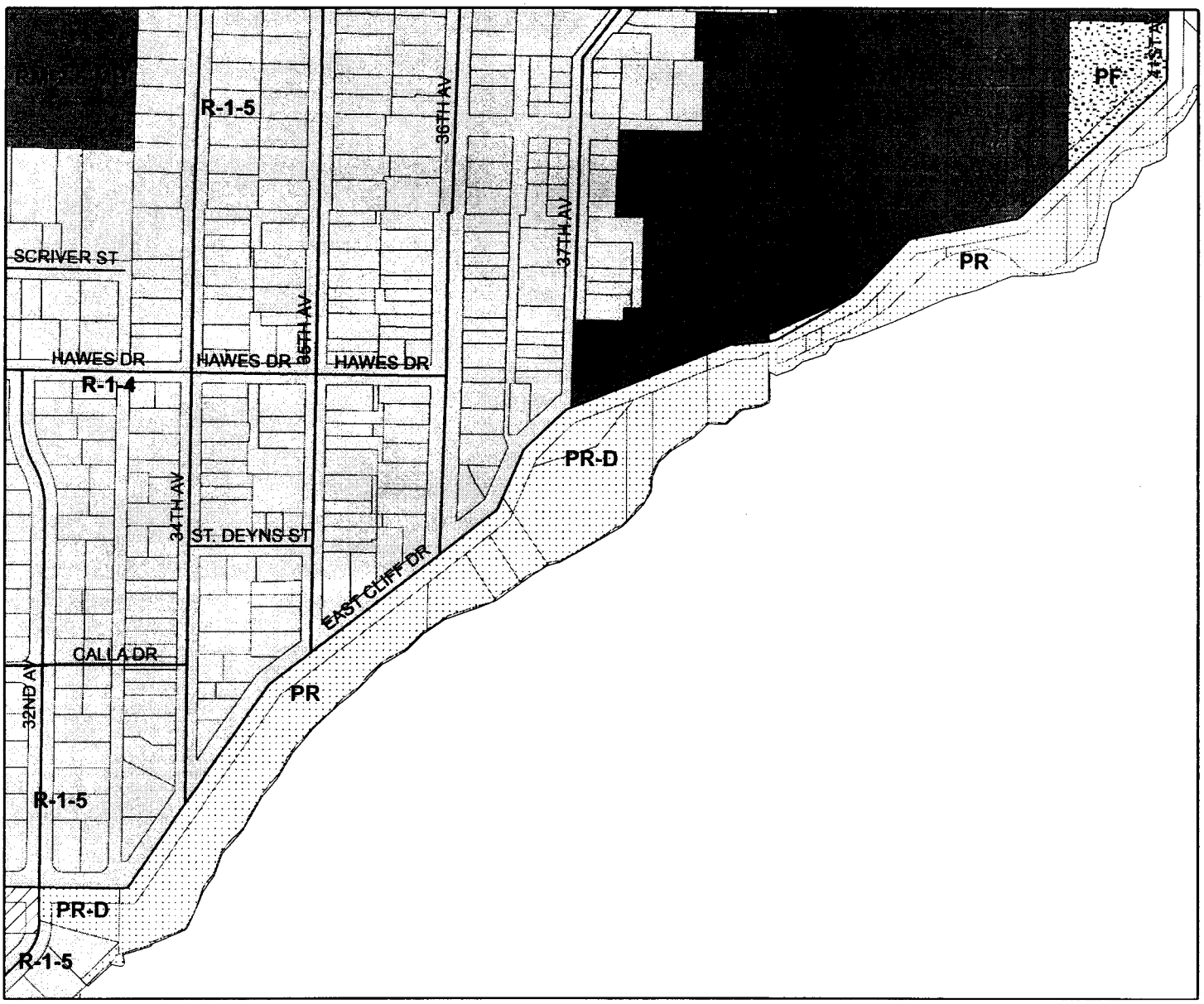
Diane Landry

Diane Landry
Central Coast District Manager
California Coastal Commission

cc: First District Supervisor Jan **Beautz**
Betsey Lynberg, Director, **Santa** Cruz County Redevelopment Agency
Tom Bolich, Director, Santa Cruz County Public **Works** Department

