U.S. Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

FEMA

March 23, 2015

Mr. Jimmy Tan
Deputy Public Works Director / City Engineer
City of San Bruno
567 El Camino Real
San Bruno, California 94066

RE: FEMA California Coastal Analysis and Mapping Project / Bay Area Coastal Study

Dear Mr. Tan:

Thank you for submitting comments regarding the San Francisco Bay Area Coastal (BAC) Study draft floodplain work maps prepared for San Mateo County. The BAC Study is the most comprehensive coastal hazard analysis of San Francisco Bay coastal communities undertaken to date and the study process is designed to be a collaborative process that encourages engaged stakeholders. The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) shared the data and draft floodplain work maps with San Mateo County, the affected incorporated communities, and with state and federal partners.

FEMA requested and received comments submitted by the City of San Bruno. The purpose of this letter is to share the response to these comments with you. FEMA and its consultants carefully reviewed all of the submitted comments and detailed responses can be found on the enclosed attachments.

We look forward to working with the City of San Bruno and the affected incorporated communities on this multi-year coastal mapping project. If you have questions about the BAC Study, please don't hesitate to contact me at (510) 627-7211, or by e-mail at Juliette.Hayes@fema.dhs.gov.

Sincerely,

Juliette Hayes
Risk Analysis Branch Chief
Mitigation Division
FEMA, Region IX

Memo

BakerAECOM
An Integrated Production Team

DATE: **March 23, 2015**

MEMORANDUM FOR: Shilpa Mulik, CFM, FEMA Region IX Engineer

FROM: Kris May, Ph.D., P.E., BAC Study Project Manager
Krista Conner, BAC Technical Lead

SUBJECT: Response to Comments Received on the San Mateo County Draft Work Maps

BakerAECOM received and reviewed comments on the draft San Mateo County work maps from the city of San Bruno submitted on February 13, 2015. The comments were prepared by Moffat & Nichol on behalf of the city of San Bruno. FEMA and the BAC study team appreciate the thoroughness of the reviews completed on behalf of the city. The memorandum provides responses to the comments contained with the memorandum prepared by Moffat & Nichol for Jimmy Tan, PE, Deputy Public Services Director / City Engineer with the city of San Bruno dated February 11, 2015 (attached for reference). The section numbers below refer to the section numbers in the Moffat & Nichol memorandum.

1.1 Base Flood Elevation

The base flood elevation rounded to the nearest whole foot is 10 feet, although the base flood elevations presented to tenth of foot accuracy range from 10.1 to 10.5 (rounded up from 10.47 feet) in this area. The floodplain mapping on the draft work maps presented within the FRR Tool was delineating using the base flood elevations with tenth of a foot accuracy. Only the base flood elevation label is rounded to the nearest whole foot. The analysis in this area relied on two regional modeling studies completed to support the San Francisco Bay Area Coastal Study. The Central Bay modeling used a 31-year hindcast and included the effects of long-period waves that propagate through the Golden Gate. The South Bay modeling used a 54-year hindcast, but it did not include the effects of long-period waves propagating through the Golden Gate. The influence of the long-period waves is small within the South Bay, and negligent within the far South Bay below the Dumbarton Bridge. The documentation associated with both the Central and South Bay regional modeling studies has been supplied to Moffat & Nichol to support their work with SFO. FEMA can also make these documents available to the City of San Bruno.

1.2 Sources of Flooding

FEMA coastal analysis is evaluated for steady state conditions. It is acknowledged that there are a lot of underlying assumptions and caveats with such an approach; however, extending the analysis to a more sophisticated approach (such as including 2D overland flow) would also require many underlying assumptions and caveats. It should be noted that a higher degree of precision in the modeling does not necessarily mean the answer is more accurate. There are multiple channels, creeks and low spots where the 1% annual chance flood can overtop from the Bay to the Bel Air neighborhood of the City; therefore it is mapped within the SFHA.

3. *Are rounded base flood elevations used to map the extents of the flood hazard areas? If so, what are the extents of the flood hazard areas if the BFE were changed?*

The extents of the flood hazard areas are mapped based using flood elevations to the tenth of a foot, and the flood elevations will be presented in the Flood Insurance Study Report with tenth of a foot accuracy. Only the base flood elevation labels on the Flood Insurance Rate Maps (FIRMs) are rounded to nearest whole foot. The rounded BFE labels allow for greater usability and readability of the FIRMs. FEMA has not completed analysis and mapping for the city of San Bruno using alternate flood elevations.

4. *If the BFE is indeed revised due to comments raised by SFO, will it affect the overall flooding areas for the City?*

Currently, the City of San Bruno's analysis and mapping is consistent with the analysis and mapping for the San Francisco International Airport. This mapping is being provided to the City of San Bruno so that they can better understand how the flood hazards between these adjacent areas may relate. The San Francisco International Airport has developed a flood protection plan to reduce their risk of being flooded by the 1% annual chance flood. If this project impacts coastal flood hazards within the City of San Bruno, this can be taken into account through a Letter of Map Revision. FEMA recommends that the City of San Bruno coordinate directly with the San Francisco International Airport on their flood improvement project.

5. *Since the model is strictly to evaluate the impacts from storm surge, swells and wave generation due to wind and does not include rainfall runoff or riverine flooding, what is the typical duration of the storm surge event that correlates to the results of the flooding areas shown on the maps?*

As described in the response to Section 1.2, FEMA coastal analysis is evaluated for steady state conditions. As such, a specific duration is not assigned to the base flood.

6. *What is the result of SFO's recent efforts for the City of San Bruno?*

FEMA recommends that the City of San Bruno coordinate directly with the San Francisco International Airport on their flood improvement project.

7. *Please confirm that the topographic information used were from 2010 and 2011 Lidar data from USGS and NOAA.*

Topographic information is based on the National Oceanic and Atmospheric Administration (NOAA) Northern San Francisco Bay Area LiDAR, collected February-April 2010.

8. *Please confirm the elevation at the San Bruno Creek channel tidegate (anticipated to be approximately 12 feet). Also, does the current FEMA modeling indicate any water overtopping into the San Bruno Creek channel at the tidegate structure?*

The elevation of the tide gate is not captured in the topography because coastal structures were removed from the bare-earth processed LiDAR. If the tide gate structure was accredited, it would have been manually included within the digital elevation model developed for the analysis.

San Francisco Bay Area Coastal Study
San Mateo County
Flood Risk Review Response to Comments

San Mateo County Response to Comments				
Comment ID	X	Y	Comment	Response
1	-13626368.4	4529544.4	Are rounded base flood elevations used to map the extents of the Special Flood Hazard Areas, or is a rounded BFE listed, but the precise elevation from the study reports used to map the extents of one-percent flooding? The extents of the flooding does not seem to match the listed base flood elevation but are more extensive. If the precise elevation is used, and since there are slight variations in the one-percent SWEL, how are the interior limits of inundation determined?	The Base Flood Elevation (BFE) label on the FIRM is rounded to the nearest whole-foot, but the boundary is mapped using precision to the tenth of a foot, and the tenth of a foot BFE will be presented within the Flood Insurance Study. The inundation limits are mapped using the 1% Still Water Elevation (SWEL) from the nearest transect(s).
2	-13625519.6	4530031.6	It appears that the new coastal hazard mapping ties into interior flood hazard delineation based on the September 9, 2013 LOMR. Please confirm. Does the revised coastal hazard study affect riverine flooding (e.g. Colma Creek), and how have the new coastal hazard maps been conformed to previously completed flood hazard mapping?	Yes, the Letter of Map Revision (LOMR) Case no. 13-09-1038P was partially incorporated into this physical map revision (PMR). The new coastal information supersedes the flood hazard information in the LOMR up to the railroad crossing between San Mateo Ave and South Linden Ave. Upstream of the railroad crossing the LOMR has been incorporated into this PMR. The floodplain areas associated with the LOMR are coded "LOMC16" in the SOURCE_CIT attribute of the mapping database layers. Additional information on this mapping decision is documented in Section 2.3 Incorporation of LOMCs of the Floodplain Mapping TSDN report. This report can be provided upon request. The revised coastal study does not affect the Colma Creek floodplain upstream of the coastal flood hazard areas.
3	-13626099.8	4529702.0	It appears that the new coastal hazard mapping ties into interior flood hazard delineation based on the September 9, 2013 LOMR. Please confirm. Does the revised coastal hazard study affect riverine flooding (e.g. Colma Creek), and how have the new coastal hazard maps been conformed to previously completed flood hazard mapping?	See response to Comment 2.
4	-13626998.8	4529322.4	It appears that the new coastal hazard mapping ties into interior flood hazard delineation based on the September 9, 2013 LOMR. Please confirm. Does the revised coastal hazard study affect riverine flooding (e.g. Colma Creek), and how have the new coastal hazard maps been conformed to previously completed flood hazard mapping?	See response to Comment 2.
5	-13625877.7	4529748.6	Are the 0.2 percent flood hazard areas (erroneously labeled on the map as "2 percent" to be mapped as separately designated flood zones or included as part of a Shaded X zone?	The 0.2-percent-annual-chance flood hazard areas will be mapped as Shaded Zone X.

6	-13624810.4	4529440.6	South San Francisco does not have protective levees along its shoreline. Is the coastal LiDAR data set sufficiently accurate to establish crest elevations where detailed levee elevation data is not listed as available?	The 2010 NOAA Light Detection and Ranging (LiDAR) dataset used for the study has a horizontal accuracy of 1m or better and a vertical accuracy of 9 cm. Since the crest of a levee is generally multiple meters wide, the LiDAR is able to capture the levee crest. It is a highly accurate dataset that is considered generally sufficient for the purposes of a flood hazard study.
7	-13624495.2	4529311.6	The one-percent TWL is less than the one-percent SWL at Transect No. 12 near Colma Creek. Is there an explanation for this? It looks like the transect may intersect what is locally referred to as Samtrans island as well as the shoreline on the north side of the mouth of Colma Creek. Was this accounted for in the study?	This is a result of the statistical analysis and the differences in the distribution curves. While we agree that at face value it does not seem to make physical sense, it does make statistical sense and is not considered an error. This issue occurs where waves are small and are not likely to represent the maximize coastal hazard. In these instances the 1% SWEL is used to appropriately identify the flood hazard.
8	-13625875.0	4528604.0	Another ongoing study for San Francisco International Airport references a DHI model one-percent stillwater elevation of 10.0 feet NAVD at the north end of the airport near its treatment plant. The closest CCAMP transect to this referenced location is only 2,000 feet to the north, but the listed one-percent stillwater elevation, which should be based on the same DHI model, is 10.5 feet NAVD. While the BFE is rounded to 10 feet NAVD on the preliminary map, this seems like a real difference in DHI model interpretation.	The regional modeling of San Francisco Bay was conducted in two phases. The first phase, focused on the North and Central Bay, was completed in 2011 (DHI, 2011). The second phase, focused on the South Bay, was completed in 2013 (DHI, 2013). SFO is located at the southern limit of the North and Central Bay study. The differences in 1-percent-annual-chance stillwater elevations between the (California Coastal Analysis Mapping Project (CCAMP) study and the SFO study described in the comment is likely referring to the differences in the results from the North and Central Bay model versus the South Bay model. Section 3.2 Water Level and Wave Starting Conditions of the Coastal Analysis Report describes the technical differences between the two models in more detail. This report can be provided upon request.
9	-13626239.3	4529446.6	The area of flooding seems to assume an infinite duration of SWL effect and resulting flood water volume. Peak tide period is limited in duration and would limit the amount of water and inland reach of inundation.	FEMA coastal analysis is evaluated for steady state conditions. It is acknowledged that there are a lot of underlying assumptions and caveats with such an approach; however, extending the analysis to a more sophisticated approach (such as including 2D overland flow) would also require many underlying assumptions and caveats. It should be noted that a higher degree of precision in the modeling does not necessarily mean the answer is more accurate. There are multiple channels, creeks and low spots were the 1% annual chance flood can be routed from the Bay to these locations; therefore they are mapped within the Special Flood Hazard Area (SFHA), area inundated by 1% annual chance flood event.
10	-13625108.5	4529571.6	The area of flooding seems to assume an infinite duration of SWL effect and resulting flood water volume. Peak tide period is limited in duration and would limit the amount of water and inland reach of inundation.	See response to Comment 9.
11	-13626348.0	4528680.1	The area of flooding seems to assume an infinite duration of SWL effect and resulting flood water volume. Peak tide period is limited in duration and would limit the amount of water and inland reach of inundation.	See response to Comment 9.

12	-13626244.7	4529375.9	Although South San Francisco does not have any levees, the preliminary maps seem to discount the effect of other man made barriers such as sound walls and highway barriers. The storm drainage culverts under such features will limit the effective reach of inundation, especially given the limited duration of SWL due to tides.	As noted in the comment, features such as sound walls and highway barriers are not levees. For purposes of the NFIP, FEMA will only recognize in its flood hazard and risk mapping effort those levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with the level of protection sought through the comprehensive floodplain management criteria established by NFIP regulations (44 CFR 65.10). Therefore, these features are not considered within the flood hazard analysis or mapping. Also, see response to Comment 9 regarding flood duration.
13	-13609749.8	4510816.9	The parcel for In & Out Burger should have the restaurant structure removed from the Zone AE Flood Hazard Area as it was built at or above BFE.	If this structure is associated with an existing Letter of Map Amendment Application (LOMA), it will be evaluated for possible revalidation during preliminary map production. Based on our review, the approximate lowest elevation adjacent to this structure is 9.6 feet NAVD88. Note that this elevation is based on the 2010 NOAA LiDAR, and improvements were made after 2010, these improvements may not be represented accurately. If this structure has a lowest adjacent grade at or above the BFE, they can submit a LOMA application (including certified LAG information) to be evaluated for removal from the SFHA.
14	-13610008.5	4510830.0	Please provide complete list of addresses that are to be removed from the Special Flood Hazard Area(s).	FEMA does not complete parcel level analysis to review the individual structures that are being removed or added to the SFHA. The GIS data associated with the draft floodplain mapping can be made available to the City of San Carlos so that this assessment can be completed. When the preliminary FIRMs are released, the GIS data will be available on the FEMA Map Services Center. This data can be downloaded and reviewed when it becomes available.
15	-13608839.5	4508807.1	Please clarify the yellow shading in this triangle - it appears to be incomplete and should possibly continue to the south?	This location is outside of the Bay Area Coastal (BAC) Study area, and the review team cannot locate what feature may have represented triangle-shaped shading within the FRR Tool.
16	-13609336.0	4509298.4	Parcels in this area were removed from the Special Flood Hazard Area in 2012. Please confirm and update maps accordingly.	If structures or parcels in this area were removed through the LOMA process, these LOMAs will be reviewed during preliminary map production. When the preliminary Flood Insurance Rate Maps are released and provided to the communities, you will also receive a preliminary Summary of Map Actions covering the affected FIRM panels. This summary will provide the preliminary determinations for all LOMA/LOMR-F/LOMRs within the study area. This summary will organize the map actions as those that will be incorporated into the mapping (Category 1 - typically LOMRs), revalidated (Category 2 - most LOMAs and LOMR-Fs will still be valid on the new maps), those that will be superseded (Category 3), and those that may require additional information to make a final determination (Category 4).

