

# COLUMBIA AND VASSAR BEACH ACCESS IMPROVEMENT PROJECT

## PROJECT DESCRIPTION

### SUMMARY

The County of San Mateo Department of Public Works (County) is proposing to construct a wooden stair case at the end of Columbia Avenue and grade a pedestrian trail at the harbor end of Vassar Avenue in the Pillar Point Harbor. Dedicated pedestrian access to the strip of sandy beach at Pillar Point Marsh Beach is limited. Construction of the stair case would involve minor grading of the small coastal bluff below Columbia Avenue. An existing undesignated trail at the south end of Vassar Avenue will be graded to construct a dedicated pedestrian access point.

### PURPOSE

Foot access to the beach area below Princeton Avenue is scarce. Currently, pedestrians access the beach at West Point Avenue and multiple undesignated routes at the road ends between West Point Avenue and Broadway Avenue. These undesignated routes can be hazardous due to unstable angular rocks and steep terrain. Construction of the proposed stair case and grading of the trail would improve public safety and access for pedestrians.

### LOCATION

The project sites are located at the harbor end of Columbia Avenue and Vassar Avenue in the Pillar Point Harbor of unincorporated San Mateo County (Figures 1 - 3). The Project sites are mapped as occurring on the United States Geological Survey (USGS) Montara Mountain 7.5 minute quadrangle topographic map. The latitude and longitude coordinates for the project sites are 37° 30' 12.0"N 122° 29' 21.8"W and 37°30'09.7"N 122°29'28.3"W.

### EXISTING CONDITIONS

Columbia Avenue is located on a 7-foot-tall coastal bluff overseeing the Pillar Point Harbor. Over time, the bluff has eroded due to urban runoff, tidal fluctuations, and wind. A pile of broken concrete has accumulated within the proposed footprint of the stair case. All of the proposed work exists above the mean high water line. Portions of the proposed stair case and the relocation of the broken concrete would be located at or below the highest tide line. See Photos 1 through 3 for existing conditions at the project site. A shallow earthen swale carries street runoff flow along the western shoulder of Columbia Avenue. At the Vassar Avenue location, pedestrians access the beach using undesignated dirt paths. The roadway

shoulder is located approximately 3 feet above the beach. The Project would improve one of these dirt paths by grading it to a width of 5 feet. Existing broken concrete at the base of the proposed path would be relocated to the areas immediately adjacent to the path.

## **PROJECT COMPONENTS**

Project activities would occur in the following sequence: best management practice installation, equipment staging, concrete relocation, slope grading, stair construction, and erosion control. These construction activities are further described in the subsections below. A list of best management practices to be used for this project is on page 7. All project activities will be conducted in accordance with best management practices and protection measures specified in the County of San Mateo Watershed Protection Program's Maintenance Standards and San Mateo Countywide Water Pollution Prevention Program to prevent and minimize Project-related impacts (County 2004 and SMCWPPP 2012).

### **Staging and Access**

For the duration of the Project, materials and equipment will be positioned on the paved roadway and shoulder or adjacent streets. Operation of heavy equipment and vehicles will be limited to the roadway. Equipment access to the beach will not be required. Personnel will access the beach to install BMP's, move concrete, and construct the stair case.

### **Concrete Relocation**

The pile of broken concrete will be relocated by hand and equipment from the proposed construction area to the left and right of the proposed stair case. Approximately 1.9 cubic yards of broken concrete will be relocated from the construction area to the bluff line approximately 6 feet away from each side of proposed stair case location.

### **Stair case Construction**

An excavator operating from the roadway will remove material from the bluff to construct the stair case. The footprint of the stair case measures approximately 24'L x 4'W x 7'H. Once excavated, personnel will pour pile foundations and concrete landing pads. The stair case between the landing pads will be constructed using wood. Handrails will be present on both sides of the stair case. A 12-inch diameter drainage culvert will be attached alongside the stair case, above the mean high water line to direct street runoff flow away from the stair case. Approximately 6.2 cubic yards of the wooden stair case will be at or below the highest tide line. A survey map shows the locations of the proposed

stair case and mean high water line. Photo 4 shows a computer-generated representation of the proposed stair case.