EXHIBIT 1

Zoning Map



Legend

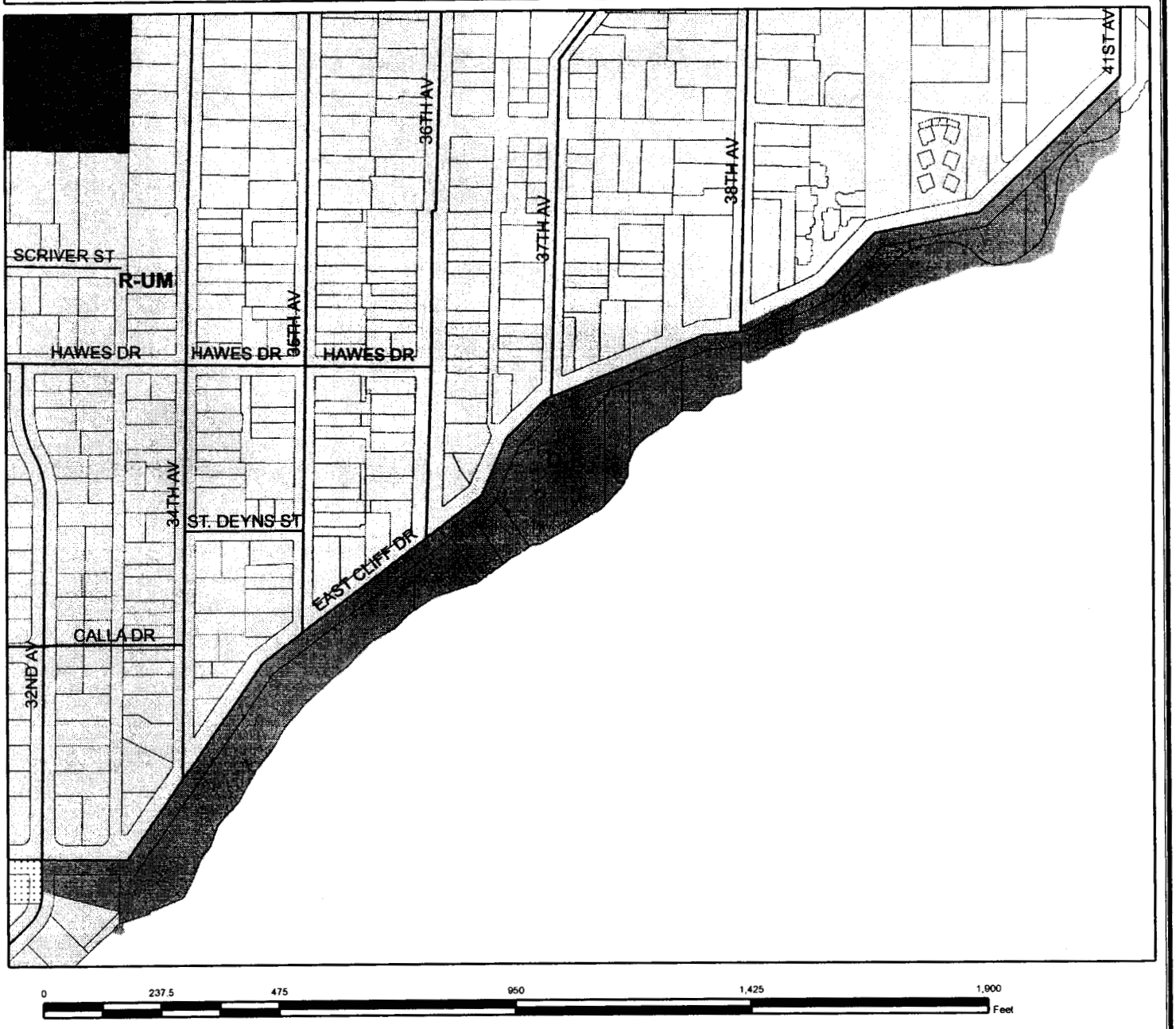
- APN 051-091-03
- Assessors Parcels
- County Maintained Streets
- RESIDENTIAL-SINGLE FAMILY (R-1)
- RESIDENTIAL-MULTI FAMILY (RM)
- PARK (PR)
- PUBLIC FACILITY (PF)
- COMMERCIAL-NEIGHBORHOOD (C-1)

N
W E
S

EXHIBIT J

Map Created by
County of Santa Cruz
Planning Department
January 2007

General Plan Designation Map



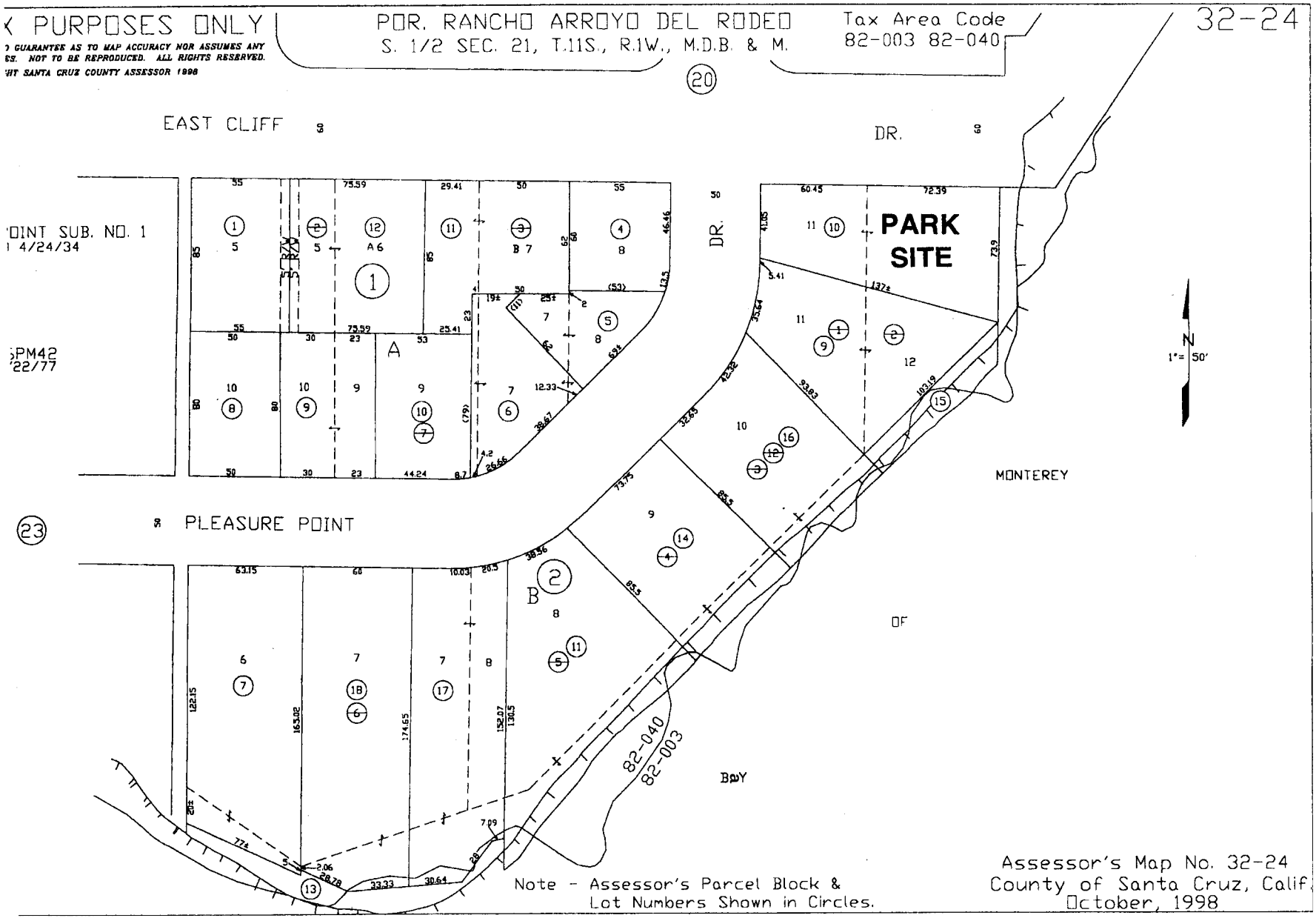
Legend

- APN 051-091-03
- Assessors Parcels
- County Maintained Streets
- Residential - Urban Medium Density (R-UM)
- Parks and Recreation (O-R)
- Residential - Urban High Density (R-UH)
- Commercial-Neighborhood (C-N)

