

CHAPTER 9

TRANSPORTATION

9.1 TRANSPORTATION

9.1.1 Introduction/Region of Influence

The project site consists of East Cliff Drive between 32nd Avenue and 41st Avenue, located within unincorporated Santa Cruz County. The transportation study area is bounded by Portola Drive on the north, East Cliff Drive on the south, 30th Avenue on the west, and 41st Avenue on the east.

9.1.2 Regulatory Consideration

Santa Cruz County General Plan. Section 5.9 of the General Plan (Santa Cruz County 1994) is a description of planning and design standards for the urban roadway network in Santa Cruz County. These planning standards include a capable roadway network function, which is functional street classifications in urban areas, including the location of the project site in the Live Oak Planning Area. East Cliff Drive's functional street classification is arterial (arterial roads generally have multiple lanes and high traffic volumes, over 10,000 vehicles per day). Figures 3-14 and 3-18 of the General Plan describe the improvements to East Cliff Drive between 32nd Avenue and 41st Avenue as a one-way route, or couplet, with a bike/pedestrian facility or lane.

9.1.3 Roadways

East Cliff Drive begins at the intersection of Ocean Street and San Lorenzo Boulevard in Santa Cruz and extends to 41st Avenue in Capitola at the end of the project area. The roadway generally follows the coastline, running inland in places where residential streets abut the coast, and ends at Woods Lagoon, where through-traffic must use Murray Street/Eaton Street to cross the water.

East of the intersection of Pleasure Point Drive and 32nd Avenue, East Cliff Drive runs along the top edge of the coastal bluffs. With the exception of three single-family residences on the ocean side obstructing the view, the vistas from the roadway are open, as it runs at or near the cliff edge for this entire segment. The cliffs in this area have

experienced severe erosion and cliff failure, resulting in damage to and the loss of entire sections of the roadway. The current paved roadway area now occupies only about two-thirds of the historic right-of-way; the remainder has been lost to erosion. The current roadway setback from the cliff edge varies from zero feet, where severe failure has occurred, to over 100 feet (30 meters) near 36th and 37th avenues, where a more gradual cliff slope has prevented erosion.

In 1994 and 1995, in order to reduce the load-bearing weight from vehicles on the cliffs, the Santa Cruz County Board of Supervisors designated East Cliff Drive between 32nd Avenue and 41st Avenue as a one-way roadway, with travel in the eastbound direction only. The County determined that eastbound would be the most appropriate one-way direction, based on traffic counts and lesser diversionary impacts onto adjacent residential streets (County of Santa Cruz DPW 1996).

Pleasure Point Park is at the western end of the project area, at the intersection of Pleasure Point Drive, 32nd Avenue, and East Cliff Drive. With the exception of three single-family residences along the ocean side of the roadway, East Cliff Drive runs directly along the cliff edge from 33rd Avenue to 41st Avenue. East Cliff Drive meets 41st Avenue at a moderate northward curve at The Hook. There is a small landscaped ocean viewing area along the ocean side of the roadway at the intersection of East Cliff Drive and 41st Avenue.

The inland side of East Cliff Drive consists of predominantly single-family homes, with some two-story multifamily apartment buildings. A series of north-south avenues provide access to a neighborhood of primarily single-family homes. From west to east, the intersections with East Cliff Drive include 32nd Avenue/Pleasure Point Drive, 33rd Avenue, 34th Avenue, 35th Avenue, 36th Avenue, Madrone Avenue, 37th Avenue, Manzanita Avenue, 38th Avenue, Larch Lane, and 41st Avenue. The major east-west arterial, Portola Drive, forms the northern boundary of this residential area.

9.1.4 Sidewalks and Crosswalks

Most of the project area lacks curbs and sidewalks, but there are sidewalks at the following locations:

- Ocean side of East Cliff Drive, west of 32nd Avenue;
- Both sides of Pleasure Point Drive, south of East Cliff Drive;
- Inland side of East Cliff Drive, between 34th and 35th avenues (discontinuous segment);
- East side of 41st Avenue to its intersection with Opal Cliffs Drive (which is 40 feet [12 meters] north of the East Cliff Drive intersection); and
- West side of 41st Avenue to Portola Drive.

The avenues that intersect East Cliff Drive generally lack curbs and sidewalks.

Crosswalks are present across East Cliff Drive in a number of locations to facilitate pedestrian crossings from the neighborhood to the ocean side of the road. Crosswalk locations include Pleasure Point Drive (east leg), 36th Avenue (a high visibility crosswalk at the west leg), 38th Avenue (east leg), and at The Hook parking lot. A crosswalk is also striped across the entrance to The Hook parking lot along 41st Avenue.

9.1.5 Pathways and Bikeways

There is a small network of dirt pathways at Pleasure Point Park, providing access to the overlook area and to cliff areas that surfers and others use to climb down to the ocean.