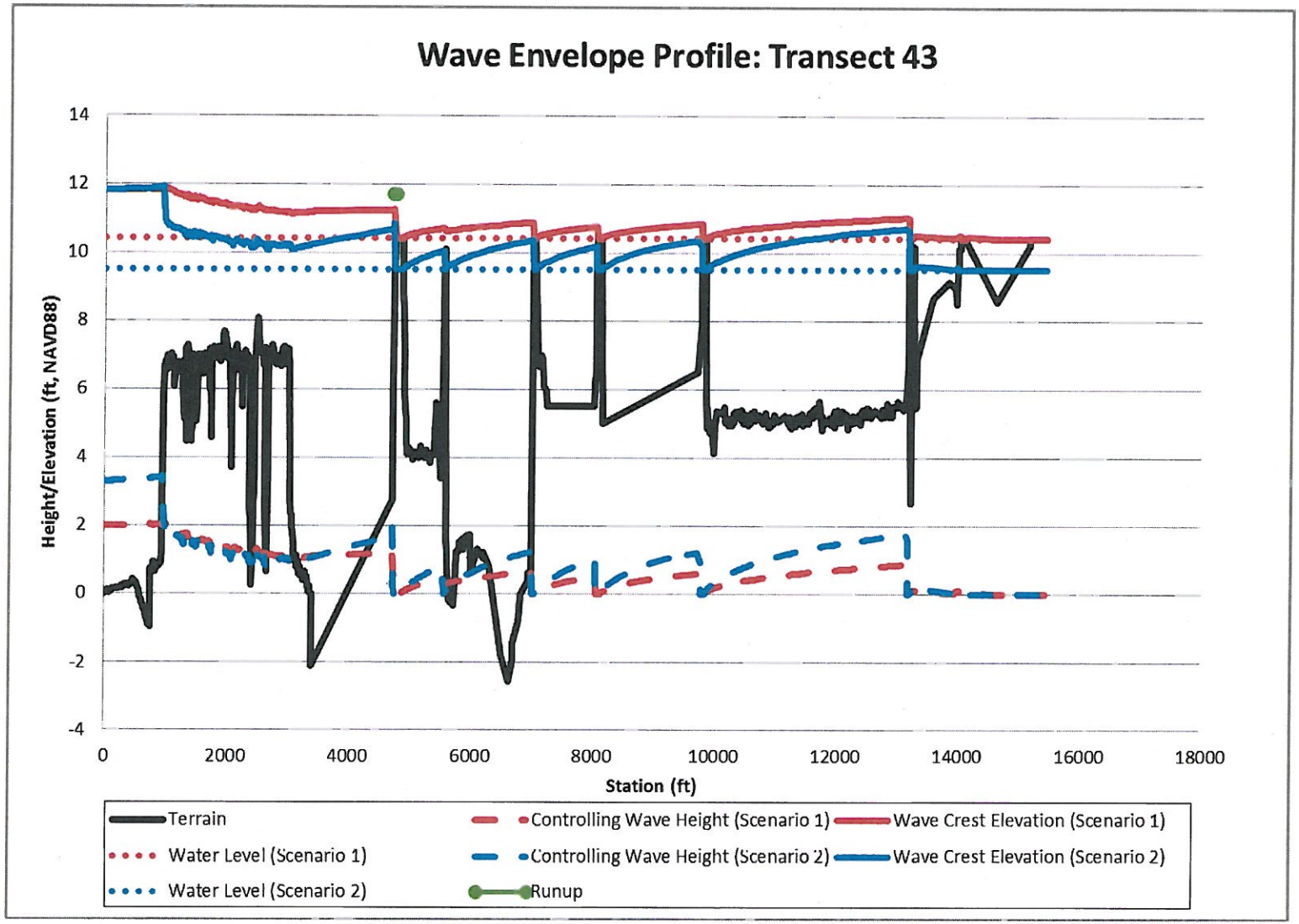
17	-13609033.9	4508980.5	Parcels in this area were removed from the Special Flood Hazard Area in 2012. Please confirm and update maps accordingly.	See response to Comment 16.
18	-13609136.3	4510433.3	Please provide data that justifies all areas that have been added in red as indicated per this draft review map.	The coastal analysis and floodplain mapping submittals can be made available to you.
19	-13609853.5	4511108.5	Please confirm that all new structures for the Palo Alto Medical Facility are clearly marked as out of the Special Flood Hazard Area.	Based on the 2010 NOAA LiDAR used within the BAC Study, these structures appear to fall partially within the SFHA. However, if these structures were built after 2010, these improvements may not be represented accurately. If these structures have a lowest adjacent grade elevation at or above the BFE, they can submit a LOMA application (including the certified LAG information) to be evaluated for removal from the SFHA.
20	-13609577.7	4510467.5	Please review the flood hazard data in this area for residential and commercial property to see if Zone AE boundary can be moved further east.	The flood zone boundaries are mapped to the tenth of a foot precision, based on the 2010 NOAA LiDAR topographic data. The BFE is in this area is currently mapped as 10 feet NAVD88. The topographic elevations in this area are 6.0 feet to 13.6 feet NAVD88; therefore some of this area is located below the 10 foot BFE.
21	-13603181.7	4507273.7	Is sound wall for 101 mapped? Would sound wall act as flood barrier?	See response to Comment 12.
22	-13605140.7	4509442.4	Seaport Centre has a Letter of Map Revision dated August 29, 1985 - was this incorporated?	There is no LOMR pertaining to the Seaport Centre, and no data available in our database pertaining to Seaport Centre from 1985, but there are two LOMAs and one CLOMR-F more recent than 1985: - CLOMR-F #10-09-0540C, panel 175B, flood source Westpoint Slough/SF Bay, dated 12/29/2009. Proposed Portion of Parcel A -- 1529 Seaport Blvd in C/O Redwood. This is a Conditional LOMR based on proposed conditions; these are not incorporated into the FIRMs until a LOMR/LOMR-F has been issued. - LOMA #11-09-2185A, panel 012B, flood source SF Bay, dated 04/21/2011. (70-RS) SEAPORT CENTRE UNIT III, LOTS 1 & 3 -- 600 & 900 CHESAPEAKE DRIVE in C/O Redwood. LOMAs are not incorporated on the FIRMs unless they were issued for multiple parcels/lots. - LOMA #11-09-3651A, panel 012B, flood source SF Bay, dated 08/05/2011. SEAPORT CENTRE UNIT III, LOTS 1 -- 900 CHESAPEAKE DRIVE in C/O Redwood. LOMAs are not incorporated on the FIRMs unless they were issued for multiple parcels/lots. In general, any old LOMRs would have either been incorporated into or supeseded by the countywide mapping, possibly in 2009 (5/18/2009 CW FIRMs).
23	-13605853.5	4508666.3	One Marina development submitted a LOMR-F dated 10/17/2014.	See response to Comment 16.

24	-13617650.3	4520472.9	Can FEMA confirm if these boundaries will cause any of this apartment complex to be included? The boundaries appear to only be in the road and on a driveway. This is a large apartment/condo complex and we'd want to know if any of these buildings would be going into the SFHA.	FEMA agrees that the flooding in this area is limited to the roadway areas. However, since the SFHA is touching some of the buildings they may be required to carry flood insurance by the lenders unless they have an approved LOMA. In such a case residents can submit a LOMA application to include the certified LAG information to be evaluated for removal from the SFHA. Also, please note that only one application will need to be submitted per condominium building to include a list of all units in the building.
25	-13625126.8	4528521.2	A tide gate/bridge structure currently exists at the mouth of San Bruno Creek near the SFO Parking garage. Has this feature been considered in providing protection against flooding from tides and wave actions for the upstream properties in the City of San Bruno/unincorporated San Mateo County?	The tide gate was not explicitly considered in the flooding analysis. Detailed structural engineering data in accordance with FEMA guidelines may be provided to FEMA to demonstrate the gate's ability to modify flood hazards. However, San Bruno Creek is not the only passageway for flood waters to reach upstream properties. Low lying portions of SFO provide pathways for flooding. Colma Creek is currently also providing a flooding source to this area.
26	-13626891.7	4530141.7	Colma Creek between San Mateo Avenue and Spruce Avenue have been improved to include raised channel walls on both sides (Elev. 12.54' @ San Mateo Avenue to Elev. 14.28' @ Spruce Avenue). Have these improvements been included in the analysis?	The San Francisco Bay Area Coastal Study is using the LIDAR data collected by NOAA in 2010. If grade improvements have been made that would impact flood zone designations, this information can be provided to FEMA. It should be noted that the channel walls would need to be in accordance with 44 CFR 65.10 as part of the flood protection system in order for them to be recognized by FEMA in its flood hazard and risk mapping effort.
27	-13625737.8	4529947.8	Colma Creek channel walls (both sides) from Utah Avenue to S. Airport Blvd. are above Elev. 11'.	For purposes of the NFIP, FEMA will only recognize in its flood hazard and risk mapping effort those levee/floodwall systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with the level of protection sought through the comprehensive floodplain management criteria established in accordance with 44 CFR 65.10 of the NFIP regulations. Levee/floodwall certification packages for the channel walls must be provided to FEMA for review to determine if they will qualify as providing protection from the 1-percent annual chance flood and then shown on the FIRM as providing protection.
28	-13618298.9	4521177.3	Why is this area in the SFHA? If the freeway is not in the SFHA, what wave processes would inundate this area that is also behind a 12' soundwall?	The floodwater pathway to this area is across Poplar Creek Golf Course and HWY 101 adjacent to the golf course. The soundwall was not considered to be a floodwall -- see response to Comment 12.
29	-13622438.6	4522704.3	Was the 3' concrete barrier along HWY 101 taken into consideration during the study? Would it act like a water barrier for waves that have overtopped the east side. Is there a reason why this stretch of HWY 101 is not in the SFHA? Is it purely because of its elevation?	The concrete barrier was not taken into consideration -- see the response to Comment 12. Wave hazard modeling indicates that the waves dissipate near to the Bay shoreline; however, high tides and surge will result in inundation of low-lying areas like this one. Yes, the stretches of HWY 101 that are not in the SFHA are removed based on elevation.

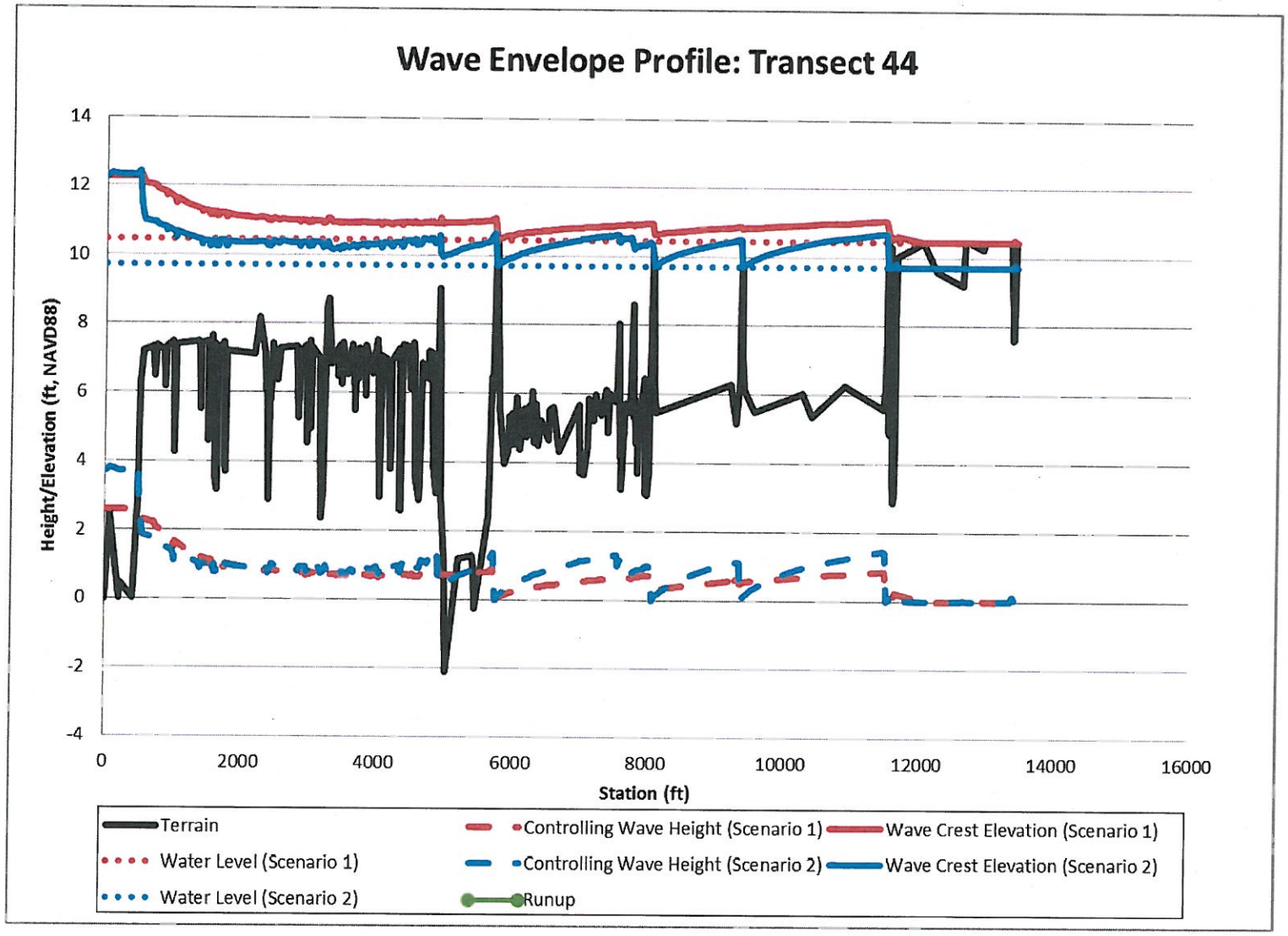
30	-13623230.6	4522840.3	There are individual structures, such as this one that is not part of the SFHA but is completely surrounded by it. What information was used to determine this?	The 2010 LiDAR indicates that the ground elevations of the areas that are mapped outside of the floodplain are greater than the 1% stillwater elevation.
31	-13623153.2	4522610.5	For this particular structure it is unclear if it is in the SFHA or outside. The majority of the structure is outside with the exception of the northwest side and southeast corner. How is the delineation of the SFHA defined?	The SFHA boundary is delineated based on the 2010 LiDAR data. The data indicates that the ground elevations adjacent to the northwest side and southeast corner are slightly lower than adjacent grades around the rest of the building. If any portion of a structure is within the SFHA, the structure is considered within the SFHA.
32	-13622174.2	4523355.3	How was this structure singled out from being in the SFHA?	The SFHA boundary is delineated based on the 2010 LiDAR data. The data indicates that the ground elevations surrounding the building are more than 11 feet with the exception of a low spot near the southeast corner where the SFHA boundary can be seen to curve into the building.
33	-13622219.3	4523064.6	Wouldn't this entire area be buffered by the airport runway? Why isn't SFO included in this study? We would like to see SFO included in this study.	The area is somewhat protected from waves by the runway--that is one of the reasons why a Zone AE is mapped along the shoreline. SFO is included in FEMA's CCAMP Bay Area Coastal Study as a part of the San Francisco County study area.
34	-13622439.8	4521813.9	In general, what allows areas that were once in the SFHA to be removed based on this study?	Mapping decisions are made on a case-by-case basis by coastal and riverine specialists so it is difficult to provide a general answer to this question. In the vicinity of the point associated with this comment, the floodplain boundary for the Zone AH (EL 14) was redelineated using the 2010 LiDAR to improve the delineation by using the newer, more accurate topography. Areas that are no longer within the SFHA are areas with ground elevations above the BFE.
35	-13618081.1	4521648.3	When you zoom in further, the political areas do not display. Zoom out, they show up, zoom in and they disappear even when selected from the legend field.	Some of the features within the FRR Tool were only visible at certain map scales. We apologize if this made reviewing the mapped data difficult for you.
36	-13608382.9	4518038.3	Why are some coastal elevations shown as "AE" and not "VE"? This location has a VE elevation next to an AE elevation. Should the AE really be a VE?	Coastal flood hazard zones with wave heights greater than 3 feet are mapped as Zone VE (i.e., high hazard zones). If the wave heights are less than 3 feet in height, the coastal flood hazard zone is mapped as an AE.
37	-13623690.5	4537101.5	test	
38	-13596269.5	4504138.9	test	
39	-13595901.0	4502778.3	The "Coastal Hazard Analysis Transect Layout - F" map does not cover the entire City of East Palo Alto. The south end of the City boundary is missing.	The entire City of East Palo Alto is not contained within the San Francisco Bay Area Coastal Study area. The Coastal Hazard Analysis Transect Layout maps were provided as a guide to help the reviewers understand the transect layout placement along the San Mateo County shoreline.
40	-13596813.3	4504404.8	During the development of the Map Action Table, will FEMA provide locations where the LOMA's will be invalidated?	See response to Comment 16.

41	-13597916.0	4506009.5	In 1994 the City of Menlo Park installed a floodwall and floodgate to remove 1317-1385 Willow Road from the Special Flood Hazard Area (SFHA). FEMA granted a LOMR on 8/19/1996, Case No.: 96-09-945P, a copy of which will be emailed to you. The area upland from this location is now proposed for removal from the SFHA which indicates even less flood risk to the property. City believes this block should remain outside the Special Flood Hazard Area.	The BAC Coastal Study coastal analysis and terrain data (the 2010 LiDAR data) supersedes this LOMR. The ground elevation from the 2010 LiDAR data is below the coastal stillwater level of 10.8. FEMA accreditation data for the foodwall and floodgate have not been located by the BAC Study team. If these structures meet FEMA accreditation requirements, this information should be provided to FEMA.
42	-13596736.2	4506724.4	Please provide the City of Menlo Park with cross sections of the coastal transects 43 through 49 showing ground, shoreline, surge & wave run-up elevations.	Cross sections for these transects, with the coastal analysis representing Scenarios 1 and 2, are presented included as an attachment.
43	-13597312.6	4505867.3	The three buildings at the following addresses have as-built elevation certificates showing that they were built with finished floors well above Base Flood Elevation. Even with the higher BFE in the RISK Map, they will still be above BFE. The former flood zone boundary should remain as is, keeping them at least partly outside of the Special Flood Hazard Area.	See response to Comment 16. If these structures are associated with an existing LOMA and their LAGs (not the finished floor) elevations are at or above the BFE, these LOMAs will be revalidated. The preliminary determination will be made in the preliminary Summary of Map Actions. It is recommended that all communities review the preliminary Summary of Map Actions in detail. If these structures are not associated with an existing LOMA, and they have valid elevation certificates or certified elevations that show their LAG is at or above the BFE, these structures may qualify for a LOMA to remove them from the SFHA.