N
W E
S

EXHIBIT J

Map Created by
County of Santa Cruz
Planning Department
January 2007



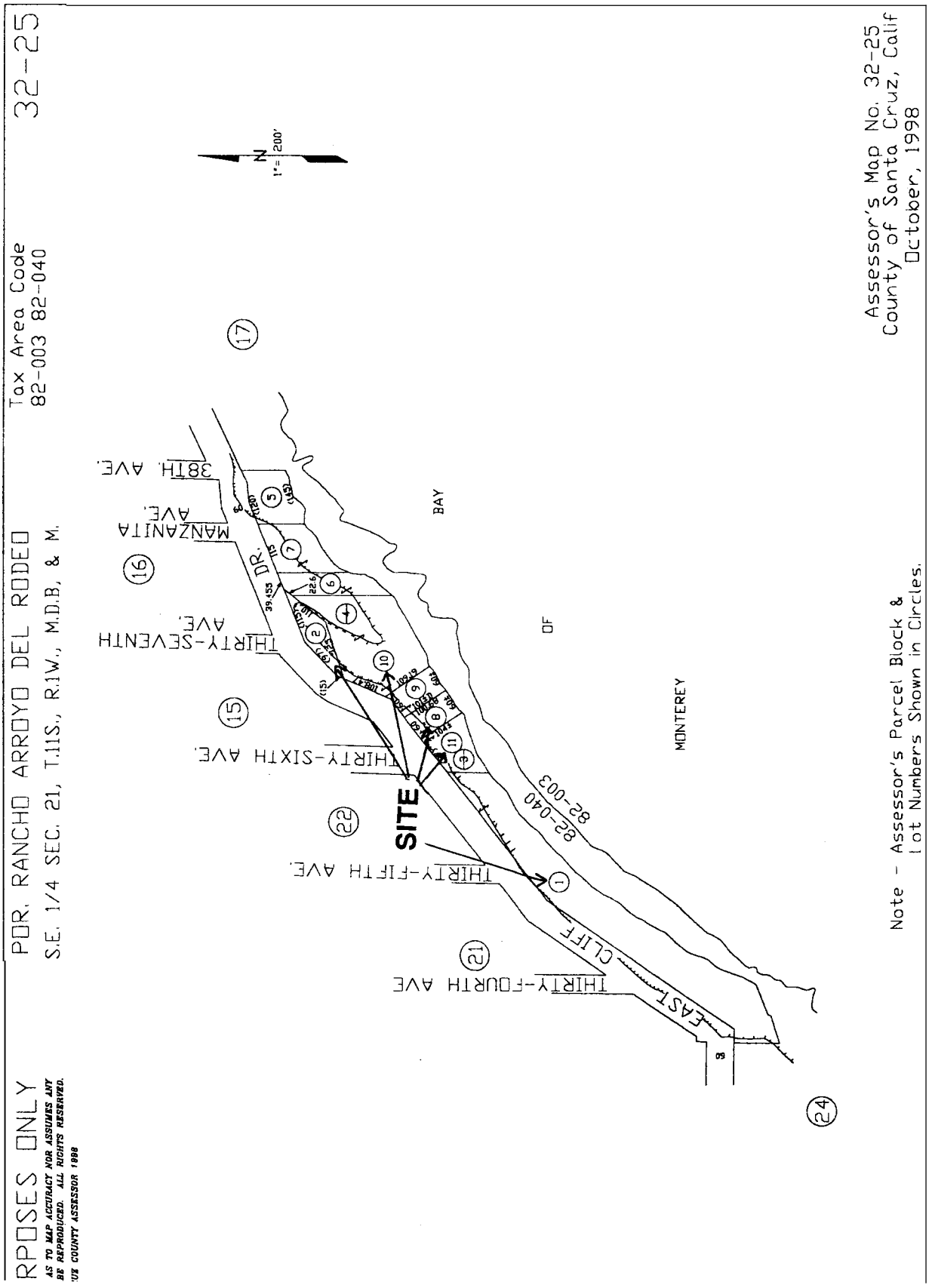
Note - Assessor's Parcel Block & Lot Numbers Shown in Circles.