Class II bike lanes are present on both sides of East Cliff Drive, from Rockview Drive to Pleasure Point Drive, connecting directly to the project area (a Class II bike lane is a striped on-street lane for one-way bike travel). Class II bike lanes used to be present along the study segment on East Cliff Drive but needed to be removed following the roadway's erosion and conversion to one-way travel. To facilitate bicycle and pedestrian circulation along the ocean side of East Cliff Drive, a two-way bicycle and pedestrian pathway has been delineated along the southern edge of East Cliff Drive. This bicycle/pedestrian pathway is essentially just a portion of the former eastbound travel lane and is at-grade with the adjacent vehicle travel lane, separated by a row of plastic lane divider markers mounted into the pavement. The pathway varies in width from 7 to 13 feet (2 to 4 meters) along the study area, depending on the amount of erosion that has occurred. Because it is not separated from the roadway lanes by a horizontal buffer (such as landscaping) or a solid vertical barrier (such as a fence), this pathway is not considered to be a formal bike path per Caltrans standards. Some faded striping and bike lane stenciling is visible along the pathway, a remnant of the former Class II bike lane that existed. Within the pathway there is no centerline or other separation of pedestrian and bicycle traffic, and the entire width is generally shared by users traveling in both directions.

At the eastern end of the study area, bike lanes are present along both sides of 41st Avenue, connecting to East Cliff Drive. In the southbound direction, the bike lanes terminate at a crosswalk at the entrance to the public parking lot at The Hook. Bicyclists intending to travel westbound (toward Pleasure Point Park) on East Cliff Drive from 41st Avenue must cross the roadway to access the pathway. Most bicyclists enter the parking lot crosswalk from the bike lane, ride onto the sidewalk on the west side of 41st Avenue, then ride through the crosswalk across East Cliff Drive to access the path. A sign is posted at this crosswalk stating "Bikes Must Cross" with an arrow pointing toward the pathway. In addition, a "No Bicycles" sign is posted along the East Cliff Drive travel lane near Larch Lane facing westbound (the wrong way). These signs help to ensure that bicyclists heading westbound cross to the pathway and do not ride wrong-way along the East Cliff Drive travel lane.

Bicycle route signs are present along East Cliff Drive at 32nd Avenue (facing east) and 41st Avenue (facing west). Portola Drive, which has bike lanes in both directions in the vicinity of the project, is signed as the Pacific Coast Bike Route, eastbound from the intersection with 41st Avenue.

There are four-bend wave bike racks at The Hook parking lot, and there are five-bend wave bike racks across the street at The Hook observation area.

9.1.6 Circulation and Access Provisions

As noted above, East Cliff Drive between 32nd Avenue and 41st Avenue provides one-way vehicular travel in the eastbound direction. A major point of access to East Cliff Drive is 30th Avenue, with most traffic continuing through the study area to 41st Avenue. Residents of single-family homes or apartments along the one-way portion of East Cliff Drive must use a parallel two-way neighborhood street to travel westbound toward 30th Avenue.

East Cliff Drive is an access point for adjacent beaches and surfing points. Three stairways provide pedestrian access from the roadway to the beach, one east of 35th Avenue, one at 38th Avenue, and one at 41st Avenue, at The Hook. Surfers and others also climb down the cliffs at Pleasure Point Park to access the water.

Motorists wanting to evaluate surf conditions or to observe surfers in the water also use East Cliff Drive. Many motorists view ocean conditions by driving slowly along the entire study segment, from 32nd Avenue to 41st Avenue. During a field survey, some cars were double parked within the pedestrian/bicycle lane as their occupants peered out their windows and scanned the ocean.

9.1.7 Traffic Volumes

In July 1995, the County of Santa Cruz conducted a number of traffic counts on East Cliff Drive and surrounding streets as part of a traffic study following conversion of the roadway to one way. From those counts, the County determined that average traffic volumes on East Cliff Drive were about 3,700 vehicles per day downcoast of 32nd Avenue and almost 3,100 vehicles per day downcoast of 38th Avenue.

Updated peak period traffic counts were conducted on November 19th and 21st, 2005, at the intersections of 32nd Avenue/Pleasure Point Drive/East Cliff Drive and 41st Avenue/East Cliff Drive, during a weekday evening and a weekend afternoon. The results of these counts are shown in Table 9-1.

Pedestrian and bicycle counts were also taken during the traffic study periods. While these counts reflect all pedestrians and bicyclists passing through the intersection in any direction, most pedestrians and bicyclists were using East Cliff Drive. Pedestrian and bicycle counts are summarized in Table 9-2.

As shown in Tables 9-1 and 9-2, the highest vehicle, bicycle, and pedestrian volumes on East Cliff Drive occur on weekends.