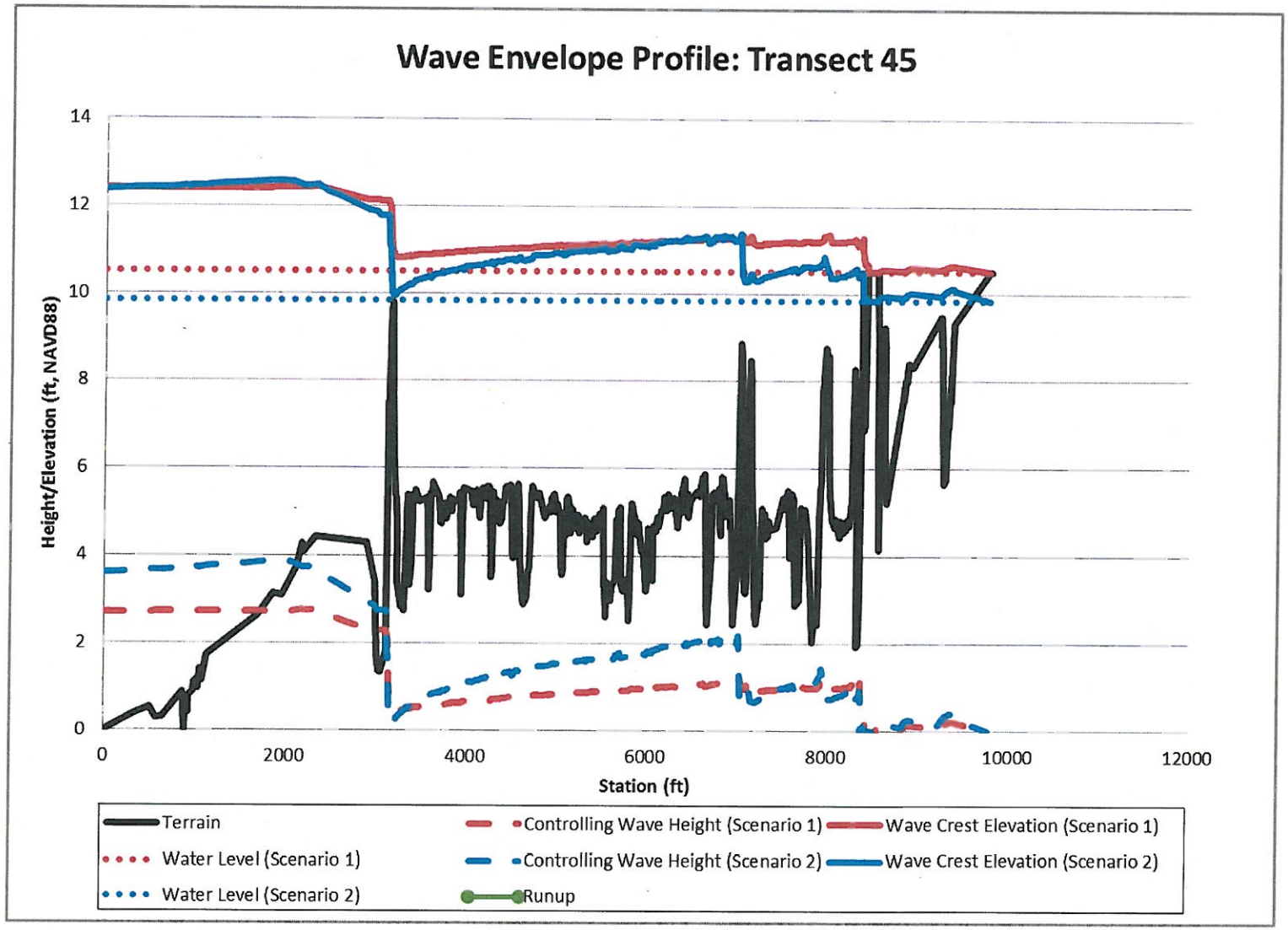
Attachment 1
Transect Profiles



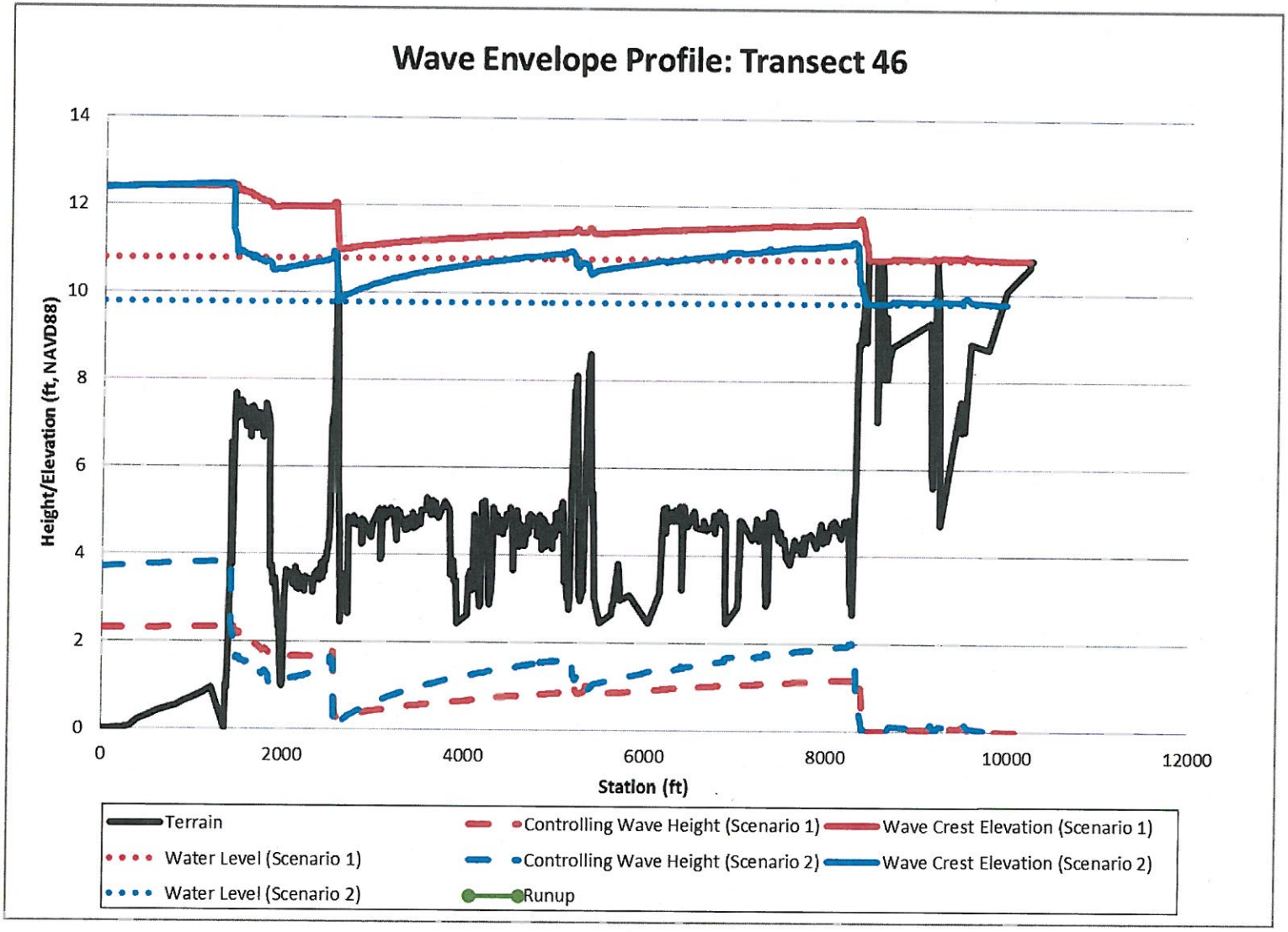
Transect 43 - Summary of Wave Hazard Results for WHAFIS Analysis, Including Wave Runup.



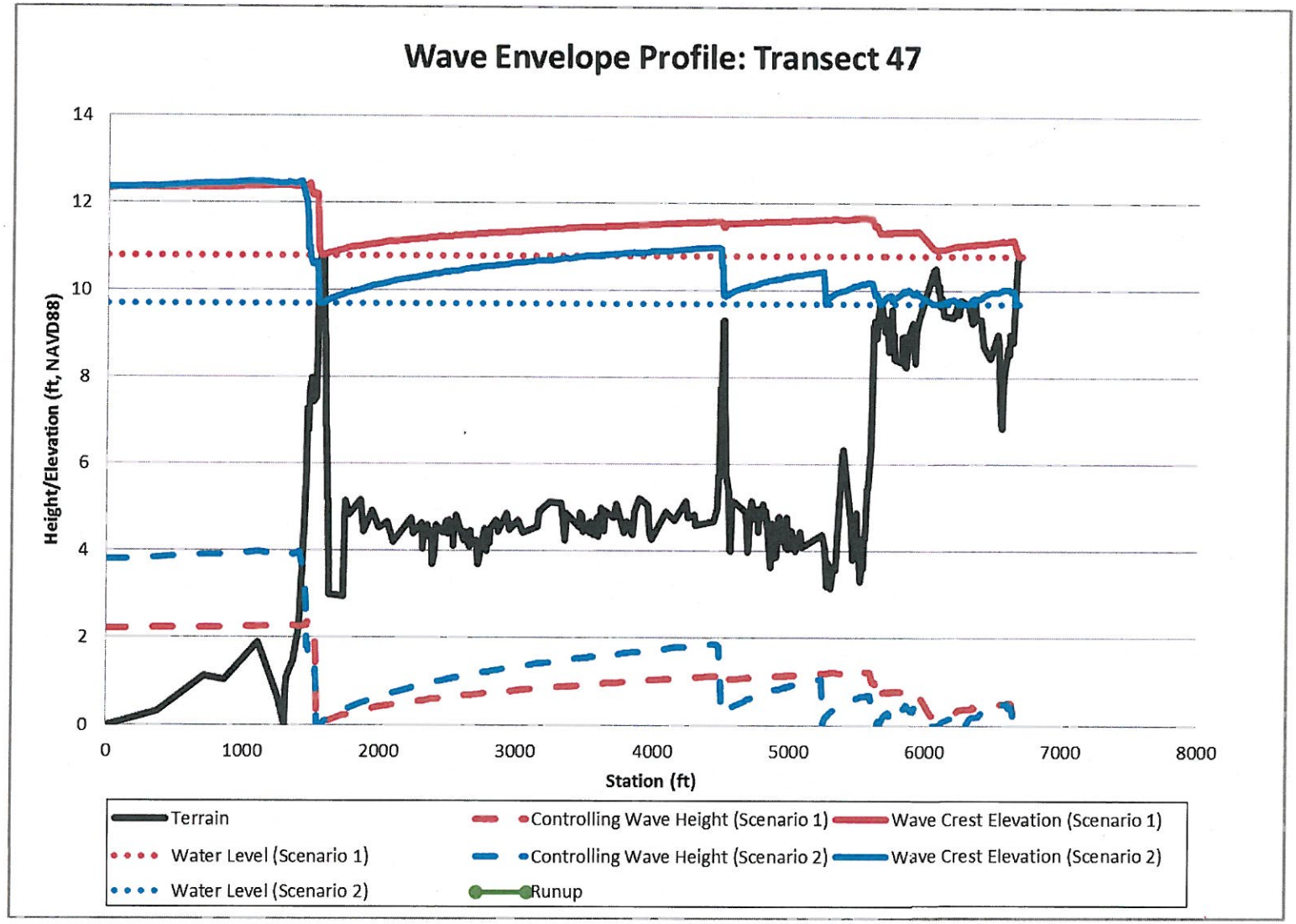
Transect 44 - Summary of Wave Hazard Results for WHAFIS Analysis — Inland Runup Hazard Negligible.



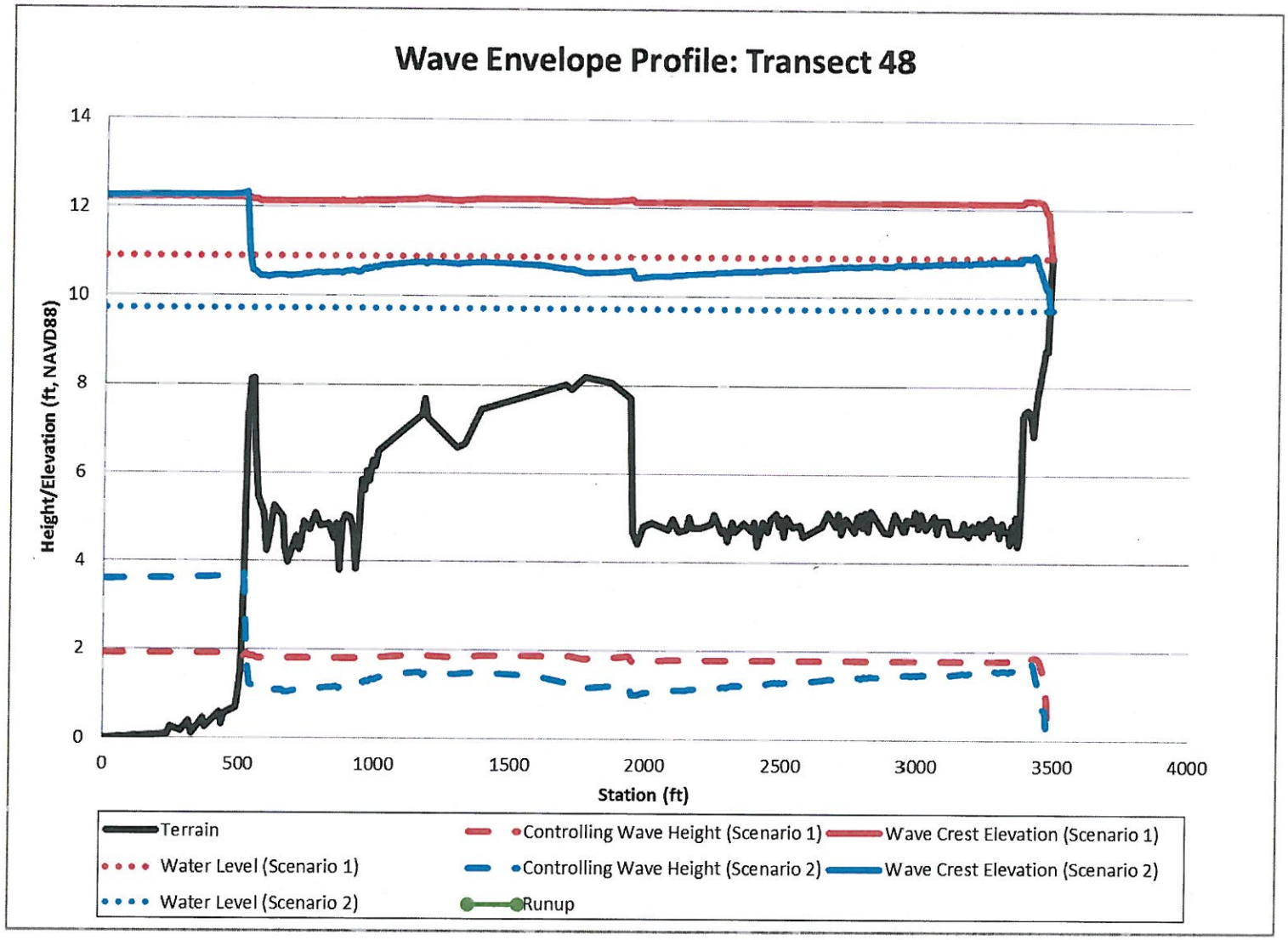
Transect 45 - Summary of Wave Hazard Results for WHAFIS Analysis— Inland Runup Hazard Negligible.



