APPENDIX A:
Initial Study

Initial Study Checklist

Coastside Fire Protection District
Fire Station 41 (El Granada) Replacement Project

INTRODUCTION

The proposed Fire Station 41 (El Granada) Replacement Project is a project under the California Environmental Quality Act (CEQA). This Initial Study was prepared by PlaceWorks for the Coastside Fire Protection District (CFPD). This Initial Study was prepared pursuant to the CEQA (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Section 15000 et seq. of the California Code of Regulations).

1.	Title:	Fire Station 41 (El Granada) Replacement Project
2.	Lead Agency Name and Address:	Coastside Fire Protection District 1191 Main Street Half Moon Bay, CA 94019
3.	Contact Person and Phone Number:	Paul Cole Assistant Chief (650) 726-5213
4.	Location:	Unincorporated San Mateo County Community of El Granada
5.	Applicant's Name and Address:	Coastside Fire Protection District 1191 Main Street Half Moon Bay, CA 94019
6.	General Plan Land Use Designations:	See page 4 of this Initial Study
7.	Zoning:	See page 4 of this Initial Study
8.	Description of Project:	See page 7 of this Initial Study
9.	Surrounding Land Uses and Setting:	See page 4 of this Initial Study
10.	Required Approvals:	See page 9 of this Initial Study

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the proposed Project, involving at least one impact that is a potentially significant impact, as indicated by the checklist on the following pages.

☑ Aesthetics	☐ Agriculture & Forestry Resources	☑ Air Quality
☑ Biological Resources	☐ Cultural Resources	☐ Geology & Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☑ Hydrology & Water Quality
☐ Land Use & Planning	☐ Mineral Resources	☑ Noise
☐ Population & Housing	☐ Public Services	☐ Recreation
☑ Transportation & Circulation	☐ Utilities & Service Systems	☑ Mandatory Findings of Significance

Determination:

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

☐ I find that, although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the City. A MITIGATED NEGATIVE DECLARATION will be prepared.

☑ I find that the proposed Project MAY have a significant effect on the environment, and an ENIRONMENTAL IMPACT REPORT (EIR) will be prepared.

☐ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Paul Cole — 6/24/15

SIGNATURE — DATE

Paul Cole — Assistant Chief

PRINTED NAME — TITLE

A. OVERVIEW

This Initial Study checklist was prepared to assess the potential environmental effects of the Fire Station 41 (El Granada) Replacement Project, herein referred to as the "proposed Project" or "Project." This Initial Study consists of a depiction of the existing environmental setting and the Project description followed by a description of various environmental effects that may result from construction and operation of the proposed Project.

B. BACKGROUND

The proposed Project would replace the existing Fire Station 41 located approximately 600 feet to the west of the Project site at 531 Obispo Road. The existing Fire Station 41 is approximately 50 years old. It is not large enough to properly house all the current and necessary fire/public safety equipment needs to serve the coastside area. In addition, the existing Fire Station 41 was not designed as an Essential Service Facility pursuant to the Essential Services Buildings Seismic Safety Act[1] and is not capable of withstanding a significant seismic event, which would render the existing Fire Station 41 inoperable. The increase in residents and visitors over the past 50 years has resulted in a demand for additional fire protection related services. Additionally, changes in modern equipment cannot be accommodated in the existing Fire Station 41.

If the proposed Project is approved, then a determination for the use of the existing Fire Station 41 can be made. Upon completion of the proposed Project, the existing Fire Station 41 may be deemed surplus property by the Coastside Fire Protection District (CFPD) and sold. Future use of the existing site would then be subject to separate environmental review, as needed.

C. REGIONAL AND LOCAL LOCATION

As shown in Figure 1, the Project site is in El Granada, an unincorporated community in the northern coastal area of San Mateo County. The Project site is located three miles northwest of Half Moon Bay, eight miles southeast of Pacifica, and 18 miles south of San Francisco. Regional access is provided via Cabrillo Highway (Highway 1), located to the south of the Project site.

The Project site is a 2.5-acre parcel of land bound by Avenue Alhambra to the north, Coronado Street to the east, Obispo Road to the south, and Avenue Portola to the west. Given the undeveloped nature of the Project site, there are no formal driveways to provide access to the Project site; however, the Project site is accessible via Obispo Road, Avenue Alhambra, and Avenue Portola. The Project site is located within the Coastside Fire Protection District boundaries.

[1] In 1986, the California Legislature determined that buildings providing essential services should be capable of providing those services to the public after a disaster. Their intent in this regard was defined in legislation known as the Essential Services Buildings Seismic Safety Act of 1986 and includes requirements that such buildings shall be "designed and constructed to minimize fire hazards and to resist the forces of earthquakes, gravity and winds." The Essential Services Buildings Seismic Safety Act California Health and Safety Code, Chapter 2, sections 16000 through 16022, and the California Building Code defines how the intent of the Act is to be implemented in Title 24, Part 1 of the California Building Standards Administrative Code, Chapter 4, Articles 1 through 3. http://www.cab.ca.gov/general_information/esbssa/, accessed June 18, 2015.

Source: ESRI, 2015. PlaceWorks, 2015

Figure 1
Regional and Local Location

D. EXISTING SETTING

Existing Conditions

As shown in Figure 2, the Project site is currently an undeveloped narrow parcel of land designated Assessor's Parcel Number (APN) 047-261-030. The Project site's topography is characterized by a slight downward slope toward the coast with an elevation that generally decreases from the northeast to the southwest. The Project site has a 15 percent average cross-slope on a section through the proposed Fire Station 41. A drainage area surrounded by dense riparian habitat approximately 200 feet in width[2] is located slightly to the west of the center of the Project site. The west side of the Project site consists of non-native annual grassland habitat with an unimproved dirt road, west of the drainage area. The east side of the Project site consists of non-native annual grassland, as well as 11 trees consisting of a mix of imported trees (i.e. no trees native to the El Granada area).[3]

Surrounding Conditions

The land uses surrounding the Project site consists of single- and multi-family residential uses to the north, and commercial uses to the west and northwest. To the east, directly across Coronado Street, is the Wilkinson School, a private K to 8th grade school. To the south is an undeveloped area of land that is covered with similar vegetation as that of the Project site and is partially used as informal and unimproved parking area for beachgoers. The El Granada Elementary School, a Cabrillo Unified School District-K through 5th grade school, is located 500 feet (0.10 mile) from the southeast border of the Project site.

Land Use Designation and Zoning

The Project site is within the land use planning jurisdiction of the San Mateo County. As shown on Figure 3, the Project site has two General Plan and Local Coastal Plan land use designations and County zoning districts.[4] The westernmost portion of the Project site, at the Avenue Portola/Obispo Road intersection (across Avenue Portola from the existing Fire Station 41), is designated Neighborhood Commercial Urban and is zoned Neighborhood Business District/Design Review/Coastal Development (C-1/S-3/DR/CD). Uses allowed on this portion of the Project site can include automobile service stations, bakeries, banks, bars, barber shops, confectionery stores, gift shops, restaurants, and cafes.[5] No development is proposed on this portion of the Project site. The remaining Project site, which encompasses the drainage area and the location of the proposed Fire Station 41, is designated as Open Space with Park Overlay Urban and is zoned El Granada Gateway/Design Review/Coastal Development (EG/DR/CD). The EG zoning has limited number of allowed uses and strict development requirements; however, the zoning code provides for institutional/public services uses to be located in any zoning district subject to the issuance of a Use Permit.

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[2] Coastside Fire Protection District, Riparian Setback Analysis, TRA Environmental Sciences, Inc., August 7, 2014. A copy of this analysis is included as Appendix C of this Initial Study.

[3] A preliminary evaluation of trees was prepared by Kevin R. Kielty, Certified Arborist WE#0476A of Kielty Arborist Services, LLC on Wednesday, May 27, 2015. A copy of this evaluation is included as Appendix A of this Initial Study.

[4] San Mateo County, San Mateo Planning and Building Department GIS Website, http://maps.smcgov.org/planning/, accessed on May 21, 2015.

[5] San Mateo County, Zoning Regulations, December 2012, Chapter 15 "C-1" Districts (Neighborhood Business Districts), page 15.1-15.2

Note: Entire Project Site and surrounding area is flagged as possible Monarch Butterfly and San Francisco Garter Snake habitat according to the California Natural Diversity Database, 2014.