Total Concrete Fill Below HTL (yd <sup>3</sup> )	Total Stair case Fill Below HTL (yd <sup>3</sup> )	Total Area of Work (ac)
1.9	6.2	0.006



**Photo 1.** View of coastal bluff edge leading towards Pillar Point Harbor (2/22/2018).



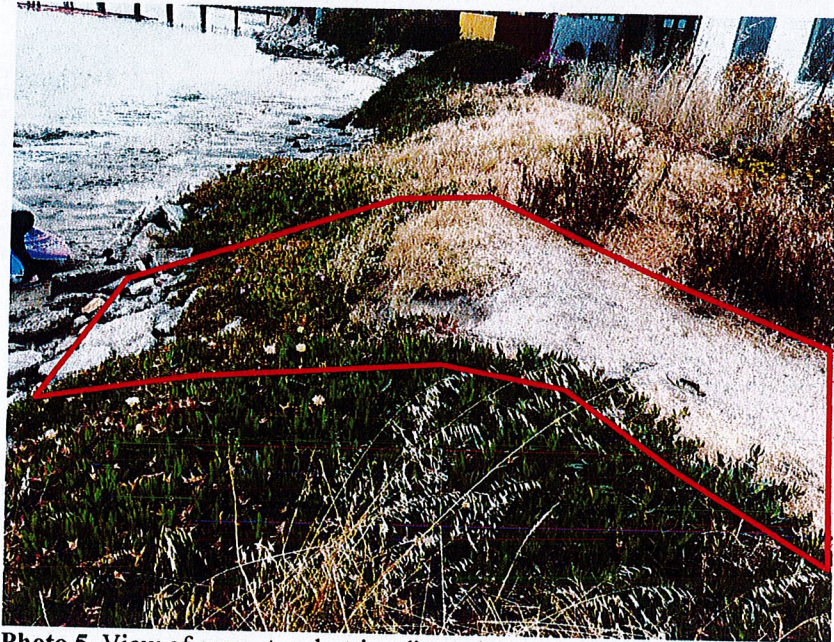
**Photo 2.** Western view of coastal bluff edge and broken concrete (2/22/2018).



**Photo 3.** Northern view of coastal bluff from Pillar Point Harbor (2/22/2018).

## Trail Grading

Pedestrian access at the end of Vassar Avenue would be improved by grading a 5-foot wide trail towards the beach for approximately 10 linear feet. Equipment operating from the roadway will excavate soil and vegetation from the proposed work area and grade a pathway to the beach. Approximately 1 cubic yard of soil will be removed to construct the trail. Approximately 1 cubic yard of broken concrete will be relocated to the adjacent area to provide a safe transition from the pathway to the beach. An area of approximately 5 feet by 5 feet is occupied by iceplant (*Carpobrotus* sp.) and will be removed for the proposed dirt walk way.



**Photo 5.** View of current pedestrian dirt pathway towards beach. Approximately location of pathway grading depicted in red outline.