Assessor's Map No. 32-24
County of Santa Cruz, Calif.
October, 1998

ASSESSORS MAP 1

APN [illegible]-166-42-10

EXHIBIT K



ASSESSORS MAP 2

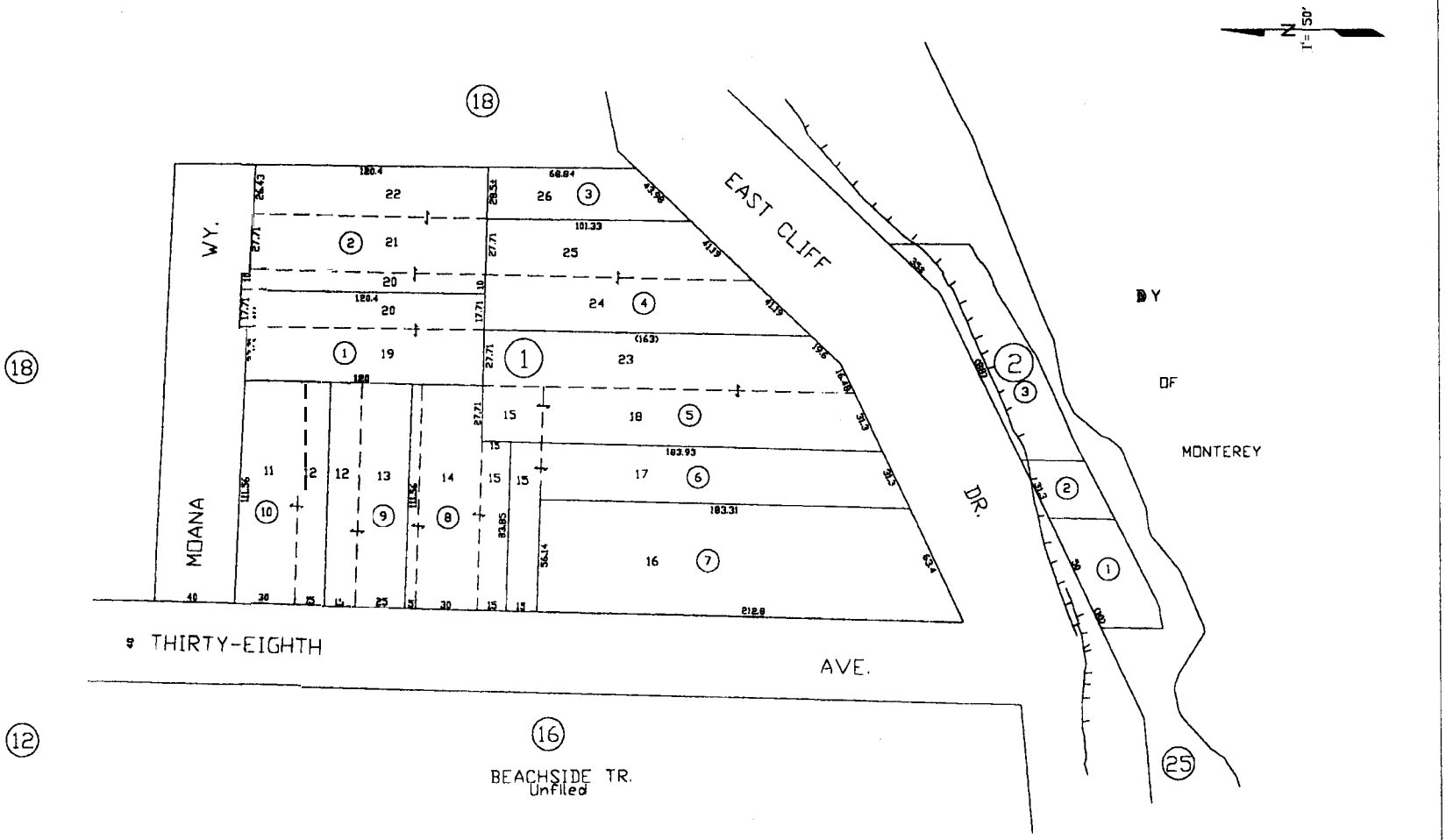
EXHIBIT K

APNs 032-251-01, 032-251-02, 032-251-08, 032-251-10, 032-251-11

POR. RANCHO ARROYO DEL RODEO
E. 1/2 SEC. 21, T.11S., R.1W., M.D.B & M.

Tax Area Code
96-068 96-103

32-17



Note - Assessor's Parcel & Block Numbers Shown in Circles.

Assessor's Map No. 32-17
County of Santa Cruz, Calif.
October, 1998

ASSESSORS MAP 3

EXHIBIT K

RPOSES ONLY

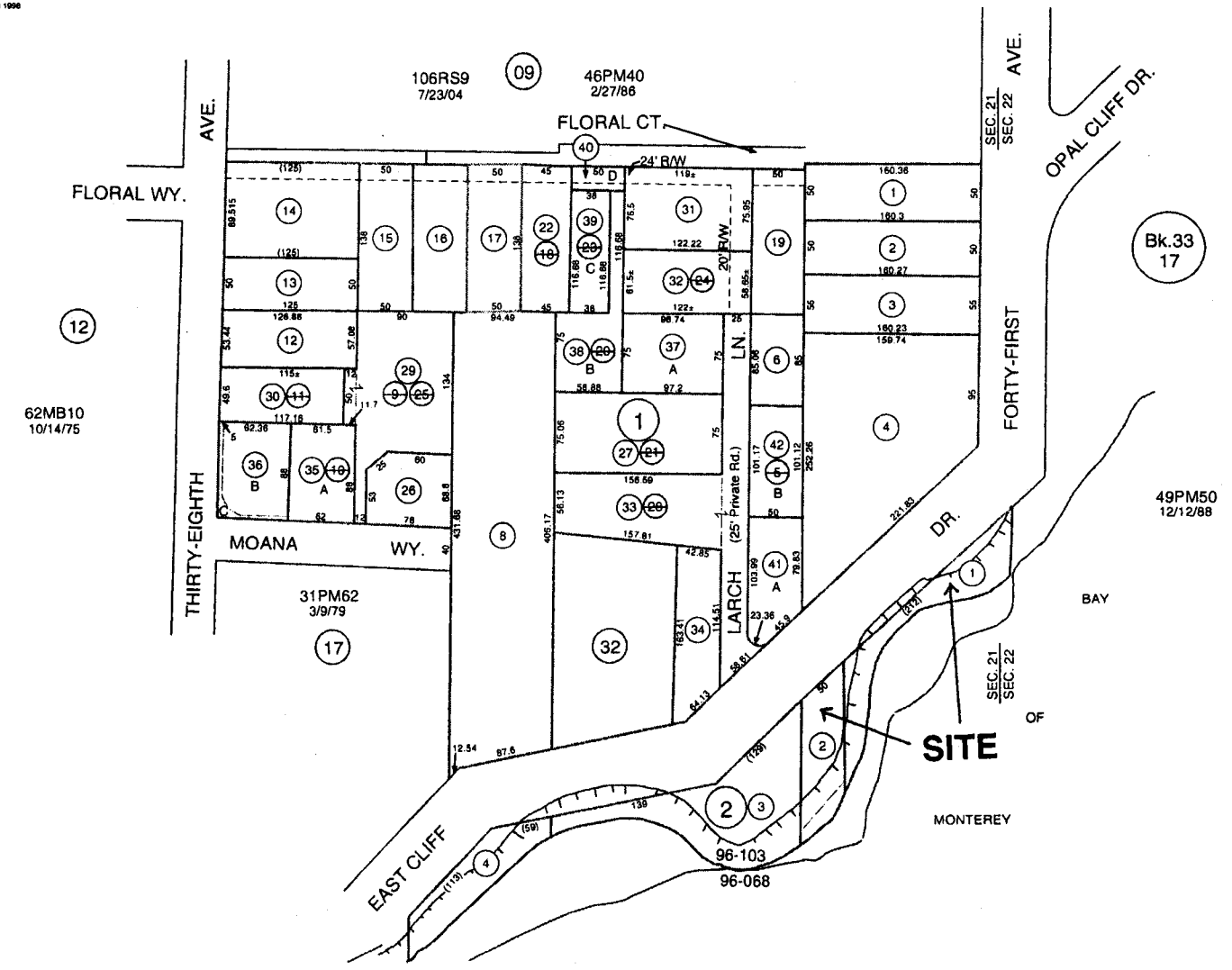
TO MAP ACCURACY NOR ASSUMES ANY
PRODUCED. ALL RIGHTS RESERVED.
CRUZ COUNTY ASSESSOR 1998