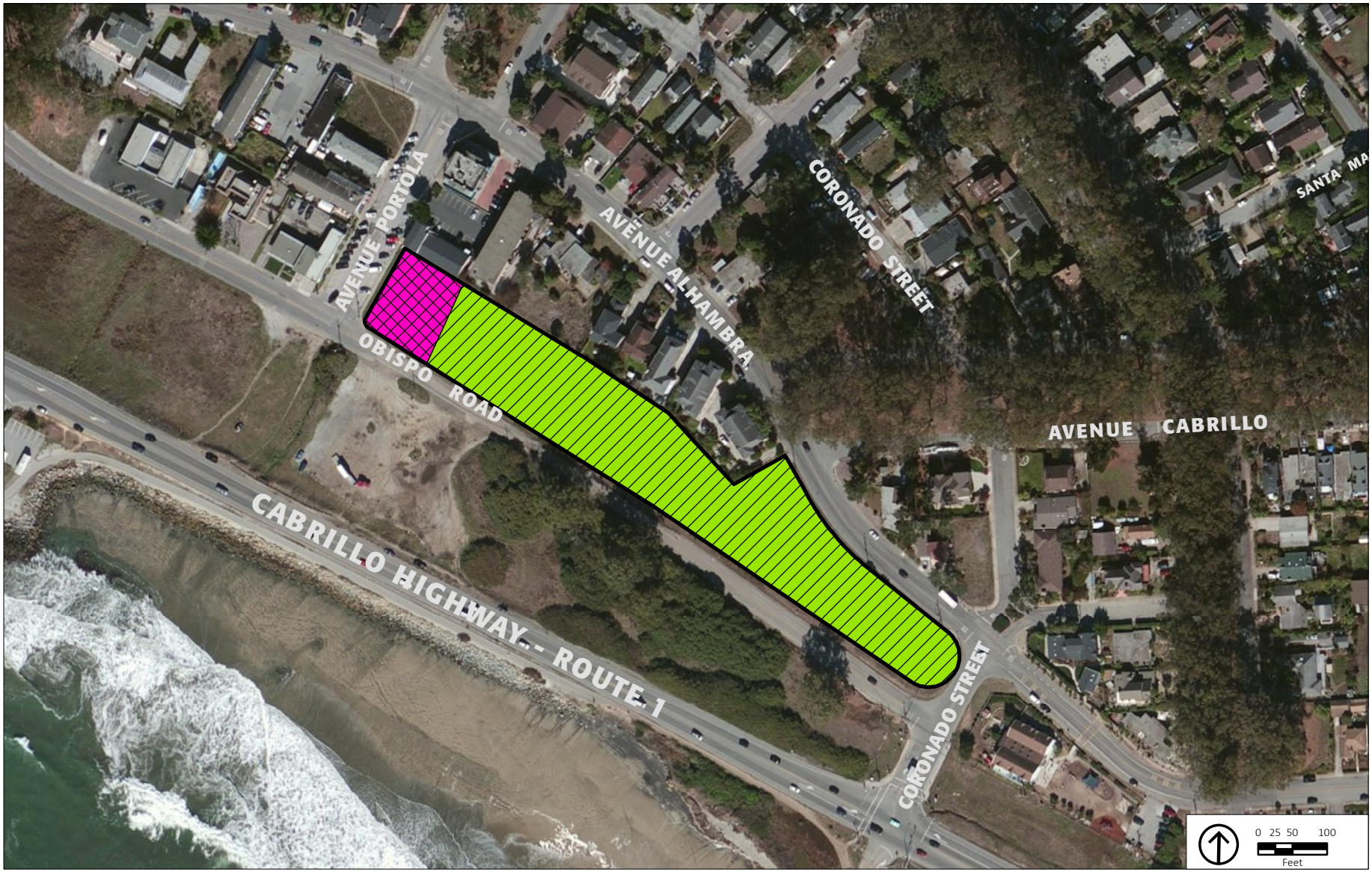
Source: ESRI, 2015. PlaceWorks, 2015

Project Site

Site Proposed For Development

Riparian Habitat

Figure 2
Existing Project Site



Source: San Mateo County, 2015

General Plan Land Use Designation
- Neighborhood Commercial Urban
- Open Space With Park Overlay

Zoning Designation
- Neighborhood Business District/Multiple Family Residential/Design Review District/Coastal Development District (C-1/S-3/DR/CD)
- El Granada Gateway District/Design Review District/Coastal Development District (EG/DR/CD)

Figure 3
General Plan Land Use and Zoning Designation

E. PROJECT DESCRIPTION

As shown on Figure 4 and described above, the CFPD proposes construction of a new Fire Station 41 on the easternmost portion of the Project site. The Project would result in a new 10,000-square-foot, single-story fire station, with three bays providing drive-through truck access via Obispo Road, as well as 14 on-site secured parking spaces for staff, and three on-site public parking spaces, including one Americans with Disabilities Act (ADA)-compliant parking space.

The maximum height of the Project would be 30 feet above finish grade at the center of the three-bays, in order to accommodate the height of the fire trucks and equipment; however, other areas of the structure, such as the staff residential/administration and work training areas, would be below 30 feet in height.

The Project includes the installation of an emergency generator and an above ground diesel fuel tank within secured areas. The Project would include native, drought tolerant landscaping and a new curb, gutter and sidewalk along the frontage of the proposed Fire Station 41.

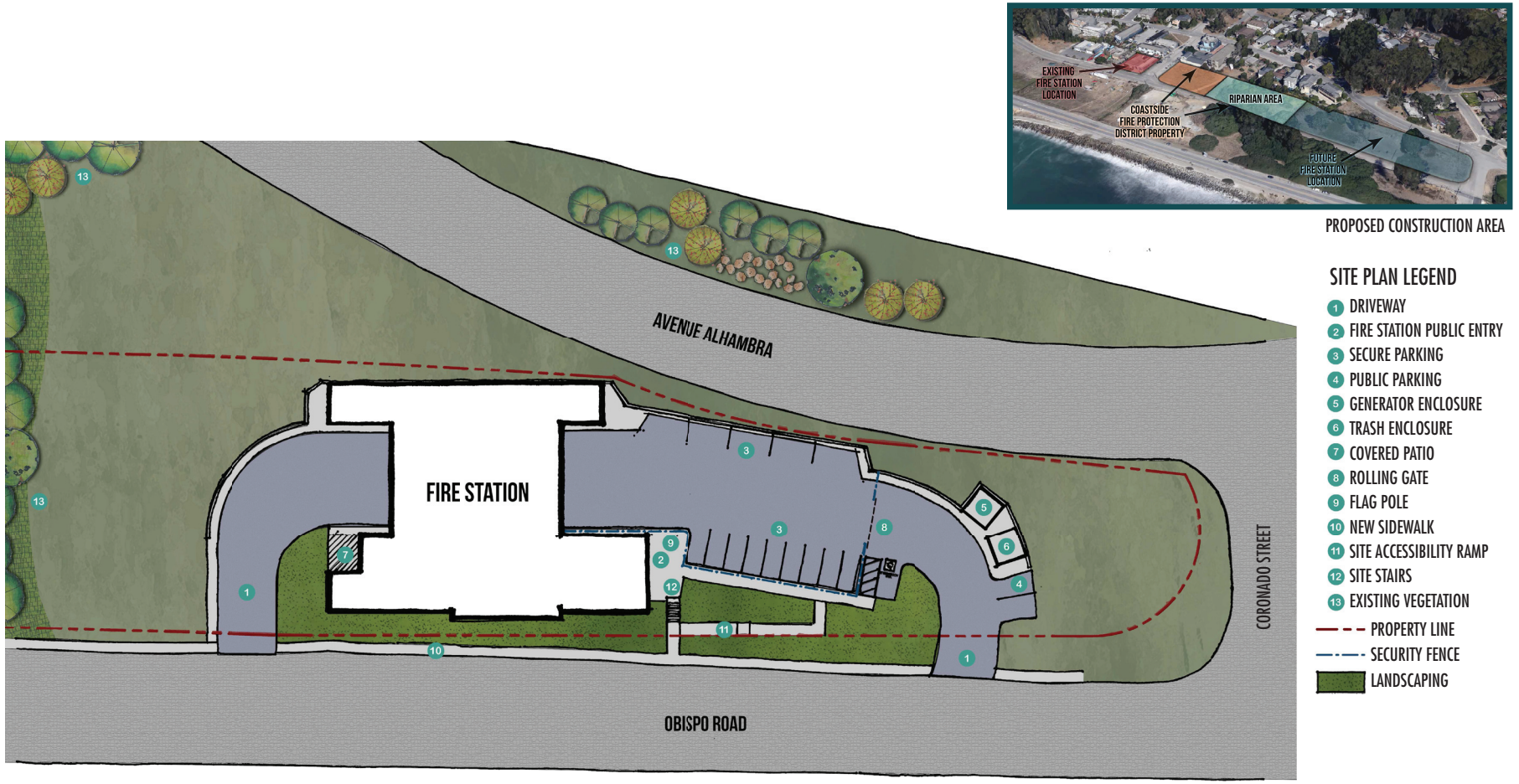
Given the sloped topography and existing vegetation at the Project site, site preparation would include the removal of existing non-native trees that are primarily in poor condition, removal of ground vegetation, and site grading as well as the construction of a retaining wall to create a buildable pad (i.e. building surface). Approximately 4,300 cubic yards of material is to be excavated and 2,000 cubic yards of fill material is to be placed, with 2,300 cubic yards of material to be exported. Project construction is expected to occur throughout one 12 to 15-month phase and is estimated to start in Summer 2016.