**Table 9-1
Peak Hour East Cliff Drive Traffic Volumes, November 2005**

	East of 32 nd Avenue	East of 38 th Avenue
Weekday 4:30 to 5:30 PM		
Cars	329	430
Weekend 1:00 to 2:00 PM		
Cars	344	483

Source: Alta Planning + Design 2005

**Table 9-2
Peak Hour Pedestrian and Bicycle Volumes, November 2005**

	32 nd Avenue/East Cliff Drive	41 st Avenue/East Cliff Drive
Weekday 4:30 to 5:30 PM		
Pedestrians	53	168
Bicyclists	48	71
Weekend 1 to 2 PM		
Pedestrians	110	70
Bicyclists	135	130

Source: Alta Planning + Design 2005

9.1.8 Parking Conditions

Six pull-in public parking spaces (two diagonal and four at 90 degrees) are available on the ocean side of East Cliff Drive in the vicinity of 36th Avenue. During parking surveys conducted on a weekday evening and midday weekend, the diagonal parking spots on East Cliff Drive were fully occupied. No turnover of these spots was observed during a 30-minute weekday morning field visit to the project area.

Approximately 21 spaces along the inland side of East Cliff Drive, between 36th Avenue and Manzanita Avenue, are immediately in front of residential buildings and are used primarily by residents (including being posted with “NO PARKING, TOW AWAY” signage). But many of the spaces appear to be at least partially within the public right-of-way. During field visits, these spaces were observed to be occupied approximately 50 to 75 percent by residents’ vehicles.

On-street parking is available in various locations along the residential side streets in the study area. In general, due to the lack of curbs, parking spaces are informal, with residents often pulling vehicles partially onto front lawns. A parking survey of the avenues during an evening weekday and the midday weekend found on-street parking areas immediately adjacent to East Cliff Drive generally fully occupied, with open areas available one to two blocks north on most avenues. A precise number of available spaces and occupancy could not be quantified because of the lack of curbs and the informally parked vehicles.

A free off-street public parking lot is across from The Hook, at the intersection of East Cliff Drive and 41st Avenue. This lot provides 64 parking spaces, including three handicapped spaces. It was approximately 80 percent occupied during a weekday evening survey and 100 percent occupied during the midday weekend survey. During a

30-minute weekday morning field visit, minimal turnover of cars was observed in this lot (approximately five cars).

9.1.9 Transit Service

The Santa Cruz Metropolitan Transportation District (Metro) provides transit service within Santa Cruz County. Metro offers fixed-route service on 39 routes within the county, operates the Highway 17 express service to San Jose, and offers van and taxi paratransit service for handicapped and elderly users.

No bus service is provided along East Cliff Drive between 32nd and 41st avenues, but several bus routes include Portola Drive. Route 68 (Live Oak via Broadway/Portola) runs eastbound along East Cliff Drive, turning north on 30th Avenue to Portola Drive. Other bus routes that use Portola Drive include Route 66 (Live Oak via 17th Avenue), Route 7N (Beach Night Capitola Mall), and Route 12A (University/East Side Direct). Route 12A runs only when the University of California Santa Cruz is in session and runs one westbound bus along Portola Drive at approximately 7:15 AM. The other routes generally run on one-hour headways, with earliest service from the project vicinity beginning at approximately 6:30 AM, and the latest service ending at approximately 11 PM. During the weekends, Route 68 provides service between approximately 9 AM and 7 PM, and Route 7N provides night service between approximately 7 PM and 11 PM (Santa Cruz Metropolitan Transit District 2005).

9.2 ENVIRONMENTAL CONSEQUENCES

Impact Methodology

The project area consists of East Cliff Drive between 32nd Avenue and 41st Avenue, located within Santa Cruz County. For purposes of this EIS/EIR, the transportation study area is bounded by Portola Drive on the north, East Cliff Drive on the south, 30th Avenue on the upcoast side, and 41st Avenue on the downcoast side.

As discussed in the CEQA initial study, published on January 22, 2001, the proposed project is not expected to cause a permanent increase in traffic, as it does not include any traffic-generating land uses. As such, this traffic analysis does not focus on long-term traffic volumes and impacts on local intersections, but rather evaluates the impacts of temporary project 1 and project 2-construction traffic on the local circulation network. Impacts of the project 2 roadway improvements on local circulation, parking, access, and safety are also evaluated.

Thresholds of Significance

The project would have a significant impact on traffic and circulation if its implementation would result in any of the following:

- Substantial increases in vehicle trips on local roadways that would substantially disrupt or alter local circulation patterns;
- Lane closures or impediments that would substantially disrupt or alter local circulation patterns;

- Improperly managed construction activities that would create potential safety hazards; or
- Increased conflicts with pedestrian and bicycle routes or fixed-route transit.

9.2.1 Alternative 1 (Full Bluff Armoring)

Under projects 1 and 3 of Alternative 1, two segments of the cliff face adjacent to East Cliff Drive would be fully armored with an engineered soil nail structure: a 1,100-linear-foot segment, between 33rd and 36th avenues, and a 300-foot segment at the terminus of 41st Avenue (The Hook). Under project 2, the travel lane on East Cliff Drive would be reconfigured to provide a 16-foot vehicle lane, curb and gutter, additional parking spaces, and separate eight-foot bicycle and eight-foot pedestrian pathways.