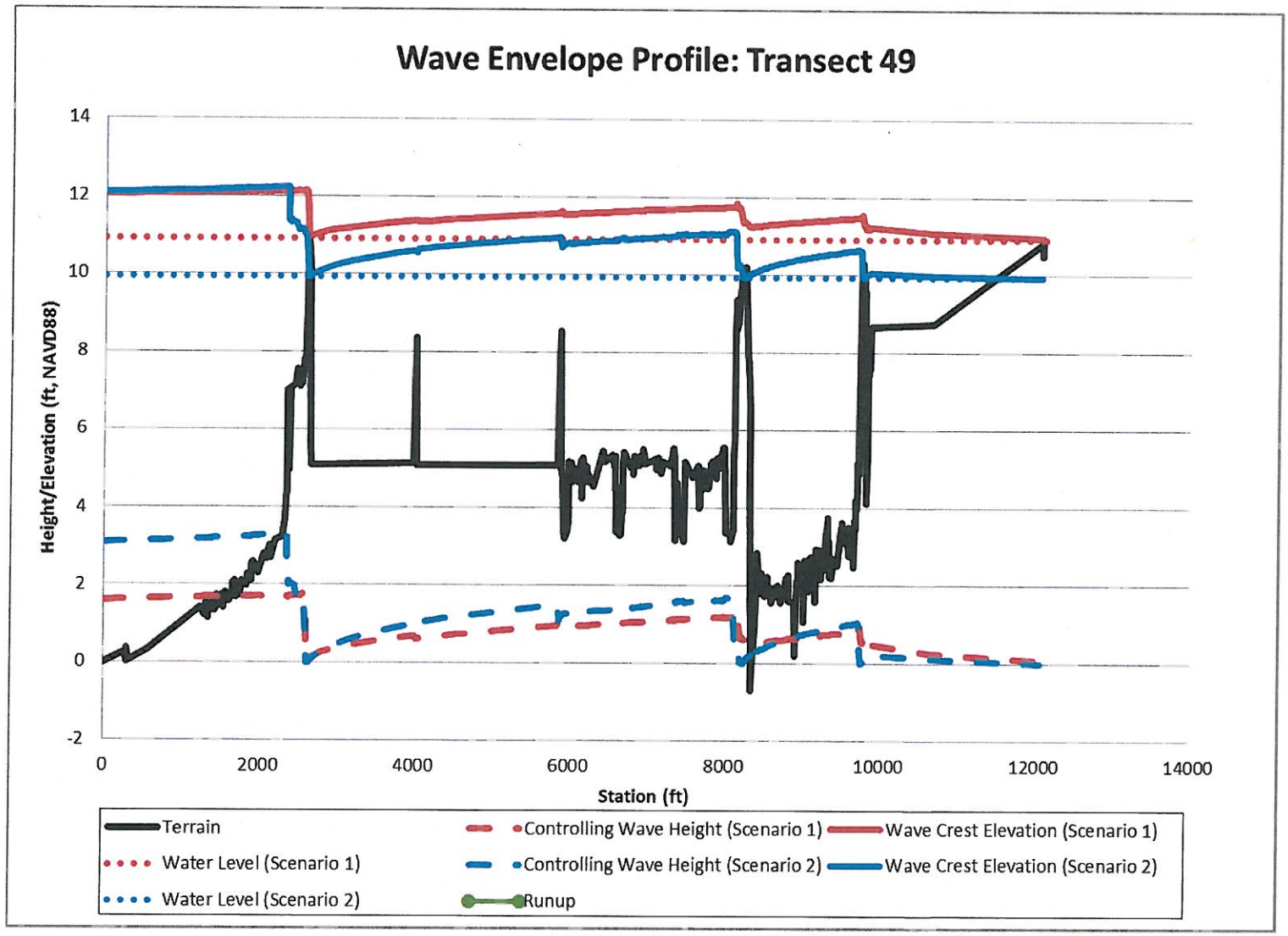
Transect 46 - Summary of Wave Hazard Results for WHAFIS Analysis— Inland Runup Hazard Negligible.



Transect 47 - Summary of Wave Hazard Results for WHAFIS Analysis— Inland Runup Hazard Negligible.

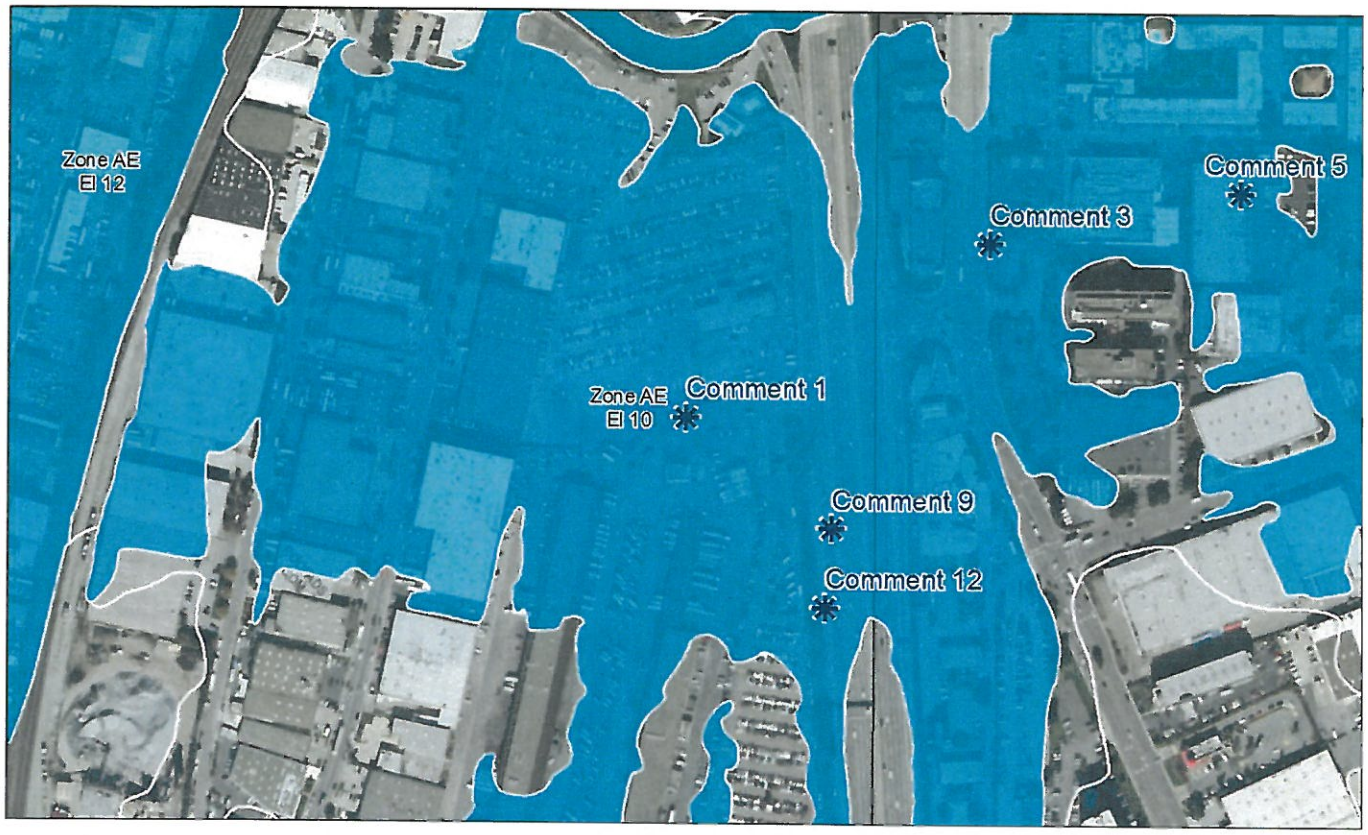


Transect 48 - Summary of Wave Hazard Results for WHAFIS Analysis— Inland Runup Hazard Negligible.



Transect 49 - Summary of Wave Hazard Results for WHAFIS Analysis— Inland Runup Hazard Negligible.