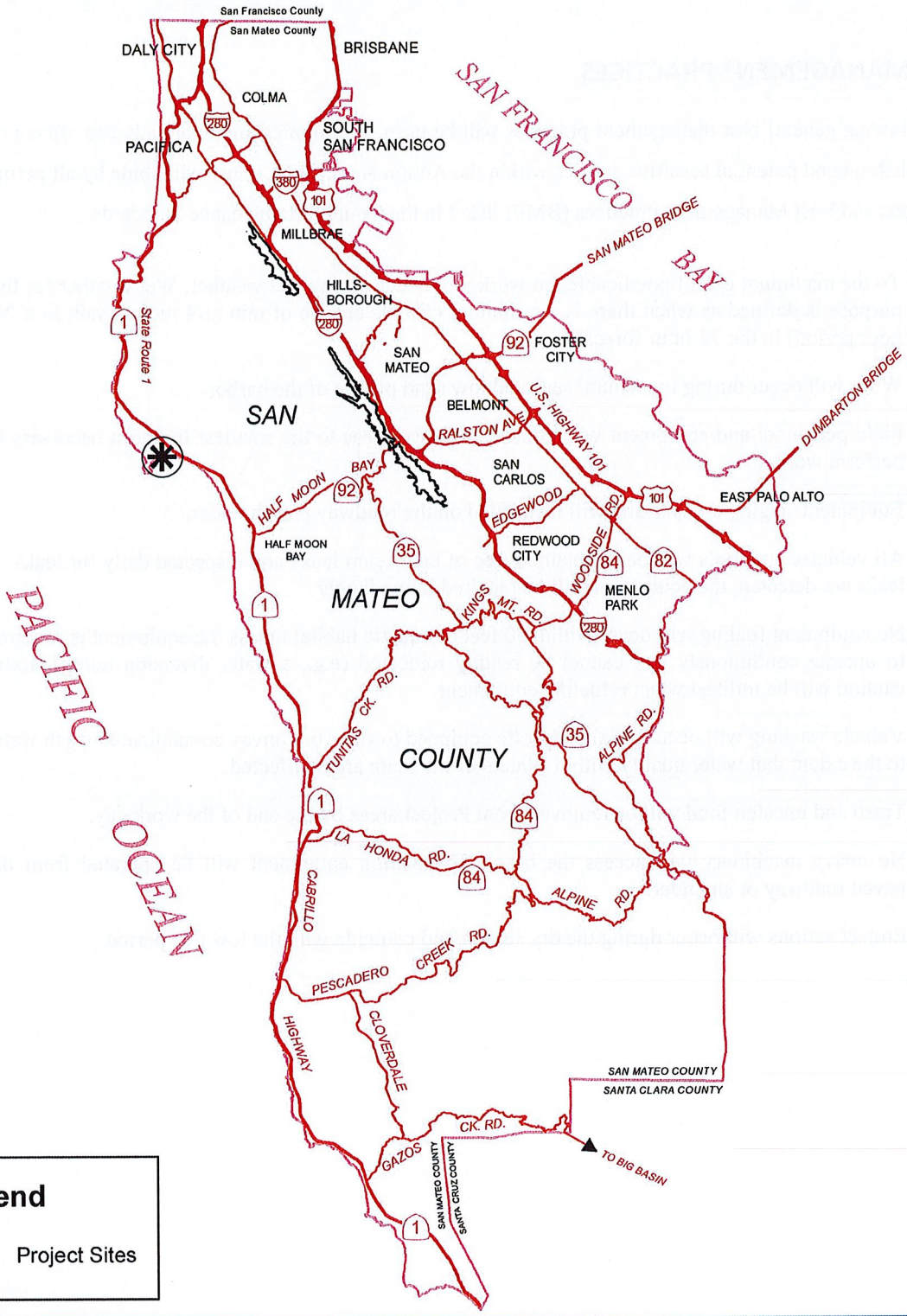


**Photo 6.** View of current pedestrian dirt pathway towards beach. Approximately location of pathway grading depicted in red outline.


## BEST MANAGEMENT PRACTICES

The following general best management practices will be used to minimize and avoid adverse effects on marine habitat and potential sensitive species within the Action Area. The County will abide by all permit conditions and Best Management Practices (BMP) listed in the County Maintenance Standards.


1. To the maximum extent practicable, no work will occur during wet weather. Wet weather for this purpose is defined as when there is a minimum of 30% chance of rain (1/4 inch of rain in a 24-hour period) in the 72-hour forecast.
2. Work will occur during the natural seasonal low sand profile of the harbor.
3. Field personnel and equipment will limit disturbance areas to the smallest footprint necessary to perform work.
4. Equipment staging and parking will be located on the roadway and shoulder.
5. All vehicles and tools will be maintained free of petroleum leaks and inspected daily for leaks. If leaks are detected, the equipment will be repaired immediately.
6. No equipment fueling will occur within 50 feet of aquatic habitat unless the equipment is required to operate continuously and cannot be readily relocated (e.g., a water diversion pump). Extra caution will be utilized when refueling equipment.
7. Vehicle washing will occur off-site at a site equipped to filter or convey contaminated wash water to the extent that water quality within Waters of the State are unaffected.
8. Trash and uneaten food will be removed from Project areas by the end of the work day.
9. No heavy machinery will access the beach. Excavation equipment will be operated from the paved roadway or shoulder.
10. Project actions will occur during the dry season and coincide with the low tide period.



**Legend**

 Project Sites

Document Path: G:\Users\utility\watershed\_protection\PERMITS\WPS2018-002 Columbia Avenue Harbor Access\03 Project\_Description\Maps\Vicinity\VicinityMap.mxd

	DESIGNED BY:	<b>Columbia Avenue Beach Access Improvement Project UNINCORPORATED SAN MATEO COUNTY VICINITY MAP</b>	SCALE: NONE
	CHECKED BY: JAL		DATE: APR 2018
	DRAWN BY: MH		FILE NO: 1/XXXX