Operation of the proposed Project is not expected to change beyond existing conditions and would continue to operate with existing staff. A fully staffed shift of fire fighters is commonly known as a company. The proposed Fire Station 41 would be staffed by a three-person company working 2.5 shifts per week. As under current conditions, the three companies would work three shifts as follows:

- Shift 1 would work Sunday, Monday and Tuesday
- Shift 2 would work Thursday, Friday and Saturday
- Relief Shift would work Wednesday.

The proposed Project would include a Fire Engine, a Truck, and a Heavy Rescue Vehicle. The CFPD dispatches the type of equipment and staff based upon the nature of the emergency.

PLACEWORKS



Source: JKA Jeff Katz Architecture, May 2015.

0 2
Scale (Feet)

Figure 4
Conceptual Site Plan

F. CEQA LEAD AGENCY

Section 15367 of the CEQA Guidelines defines the "Lead Agency" as the public agency which has the principal responsibility for carrying out or approving a project. The CFPD is the public agency which has the principal responsibility for planning, designing and building the proposed Project. While San Mateo County has land use planning jurisdiction on this site, the County Planning Division has agreed that CFPD will be the Lead Agency for CEQA purposes and San Mateo County will be a "Responsible Agency."[6]

G. REQUIRED APPROVALS

As previously described under the heading "Environmental Factors Potentially Affected," the proposed Project has the potential to have a significant effect on the environment, and an EIR will be prepared. Upon completion of the Draft EIR, the CFPD, acting as the Lead Agency, will hold a public hearing on the Draft EIR. All public comments within the required public review period will then be included in the Final EIR, which would be reviewed for certification by the CFPD. Following the CFPD certification of the EIR and subsequent approval of the Project, San Mateo County will conclude their review and analysis of the proposed Project, and hold the required public hearings for the following permits, as well as other permits as determined throughout the environmental review and permitting process:

- Coastal Development Permit – (San Mateo County Planning and Building Department)
- Design Review – (San Mateo County Planning and Building Department)
- Use Permit – (San Mateo County Planning and Building Department)
- Variance – (San Mateo County Planning and Building Department)
- Certificate of Compliance – (San Mateo County Planning and Building Department)
- Excavating, Grading, Filling and Clearing Permit – (San Mateo County Planning and Building Department)
- Building Permit – (San Mateo County Building Department)

There are no plans at this time for development of the undeveloped westernmost portion of the Project site that is designated Neighborhood Commercial Urban with a zoning of Neighborhood Business District (C-1/S-3/DR/CD). The CFPD is considering creating a separate parcel for this portion of the Project site. The CFPD is currently working with the County to determine the process to pursue this future goal.

[6] CEQA Section 21069, a "Responsible agency" means a public agency, other than the lead agency, which has responsibility for carrying out or approving a project.

ENVIRONMENTAL CHECKLIST

I. AESTHETICS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☑	❒	❒	❒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a State scenic highway?	❒	❒	❒	☑
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☑	❒	❒	❒
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☑	❒	❒	❒

Discussion

a) *Would the project have a substantial adverse effect on a scenic vista?*

The San Mateo County General Plan and the County Local Coastal Program (LCP) do not define or officially designate any *scenic vistas* within the County. However, the General Plan does state that El Granada is largely influenced by its coastal setting, and mentions that the beautiful views of the ocean, rocky hills, dense stands of mature eucalyptus trees and sloped terrain make El Granada an extremely scenic area.[7] Further, the stretch of Highway 1 just south of the Project site is a County-designated *scenic corridor*.

The Project site is a narrow 2.5-acre parcel of undeveloped land that offers panoramic views of the Pacific Ocean to its south, including views from the existing residential and commercial structures north of the Project site. The Project proposes construction of a new Fire Station 41 on a relatively small portion of the Project site along its eastern edge, which would leave much of the remaining Project site undeveloped. However, given that the proposed Project would introduce a new structure, with a maximum height of 30 feet, to a portion of an undeveloped site, views of the ocean could be affected. This would result in a *potentially significant* impact and will be addressed in the EIR.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a State scenic highway?*

The Project site is not located within the vicinity of a State scenic highway; however, the stretch of Highway 1 from Half Moon Bay (3.5 miles south) to the Santa Cruz County line, is a State-designated scenic highway. Given the distance of the Project site from this segment of Highway 1, and because the Project site itself is not located immediately adjacent to a State designated scenic highway, there would be *no impact*. No mitigation measures are required and this issue will not be discussed further in the EIR.

[7] County of San Mateo General Plan, page 4.14.

c) *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

The existing Project site itself is primarily vegetated with shrubs, grasses and an area of denser vegetation generally in the center of the Project site. The area of the Project site where the Project proposes construction is characterized by grasses and shrubs, along with 11 trees consisting of a mix of imported trees (i.e. no trees native to the El Granada area).[8]

Existing visual character in the vicinity of the Project site includes mostly one- and two-story single-family residential homes with flat or slightly pitched roofs, of varying architectural styles. There are also two small multi-family buildings along Avenue Alhambra along the northern border of the Project site. Both multi-family structures are approximately three stories, with parking on the ground floor as well as on-site paved surface parking. Along Avenue Portola, west of the Project site, are commercial structures characterized by two- and three-story structures of varying design and materials, as well as the existing Fire Station 41, which is a single-story, two-bay structure with modest landscaping, including small patches of turf grass, and few ornamental trees. Across Obispo Road south of the Project site is a vacant parcel of land consisting of dense trees and shrubbery, along with an area of an unimproved dirt/gravel parking lot.

As described above, the Project would include construction of a new 10,000 square-foot, three-bay fire station at the eastern portion of the Project site, which is currently undeveloped. The Project would be a maximum of 30 feet at its highest point at the center bay in order to accommodate equipment; however, would generally include heights of less than 30 feet in other areas.

A retaining wall would be incorporated into the north wall of the building, which would extend east and west of the proposed Fire Station 41 to create a buildable pad. The concrete retaining wall where visible, would be treated to create a rocklike appearance and minimally visible from Obispo Road due to the location of the proposed Fire Station 41. The retaining wall would daylight at the natural grade adjacent to the Avenue Alhambra area of the parcel and would not be visible from that vantage point. The Project would also include native, drought tolerant landscaping along the frontage of the proposed Fire Station 41, as well as a new sidewalk. The proposed fence and landscaping along Obispo Road would also serve to blend the proposed Fire Station 41 into the Project site.

The building exterior would include materials such as stone veneer and cement treated siding in earth tones, and flat concrete tile roof material also in earth tones.