Significant Impacts

Impact 9.1 Temporary Construction-Related Vehicle Trips

The proposed project construction would involve a temporary increase in vehicle trips to and from the project area. Vehicle trips would be required for bringing construction equipment, materials, and workers to and from the area and for removing construction debris and concrete rubble and rock riprap along the beach. Construction vehicles would include cars, pickup trucks, dump trucks, transfer (trailer) dump trucks, and flatbed trailer trucks used to haul heavy stationary equipment, such as cranes and lifters (Rodrigues 2001).

Construction-related traffic is expected to use 41st Avenue for access to and from Highway 1, which provides the most direct route to the project area. For construction from 32nd to 36th avenues, vehicles would likely use Portola Drive to 30th Avenue for access. For construction at 41st Avenue (The Hook), trucks would likely use Portola Drive to 38th Avenue for access. It also could be necessary during some portions of construction at The Hook to allow wrong-way construction vehicle access to The Hook via 41st Avenue.

Projects 1 and 3 would be the most vehicle-intensive, involving debris removal, footing preparation for soil nail structures, fitting of soil nails, and application of the shotcrete layer. Most heavy truck operations would occur during concrete rubble and rock riprap removal along the beach, when dump trucks would remove as much as 6,000 cubic yards of material. In addition, during structure construction, approximately 1,800 cubic yards of excavation material would be removed for the structure footing. These activities are expected to take six to eight weeks, during which there could be up to 10 heavy truck trips per day (Pages, F. Personnel Communication 2001). Additional daily truck and vehicle trips would be required for equipment and materials to haul and transport workers throughout project 1 and project 2 construction activities.

The number of construction vehicle trips temporarily added to the local roadway network would not be substantial, compared to the total number of vehicles traveling in the area, (recent traffic counts resulted in between 3,100 and 3,700 vehicles per day) and

would not be expected to affect service levels at any intersections along the major access roads, such as 41st Avenue and Portola Drive. However, in the absence of a plan of designated routes through the residential neighborhood to construction zones, the addition of construction vehicles could result in a general disruption of local traffic. This would be a temporary significant impact.

Mitigation 9.1

To minimize impacts of construction-related traffic and staging on normal vehicle traffic and area roadway use, prior to initiation of construction activities, the Construction Contractor shall prepare a construction traffic mitigation plan to address impacts related to construction traffic routes, construction equipment staging, construction vehicle parking, lane closures and blockages, detours, resident access to homes along East Cliff Drive, and emergency vehicle access during construction. The County Public Works Department shall review and approve this plan prior to any construction or site preparation. Elements of the mitigation plan shall include but not be limited to the following:

- 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.
- No Weekend Construction. Construction activities shall be prohibited on East Cliff Drive on Saturdays, Sundays, and holidays.
- 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.
- Pedestrian and Bicycle Access. Bicycle and pedestrian access along East Cliff Drive shall be maintained during construction to the maximum extent feasible.
- Fencing and Barricades. Construction areas shall be blocked off from vehicle, pedestrian, and bicycle traffic by such measures as temporary barriers or fencing.
- Lane Closure/Blockage Timing. Lane closures shall be limited to noncommute times, to the extent feasible, such as between 8:30 AM and 4:30 PM.
- Lane Closure/Blockage Monitor. A public safety monitor or flagperson shall be present during all lane closures/blockages to regulate vehicle, pedestrian, and bicycle traffic through the construction zone.

- 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.
- Lane Closure Detour Plans. Detour plans shall be developed for periods when segments of East Cliff Drive must be completely closed to through-traffic.
- Local Resident Access. Provisions shall be made to provide vehicular access to residences along East Cliff Drive with minimum delays during construction.
- 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.
- Phone Number for Complaints. The County Department of Public Works 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. The Department of Public Works shall keep a written record of all such complaints and investigate the problems registered by the public within 48 hours of receiving the complaints.
- 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 and detour routes.

Impact 9.2 Temporary Narrowing and Closing of East Cliff Drive

During projects 1 and 3, there would need to be a construction staging area on the ocean side of East Cliff Drive, adjacent to the area of construction. This staging area would provide a site for storing materials and equipment and for parking trucks and other vehicles during the day. Heavy equipment, including a crane, forklifts, worker lifts, and concrete pumps, would be operated along the cliff top from the staging area.

Setting up a construction staging area may require reconfiguring the current roadway and bicycle/pedestrian lane on East Cliff Drive. It is possible that the area adjacent to the O'Neill property may be used for this purpose. At a minimum, the bicycle/pedestrian lane is expected to be eliminated in the immediate area of construction, and a single lane would be available for vehicles, bicyclists, and pedestrians. Some delays could occur as traffic stops to allow for construction vehicle and equipment movement. During certain construction activities, such as crane operation, segments of East Cliff Drive may have to be closed completely, requiring traffic to detour completely around the construction zone. This would result in temporary traffic increases on detour roadways.