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5TH FLOOR REDWOOD CITY, CALIFORNIA 94063-1665
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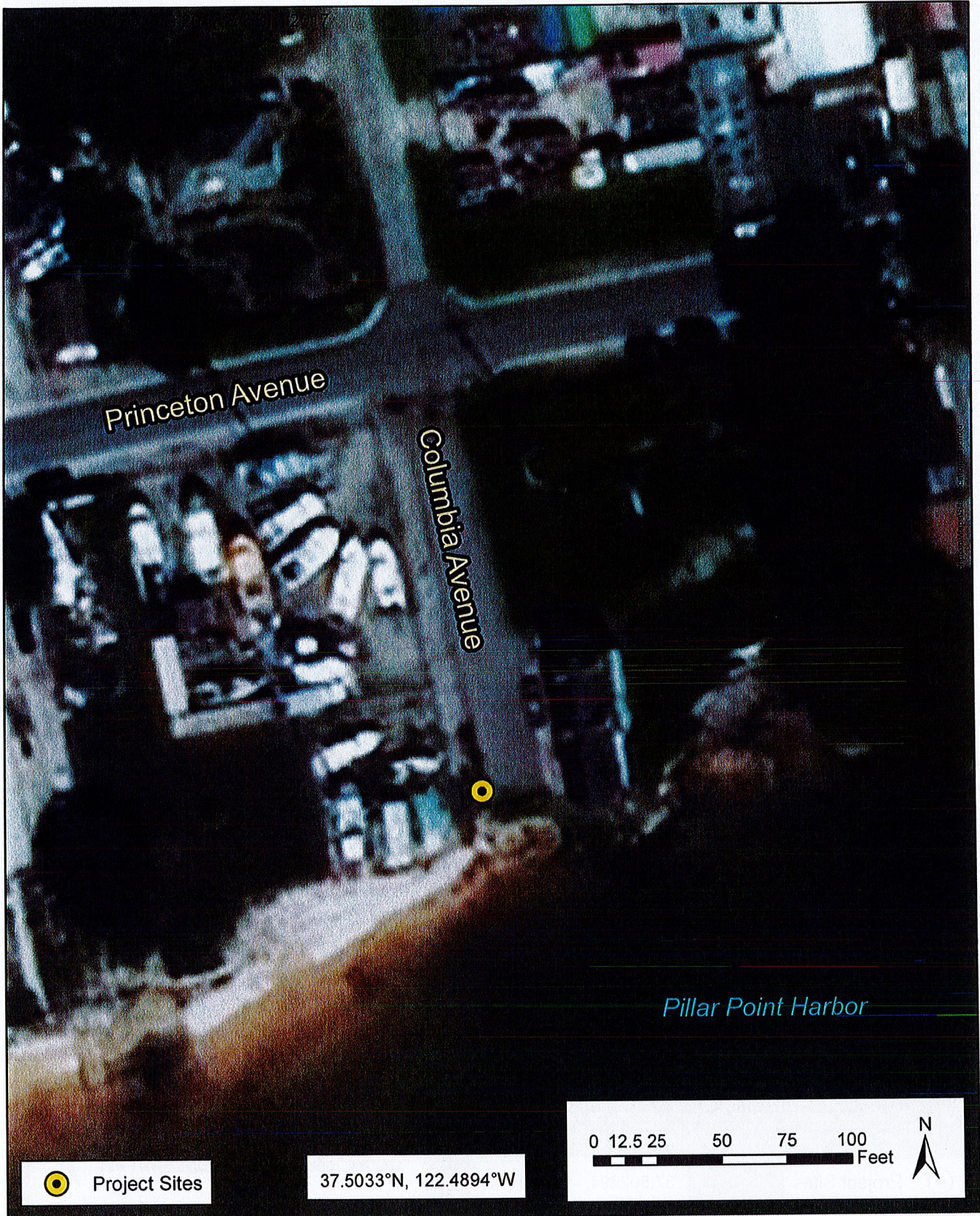
Source: County GIS 2018 & ESRI 2018