Although the Project would undergo Design Review and be reviewed for conformance with all required Visual Resource policies of the San Mateo County LCP to ensure the design; character, height, scale, and mass are compatible with the, the Project would still represent a change to the existing visual character of the Project site by adding a new structure to an undeveloped site. As a result, impacts related to the

[8] A preliminary evaluation of trees was prepared by Kevin R. Kielty, Certified Arborist WE#0476A of Kielty Arborist Services, LLC on Wednesday, May 27, 2015. A copy of this evaluation is included as Appendix A of this Initial Study.

degradation of the existing visual character or quality of the Project site and its surroundings are *potentially significant* and will be addressed in the EIR.

d) *Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

Although there are existing sources of light and glare in the vicinity of the Project site typical of residential and commercial developments, such as interior lighting and some exterior lighting, as well as sources of glare from building windows and cars in the parking lots, the Project site itself currently does not currently emit any sources of light and/or glare. Given that the Project proposes construction of a new Fire Station 41, which would include new sources of light and glare to the Project site, including, but not limited to, exterior and interior lighting, as well as introduce new sources of glare from windows and/or any reflective materials of the Project, a *potentially significant* impact could occur and will be addressed in the EIR.

II. AGRICULTURE AND FORESTRY RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	❒	❒	❒	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	❒	❒	❒	☑
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	❒	❒	❒	☑
d) Result in the loss of forest land or conversion of forest land to non-forest use?	❒	❒	❒	☑
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or of conversion of forest land to non-forest use?	❒	❒	❒	☑

Discussion

a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

According to maps from the Farmland Mapping and Monitoring Program of the California Resources Agency land within El Granada is categorized as primarily Urban and Built-Up Land. The Project site is

located on Urban and Built-Up Land.[9] There are no agricultural lands identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Project site. Therefore, there would be *no impact.* No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project conflict with an existing zoning for agricultural use, or a Williamson Act contract?*

According to the 2012 map of Williamson Act contract land, there is no agricultural land within the Project site. [10] Further, the Project site is zoned as EG/DR/CD, which does not permit agricultural uses within that designation. Therefore, implementation of the proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Consequently, there would be *no impact*. No mitigation measures are required and this issue will not be discussed further in the EIR.

c) *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

Neither the Project site, nor adjoining parcels feature zoning designations for forest land, timberland, or timber production. Therefore, the Project would have *no impact*. No mitigation measures are required and this issue will not be discussed further in the EIR.

d) *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

For the reasons provided in response to Sections II.a through II.c, there would be *no impact* in relation to the conversion of forest land to non-forest use. No mitigation measures are required and this issue will not be discussed further in the EIR.

e) *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or of conversion of forest land to non-forest use?*

As detailed above, the Project site and surrounding areas do not include any zoning, or existing land uses relating to forest land, timber production, or agriculture. The Project site is generally in an urbanized area, and would not impact any distant or outlying areas used for agricultural lands. Therefore, *no impact* would occur. No mitigation measures are required and this issue will not be discussed further in the EIR.

[9] California Resources Agency, Farmland Mapping and Monitoring Program. Santa Clara County Important Farmland 2012, ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2012/smt12.pdf, accessed on May 19, 2015.

[10] California Department of Conservation, 2012, State of California Williamson Act Contract Land, ftp://ftp.consrv.ca.gov/pub/dlrp/wa/2012%20Statewide%20Map/WA_2012_36x42.pdf, accessed on May 19, 2015.

III. AIR QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	❒	❒	☑	❒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☑	❒	❒	❒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable federal or State ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☑	❒	❒	❒
d) Expose sensitive receptors to substantial pollutant concentrations?	☑	❒	❒	❒
e) Create objectionable odors affecting a substantial number of people?	❒	❒	☑	❒

Discussion

The Bay Area Air Quality Management District (BAAQMD) is the regional air quality management agency for the San Francisco Bay Area Air Basin (SFBAAB), which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.[11]

a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Large projects that exceed regional employment, population, and housing planning projections have the potential to be inconsistent with the regional inventory compiled as part of the BAAQMD *2010 Bay Area Clean Air Plan*. The Project proposes construction of a new 10,000-square-foot fire station building to replace the existing Fire Station 41 with a new three-bay fire station staffed at current levels and would not generate new operational vehicle trips within the CFPD's service area. In addition, the proposed Project would not have the potential to substantially affect housing, employment, and population projections within the region, which is the basis of the *Bay Area Clean Air Plan* projections. Therefore, the proposed Project is not considered a regionally significant project under CEQA Guidelines Section 15206 that would affect regional vehicle miles traveled (VMT) and warrant intergovernmental review by the Association of Bay Area Governments (ABAG)[12] and the Metropolitan Transportation Commission (MTC).[13] Furthermore, the Project would fall under BAAQMD's screening criteria, which is used to determine

[11] Bay Area Air Quality Management District, 2011, California Environmental Quality Act Air Quality Guidelines, Appendix C: Sample Air Quality Setting.

[12] Association of Bay Area Governments (ABAG), Accessed 2015, Regional Clearinghouse http://abag.ca.gov/planning/clearinghouse.html

[13] Metropolitan Transportation Commission (MTC), Access 2015, Air Quality Conformity, http://www.mtc.ca.gov/planning/air_quality/

projects that have the potential to generation emissions that exceed BAAQMD's operational emissions thresholds (see Section III (b)). These thresholds are established to identify projects that have the potential to generate a substantial amount of criteria air pollutants. Because the Project would not exceed these thresholds during Project operations, the Project would not be considered by BAAQMD to be a substantial emitter of criterial air pollutants. Therefore, the Project would not conflict with or obstruct implementation of the *2010 Bay Area Clean Air Plan* and impacts would be considered *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including reactive organic gases (ROG), oxides of nitrogen (NO_x), coarse inhalable particulate matter (PM_{10}), and fine inhalable particulate matter ($PM_{2.5}$). Development below the significant thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Construction Emissions

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the Project site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM_{10} and $PM_{2.5}$) from soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities on site would vary daily as construction activity levels change. Because the proposed Project has the potential to result in overlapping construction activities, a quantified analysis of the Project's construction emissions will be prepared. The impact is *potentially significant*, and will be addressed in the EIR.

Operational Emissions

The existing Fire Station 41 generates long-term air pollutant emissions from the burning of fossil fuels in fire trucks and other vehicles (mobile sources), energy use for cooling, heating, and cooking (energy), and landscape equipment use and consumer products (area sources). The proposed Project involves the construction of a new 10,000-square-foot fire station building to replace the existing station, but on a new site. BAAQMD's CEQA Guidelines identifies screening criteria for operation-related criteria air pollutant emissions. Since BAAQMD's CEQA Guidelines does not have specific screening criteria for fire stations, the screening criteria for government office building were used as the best fit. Based on BAAQMD's screening criteria, government office buildings of 61,000 square foot or larger have the potential to generate a substantial increase in criteria air pollutant emissions and would need further analysis.[14] The Project is substantially below the BAAQMD screening threshold and would generate nominal criteria air pollutant emissions. Furthermore, the proposed Project would not generate new vehicle trips within the CFPD's service; therefore, it is not anticipated to result in a net increase of mobile source emissions. Additionally, the proposed Fire Station 41 building would be energy efficient, because the new station would be constructed to achieve the latest Building and Energy Efficiency Standards and

[14] Bay Area Air Quality Management District (BAAQMD), 2011 Revised, California Environmental Quality Act Air Quality Guidelines.

California Green Building Standards Code. Criteria air pollutant emissions generated by the Project are a *less-than-significant* impact. No mitigation measures are warranted and this issue will not be discussed further in the EIR.

c) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable federal or State ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors?*

The SFBAAB is currently designated as a nonattainment area for California and National ambient air quality standards (AAQS) for ozone (O_3) and for $PM_{2.5}$, and a nonattainment area under the California AAQS for PM_{10}.[15] Any project that does not exceed or can be mitigated to less than the BAAQMD significance levels, used as the threshold for determining major projects, does not add significantly to a cumulative impact.[16] As explained in response to Section III.b above, operation of the Project would fall under the BAAQMD screening criteria and would not result in regional emissions in excess of these threshold values. However, the Project would generate an increase in criteria air pollutant emissions during construction activities. A quantified analysis of the Project's construction emissions will be prepared to evaluate whether the Project would result in a considerable contribution to O_3, $PM_{2.5}$, and PM_{10} concentrations in the SFBAAB. Until this analysis is completed, this impact is considered *potentially significant* and will be addressed in the EIR.

d) *Would the project expose sensitive receptors to pollutant concentrations?*

Localized concentrations refer to the amount of pollutants in a volume of air (ppm or $\mu g/m^3$) that can be correlated to potential health effects on sensitive populations.