During project 2, construction would occur directly on the roadway, as the East Cliff Drive travel lane would be reconfigured to provide pedestrian and bicycle paths and additional parking along the roadway. During construction, segments of the roadway may need to be temporarily blocked or completely closed to through-traffic. This would be a temporary significant impact.

Mitigation 9.2

Implementation of a construction traffic plan detailing safety measures and detour routes shall be used during lane blockages or closures and described above under Mitigation 9.1.

Significance After Mitigation

All temporary impacts related to construction-related trips and narrowing/closure of East Cliff Drive during construction would be reduced to a less-than-significant level with implementation of Mitigation 9.1.

Impact 9.3 Bicycle Safety at 32nd Avenue Intersection

Bicyclists who want to travel westbound on the proposed bicycle pathway 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 East Cliff Drive at 32nd Avenue to connect to bicycle lanes.

The proposed project would construct a new crosswalk at The Hook, between the public parking lot and the bicycle and pedestrian paths. No traffic controls are proposed for this location. A sign is currently posted at this location stating “Bikes Must Cross” with an arrow pointing toward the pathway. In addition, a sign is posted along the East Cliff Drive travel lane near Larch Lane facing the westbound (wrong-way) direction that states “No Bicycles.” The presence of these signs helps to ensure that bicyclists heading westbound cross to the pathway and do not ride wrong-way along the East Cliff Drive travel lane. Given this signage, no bicycle safety conflicts are anticipated at this location.

“Bikes Must Cross” signage has not been installed at the intersection of East Cliff Drive/32nd Avenue/Pleasure Point Drive, where westbound cyclists must cross back over to the north side of the roadway to the existing bike lanes west of Pleasure Point Drive. In the absence of clear directional signage, westbound bicyclists exiting the pathway at 32nd Avenue/Pleasure Point Drive may continue riding against traffic on the ocean side of the roadway. Given that as many as 300 to 400 cars and 100 to 150 bikes may travel through each of these intersections during a peak hour, the possibility of bicycle/vehicle conflict is considered a potentially significant long-term operational safety impact (Higgins Associates, 2001). Measures to address bicycle safety at this location are outlined in Mitigation 9.3 below.

Mitigation 9.3

To minimize bicycle safety impacts at 32nd Avenue/Pleasure Point Drive, signs shall be installed by the County Public Works Department 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 and would ensure that bicyclists continuing westbound from the proposed bicycle path obey the stop sign at Pleasure Point Drive before crossing to the existing bicycle lanes across the roadway.

Significance After Mitigation

All impacts related to bicycle safety at 32nd Avenue/Pleasure Point Drive/East Cliff Drive would be reduced to a less-than-significant level with the implementation of Mitigation 9.3.

Nonsignificant Impacts

Increase in Vehicle Trips

The proposed project does not involve any traffic-generating land uses and is not expected to result in a substantial permanent increase in vehicle trips to the project area.

Transit Impacts

Construction and operation of the proposed project is not expected to affect any of Metro’s transit routes in the project area.

No Impact

Consistency with the Santa Cruz County General Plan

Alternative 1 would be consistent with all relevant General Plan transportation policies identified in Chapter 3.

Beneficial Impacts

Increased Public Parking

Currently there are a total of six formal public parking spaces on East Cliff Drive (adjacent to the O’Neill property), and 21 semiprivate off-street spaces located within the right-of-way (adjacent to existing residential buildings) concentrated between 36th Avenue and Manzanita Avenue. The parkway improvements under project 2 would result in reconfiguration of the roadway lanes and existing parking spaces and a net gain of 8 new parking spaces, for a total of 35 on-street public parking spaces following project implementation: five diagonal spaces on the ocean side of the road, between Pleasure Point Drive and 33rd Avenue; 11 diagonal spaces on the ocean side, two parallel spaces on the inland side, two parallel spaces on the ocean side of the road, near 36th Avenue; 15 between 37th Avenue and Manzanita Avenue; and two parallel spaces on the ocean side, between 38th Avenue and Larch Lane. These additional parking spaces are not expected to generate new trips to the project area; rather it is expected that they would reduce circulation through the neighborhood side streets by visitors searching for limited parking spots. The additional parking is also expected to help reduce double parking along East Cliff Drive.

As noted earlier, the existing parking spaces identified as semiprivate are used by residents of buildings between 36th Avenue and Manzanita Avenue as if they were

private residential parking, although many of the spaces appear to be within the public right-of-way. These spaces are not typically used by the general public, and signs such as “PRIVATE PARKING, TOW AWAY” have been posted by residents. Some of these semi-private spaces would be removed as part of the roadway improvements, and others might be reconfigured and made available for public use. Under the proposed improvements, residents would no longer have exclusive use of public parking spaces adjacent to their buildings spaces and would have to compete with the general public for parking on high use days.