Attachment 2
Screen Shots of Comment Locations

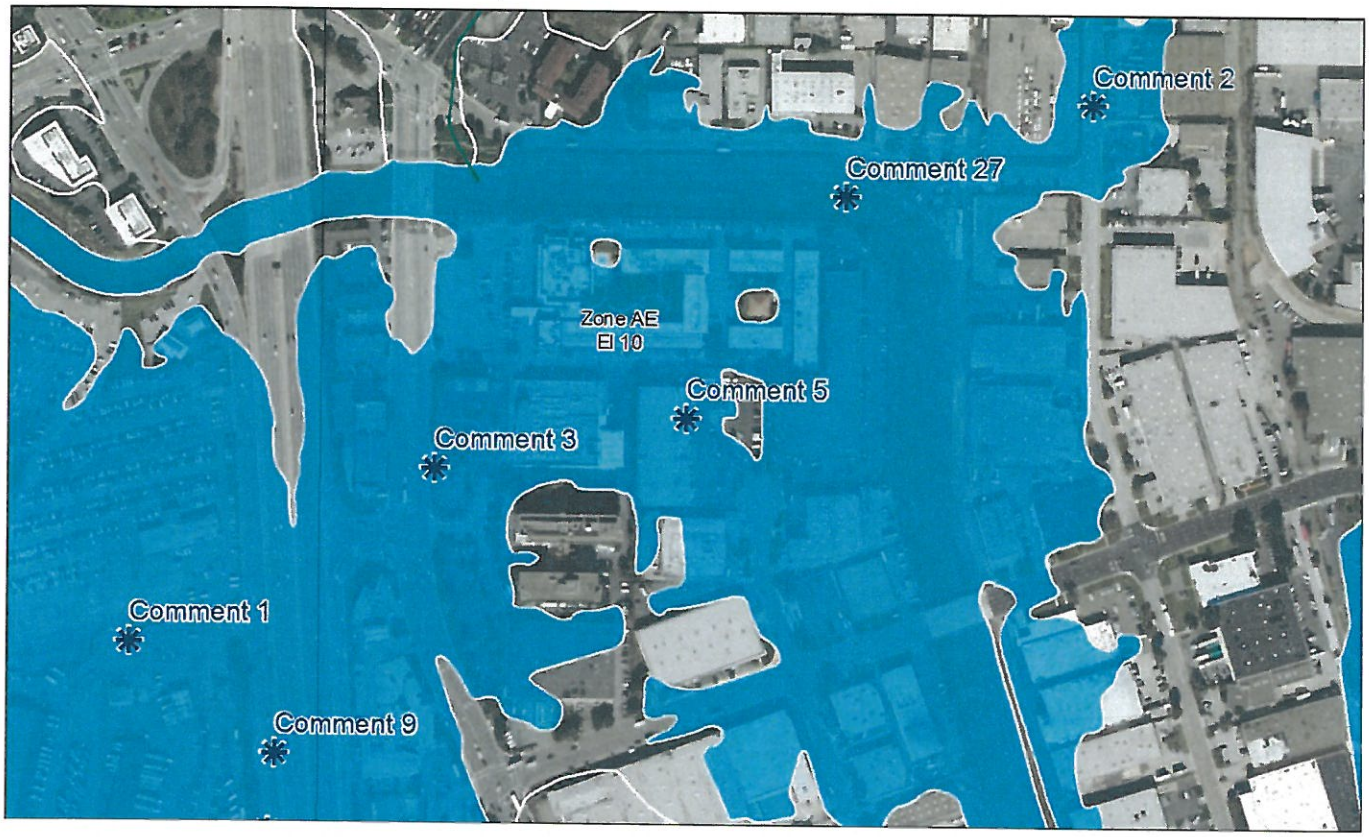


San Mateo County: Comment 1

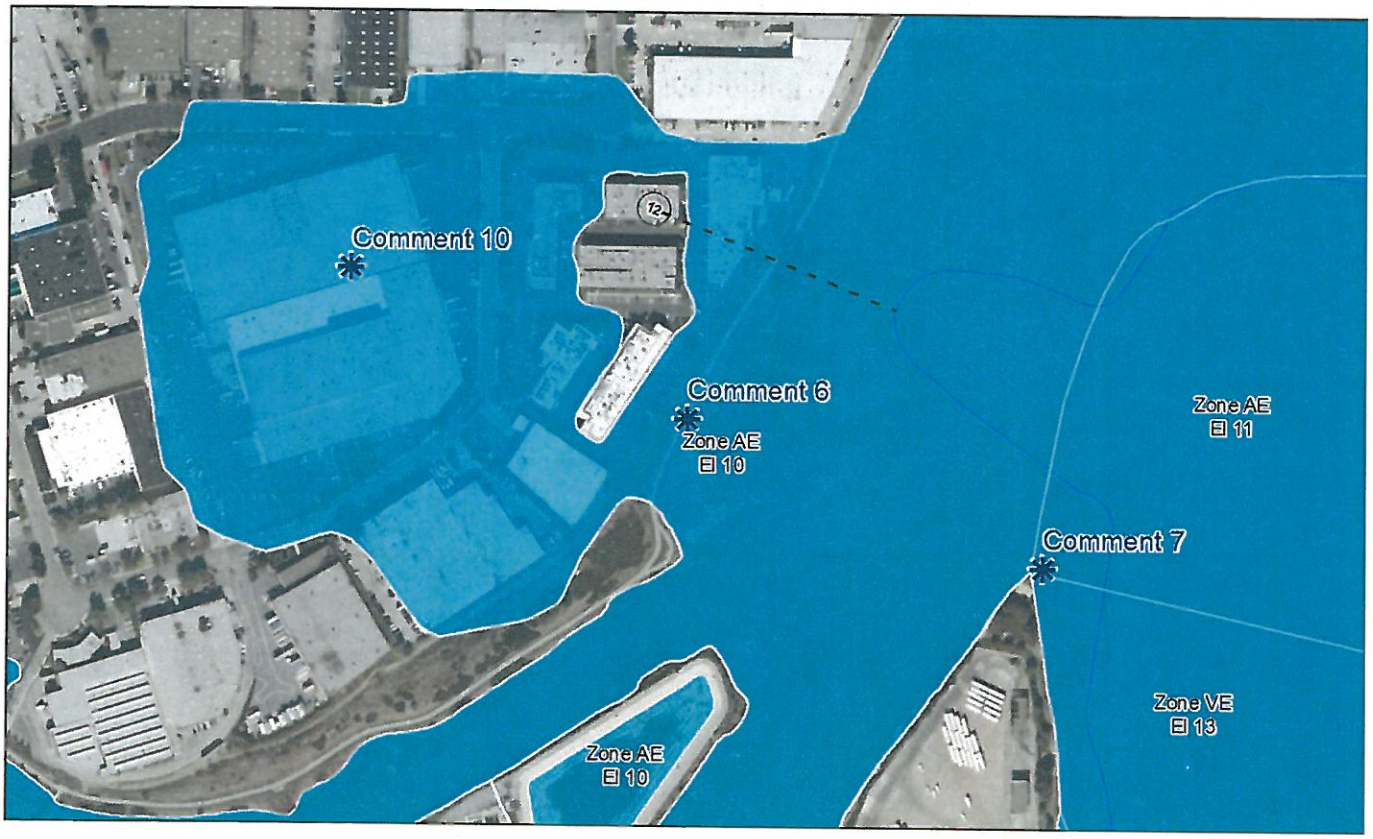
San Mateo County: Comment 2

San Mateo County: Comment 3

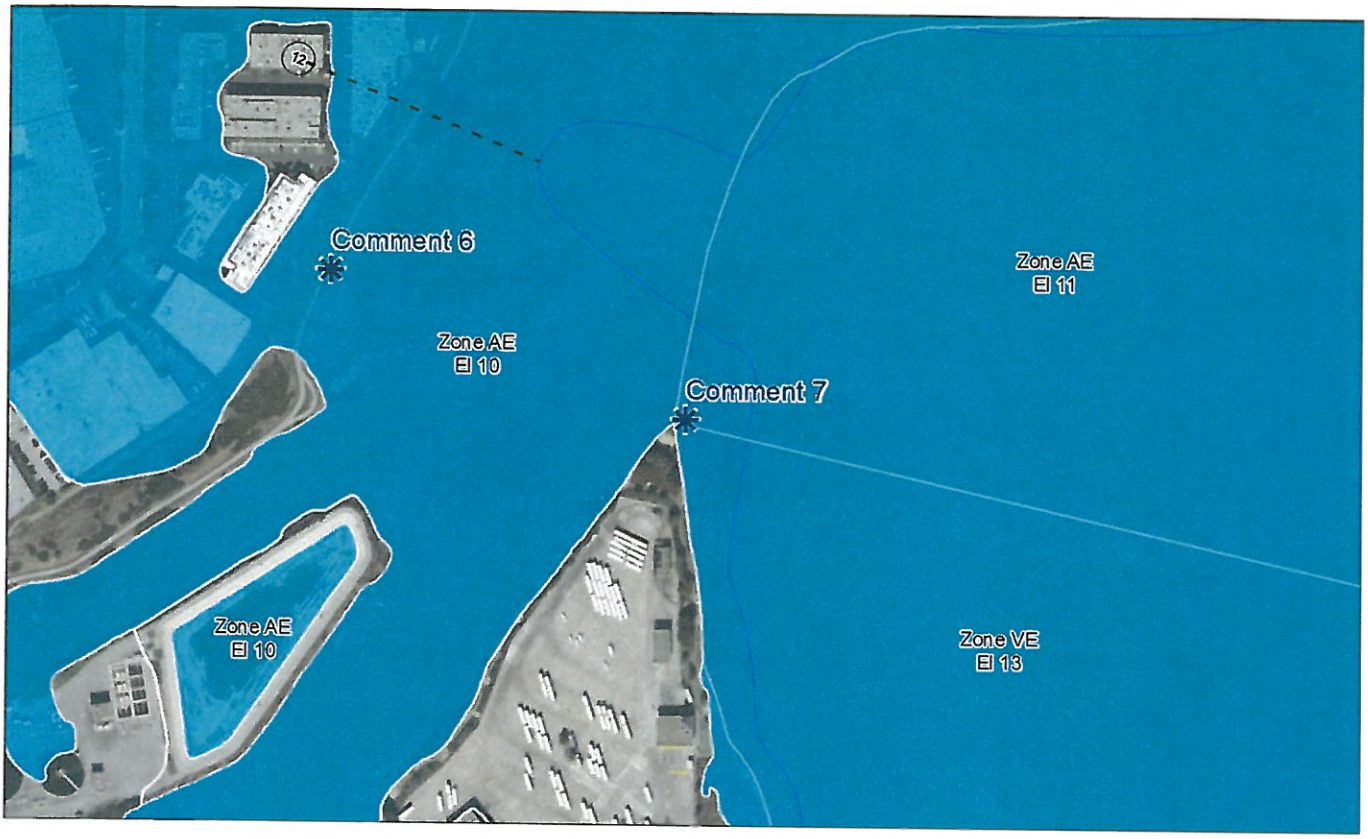
San Mateo County: Comment 4



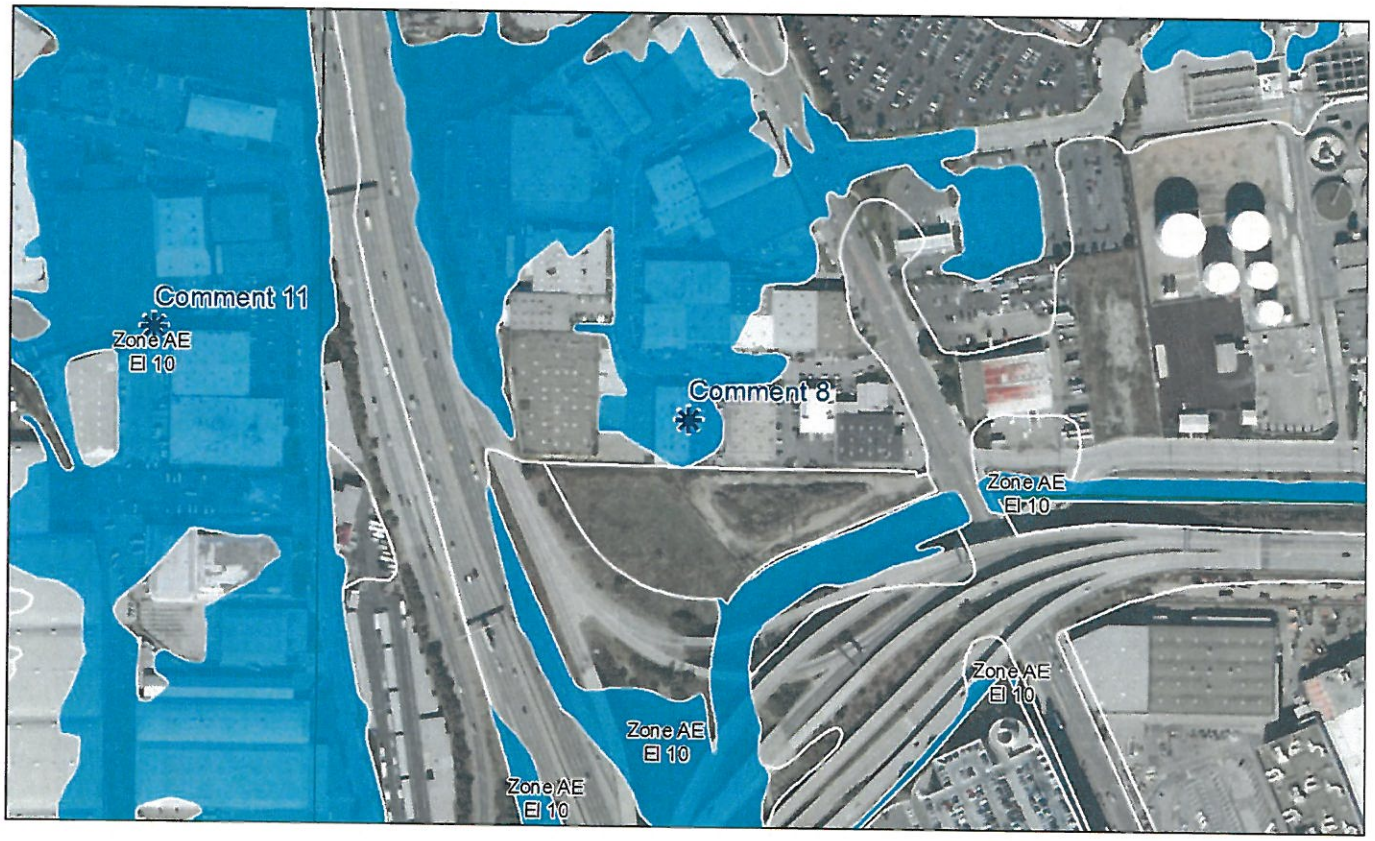
San Mateo County: Comment 5



San Mateo County: Comment 6



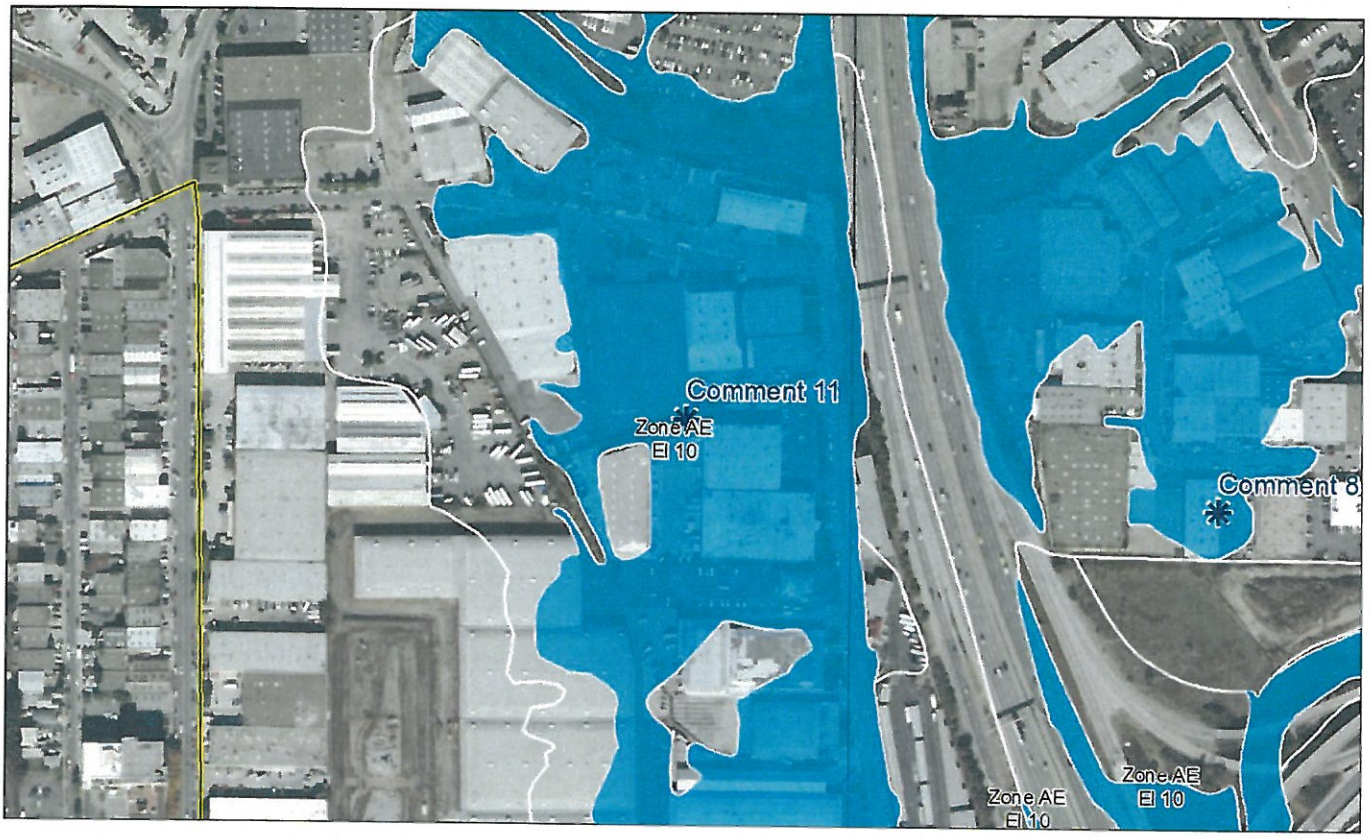
San Mateo County: Comment 7



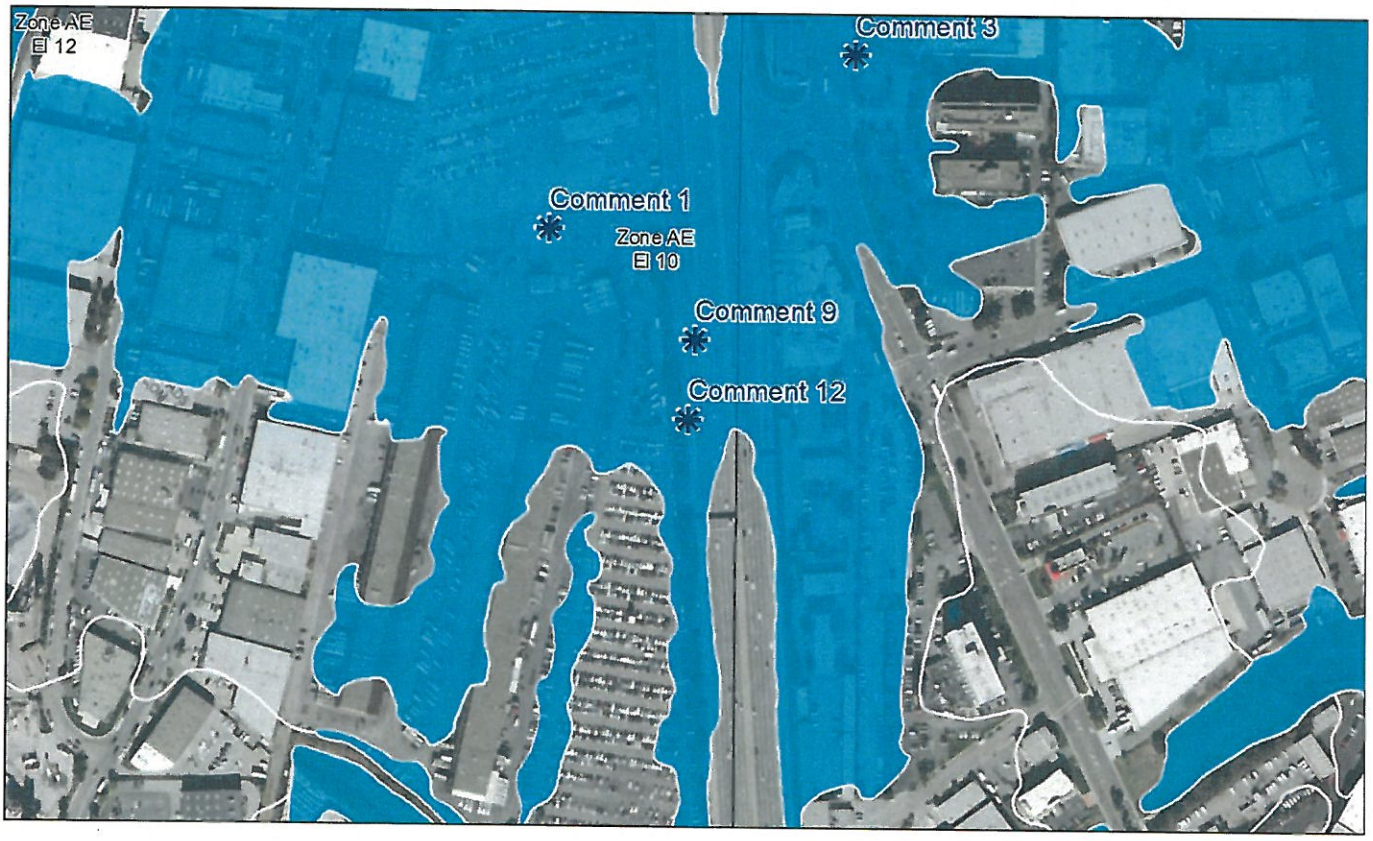
San Mateo County: Comment 8

San Mateo County: Comment 9