Construction Off-Site Community Risk and Hazards

The Project would elevate concentrations of toxic air contaminants (TACs) and diesel-$PM_{2.5}$ in the vicinity of sensitive land uses during construction activities. BAAQMD has developed screening thresholds for assessing potential health risks from construction activities. Receptors would have to be located more than 300 feet away to fall below the BAAQMD's screening thresholds.[17] Therefore, construction health risk assessment will be prepared to evaluate the potential for the Project to expose adjacent residential receptors to elevated concentrations of air pollutants. The impact is *potentially significant* and this issue will be addressed in the EIR.

Operational Phase On-Site Community Risk and Hazards

The Project would include installation of an emergency diesel-fueled generator on-site. Emergency generators are operated intermittently, during times of periodic testing and maintenance. Diesel particulate exhaust, a chemical with cancer potency factors and Reference Exposure Levels (RELs), would be emitted only during testing periods. Since emergency generators are tested infrequently throughout

[15] California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, April 17.

[16] Bay Area Air Quality Management District (BAAQMD), 2011 Revised, California Environmental Quality Act Air Quality Guidelines.

[17] Bay Area Air Quality Management District (BAAQMD). 2010. Screening Tables for Air Toxics Evaluation During Construction.

the year (typically once a week), exposure to diesel particulate exhaust from emergency generators is generally very low. Therefore, emissions generated by the emergency generator are a *less-than-significant* impact. No mitigation measures are warranted and this issue will not be discussed further in the EIR.

e) *Would the project create objectionable odors affecting a substantial number of people?*

Construction and operation of a fire station building would not generate substantial odors or be subject to odors that would affect a substantial number of people. The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g. auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Fire station uses are not associated with foul odors that constitute a public nuisance.

During operation, fire stations could generate odors from cooking. Odors from fire station cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people. Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, *Odorous Substances*, which requires abatement of any nuisance generating an odor complaint.

During construction activities, the application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent in nature. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Impacts would be *less than significant*. No mitigation measures are warranted and this issue will not be discussed further in the EIR

IV. BIOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☑	❒	❒	❒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☑	❒	❒	❒

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☑	❒	❒	❒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	❒	❒	☑	❒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☑	❒	❒	❒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	❒	❒	❒	☑

Existing Conditions

The Project site is located in a relatively developed area of El Granda, surrounded by residential development to the north, east and south, and Obispo Road and Highway 1 to the west. The Project site is currently undeveloped and contains a natural cover of non-native grasslands, scattered native and non-native trees, and is bisected by a dense riparian corridor dominated by native arroyo willow (*Salix lasiolepis*). The riparian corridor is considered a sensitive natural community, is a jurisdictional waters regulated by State and federal resource agencies, and is subject to setback requirements defined in Policies 7.7 and 7.11 of the San Mateo County LCP. Coastal trees outside of riparian corridors are protected under the policy provisions in the Visual Resource component of San Mateo County LCP. The San Mateo County LCP also references Section 12,000, San Mateo County Ordinance regarding Significant Trees and Section 11,000 San Mateo County Ordinance regarding Heritage Trees. The purpose of these ordinances is to protect and preserve healthy trees and to provide the type of permits and review process if removal of tree(s) is necessary for a project.

Discussion

a) *Would the Project have a substantial adverse effect, either directly or through habitat modifications, on a plant or animal population, or essential habitat, defined as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?*

Special-status species are plants and animals that are legally protected under the State and/or federal Endangered Species Acts or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts and other essential habitat. A habitat assessment was conducted for the applicant evaluating the potential for occurrence the

federally-threatened California red-legged frog (Rana draytonii) and State and federally-endangered San Francisco gartersnake (Thamnophis sirtalis tetrataenia) on the Project site, which concludes that suitable habitat for these species is absent on the Project site.[18] There also remains a potential for nesting by one or more species of birds. Nests of birds in active use are protected under the Migratory Bird Treaty Act and California Department of Fish and Wildlife Code. Further assessment of the potential for adverse impacts on special-status species and nesting birds will be conducted as part of the EIR, together with an assessment of potential impacts and recommended mitigation, if necessary. Therefore, this remains a *potentially significant* impact that will be addressed in the EIR.

b) *Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?*

The Project site is largely vegetated by non-native grasslands and scattered trees, but the riparian corridor does qualify as a sensitive natural community type. Based on preliminary plans, the proposed Project would be located outside of the footprint of this central riparian corridor. However, further evaluation is necessary to confirm no other sensitive natural communities are present on the Project site and that adequate controls are in place to prevent direct and indirect adverse impacts on sensitive natural communities. Therefore, this is a *potentially significant* impact that will be addressed in the EIR.

c) *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption or other means?*

The riparian corridor that bisects the Project site is a jurisdictional waters, regulated by the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers, and the Regional Water Quality Control Board. Based on preliminary plans, the proposed Project would be located outside of the footprint of this central riparian corridor and associated jurisdictional waters. However, further evaluation is necessary to confirm no other potential jurisdictional waters are present on the Project site and that adequate controls are in place to prevent direct and indirect adverse impacts on jurisdictional waters. Therefore, this remains a *potentially significant* impact that will be addressed in the EIR.

d) *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with an established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

The Project site is located in a largely urbanized area, bordered by existing roadways and other urban uses which preclude the presence of any important wildlife movement corridors across the Project site. The riparian corridor which bisects the Project site would be retained in a natural state with appropriate setbacks, which would allow for continued, uninterrupted movement by any wildlife which may use this feature for cover, movement and other functions. The proposed Project would not have any significant effects on native resident or migratory fish or wildlife species, or with established native resident or

[18] WRA, 2015, *Preliminary Environmentally Sensitive Habitat Areas Assessment at the Proposed Coastside Fire District Project in El Granada, San Mateo County, California*, prepared for Chief Paul Cole, Coastside Fire Protection District, April 16. A copy of this assessment is included as Appendix C of this Initial Study.

migratory wildlife corridors, or impede the use of native wildlife nurseries. Wildlife species common in non-native grasslands, riparian corridors and urban habitat would continue to move through the area, both during and after construction. Therefore, potential impacts on wildlife movement opportunities would be considered *less than significant* and this criterion will not be discussed further in the EIR.

e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?*

The Project site is located within the coastal zone and would be subject to policies in the San Mateo County LCP, as well as the County's Significant Tree Ordinance and Heritage Tree Ordinance (if applicable). Further review would be necessary to confirm the degree to which the proposed Project conforms with policies in the San Mateo County LCP related to riparian setbacks, and whether any of the trees to be removed are of a regulated size. This would be a *potentially significant* impact and will be addressed in detail in the EIR.

f) *Would the project conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?*

The Project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. The San Bruno Mountain Habitat Conservation Plan encompasses an area of approximately 3,600 acres near San Bruno Mountain located 20 miles north of the Project site and does not include areas in the vicinity of the Project site. No such plans have been adopted encompassing the project vicinity, *no impacts* are anticipated, and this criterion will not be discussed further in the EIR.

V. CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	❒	❒	❒	☑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	❒	❒	☑	❒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	❒	❒	☑	❒
d) Disturb any human remains, including those interred outside of formal cemeteries?	❒	❒	☑	❒

Discussion

a) *Would the Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?*

The types of cultural resources that meet the definition of historical resources under CEQA generally consist of districts, sites, buildings, structures, and objects that are significant for their traditional, cultural

and/or historical associations. Commonly, the two main resource types are subject to impact, and that may be impacted related to buildout of the Project, are historical archaeological deposits and historical architectural resources, as discussed below. Archaeological resources are addressed in Section V.b., and human remains are addressed in Section V.d below.

Cultural resources are protected by federal and State regulations and standards, including but not limited to, the National Historic Preservation Act, the California Public Resources Code, and CEQA. Also, the Office of Historic Preservation (OHP) has determined that structures in excess of 45 years of age should be considered potentially important historical resources, and former buildings and structure locations could be potentially important archaeological sites. Typically, if the Project site or adjacent properties are found to be eligible for listing on the California Register, the development would be required to conform to the current Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, and Restoring Historic Buildings, which require the preservation of character defining features which convey a building's historical significance, and offers guidance about appropriate and compatible alterations to such structures.

Historical and pre-contact archaeological deposits that meet the definition of historical resources under CEQA could be damaged or destroyed by ground-disturbing activities associated with construction of the Project, such as grading and/or filling. Should this occur, the ability of the deposits to convey their significance, either as containing information important in prehistory or history or as possessing traditional or cultural significance to Native American or other descendent communities, would be materially impaired.