POR. RANCHO ARROYO DEL RODEO

N.E. 1/4 SEC. 21, T.11S., R.1W., M.D.B. & M.

Tax Area Code
96-103

32-18



Note - Assessor's Parcel & Block
Numbers Shown in Circles.

Assessor's Map No. 32-18
County of Santa Cruz, Calif.
October, 1998

ASSESSORS MAP 4

032-182-01 thru 032-182-02

EXHIBIT K

EXHIBIT L

EAST CLIFF DRIVE BLUFF PROTECTION AND PARKWAY PROJECT AREA

AERIAL PHOTO 1 – WEST END

EXHIBIT L

AERIAL PHOTO 2 - EAST END

EAST CLIFF DRIVE BLUFF PROTECTION AND PARKWAY
PROJECT AREA

COUNTY OF SANTA CRUZ
Discretionary Application Comments

Project Planner: Melissa Allen
Application No.: 00-0797
APN: NO-APN-SPEC

Date: January 4, 2007
Time: 11:39:40

Environmental Planning Completeness Comments

========== REVIEW ON SEPTEMBER 20, 2006 BY ANDREA M KOCH ==========

1) See any comments from Joe Hanna and Kent Edler.

Environmental Planning Miscellaneous Comments

========== REVIEW ON SEPTEMBER 20. 2006 BY ANDREA M KOCH ==========

1) See any comments from Joe Hanna and Kent Edler

Accessibility Completeness Comments

LATEST COMMENTS HAVE NOT YET BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON JANUARY 8, 2001 BY MICHAEL E BUSH ==========
NO COMMENT

Accessibility Miscellaneous Comments

LATEST COMMENTS HAVE NOT YET BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON JANUARY 8, 2001 BY MICHAEL E BUSH ========== It's hard for me to know for sure, but with the apparent length being developed for the stairs down from East Cliff in at least two locations, it seems that a ramp is simpler, safer, and provides wheeled access. In 1998 at the time of Linda Mcdougal's death, the County Commission on Disabilities approached DPW with an idea for a memorial location and indications at that time were to wait for the developement of this project for incorporation of that idea. Specifically the little parklike setting at 33rd would be partially developed to house a permanent plaque to commemorate Disability activists of the past with room for inclusion of future honorees. I will bring the fact of this project's moving forward to the commission's attention ASAP.

Dpw Drainage Completeness Comments

LATEST COMMENTS HAVE NOT YET BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON JANUARY 9. 2001 BY ALYSON B TOM ==========
NO COMMENT

Dpw Drainage Miscellaneous Comments

LATEST COMMENTS HAVE NOT YET BEEN SENT TO PLANNER FOR THIS AGENCY

========== REVIEW ON JANUARY 9. 2001 BY ALYSON B TOM ==========
1. Confirm that the single weephole is adequate for draining the proposed seawall.

2. Runoff from roadway areas must be treated with silt-and-grease traps prior to discharge into the ocean. ========== UPDATED ON SEPTEMBER 20. 2006 BY ALYSON B TOM

EXHIBIT M

========== Application with plans dated 7/28/06 has been received. The plans received seem to be conceptual in nature and do not appear to be complete in terms of storm-water management design and/or analysis.

1) Provide analysis for the proposed drainage facilities demonstrating that they have adequately accounted for upstream watersheds and meet County Design Criteria requirements.

2) The grading sections provided were difficult to read. It appeared that the proposed DG and AC paths will slope towards the ocean and over fill in some sections. Is this acceptable for the project geotechnical engineer?

3) Public Works road maintenance should be consulted to determine where propsed CDS units should be located for ease of maintenance.

4) There were discrepancies between the RDA plan sheets and the SAGE plans in terms of drainage facilities. These should be eliminated.

4) This project should assess the condition of all of the existing drainage facilities that are proposed to remain to determine if any of them need replacement at this time due to condition.

5) It appears that the roadway will drain to the inboard side in most areas. The gutter, swale. or pipe systems here should be evaluated to show that the proposed plan meets stormwater requirements from the County Design Criteria.

6) The cross sections indicate some low areas without any drainage facilities. These should be eliminated.

7) All inlets should be marked with "No Dumping Drains to Ocean. No Tire Desecho Al Mar".