San Mateo County: Comment 10



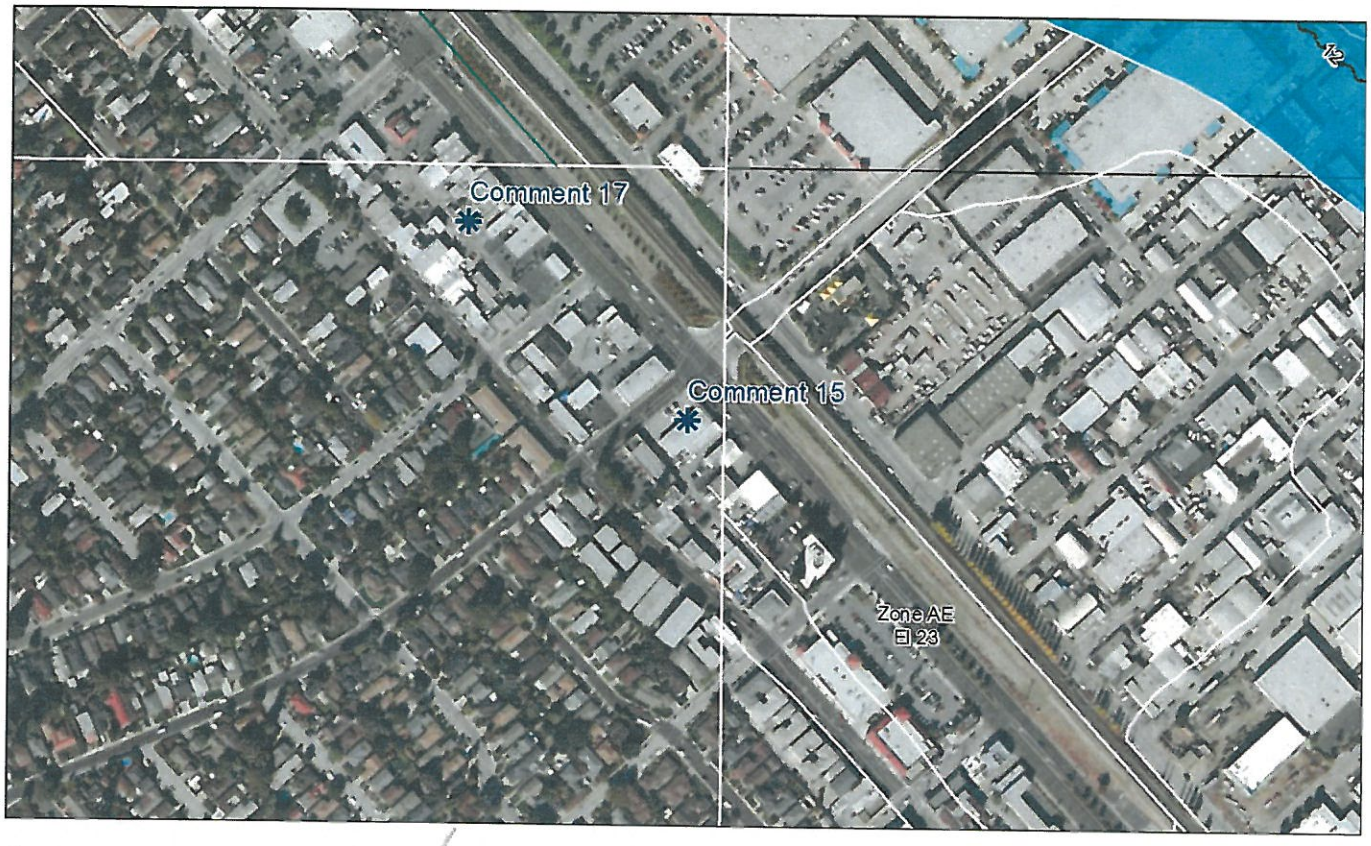
San Mateo County: Comment 11



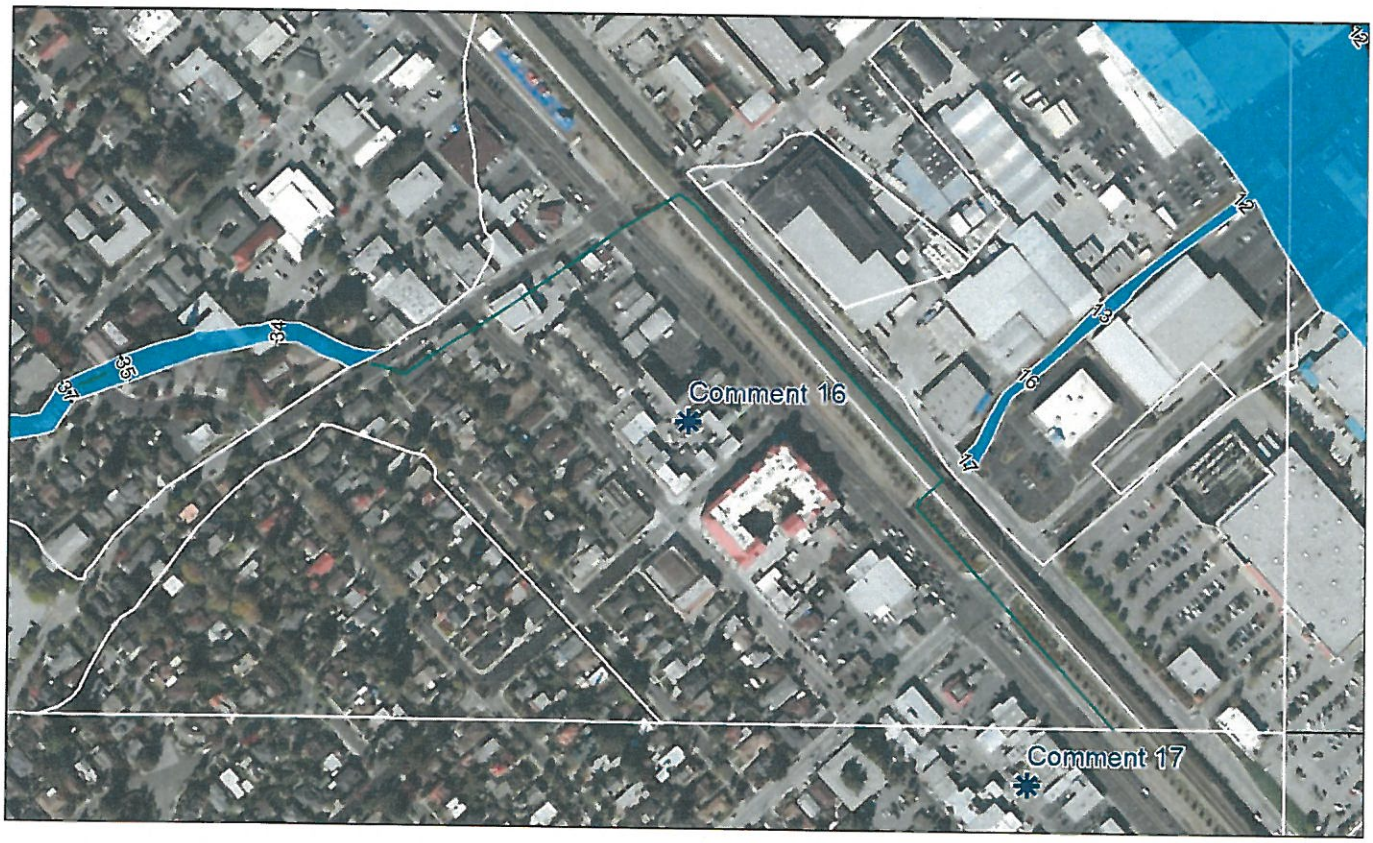
San Mateo County: Comment 12

San Mateo County: Comment 13

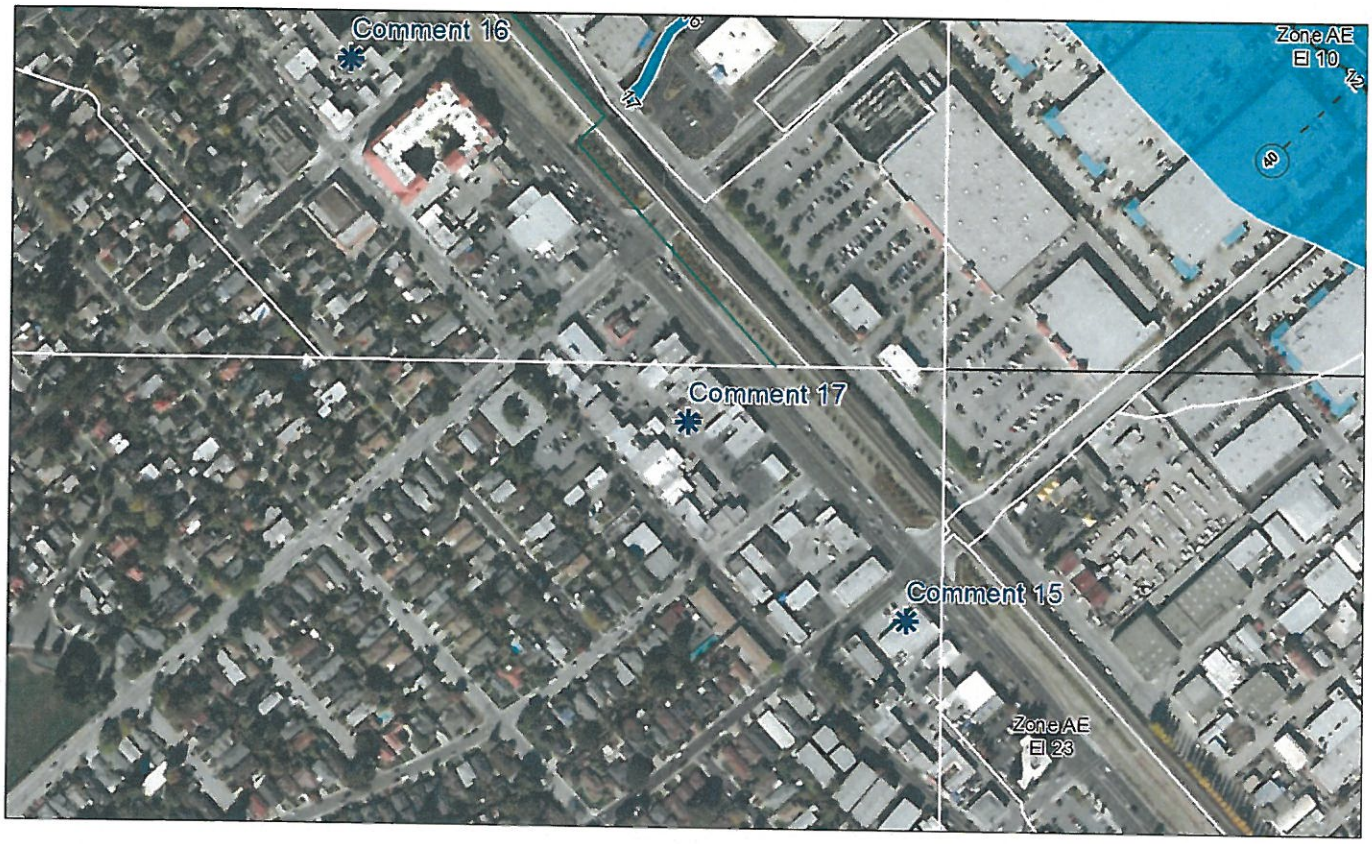
San Mateo County: Comment 14



San Mateo County: Comment 15



San Mateo County: Comment 16



San Mateo County: Comment 17

San Mateo County: Comment 18

San Mateo County: Comment 19

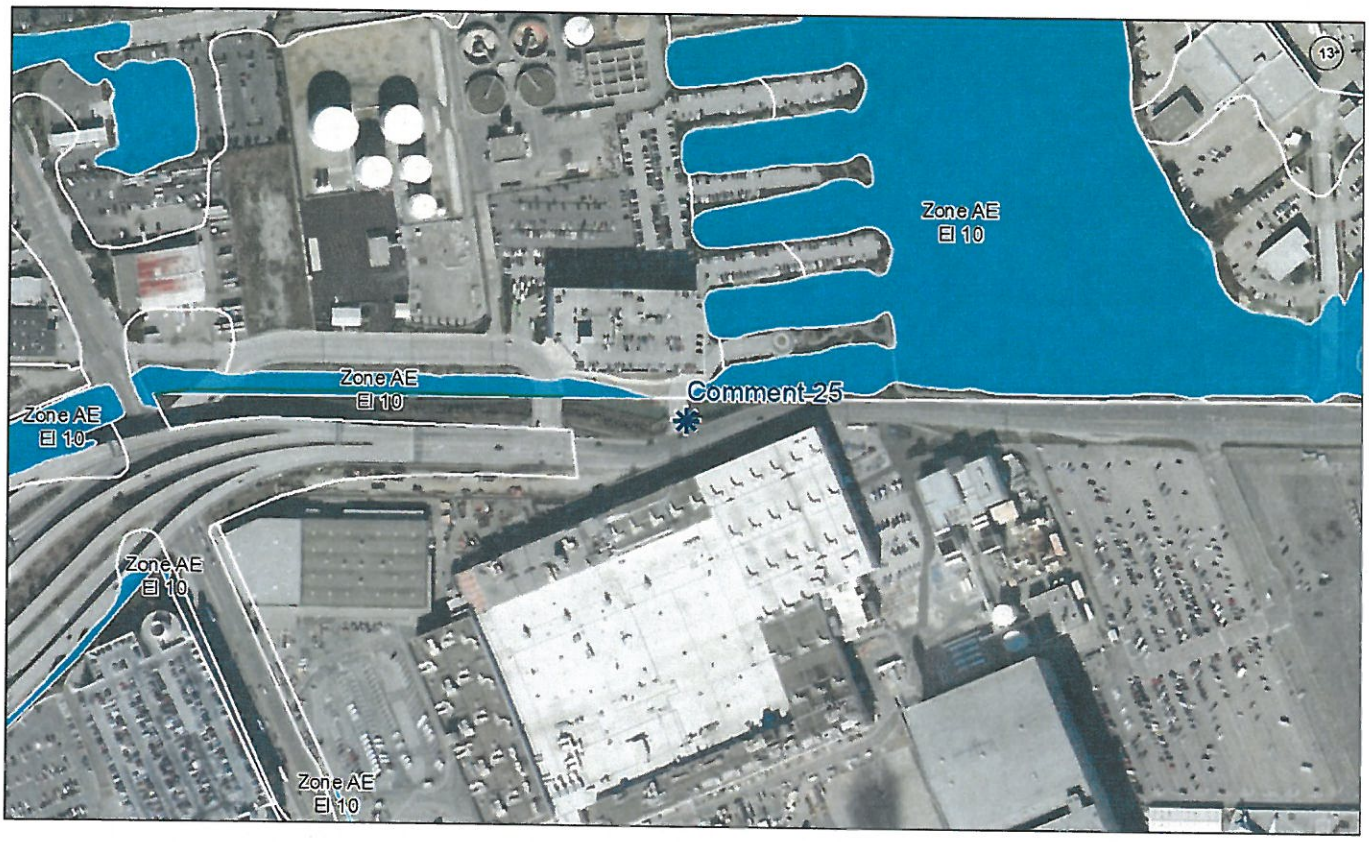
San Mateo County: Comment 20

San Mateo County: Comment 21

San Mateo County: Comment 22