A records search of pertinent base maps that reference cultural resources records and reports, historic period maps, and literature on file for San Mateo County was conducted at the Northwest Information Center, Sonoma State University, Rohnert Park on May 14, 2015 (Northwest Information Center [NWIC] File No. 14-1515). The records search revealed that the OHP Historic Property Directory (which includes listings of the California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and the National Register of Historic Places) does not list any recorded buildings or structures within or adjacent to the Project site. Further, the Project site itself is currently undeveloped and therefore does not have any structures that would be historically significant. As such, there would be *no impact* related to historical resources. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*

Archaeological deposits that meet the definition of unique archaeological resources under CEQA could be damaged or destroyed by ground-disturbing activities associated with Projects, such as grading and/or filling.[19] Should this occur, the ability of the deposits to convey their significance, either as containing

[19] If the cultural resource in question is an archaeological site, CEQA Guidelines Section 15064.5(c)(1) requires that the lead agency first determine if the site is a historical resources as defined in CEQA Guidelines Section 15064.5(a). If the site qualifies as a historical resource, the potential adverse impact must be considered through the process that governs the treatment of historical resources. If the archaeological site does not qualify as a historical resources but does qualify as a unique

information important in prehistory or history, or as possessing traditional or cultural significance to Native American or other descendent communities, would be materially impaired.

The Project would include ground-disturbing activities, such as grading, excavation and filling, as part of the construction of the proposed Project. Given that the Project site is currently a undeveloped, there is a possibility that buried archaeological deposits could be present and accidental discovery could occur during ground-disturbing construction activities.

As mentioned above, a records search was conducted at the NWIC for the Project site. The records search determined that there is no indication of historic-period activity within the Project site, therefore, resulting in a low potential of identifying unrecorded historic-period archaeological resources. However, the records search indicated that Native American resources have been found in this part of San Mateo County along the coastal margin, near seasonal and perennial waterways less than one-half mile from freshwater sources from the Project site and that there is the potential for identifying Native American archaeological resources at the Project site. Although archeological resources, including those associated with Native Americans or other descendent communities have not been discovered within the Project site itself, there is the potential for accidental discovery during construction activities during construction of the Project. However, implementation of the following Goals and Policies contained in the San Mateo County General Plan would provide for the identification of archaeological deposits prior to actions that may disturb such deposits, and the preservation and protection of such deposits.

Goals and Objectives

- 5.3 Protection of Archaeological/Paleontological Sites: Protect archaeological/paleontological sites from destruction in order to preserve and interpret them for future scientific research, and public educational programs.

Regulation of Development

Protection of Archaeological/Paleontological Resources

- 5.20 Site Survey: Determine if sites proposed for new development contain archaeological/paleontological resources. Prior to approval of development for these sites, require that a mitigation plan, adequate to protect the resource and prepared by a qualified professional, be reviewed and implemented as a part of the Project.
- 5.21 Site Treatment:
  a. Encourage the protection and preservation of archaeological sites.
  b. Temporarily suspend construction work when archaeological/ paleontological sites are discovered. Establish procedures which allow for the timely investigation and/or excavation of such sites by qualified professionals as may be appropriate.

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archaeological site, then it is treated in accordance with PRC Section 21083.2 (CEQA Guidelines Section 15064.5(c)(3). In practice, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource.

c. Cooperate with institutions of higher learning and interested organizations to record, preserve, and excavate sites.

Overall, given that the records search concluded that no Native American resources in or adjacent to the Project site have been discovered, and compliance with the General Plan Goal and Policies above which provides for the early detection and protection of archaeological resources, thereby minimizing and preventing the material impairment of the ability of archaeological deposits to convey their significance through excavation or preservation, impacts related to a substantial adverse change in the significance of an archaeological resource would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

c) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

The General Plan does not identify any unique paleontological and/or geologic features at the Project site. However, given that the Project site is currently an undeveloped and undisturbed parcel of land, there is the possibility that unique paleontological and/or geologic features could be accidently discovered and/or directly or indirectly destroyed during ground-disturbing activities associated with construction of the Project.

As listed above in Section V.b, the General Plan contains a goal and policies that provides for the early detection and protection of paleontological resources, thereby minimizing and preventing the direct or indirect destruction of any undiscovered or unrecorded paleontological deposits that could occur during ground-disturbing activities. For example, Policy 5.21 requires that construction activities be temporarily suspended in the event archaeological/paleontological sites are discovered.

Consequently, given that the General Plan does not identify any unique paleontological and/or geologic features at the Project site, and because compliance with the policies described above, as well as compliance with federal and State laws, provide protection of paleontological resources at the Project site by requiring construction activities to cease in the event of discovery of paleontological resources, impacts would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

d) *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

The Project would include grading and filling as part of the construction of the proposed Project. Given that the Project site is currently an undeveloped and undisturbed parcel of land, there is a possibility that construction activities could disturb human remains, including those interred outside of formal cemeteries.

Human remains associated with pre-contact archaeological deposits could exist on the Project site, and could be encountered at the time potential future development occurs. The associated ground-disturbing activities, such as site grading and filling, have the potential to disturb human remains interred outside of formal cemeteries. Descendant communities may ascribe religious or cultural significance to such

remains, and may view their disturbance as an unmitigable impact. Disturbance of unknown human remains would be a significant impact.

However, any human remains encountered during ground-disturbing activities would be required to be treated in accordance with California Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98 and the California Code of Regulations Section 15064.5(e) (CEQA), which states the mandated procedures of conduct following the discovery of human remains. According to the provisions in CEQA, if human remains are encountered at the Project site, all work in the immediate vicinity of the discovery shall cease and necessary steps to ensure the integrity of the immediate area shall be taken. The San Mateo County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours, who will, in turn, notify the person the NAHC identifies as the Native American Most Likely Descendant (MLD)[20] of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC. Through mandatory regulatory procedures described above impacts to human remains would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

VI. GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides, mudslides or other similar hazards?	❒	❒	☑	❒
b) Result in substantial soil erosion or the loss of topsoil?	❒	❒	☑	❒

[20] "Native American Most Likely Descendant' is a term used in an official capacity in CEQA Guidelines Section 15064.5(e), and other places, to refer to Native American individuals assigned the responsibility/opportunity by NAHC to review and make recommendations for the treatment of Native American human remains discovered during project implementation. Section 5097.98 of the Public Resources Code and Section 7050.5 of the Health and Safety Code also reference Most Likely Descendants.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	❒	❒	☑	❒
d) Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2010), creating substantial risks to life or property?	❒	❒	☑	❒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	❒	❒	☑	❒

Discussion

a) *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?; ii) strong seismic ground shaking; iii) seismic-related ground failure, including liquefaction; iv) landslides, mudslides, or other similar hazards?*

The Project site is set within the Coast Ranges geomorphic province which is characterized by northwest trending valleys and ridges. This setting is strongly influenced by a series of folds and faults that resulted from the impingement of the Pacific tectonic plate on the North American craton, and resultant strike-slip faulting along the San Andreas Fault zone. The Coast Ranges can be further divided into the northern and southern ranges, which are separated by the San Francisco Bay. The Southern Coast Ranges run north and south between San Francisco Bay to the north, the Central Valley to the east, the Transverse Ranges to the south, and the Pacific Ocean to the west.

The Project site is located on the Half Moon Bay terrace sequence, one of several marine terraces or wave-cut benches that are readily visible along this stretch of the Pacific Coast. Some of the oldest terraces have been mapped on the flanks of nearby Montara Mountain at elevations exceeding 1,500 feet above mean sea level (amsl). In the immediate vicinity of the Project site, where the topography is subdued and the prevailing elevations are low (i.e. 20 to 30 feet amsl), the shallow, unconsolidated geologic units beneath these terraces consist of older alluvial fan and stream terrace deposits, including coarse-grained gravel, sand, and silt at the heads of alluvial fans, and younger distal fan deposits composed of finer grained sand, silt, and clayey silt.[21] The bedrock geology underlying the above-referenced terrace deposits is dominated by the heavily fractured Cretaceous granitic rocks (i.e. granites, granodiorites, and tonalities) of the Montara Mountain igneous suite.

[21] U.S. Geological Survey (USGS), 1994. Geologic Map of the Montara Mountain and San Mateo 7-1/2 Degree Quadrangles, San Mateo County, California, by Earl H. Pampeyan, Map I-2390.