EXHIBIT M

Water Conservation Office 809 Center Street, Room 100 Santa Cruz, CA 95060
Phone: (831) 420-5230 FAX: (831) 420-5231

Melissa Allen
Redevelopment Agency
County of Santa Cruz
701 Ocean St
Santa Cruz, **CA** 95060

September 26,2006

Subject Property: East Cliff Bluff Protection and Parkway Project Appl. #00-0797

Dear Ms Allen,

Thank you for submitting a preliminary landscape plan dated 7/28/06 for the above project. The Water Conservation Office has reviewed the plan and found the preliminary planting plan to be consistent with the City of Santa Cruz's Water Efficient Landscape Ordinance, however the submittal is incomplete – irrigation plans are required. Our understanding is that this project will not require a building permit, which is when detailed irrigation and planting plans are normally reviewed. Accordingly we would appreciate your adding the following as conditions of approval for the Development Permit summarizing the city's landscape ordinance, to make sure the project meets the city's landscape water conservation requirements.

1) A separate dedicated city meter is required for irrigation water for landscaping over 5,000 square feet in area. Applicant is required to submit three sets of complete planting and irrigation plans, and **an** annual irrigation schedule, to the City of Santa Cruz Water Department and receive approval of same plans **as** a condition of receiving irrigation meter service.

2) Irrigation plans must meet all standards of the Water Efficient Landscape Ordinance (Chapter16.16 of the Santa Cruz Municipal Code). Final imgation plans must show the location, type and size of all components of the irrigation system, including the point of connection to the water system, main and lateral lines, the automatic controller, valves, sprinkler heads or emitters, backflow prevention devices, and related irrigation equipment. Each irrigation station should be clearly identified by station number, flow rate in gallons per minute, and valve size.

3) All imgation systems shall be designed to avoid runoff, over-spray, low-head drainage and other similar conditions where water flows off-site on to adjacent property, non-irrigated area, walks, roadways, or structures.

EXHIBIT M

a. Overhead sprinkler irrigation systems are prohibited in median strips, parking islands, parkway strips and similar narrow areas measuring less than five feet wide from curb to curb.
b. Overhead irrigation systems shall be separated from adjacent sidewalks, driveways, or other paved surfaces by a mulched border at least two feet wide consisting of shrubs, ground cover or other landscape treatment that is not spray imgated.
c. All irrigation systems shall be equipped with a controller that includes dual or multiple programming capability, multiple start times, and a percent switch. Irrigation systems shall be equipped with rain sensing device to prevent irrigation during rainy weather.

4) Planting plans must meet all standards of the Water Efficient Landscape Ordinance (Chapterl6.16 of the Santa Cruz Municipal Code), including but not to limited to:

a. **High** water use plants shall be limited to not more than 10 percent of the total landscaped area. All other plantings in non-turf areas shall be composed of low to moderate use plants. Plants having similar water requirements shall be grouped together in distinct hydrozones.
b. The combined size of **turf** area and swimming pools shall be limited to not more than 25 percent of the total developed landscape area. Turf shall not be placed in areas less than **8** feet wide or on sloped greater than 10 percent.

5) Soil shall be prepared for planting by ripping and incorporating an organic amendment at the rate of six cubic yards **per** 1,000 square feet into the top six inches, or amended with organic materials as recommended by landscape architect or soil laboratory report. All exposed surfaces of non-turf areas within the developed landscape area must be mulched wit a minimum three-inch layer of organic material, except in areas of groundcover planted from flats, mulch depth shall be 1 ½ inches.

6) A landscape review fee payable to the City of Santa **Cruz** Water Engineering Department is due prior to approval of the landscape plans.

7) **A** final inspection of the completed landscape installation **by** City of Santa Cruz Water Department staff is required.

We appreciate your cooperation in meeting the conditions of the City's Water Efficient Landscape Ordinance. The ordinance is available on **the** City of Santa Cruz website at www.ci.santa-cruz.ca.us/wt/wtcon or a copy can be mailed to you on request.

Sincerely,

Elena Freeman
Water Conservation Representative

cc: Water Engineering

EXHIBIT M

Accessibility: Preliminary Project Comments for Development Review
County of Santa Cruz Planning Department

Date: September 21,2006
Planner: Melissa Allen

Application Number: ***00-0797***
APN: *n/a*

Dear Melissa,

A preliminary review of the above project plans was conducted to determine accessibility issues. The following comments are to be applied to the project design.
Please have the applicant provide a written response to each of these comments.

Please refer to the attached brochure entitled Accessibility Requirements - Building Plan Check which can also be found at the County of Santa Cruz Planning Department website:
http://www.sccoplanning.com/brochures/access_plancheck.htm
This document is an information source for the designer when preparing drawings for building plan check.
Please use the terms "accessible" or "disabled access" in lieu of the words "handicapped" (negative connotation), or "ADA" (not within the county's jurisdiction) for all notations and specifications.

Project Description: New Construction – Commercial **East Cliff Drive Parkway**

Determination of Occupancy: Please apply specific requirements per CBC code sections 1104B thru 1111B. The occupancy and construction type are to be noted in the Project Data section on the cover sheet of the plans.
The restrooms are a "B" Occupancy.

CBC Section 1103B – Building Accessibility
Accessibility to buildings or portions of buildings shall be provided for all occupancy classifications except as modified by this section. Occupancy requirements in this chapter may modify general requirements, but never to the exclusion of them. Multistory buildings must provide access by ramp or elevator.
The restrooms appear to be accessible.

CBC 1114B.1.2 Accessible Route of Travel
At least one accessible route within the boundary of the site shall be provided from public transportation stops, accessible parking and accessible passenger loading zones, other buildings on the site, and public streets or sidewalks, to the accessible building entrance they serve. Refer also to 1127B for Exterior Routes of Travel. Where more than one route is provided, all routes shall be accessible. All spot elevations, slopes, cross slopes, ramps, stairs, curb ramps, striping, signage and any other accessible requirements are to be shown on the plans.
Directional and informational signage should be addressed to meet accessible requirements. Please provide a signage plan for the site, complete with specifications.
Crosswalks do not extend to an accessible path of travel on the opposite side of the street, except for the parking lot on the east end. The path of travel to the beach is not accessible. These items should be addressed with equivalent facilitation and documented with a hardship exception.