**COUNTY OF SAN MATEO**  
DEPARTMENT OF PUBLIC WORKS

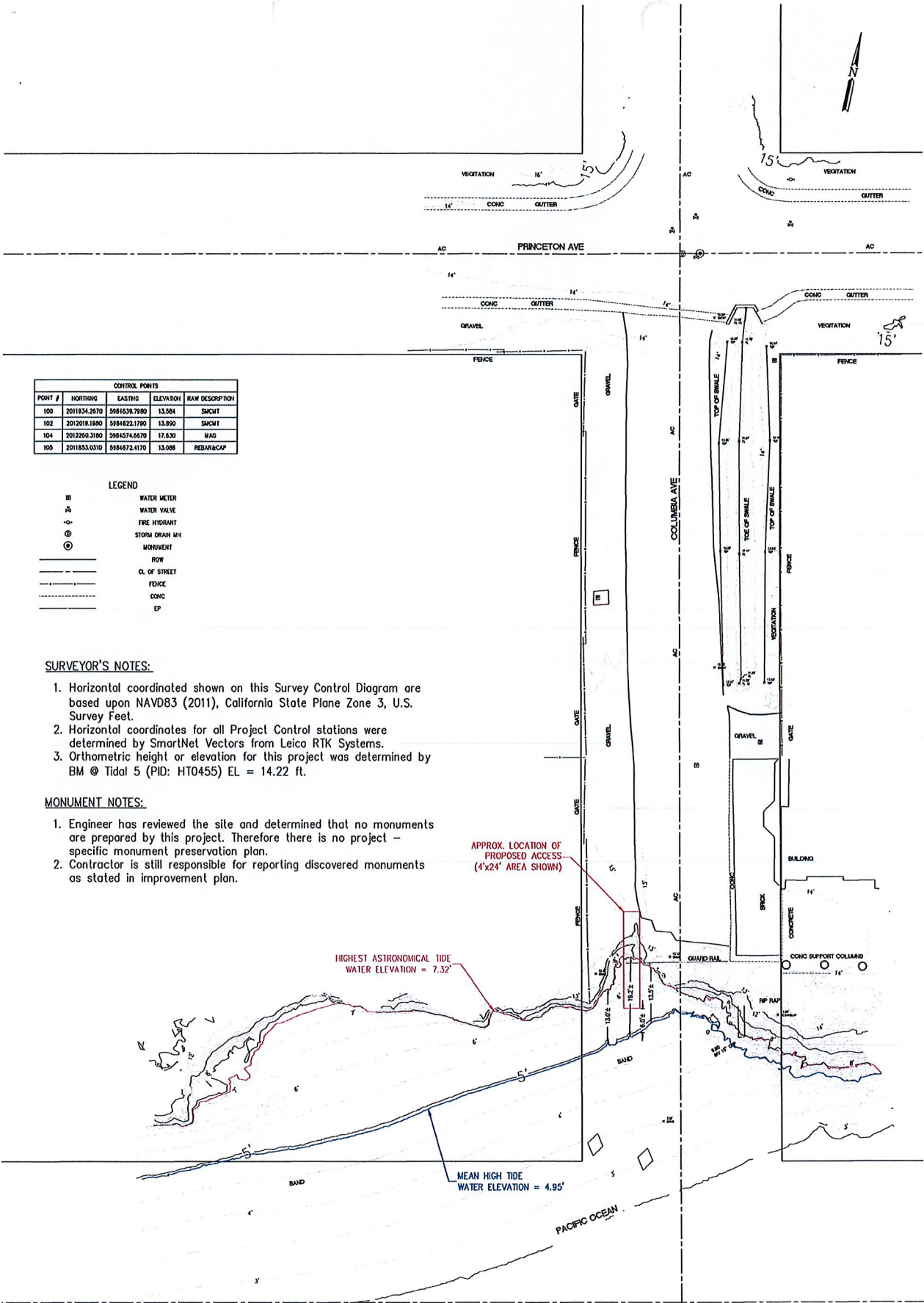
**Figure 2. Location Map**

Columbia and Vassar Avenue Pedestrian Access Improvement Project



**COUNTY OF SAN MATEO**  
DEPARTMENT OF PUBLIC WORKS

**Figure 2. Location Map**  
Columbia Avenue Pedestrian Access Improvement Project



CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	RAW DESCRIPTION
100	2011934.2670	5981639.7890	13.584	SMCMT
102	2012018.1980	5984822.1790	13.890	SMCMT
104	2012260.3180	5984574.6670	17.830	MAG
105	2011833.0310	5984872.4170	13.006	REBAR&CAP

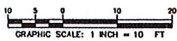
LEGEND	
⊕	WATER METER
⊕	WATER VALVE
⊕	FIRE HYDRANT
⊕	STORM DRAIN MH
⊕	MONUMENT
---	ROW
---	CL. OF STREET
---	FENCE
---	CONC
⊕	EP

**SURVEYOR'S NOTES:**

1. Horizontal coordinated shown on this Survey Control Diagram are based upon NAVD83 (2011), California State Plane Zone 3, U.S. Survey Feet.
2. Horizontal coordinates for all Project Control stations were determined by SmartNet Vectors from Leica RTK Systems.
3. Orthometric height or elevation for this project was determined by BM @ Tidal 5 (PID: HTO455) EL = 14.22 ft.

**MONUMENT NOTES:**

1. Engineer has reviewed the site and determined that no monuments are prepared by this project. Therefore there is no project - specific monument preservation plan.
2. Contractor is still responsible for reporting discovered monuments as stated in improvement plan.



SURVEYED BY TOWILL INC ON DECEMBER 14, 2017  
 THE CONTOUR INTERVAL FOR THE ROAD IS 0.5 FT  
 THE CONTOUR INTERVAL FOR THE BEACH AND CLIFF IS 1 FT  
 TOWILL INC JOB NUMBER 14984-200-05  
 ELEVATIONS ARE BASED ON NAVD83

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