In order to minimize the exposure of people or structures to potential substantial adverse effects related to geological and/or soils related hazards, the San Mateo County General Plan includes the policies listed below, which the Project would be required to comply with. In general, the policies below require the investigation and determination of any geotechnical hazards at the time of reviewing development proposals prior to any construction activities. If the County Department of Public Works deems it necessary for additional geotechnical investigations to be conducted prior to making the determination that a site is safe to construct on above and beyond any existing reports or data available, the applicant shall provide such geotechnical investigations upon request by the County prior to the issuance of any building permits.

General Policies

- 15.18 Determination of Existence of a Geotechnical Hazard:
  a. When reviewing development proposals, use the Natural Hazards map to determine general areas where geotechnical hazards may be present.
  b. When the Natural Hazards map does not clearly illustrate the presence or extent of geotechnical hazards, use more detailed maps, including but not limited to the Geotechnical Hazards Synthesis Maps prepared by Leighton and Associates for San Mateo County, geotechnical information maps prepared by the United States Geological Survey, or any other geotechnical investigation or source of information considered to be valid by the County Department of Public Works.

Regulation of Development

- 15.20 Review Criteria for Locating Development in Geotechnical Hazard Areas:
  a. Avoid the siting of structures in areas where they are jeopardized by geotechnical hazards, where their location could potentially increase the geotechnical hazard, or where they could increase the geotechnical hazard to neighboring properties.
  b. Wherever possible, avoid construction in steeply sloping areas (generally above 30 percent).
  c. Avoid unnecessary construction of roads, trails, and other means of public access into or through geotechnical hazard areas.
  d. In extraordinary circumstances where there are no alternative building sites available, allow development in geotehcnically hazardous and/or steeply sloping areas when appropriate structural design measures to ensure safety and reduce hazardous conditions to an acceptable level are incorporated into the project.

- 15.21 Requirement for Detailed Geotechnical Investigations:
  a. In order to more precisely define the scope of the geotechnical hazards, the appropriate locations for structures on a specific site and suitable mitigation measure, require an adequate geotechnical investigation for public or private development proposals located: (1) in an Alquist-Priolo Special Studies Zone, or (2) in any other area of the County where an investigation is deemed necessary by the County Department of Public Works.
  b. In order to minimize economic impacts on applicants for development and avoid duplication of information, use the existing information base when the Department of Public Works or appropriate County agency determines that it is adequate.

i. The Project site is located approximately 0.95 miles northeast of the mapped trace of the San Gregorio Fault, one of the most significant active earthquake faults in the San Francisco Bay area.[22] Detailed seismic investigations of this fault where it is exposed in the nearby Pillar Point headlands, one of only two on-land exposures, revealed that it is a zone comprised of multiple strands of right-lateral strike-slip faults. Thus, hazards associated with surface fault rupture could potentially be present. Proximity to this fault nothwithstanding, the Project site is not located in a State-designated Earthquake Fault Zone (EFZ, formerly known as an Alquist-Priolo Fault Zone). Consequently, the potential for primary seismic ground rupture at the Project site is considered low and the potential impacts of fault rupture are considered *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

ii. The Project site, as well as the greater San Francisco Bay region in which it is located, represents one of the most seismically active areas in the continental United States. As previously discussed, active earthquake faults have been mapped in relatively close proximity. An earthquake of moderate to high magnitude generated within the San Francisco Bay area could produce strong ground shaking at the Project site. The degree of shaking would be subject to a number of variables, such as the magnitude of the event, the distance to the zone of rupture, and local geologic conditions. Potential effects of earthquake-related ground shaking could include damage to buildings, streets, and utilities. During Project construction, compliance with the latest California Building Code (CBC) requirements would help ensure that the proposed structures are able to resist minor earthquakes without damage, resist moderate earthquakes without structural damage (but with some nonstructural damage), and resist major earthquakes without collapse, but with some structural as well as nonstructural damage. In light of these safeguards, the potential impacts of ground shaking are considered *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

iii. The California Geological Survey (CGS), through its Seismic Hazards Zonation Program, has not yet prepared maps that show seismically induced landslide or liquefaction hazards for the Project area. Nevertheless, maps published through a cooperative program involving the CGS and the U.S. Geological Survey (USGS) have classified the liquefaction potential at the Project site as "moderate." Zones of moderate susceptibility are expected to account for 20 to 30 percent of all future liquefaction occurrences.[23] Compared to areas with high liquefaction potential, somewhat stronger seismic shaking is required to cause liquefaction in zones of moderate susceptibility. Considering these mapping results, the potential impacts of seismically induced liquefaction are considered *less than significant.* No mitigation measures are required and this issue will not be discussed further in the EIR.

[22] USGS, 2005. Final Technical Report Paleoseismic Investigation of the Northern San Gregorio Fault, Half Moon Bay, California, by William Lettis & Associates, Inc., National Earthquake Hazards Reduction Program Award No. 04HQGR0045

[23] USGS and California Geological Survey (CGS), 2006. Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California, by Robert C. Witter, Keith L. Knudsen, Janet M. Sowers, Carl M. Wentworth, Richard D. Koehler, and Carolyn E. Randolph, Open-File Report 2006-1037.

iv. In general, the presence of steep slopes, an overabundance of surface water (including over-irrigation), combined with soils of low soil shear strength can increase the likelihood of slope instability and the related potential for landslides, mudslides, and related hazards. The Project site and its immediate surroundings are typified by gentle, southwest slopes towards the Pacific Ocean, and topographic relief in this area is subdued. Steep slopes are not present, nor are there indications of soils with unusually low shear strength. Natural hazard maps published by San Mateo County show that neither debris flow source areas nor historical landslides are located in the immediate vicinity of the Project site.[24] In light of this information, the potential impacts of landslides, mudslides, or other similar hazards are considered *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project result in substantial soil erosion or the loss of topsoil?*

Construction of the Project would entail grading and limited excavation. Such activities carry some inherent potential for soil erosion and/or loss of topsoil. Certain regulatory requirements help mitigate these potential impacts, including the San Francisco Bay Regional Water Quality Control Board's (RWQCB-SFB) requirements for the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), whose goal is to reduce runoff-related erosion impacts during Project grading and construction. These plans typically embrace erosion control Best Management Practices (BMPs) such as hydroseeding and biodegradable erosion control blankets; linear sediment barriers, fiber rolls and other measures to break up slope length or flow; post-construction inspection of drains for accumulated sediment; and clearing of accumulated sediment in such drains. Further, the following General Plan goals and policies would serve to reduce soil erosion and protect soil resources during construction of the Project:

Goals and Objectives

- 2.2 Minimize Soil Erosion: Minimize soil erosion through application of appropriate conservation practices.

Regulation of Development

- 2.17 Regulate Development to Minimize Soil Erosion and Sedimentation: Regulate development to minimize soil erosion and sedimentation; including, but not limited to, measures which consider the effects of slope, minimize removal of vegetative cover, ensure stabilization of disturbed areas and protect and enhance natural plan communities and nesting and feeding areas of fish and wildlife.
- 2.23 Regulate Excavation, Grading, Filling, and Land Clearing Activities Against Accelerated Soil Erosion: Regulate excavation, grading, filling, and land clearing activities to protect against accelerated soil erosion and sedimentation.
- 2.25 Regulate Topsoil Removal Operations Against Accelerated Soil Erosion: Regulate topsoil removal operations to protect against accelerated soil erosion and sedimentation through measures which ensure slope stabilization and surface drainage control.

[24] San Mateo County, 2015. Planning and Building Adopted Maps, http://planning.smcgov.org/adopted-maps, accessed May 29, 2015.