CBC 1129B Accessible Parking Required
Each lot or parking structure where parking is provided for the public as clients, guests or employees, shall provide accessible parking as required by this section.
Please provide curb ramps outside of each parking space access aisle. These parking spaces are required and there appears to be an adequate number.

Path of Travel Verification Form (refer to brochure)
To be submitted at the time of Building Permit application.

CBC 1133B General Accessibility for Entrances, Exits and Paths of Travel
Provide an Egress Plan showing maneuvering clearances at all doorways, passageways, and landings.
Restroom is okay.

EXHIBIT M

Plumbina Fixture Reauirements – Accessible Restrooms

Please refer to the 2001 California Plumbing Code, Table 4-1 for plumbing fixture requirements for this occupancy.

Please provide identification signage per CBC 1115B.5. The outdoor showers will require single lever controls to be specified and mounted per 1115B.6.2.4.1.

Please note that this is only a preliminary review to determine major accessibility issues. This is not a complete accessible plan check. A complete accessible plan check will be conducted at the time of building permit application review. The plans submitted for building plan check review will need to include complete details and specifications for all of the accessible issues in the California Building code. Therefore, there may be additional comments when applying for a building permit and responding to the Building Plan Check process.

Please contact me with any questions regarding these comments.

James N. Davies
Building Plans Examiner
County of Santa Cruz Planning Department
(831) 454-3249
pln799@co.santa-cruz.ca.us

EXHIBIT M

SANTA CRUZ COUNTY SANITATION DISTRICT

INTER-OFFICE CORRESPONDENCE

DATE: September 19, 2006

TO: Planning Department, ATTENTION: MELISSA ALLEN

FROM: Santa Cruz County Sanitation District

SUBJECT: SEWER AVAILABLIITY AND DISTRICT'S CONDITIONS OF SERVICE FOR THE FOLLOWING PROPOSED DEVELOPMENT

APN: N.A. APPLICATION NO.: 00-0797

PROJECT DESCRIPTION: CONSTRUCT EROSION PROTECTION ALONG EAST CLIFF DRNE - REMOVE PUBLIC BATHROOM - CONSTRUCT PUBLIC BATHROOM

Sewer service is available for the proposed public restroom upon completion of the following conditions. This notice is effective for one year from the issuance date to allow the applicant the time to receive tentative map, development or other discretionary permit approval. If after this time frame this project has not received approval from the Planning Department, a new sewer service availability letter must be obtained by the applicant. Once project has received discretionary permit approval this letter shall apply until approval expires.

The following conditions shall be met during the building permit process for the public bathroom:

The existing public bathroom lateral must be properly abandoned (including inspection by District) prior to issuance of demolition permit or disconnection of structure. An abandonment permit for disconnection **work** must be obtained fiom the District.

Proposed location of on-site sewer lateral(s), clean-out(s), and connection(s) to existing public sewer must be shown on the plot plan of the building permit application.

Show all existing and proposed plumbing fixtures on floor plans of building application. Completely describe all plumbing fixtures according to table 7-3 of the uniform plumbing code. Provide water use data for the existing and proposed bathroom facilities.

Drew Byrne
Sanitation Engineering

DB:
c: Applicant: County of Santa Cruz Redevelopment Agency

EXHIBIT M

COUNTY OF SANTA CRUZ | Planning Department

INTEROFFICE MEMO

APPLICATION NO: 00-0797

Date: October 3, 2006

To: Melissa Allen, Project Planner

From: Larry Kasparowitz, Urban Designer

Re: Design Review for East Cliff Drive (RDA) Improvements, Pleasure Point

Urban Designers Comments

- *Rest rooms –*
  1. *the urinals are placed in view of the open door.*
  2. *why use china fixtures? Most restrooms in public areas use stainless steel with hidden screws to resist vandalism.*
  3. *I would relocate the soap dispenser to the adjacent wall to allow it to spill on the lavatory.*
  4. *the south facing roof would be a great location for solar hot water heaters for the showers.*
  5. *could a changing area be added to the side of each rest room?... just a screen that allows some modesty.*

- ***Accessible parking –***
  1. *check the width of both the parking and loading zone with Title 24 (CBC).*
  2. *show symbol in parking space and no parking letters in loading zone*
  3. *show accessible ramp to loading zone*
  4. *show location of signage*

- ***Accessible ramps** and **striping at** street*
  1. *call out new striping*
  2. *maybe add PED XING signage on street **surface** in front of striping?*
  3. *eliminate the ramp between 36th and 37th Avenues*

- ***New parking areas***
  1. *will wheel stops be used? will cars be allowed to overhang the **a.c.** bike path?*
  2. *will parking on the northeast side of East Cliff have curbs? wheelstops?*
  3. *what separates public parking spots **from** private driveways?*
  4. *are some spaces proposed to be compact? how will they be designated?*

- ***Asphalt concrete / decomposed granite paths***
  1. *what happens when the d.g. path disappears? could there be a Yield to Pedestrian sign?*

- ***Planting** and **railings***
  1. *I suggest investigating pre-cast concrete railing (used at Woods Cove)*
  2. *some shrubs would be too tall, it seems that only the lower shrubs should be used between the railing and the bluff face.*

- *Miscellaneous*
  1. *How about the idea of some* sort *of "surfing at Pleasure Point history wall – or even a few small tribute plaques – **like** one to Jack O'Neill??*

EXHIBIT M

CENTRAL
FIRE PROTECTION DISTRICT
of Santa Cruz County
Fire Prevention Division

930 17th Avenue, Santa Cruz, CA 95062
phone (831)479-6843 fax (831)479-6847

Date:	September 11,2006
To:	Santa Cruz County Redevelopement
Applicant:	**same**
Fmm:	Tom Wiley
Subject:	**00-0797**
Address	**East Cliff Dr.**
APN:	032-182-01
OCC	2756
Permit:	20060291

We have reviewed plans for the above subject project.

The following NOTES must be added to notes on velums by the designer/architect in order to satisfy District requirements when submitting for Application **for** Building **Permit:**

NOTE on the plans the building will be **SPRINKLERED** as outlined in the 2001 California Building Code and via District Amendment.