The project area is covered by the Live Oak Parking Program, which generally restricts parking in the East Cliff Drive area during the weekends in the summer months without a permit. Residents can obtain free permits; non-residents are required to purchase permits for a fee of five dollars per day. Given that free parking is available at The Hook parking lot, and along the avenues farther away from East Cliff Drive, it is expected that most non-residents would continue to use the free parking areas and that there would be sufficient parking for residents along East Cliff Drive. There may be some inconvenience for residents who do not have exclusive use of a designated parking spaces, but this would not be considered a significant impact. The overall increase in public parking along the project corridor is viewed as a beneficial impact.

Improved Bicycle and Pedestrian Circulation

Currently, most pedestrians and bicyclists along East Cliff Drive use a pathway along the ocean side edge of the roadway that is delineated with plastic lane markers to separate it from the adjacent vehicular travel lane. Project 2 would develop new pedestrian and bicycle pathways along East Cliff Drive between 32nd Avenue and 41st Avenue. These pathways are expected to make an attractive walking and bicycling environment as they extend past landscaped areas along the cliff top. The project proposes to separate bicycles and pedestrians by providing different paved surfaces. The pedestrian path would be eight feet wide, constructed of decomposed crushed granite (approximately two to three inches deep), and would generally follow the cliff edge. The pedestrian path is expected to be used primarily by walkers and joggers, who generally prefer a softer trail surface. The bicycle path would be eight feet wide, constructed of asphalt, and would be between the pedestrian path and the car lane. The bicycle path would be separated from the car lane by a mountable curb. Where sufficient width is available, a landscaped buffer, composed of low coastal vegetation, would be installed along the pedestrian and bicycle paths to provide further separation from the vehicular traffic. Due to its slow-speed nature, the bicycle path generally is not expected to be used by long-distance commuters or sport cyclists, who prefer to travel at higher speeds. For high-speed cyclists traveling in the eastbound direction, the East Cliff Drive car lane would be used. For high-speed cyclists traveling in the westbound direction, a detour onto neighborhood adjacent streets, or use of Class II bike lanes on Portola Drive would be necessary to bypass the one-way segment of East Cliff Drive. 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.

Currently, crosswalks are striped across East Cliff at Pleasure Point Drive (east leg), 36th Avenue (a high visibility crosswalk at the west leg), 38th Avenue (east leg), and at The Hook parking lot. A crosswalk is also striped across the entrance to The Hook parking lot along 41st Avenue. Under the proposed project, new crosswalks would be provided at 34th, 35th, 36th, 37th, 38th, and 41st avenues.

In general, pedestrian and bicyclist safety would be improved by the two new eight-foot pathways, one for bicyclists and one for pedestrians. The separate pathways are expected to help maintain an orderly flow and to reduce pedestrian and bicyclist conflicts. Some multiuse conflicts may occur as pedestrians, skateboarders, and in-line skaters share the path with bicyclists, but these would not be significant safety issues, given that bicycle speeds are expected to be relatively slow.

Improved Pedestrian Access to the Ocean

Project 1 would construct a new stairway at Pleasure Point Park, improving public access to the ocean in this area where surfers currently climb down the cliff to the water. The stairways downcoast of 36th Avenue and upcoast of 41st Avenue would need to be removed during construction and would be reconstructed in their general locations. The stairway at 38th Avenue would not be affected by construction and would remain in place.

9.2.2 Partial Bluff Armoring with Full Improvements (Alternative 2)

Alternative 2 proposes armoring the lower Purisima bedrock, with the upper terrace deposits reinforced, as needed, with soil nail retaining walls. Roadway, pedestrian, and bicycle improvements would be implemented, as proposed under Alternative 1.

Significant Impacts

Impact 9.4 Temporary Construction-Related Vehicle Trips

Significant impacts and proposed mitigation related to temporary construction-related vehicle trips are identical to those described for Alternative 1.

Impact 9.5 Temporary Narrowing and Closing of East Cliff Drive

Significant impacts and proposed mitigation related to the temporary narrowing and closing of East Cliff Drive are identical to those described in Alternative 1.

Impact 9.6 Bicycle Safety at 32nd Avenue Intersection

Significant impacts and proposed mitigation related to bicycle safety at the 32nd Avenue intersection is identical to those described in Alternative 1.

Impact 9.7 Potential Future Loss of Pedestrian and Bicycle Improvements

Under Alternative 2, large storms would continue to erode the upper terrace deposits, causing them to fail, and would eventually damage the pedestrian and bicycle pathways and roadway. Loss of the pathways would necessitate reconfiguring the remaining roadway to accommodate pedestrians and bicyclists. Continued severe erosion of the terrace deposits would eventually damage the vehicle lanes, requiring closure of the road

to through-traffic or its eventual abandonment. In this worst-case scenario, all through-traffic would need to be rerouted onto other local streets. Because it cannot be predicted when such roadway damage would occur under Alternative 2, quantification of the pedestrian, bicycle, and traffic impacts is considered speculative. However, the eventual loss of the pedestrian and bicycle improvements and roadway is considered a potentially significant unmitigable impact of Alternative 2.

Mitigation

No mitigations have been identified that would reduce this impact to less than significant.