San Mateo County: Comment 23

San Mateo County: Comment 24



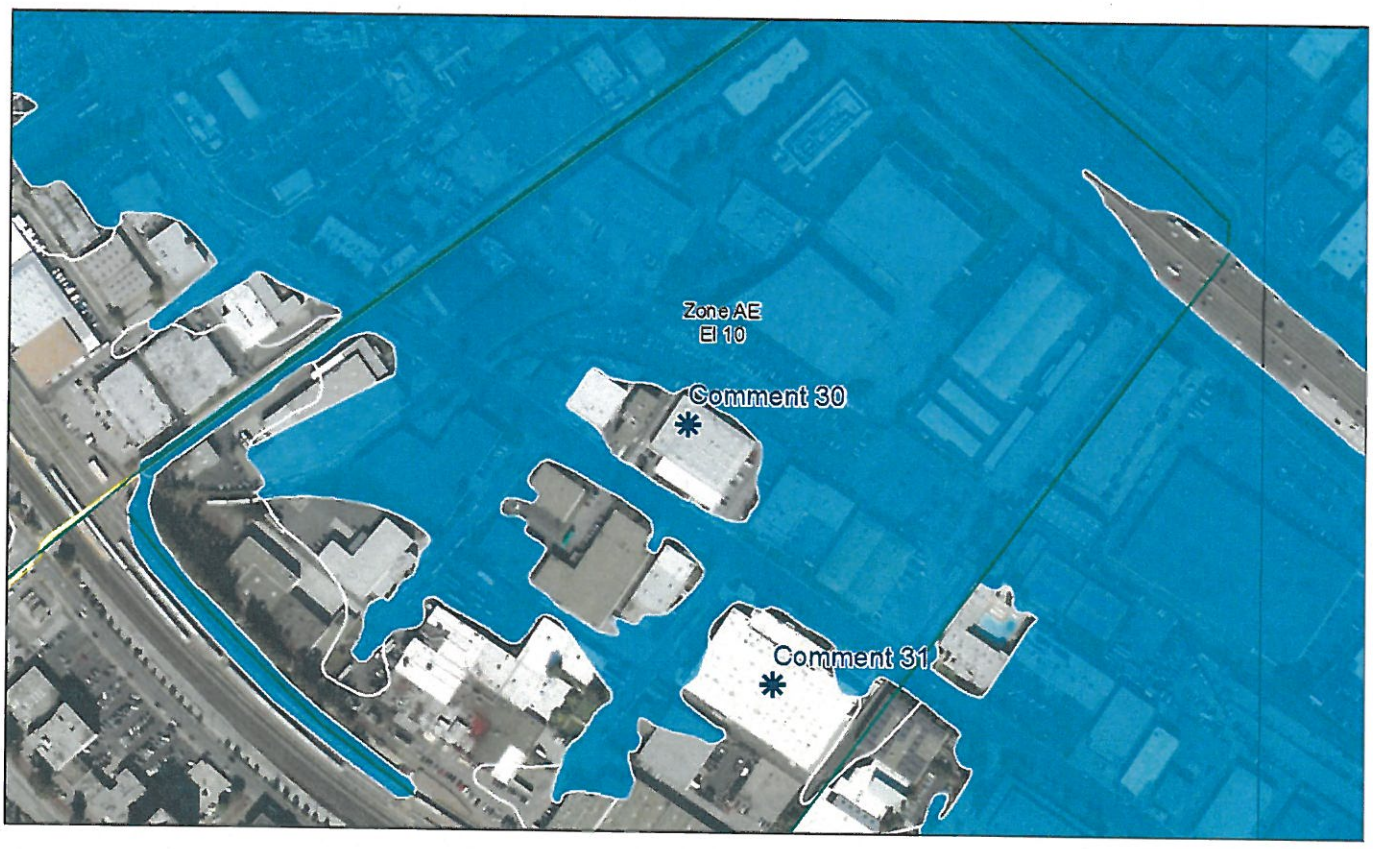
San Mateo County: Comment 25

San Mateo County: Comment 26

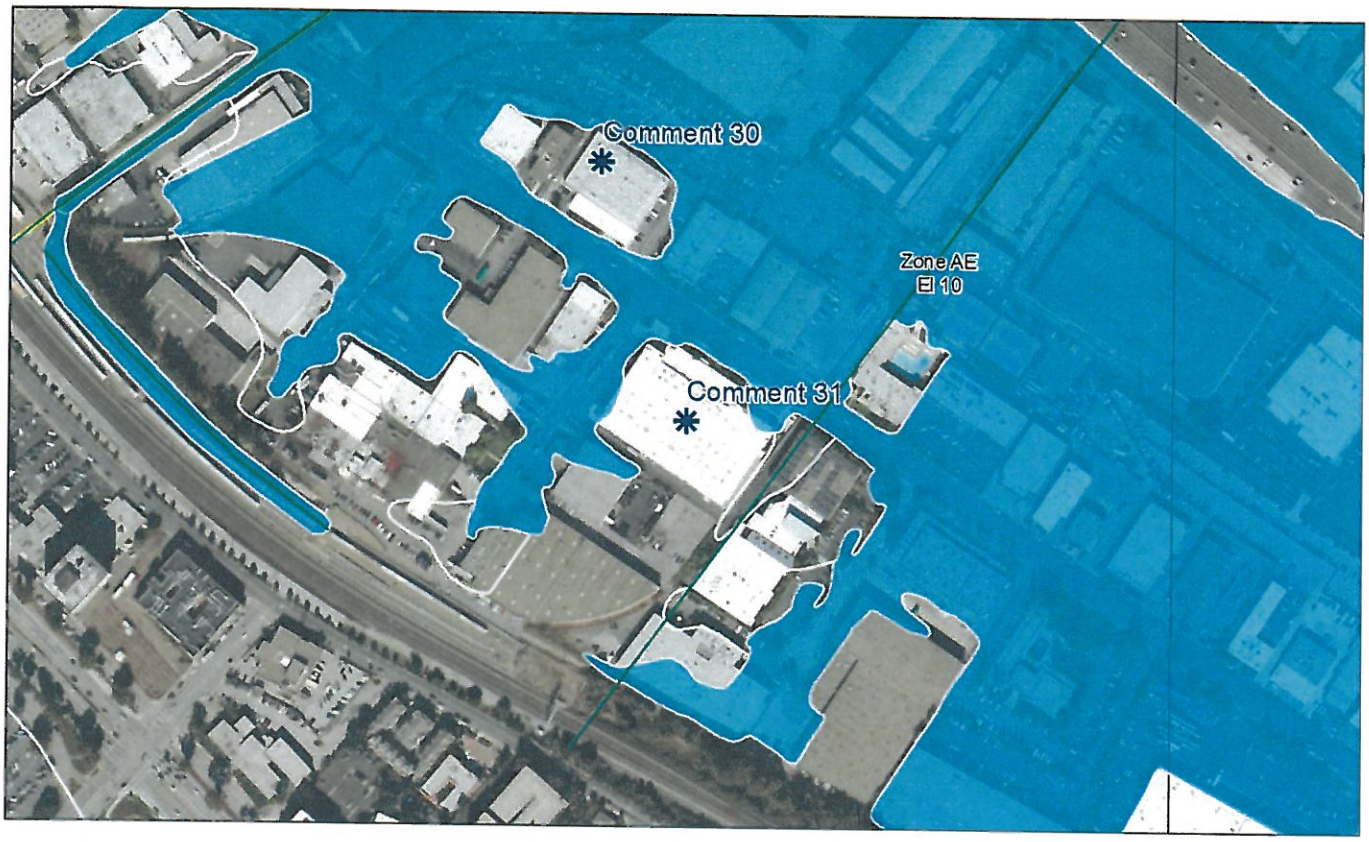
San Mateo County: Comment 27

San Mateo County: Comment 28

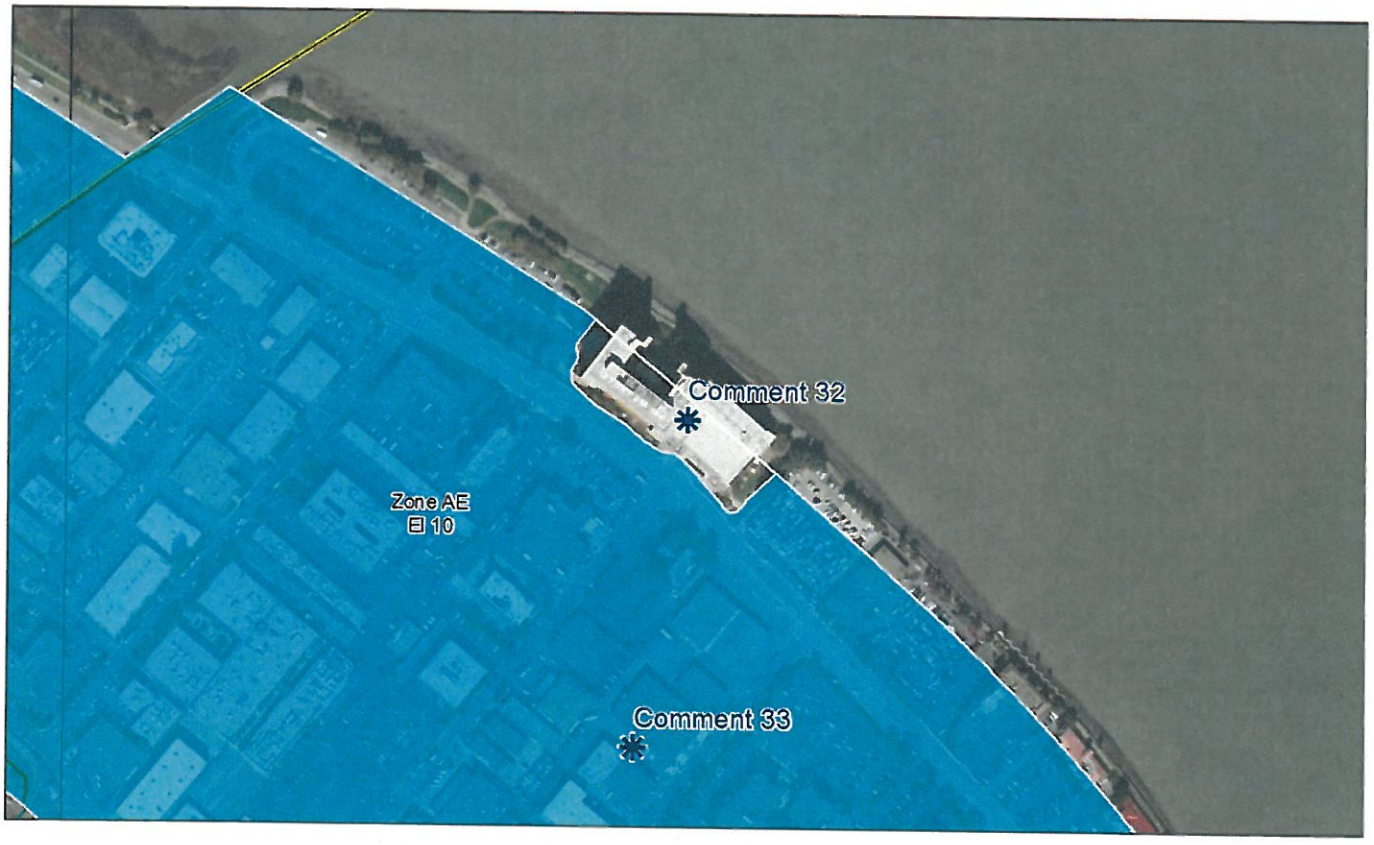
San Mateo County: Comment 29



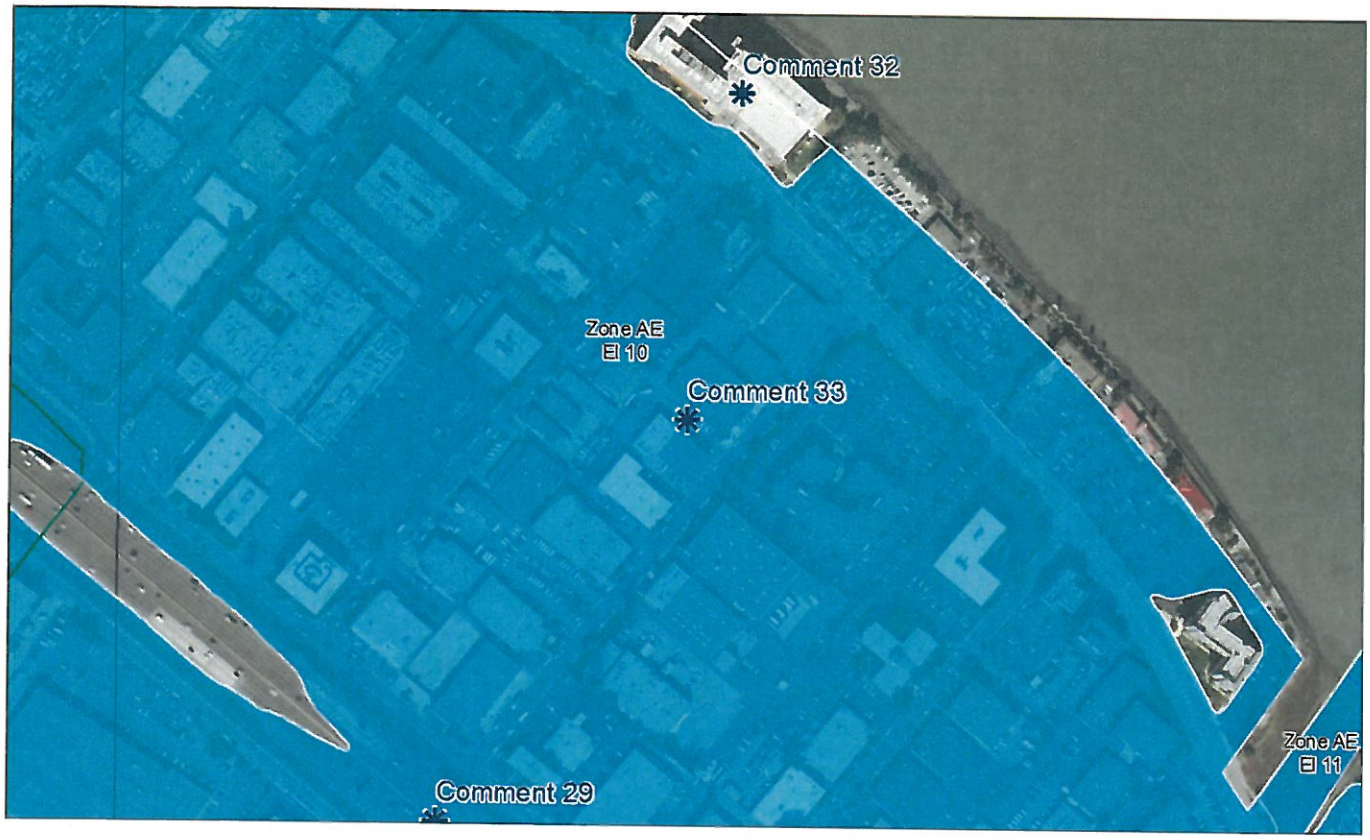
San Mateo County: Comment 30



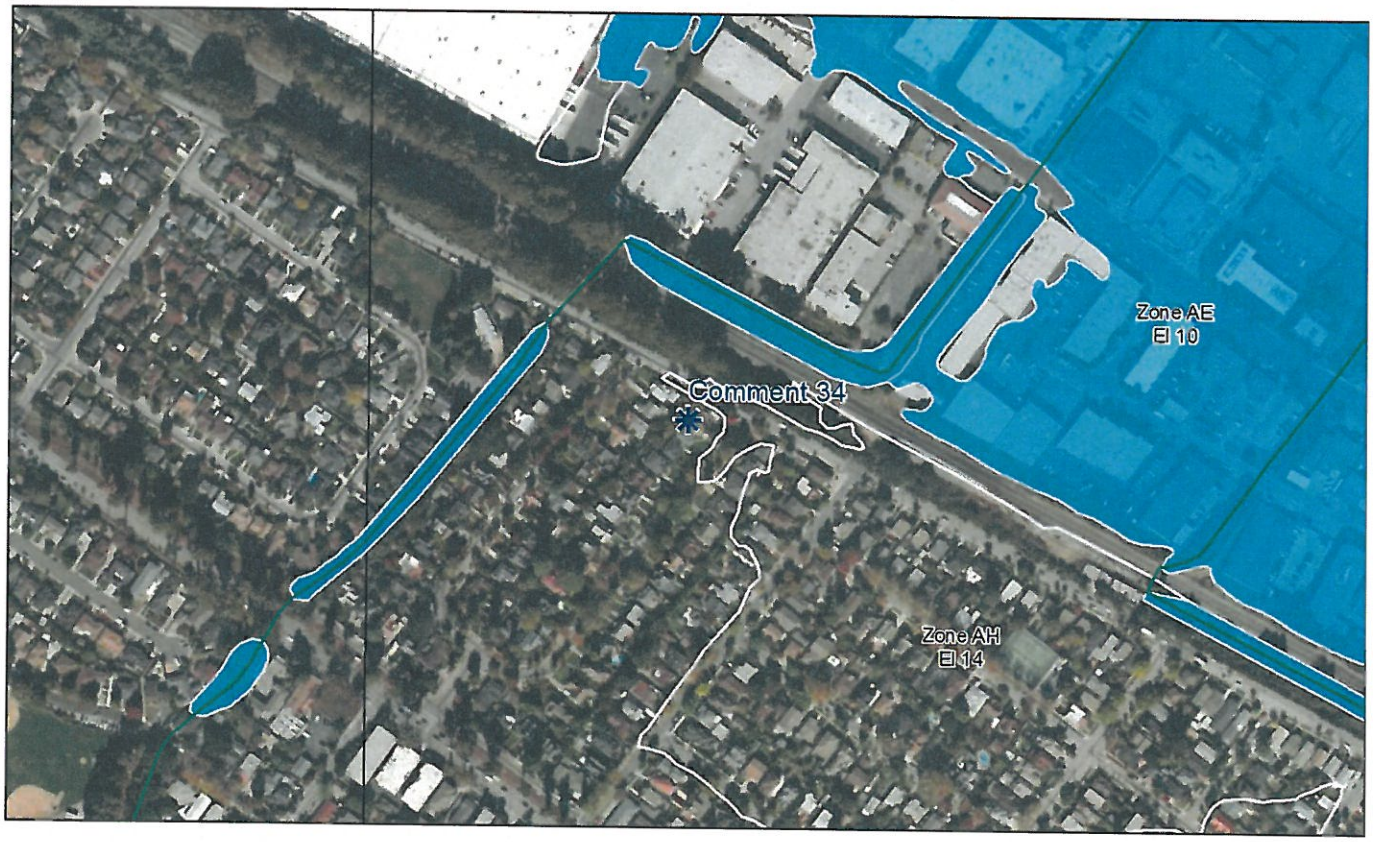
San Mateo County: Comment 31



San Mateo County: Comment 32

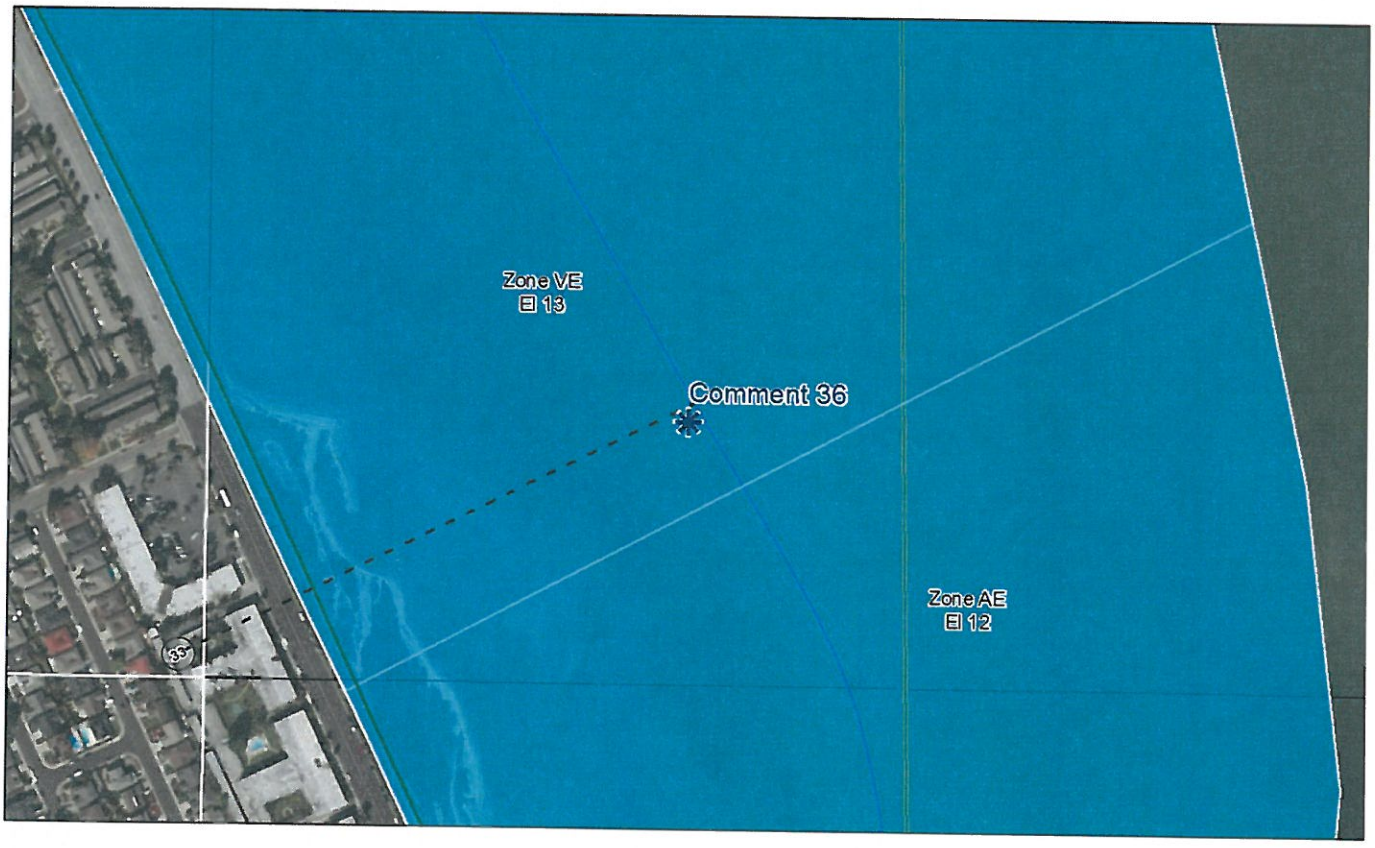