The job copies of the building and fire systems plans and permits must be on-site during inspections.

Submit a check in the amount of $100.00 for this particular plan check, made payable to Central Fire Protection District. A $35.00 **Late Fee** may be added to your plan check fees if payment is not received within 30 days of the date of this Discretionary Letter. INVOICE MAILED TO APPLICANT. Please contact the Fire Prevention Secretary at (831) 479-6843 for total fees due for your project.

If you should have any questions regarding the plan check comments, please call me at (831) 479-6843 and leave a message, or email me at tomw@centralfpd.com. All other questions may be directed to Fire Prevention at (831)479-6843.

CC: File & County

As a condition of submittal of these plans, the submitter, designer and installer certify that these plans and details comply with applicable Specifications, Standards, Codes and Ordinances, agree that they are solely responsible for compliance with applicable Specifications, Standards, Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source. Further, the submitter, designer, and installer agrees to hold harmless from any and all alleged claims to have arisen from any compliance deficiencies, without prejudice, the reviewer and the Central **FPD** of Santa Cruz County.
2756-091206

EXHIBIT M

Right of Way
340 PAJARO ST
SALINAS, CA 93901
831-754-8165

Memorandum

To: Melissa Allen , Planning Dept.
Tel: 454-2160 / FAX: **831-454-2385**
CC:
From: Roxie Tossie, Right of Way Mgr (831) 754-8165
Date: Tuesday, September **12,2006**
Re: PERMIT **APPL.NO.** 00-0797
Location: East Cliff Drive Parkway & Bluff Protection Project

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Message:

Per your request our AT&T Engineer Chris Barraza (831-728-0160) has reviewed the proposed improvement plans and has determined the following.

- AT&T facilities are located on the opposite side of the street-NO CONFUCT
- ***Call USA 800-642-2444 before digging***

Please call me if you require any additional information on 831-754-8165

Thank You,
Roxie

EXHIBIT M

MONTEREY BAY
Unified Air Pollution Control District
serving Monterey, *San* Benito, *and* Santa *Cruz* counties

AIR POLLUTION CONTROL OFFICER
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

September **13,2006**

Ms. Melissa Allen, Project Planner
Santa Cruz County
Planning Department
701 Ocean Avenue, Room 400
Santa Cruz, CA **95060**

SUBJECT: REVISED DEIR/DEIS FOR EAST CLIFF DRIVE BLUFF PROTECTION PROJECT – 2ND ROUTING

Dear Ms. Allen:

The District has no additional comments on the project. The June 26 comment letter is attached for your reference.

Thank you for the opportunity to comment on the project.

Yours truly,

Jean Getchell
Supervising Planner
Planning and Air Monitoring Division

Attachment

EXHIBIT M

MONTEREY BAY
Unified Air Pollution Control District
serving Monterey, San Benito, and Santa Cruz counties

AIR POLLUTION CONTROL OFFICER
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

June 26,2006

Ms. Claudia Slater
Santa Cruz County
Planning Department
701 Ocean Avenue, Room 400
Santa Cruz, CA 95060

SUBJECT: REVISED DEIR/DEIS FOR EAST CLIFF DRNE BLUFF PROTECTION PROJECT

Dear Ms. Slater:

The following comments are submitted for your consideration:

Demolition of Abandoned Restroom. Page ES-6.
Please contact Mike Sheehan of the District's Compliance Division to discuss demolition of the abandoned restroom, to ensure that no asbestos would be released during demolition.

§12.2.1 Introduction / Region of Influence. Page 12-2.
Santa Cruz County is not classified for the federal ozone standard. It is the North Central Coast Air Basin (NCCAB), comprised of Santa Cruz County, Monterey County and San Benito Counties, which is classified for this standard. The NCCAB is unclassified/attainment for the federal 8-hour standard. The NCCAB is classified Non-Attainment Transitional for the State I-hour ozone standard, as well as Non-Attainment for the State standard for PM_{10}. A copy of the current designations is attached for your reference.

Federal Conformity Determination. Page 12-3.
With revocation of the federal 1-hour standard for ozone on June 15, 2005, the NCCAB is classified as attainment for all federal standards. It is no longer subject to conformity determinations.

Air Quality Management Plan for the NCCAB. Page 12-3.
The most recently adopted Air Quality Management Plan for the NCCAB is dated 2004, not 1997.

EXHIBIT M

Thresholds of Significance, Page 12-5. Table 12-2, Page 12-7.
The threshold of significance for ROG, and for NOx is 137 lbs/day, not 150 lbs/day. The 100 TPY criteria associated with General Conformity, as stated previously, no longer applies to the NCCAB.

Construction Emissions. Page 12-6, et al.
Mitigation Measure 12.1. Page 12-7.
The mitigation measure on page 12-7, as written, is precatory and is too vague to be enforceable. What number and models of diesel equipment would be used on the project? Please contact the District to discuss details, to determine if a diesel **risk** screening analysis should be prepared. Following are recommended mitigation measures for impacts from operation of diesel equipment on construction projects:

1. All pre-1994 model year and older diesel equipment shall be retrofitted with EPA-certified diesel oxidation catalyst filters,
   or the entire construction and demolition equipment fleet shall be fueled with B20 biodiesel fuel;

2. The Project Applicant or his construction contractor shall maintain records of all purchases of diesel oxidation catalyst filters or B20 biodiesel fuel associated with item 1, above, until all construction and demolition work has concluded; and

3. The Monterey Bay Unified Air Pollution Control District shall have the right to inspect the construction and demolition equipment, as well as the records specified in item 2, above, at any time during construction or demolition.

Mitigation 12.1. Pape 12-6.
Grading or excavation should be discontinued when wind speed reaches 15 mph rather than 20 mph.

Thank you for the opportunity to comment on the project.

Yours truly,

Jean Getchell
Supervising Planner
Planning and Air Monitoring Division

Attachment

cc: Mike Sheehan, Compliance Division

EXHIBIT M