Significance After Mitigation

Loss of the roadway and the bicycle and pedestrian pathways due to continued erosion are considered a significant unavoidable impact of Alternative 2. All other impacts discussed above would be reduced to a less-than-significant level with the mitigation measures identified herein.

Nonsignificant Impacts

Increase in Vehicle Trips

The proposed project does not involve any traffic-generating land uses and is not expected to result in a substantial permanent increase in vehicle trips to the project area.

Transit Impacts

Construction and operation of the proposed project is not expected to affect any of Metro's transit routes in the project area.

No Impact

Consistency with the Santa Cruz County General Plan

Alternative 2 would be consistent with all relevant General Plan transportation policies identified in Chapter 3.

Beneficial Impacts

Increased Public Parking

Beneficial impacts associated with increased parking are identical to those described in Alternative 1.

Improved Bicycle and Pedestrian Circulation

Beneficial impacts associated with improved bicycle and pedestrian circulation are identical to those described in Alternative 1.

Improved Pedestrian Access to the Ocean

Beneficial impacts associated with improved access to the ocean are identical to those described in Alternative 1, except that the life of the new stairway improvements would

be expected to be substantially shorter than that provided by Alternative 1 due to continued erosion of the bluff's upper terrace deposits.

9.2.3 Partial Bluff Armoring with Limited Parkway Improvements (Alternative 3)

Under projects 1 and 3 of Alternative 3, two segments of the cliff face adjacent to East Cliff Drive would be partially armored, but no repairs or improvements would be made to retaining walls on the upper portion of the cliff. Under project 2, the roadway would be narrowed and a curb and gutter installed, and a single multi-use path would be constructed along the cliff edge. Because no retaining wall or backfill would be placed along the cliff edge, the width of the roadway and multi-use path improvements would be constrained by the available right of way and geotechnical condition of the cliff edge. It is assumed that some setback from the cliff edge would be included to allow for continued erosion.

Significant Impacts

Impact 9.8 Temporary Construction-Related Vehicle Trips

Significant impacts under, and proposed mitigation for, Alternative 3 related to temporary construction-related vehicle trips are identical to those described for Alternative 1.

Impact 9.9 Temporary Narrowing and Closing of East Cliff Drive

Significant impacts and proposed mitigation under Alternative 3 related to temporary narrowing and closing of East Cliff Drive are identical to those described in Alternative 1.

Impact 9.10 Bicycle Safety at 32nd Avenue Intersection

Significant impacts and proposed mitigation under Alternative 3 related to bicycle safety at 32nd Avenue are identical to those described in Alternative 1.

Impact 9.11 Potential Future Loss of Pedestrian and Bicycle Improvements and Roadway

Alternative 3 proposes no armoring or retaining walls on the upper portions of the cliff (terrace deposits), with bluff protection achieved through armoring of the lower Purisima bedrock.

Under Alternative 3, impacts on and mitigation for pedestrian, bicycle, and roadway improvements would be the same as those described in Alternative 2, except that these public facilities would be lost at a more rapid rate due to the lack of retaining walls.

Nonsignificant Impacts

Increase in Vehicle Trips

The proposed project does not involve any traffic-generating land uses, and is not expected to result in a substantial permanent increase in vehicle trips to the project site.

Transit Impacts

Construction and operation of the proposed project is not expected to affect any of the Metro's transit routes in the project vicinity.

No ImpactConsistency with the Santa Cruz County General Plan

Alternative 3 would be consistent with all relevant General Plan transportation policies identified in Chapter 3.

Beneficial ImpactsIncreased Public Parking

Under implementation of Alternative 3, the benefits associated with increased parking would be identical to those described for Alternatives 1 and 2.

Improved Bicycle and Pedestrian Circulation

Currently, most pedestrians and bicyclists on East Cliff Drive use a lane along the ocean side edge of the roadway that has been lined with plastic lane markers to provide a separation from vehicular traffic. Alternative 3 would result in the development of a single multi-use pedestrian and bicycle pathway along East Cliff Drive between 32nd Avenue and 41st Avenue. This facility would be between 8 and 10 feet (2 and 3 meters) wide, depending on available right-of-way, and would be expected to make an attractive walking and bicycling environment, as it would meander along the bluff top. This pathway is expected to increase the number of people who walk and bicycle to the project area. Because it would not provide for separate bicycle and pedestrian traffic and would not substantially increase the width of the existing pedestrian/bicycle lane, this improvement would not be as effective as Alternative 1 in reducing potential bicycle-pedestrian conflicts. However, the pathway would still be viewed as an overall beneficial impact on bicycle and pedestrian circulation compared to the current condition of the plastic lane markers.

As with Alternatives 1 and 2, raised crosswalks would be provided at 34th, 36th, 37th, 38th, and 41st avenues, and a standard crosswalk would be striped at 35th Avenue. All aspects of the crosswalks are identical to those described in Alternatives 1 and 2.

Improved Pedestrian Access to Ocean

Improvements to pedestrian access to the ocean under this alternative are identical to those described in Alternative 2.