San Mateo County: Comment 33

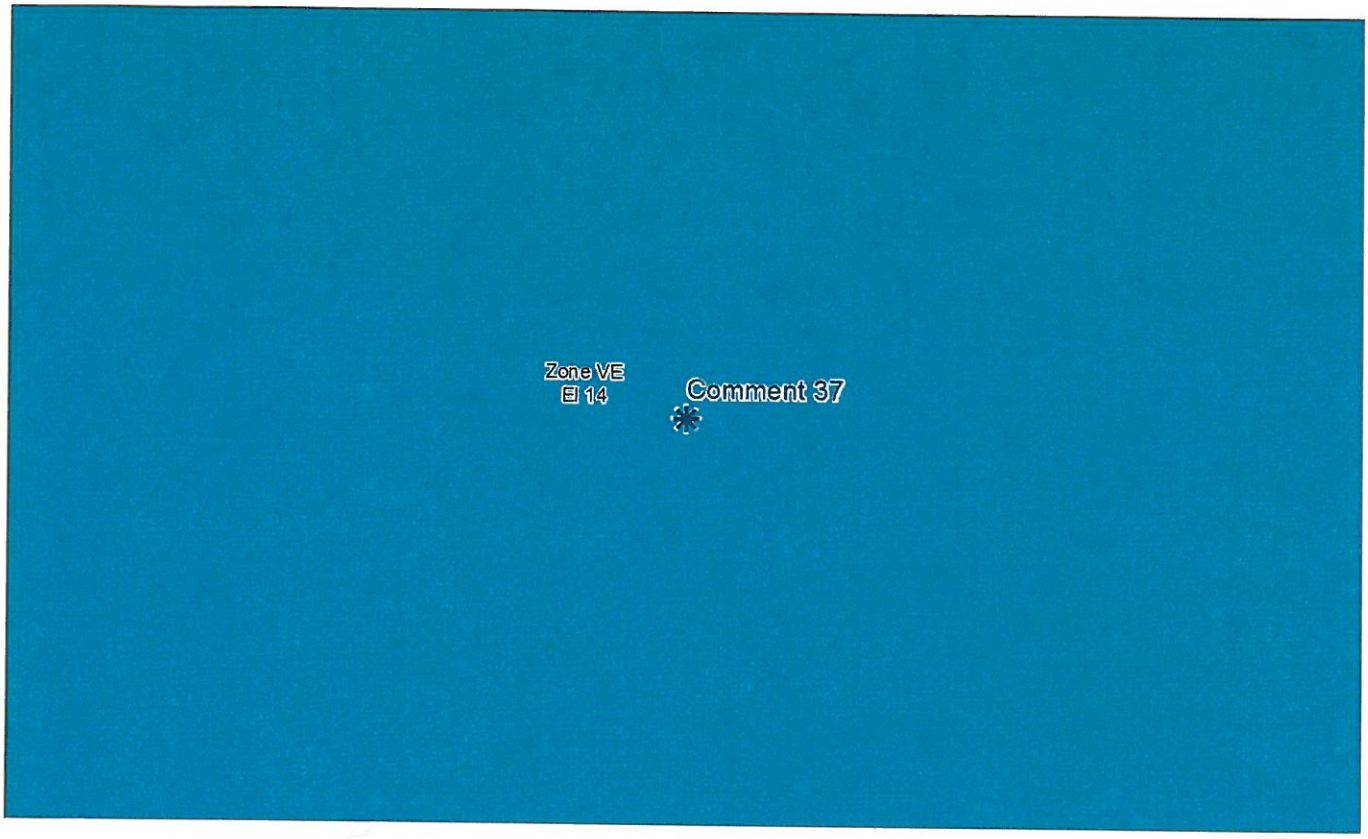


San Mateo County: Comment 34

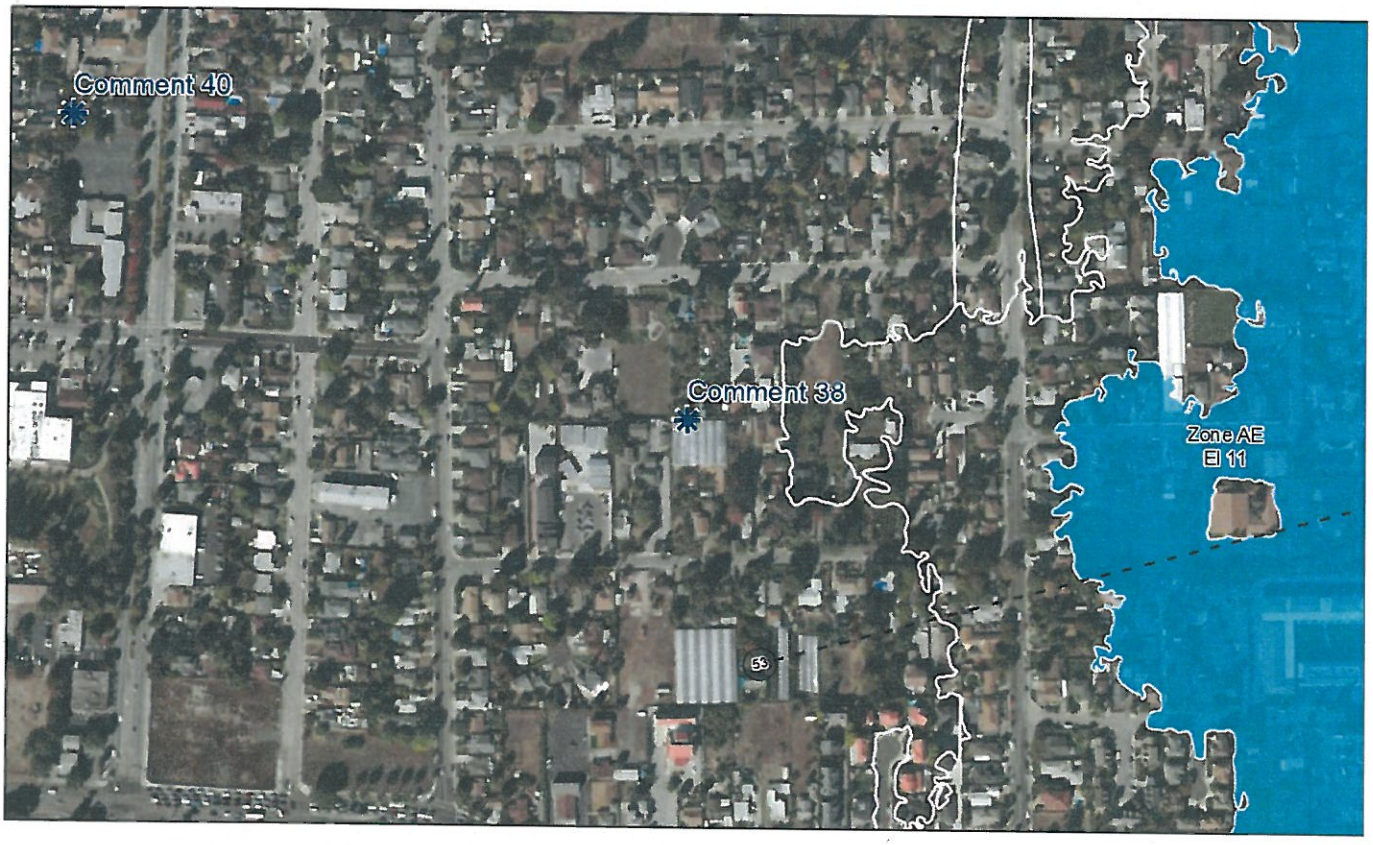
San Mateo County: Comment 35



San Mateo County: Comment 36

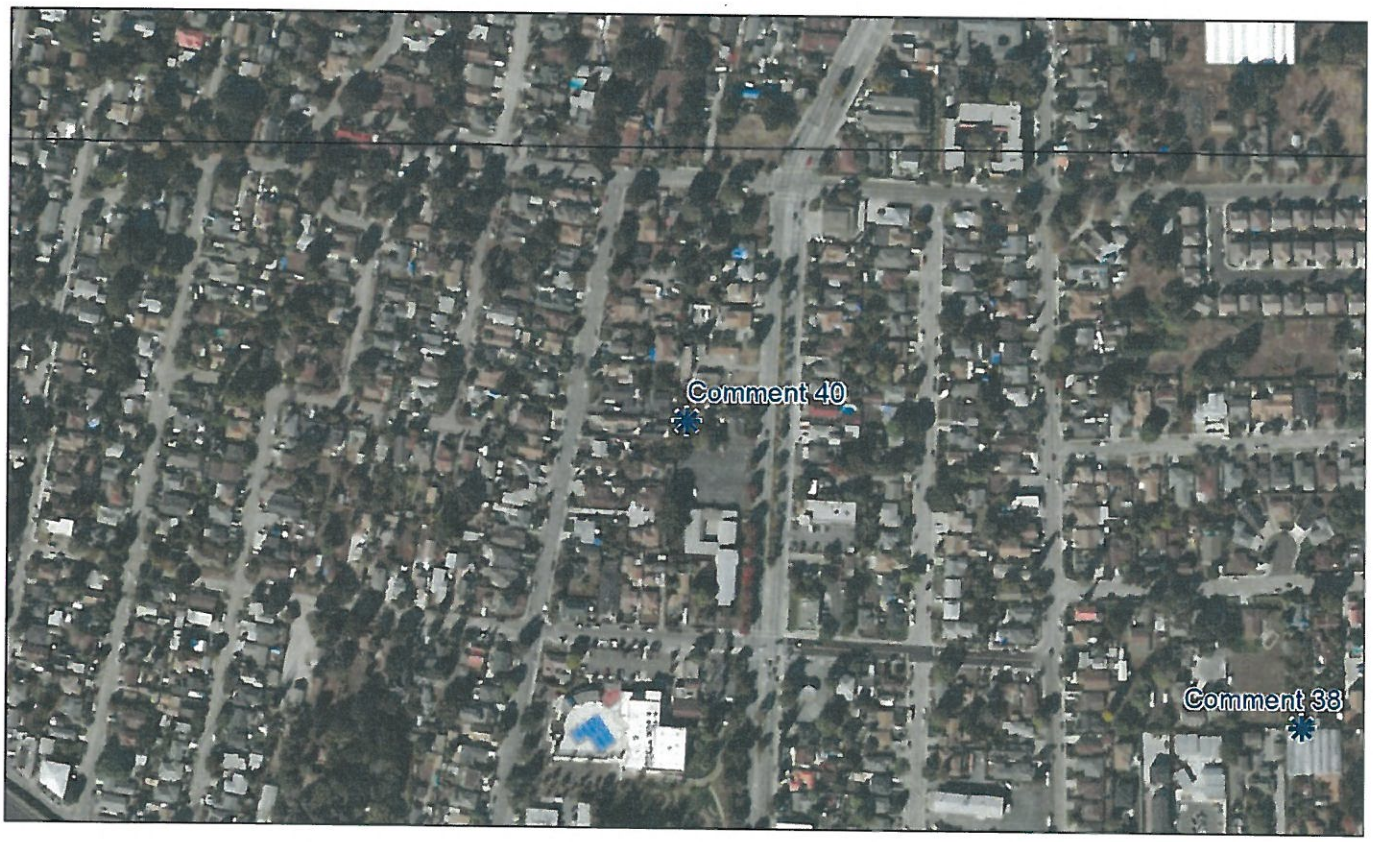


San Mateo County: Comment 37

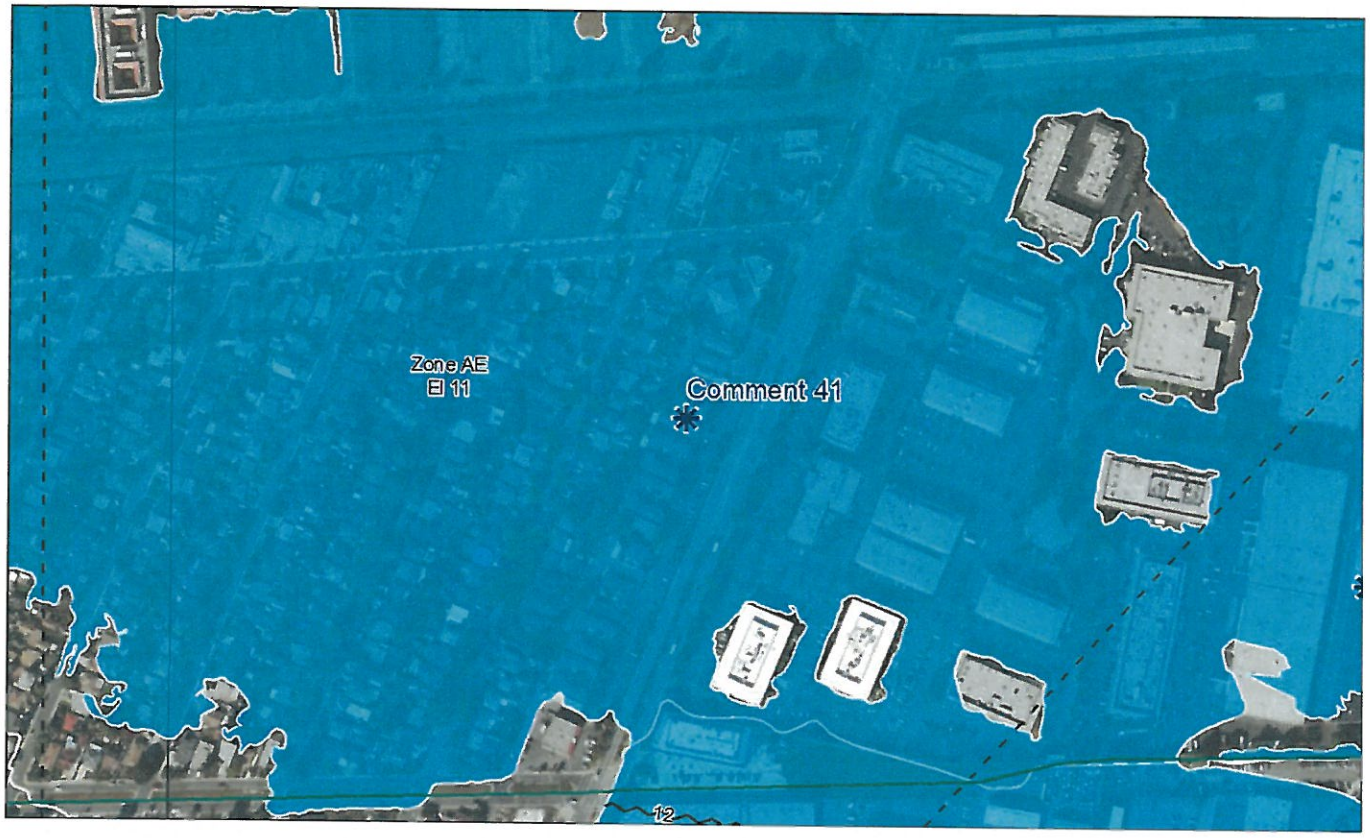


San Mateo County: Comment 38

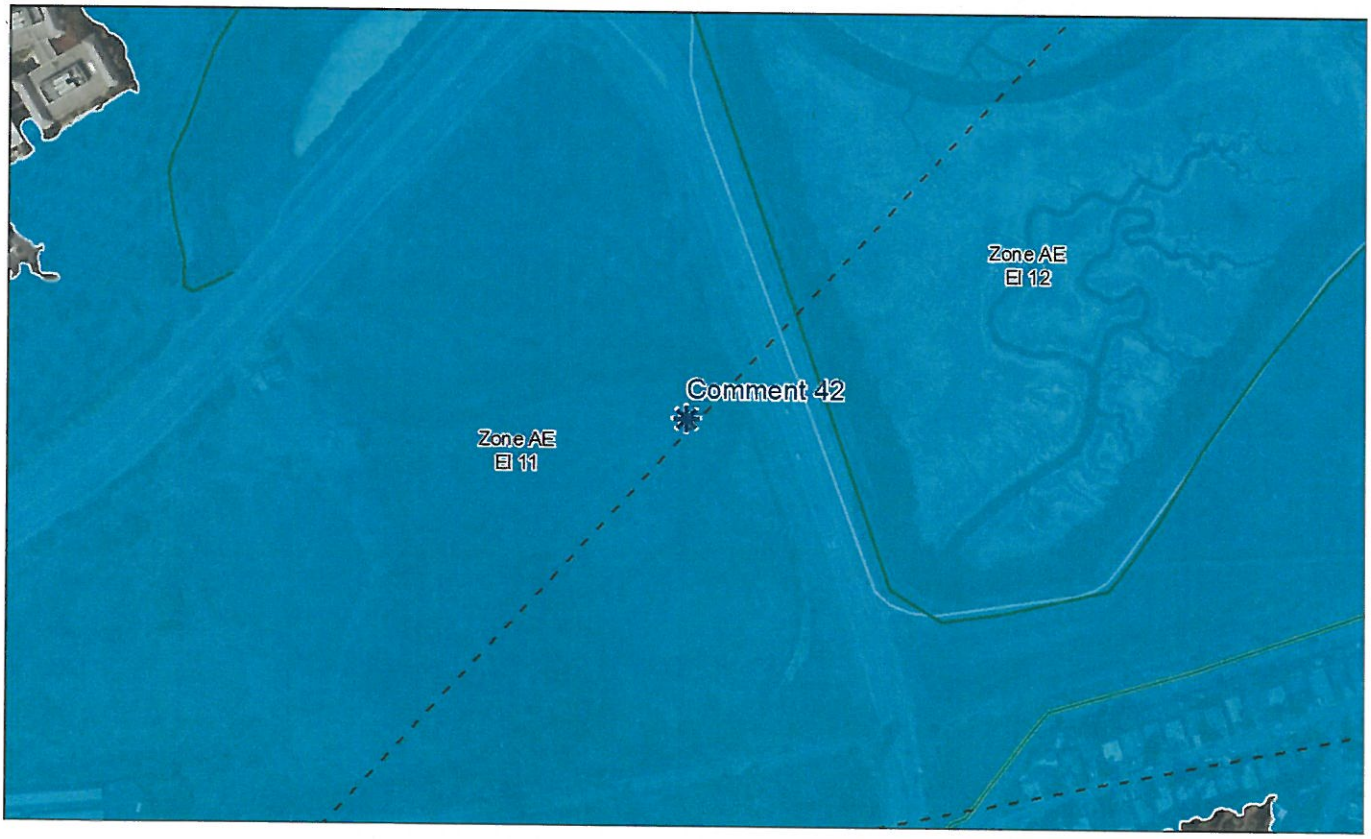
San Mateo County: Comment 39



San Mateo County: Comment 40



San Mateo County: Comment 41



San Mateo County: Comment 42

San Mateo County: Comment 43