9.2.4 Groins and Notch Infilling (Alternative 4)

Under Alternative 4, no bluff protection structures would be installed along the bluffs as part of project 1; instead, three subtidal groins would be placed perpendicular to the shoreline to trap sand and form protective beaches at the base of the cliffs. Pedestrian and bicycle improvements of project 2 under this alternative are identical to those described for Alternative 3.

Significant Impacts

Impact 9.12 Temporary Construction-Related Vehicle Trips

Significant impacts and proposed mitigation under Alternative 4 related to temporary construction-related vehicle trips are identical to those described for Alternatives 1, 2, and 3.

Impact 9.13 Temporary Narrowing and Closing of East Cliff Drive

Significant impacts and proposed mitigation under Alternative 4 related to temporary narrowing and closing of East Cliff Drive are identical to those described in Alternative 1.

Impact 9.14 Bicycle Safety at 32nd Avenue and 41st Avenue Intersections

Significant impacts and proposed mitigation under Alternative 4 related to bicycle safety at the 32nd Avenue intersection are identical to those described in Alternatives 1, 2, and 3.

Impact 9.15 Potential Future Loss of Pedestrian and Bicycle Improvements and Roadway

Alternative 4 proposes no armoring of the cliffs and would protect the bluff by installing subtidal groins to create protective beaches. Under Alternative 4, roadway and parking improvements would be implemented as proposed under Alternative 1, but a single multiuse path would be constructed to allow some buffer for continued erosion, as under Alternative 3. All other impacts and proposed mitigation associated with the pedestrian and bicycle improvements and the roadway are the same as those described under Alternatives 2 and 3.

Nonsignificant Impacts

Increase in Vehicle Trips

The proposed project does not involve any traffic-generating land uses and is not expected to result in a substantial permanent increase in vehicle trips to the project site.

Transit Impacts

Construction and operation of the proposed project is not expected to affect any of Metro's transit routes in the project area.

No Impact

Consistency with the Santa Cruz County General Plan

Alternative 4 would be consistent with all relevant General Plan transportation policies identified in Chapter 3.

Beneficial Impacts

Increased Public Parking

Beneficial impacts related to increased parking under this alternative are identical to those described in alternatives 1, 2 and 3.

Improved Bicycle and Pedestrian Circulation

Under Alternative 4, beneficial impacts associated with improved bicycle and pedestrian circulation are identical to those described in Alternative 3.

Improved Pedestrian Access to the Ocean

Beneficial impacts related to improved pedestrian access to the ocean under this alternative are identical to those described under Alternatives 3.

9.2.5 No Action Alternative

Under the No Action Alternative, roadway conditions on East Cliff Drive would remain as described in Section 2.3. No planned cliff protection or stabilization efforts would be made, and the cliff and roadway would continue to be subject to natural erosion. No roadway improvements, parking improvements, or bicycle and pedestrian improvements would be implemented. The existing pedestrian/bicycle lane would remain in place, as would the existing six public parking spaces along East Cliff Drive. No curb or gutter would be installed.

Significant Impacts

Potential Future Loss of Pedestrian and Bicycle Improvements and Roadway

Under the No Action Alternative, the project would not be built and the bluffs would continue to retreat, causing further loss of the roadway. Without reinforcement (i.e., emergency repairs), at some point the roadway conceivably would experience a major washout, as happened in the winter of 1994. Such a washout would require temporary, or possibly permanent, closure of the roadway to through-traffic and the rerouting of certain traffic movements through the neighborhood. Under the most likely scenario, east-west through traffic would be diverted to Portola Drive, and East Cliff Drive would be utilized only for local vehicular access to individual houses, emergency access, and for bicycle and pedestrian circulation. This scenario would result in an increase in traffic on Portola Drive and 30th Avenue, as well as an increase in circulation on the other residential avenues by motorists seeking ocean views or direct access to the cliff areas. Such a road closure could also limit the size of emergency vehicles that could use East Cliff Drive, due to weight concerns or turning radius restrictions. This would be a significant unmitigable impact of this alternative.

Bicycle and Pedestrian Circulation

Under the No Action Alternative, bicycle and pedestrian circulation could be affected, as the bicycle/pedestrian lane is on the segment of the roadway most vulnerable to erosion. If major roadway loss were to occur, it is likely that the traffic lane would need to be further narrowed to accommodate the pedestrian/bicycle lane. At some point, if

roadway damage were severe enough, there may not be sufficient room to accommodate both the traffic lane and the pedestrian/bicycle lane. At this point, a solution such as closing the roadway entirely to through-traffic might be required, and only local traffic shared with pedestrian/bicycle traffic would be permitted on the roadway. This would necessitate the installation of signs and barriers and possibly traffic calming devices to ensure that vehicular speeds were compatible with bicycle and pedestrian activity on the roadway. There also could be indirect impacts from rerouting traffic through the adjacent residential neighborhood, as noted above.

Beneficial Impacts

Under the No Action Alternative, there would be no beneficial impacts on traffic and transportation.

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