Compliance with the General Plan goal and policies listed above, which requires minimization and protection against the loss of topsoil and erosion during construction activities, such as excavation, grading, and filling, as well as compliance with the RWQCB and the implementation of a SWPPP and BMPs, ensure that impacts related to erosion and the loss of topsoil would remain *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

c) *Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

As described above, the topography at the Project site is subdued with elevations ranging from 23 to 28 feet amsl and gentle slopes to the southwest in the direction of the Pacific Ocean. Similarly, the potential for landslides is judged negligible in light of the prevailing gentle topography and the susceptibility for liquefaction was judged moderate based on maps compiled by the USGS. Consequently, the potential for landsliding, lateral spreading, liquefaction, or collapse appears to be low to negligible. In addition to the low potential for landsliding, lateral spreading, or liquefaction, the General Plan goal and policies listed under Section VI.a above would ensure that any potential for geotechnical hazards be identified prior to construction, which may include the requirement for additional geotechnical investigations as deemed necessary by the County in order to make the determination that the Project site is safe to construct on. As such, the potential impacts associated with unstable geologic units or soils are considered *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

d) *Would the project be located on expansive soil, as defined in Section1803.5.3 of the California Building Code, creating substantial risks to life or property?*

Published soil surveys of San Mateo County classified the soils beneath the Project site as soils of the Watsonville-Elkhorn Association, generally consisting of grayish, shallow to deep soils that have developed on low marine terraces.[25] Soils of this association reportedly possess a thick, dark-gray surface soil that is sandy loam, loam, or, in a few places, clay loam. Expansive soils were not identified at the Project site or in its vicinity. Consequently, the potential impacts arising from construction atop expansive soil are considered *less than significant.* No mitigation measures are required and this issue will not be discussed further in the EIR.

e) *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The Project would be serviced by the existing wastewater conveyance/treatment system in the community of El Granada. This system is managed by the Sewer Authority Mid-Coastside (SAM) Wastewater Treatment Facility, a plant that also serves the Granada Community Services District (GCSD), the City of Half Moon Bay, and the Montara Water and Sanitary District. As discussed elsewhere in this Initial Study, when the type, scale, and location of the Project are considered, the existing Wastewater Treatment Facility is expected to have adequate capacity given that the Project is replacing the existing Fire Station 41 and is not expected to increase operations above those under existing conditions. In light

[25] U.S. Department of Agriculture (USDA), 1961. Soil Survey of the San Mateo Area, California, by Richard J. Wagner and Ralph E. Nelson, issued May 1961.

of the above, the potential impacts arising from use of septic tanks or alternative wastewater disposal systems are considered *less than significant.* No mitigation measures are required and this issue will not be discussed further in the EIR.

VII. GREENHOUSE GAS EMISSIONS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	❒	❒	☑	❒
b) Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	❒	❒	☑	❒

Existing Conditions

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHGs), into the atmosphere. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.[26,27] This section analyzes the Project's contribution to global climate change impacts in California through an analysis of project-related GHG emissions.

Where available, the significance criteria established by the Bay Area Air Quality Management District (BAAQMD) may be relied upon to make the following determinations.

Discussion

a) *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

The Project does not generate enough greenhouse gas (GHG) emissions on its own to influence global climate change; therefore, the GHG analysis measures the Project's contribution to the cumulative environmental impact. The existing 4,000-square-foot Fire Station 41 building currently generates GHG emissions from the burning of fossil fuels in fire trucks and other vehicles (mobile sources), energy use for cooling, heating, and cooking (energy), landscape equipment use and consumer products (area sources,

[26] Intergovernmental Panel on Climate Change, 2001, Third Assessment Report: Climate Change 2001, New York: Cambridge University Press.

[27] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant.

and indirect emissions from water use, wastewater generation, and solid was disposal. The development contemplated by the Project would replace the existing Fire Station 41 and would not result in an increase in vehicle trips within the CFPD's service area. However, the proposed Project would potentially contribute to global climate change through the increase in air emissions from heating and cooling associated with a larger Fire Station 41 building.

The proposed Project involves the construction of an approximate 10,000-square-foot new Fire Station 41 building. BAAQMD does not have thresholds of significance for construction-related GHG emissions. GHG emissions from construction activities are short term and therefore not assumed to significantly contribute to cumulative GHG emissions impacts of the proposed Project.[28] Since BAAQMD's CEQA Guidelines does not have specific screening criteria for fire stations, the screening criteria for government office building were used as the best fit. Based on BAAQMD's screening criteria, government office buildings of 12,000 square foot or larger have the potential to generate a substantial increase in GHG emissions and would need further analysis.[29] The proposed Fire Station 41 building would be 10,000 square feet, which is below the BAAQMD screening threshold and would generate nominal GHG emissions. Furthermore, the new building would be more energy efficient than the existing Fire Station 41 since it would be required to be constructed to achieve the latest Building and Energy Efficiency Standards and California Green Building Standards Code. Therefore, GHG emissions generated by the proposed Project are a *less-than-significant* impact. No mitigation measures are warranted and this issue will not be discussed further in the EIR.

b) *Would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?*

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan, the MTC's/ ABAG *Plan Bay Area*, and County of San Mateo's Energy Efficiency Climate Action Plan (EECAP). A consistency analysis with these plans is presented below.

CARB's Scoping Plan

In accordance with Assembly Bill 32 (AB 32), the California Air Resources Board (CARB) developed the *2008 Scoping Plan* to outline the State's strategy to achieve 1990 level emissions by year 2020. To estimate the reductions necessary, CARB projected Statewide 2020 business as usual (BAU) GHG emissions (i.e. GHG emissions in the absence of statewide emission reduction measures). CARB identified that the State as a whole would be required to reduce GHG emissions by 28.5 percent from year 2020 BAU to achieve the targets of AB 32.[30] A revised BAU 2020 forecast conducted after publication of the *2008 Scoping Plan* by CARB shows that the state would have to reduce GHG emissions by 21.6 percent

[28] Bay Area Air Quality Management District (BAAQMD), 2011 Revised, California Environmental Quality Act Air Quality Guidelines.

[29] Bay Area Air Quality Management District (BAAQMD), 2011 Revised, California Environmental Quality Act Air Quality Guidelines.

[30] California Air Resources Board (CARB), 2008, Climate Change Scoping Plan: A Framework for Change.

from BAU without Pavley[31] and the 33 percent Renewable Portfolio Standard (RPS) or 15.7 percent from the adjusted baseline (i.e. with Pavley and 33 percent RPS).[32]

Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard (LCFS), California Appliance Energy Efficiency regulations; California Building Standards (i.e. CALGreen and the 2008 Building and Energy Efficiency Standards); California Renewable Energy Portfolio standard (33 percent RPS); changes in the corporate average fuel economy standards (e.g. Pavley I and Pavley II); and other measures that would ensure the State is on target to achieve the GHG emissions reduction goals of AB 32. Statewide GHG emissions reduction measures that are being implemented over the next six years would reduce the Project's GHG emissions.

The proposed Project would meet the current Building and Energy Efficiency Standards. The 2013 Building and Energy Efficiency Standards became effective January 1, 2014. The 2013 Standards are 30 percent more energy efficient than the 2008 standards for non-residential buildings. The new buildings would also be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems. The Project would not conflict with statewide programs adopted for the purpose of reducing GHG emissions. Impacts would be *less than significant*. No mitigation measures are warranted and this issue will not be discussed further in the EIR

MTC's/ABAG's Plan Bay Area

To achieve MTC's/ABAG's sustainable vision for the Bay Area, the *Plan Bay Area* land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. The Project is not within a PDA and would not affect regional population and employment projects. The proposed Project would continue to serve the San Mateo County coastal communities and would be consistent with the overall goals of *Plan Bay Area*. Therefore, the impacts would be *less than significant*. No mitigation measures are warranted and this issue will not be discussed further in the EIR.

San Mateo's Energy Efficiency Climate Action Plan

The County of San Mateo adopted the EECAP in June 2013. The EECAP is intended to streamline future environmental review of development projects in the unincorporated areas of San Mateo County by following the CEQA Guidelines and meeting the BAAQMD expectations for a Qualified GHG Reduction Strategy. The EECAP identifies the County's GHG reduction goal of 17 percent reduction below baseline emissions by 2020, which exceeds the statewide AB 32 target of a 15 percent reduction below baseline emissions by 2020. The goals and measures identified in the EECAP represent the County's actions to achieve its GHG reduction targets for target year 2020. The proposed Project would be constructed in conformance with CALGreen and the 2013 Building and Energy Standards and would be consistent with the energy efficiency goals and measures identified in the County of San Mateo's EECAP. Therefore, the

[31] This refers to Assembly Bill 1493, which entails regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.

[32] California Air Resources Board (CARB), 2012, Status of Scoping Plan Recommended Measures, http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf.

impacts would be *less than significant*. No mitigation measures are warranted and this issue will not be discussed further in the EIR.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	❒	❒	☑	❒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	❒	❒	☑	❒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	❒	❒	☑	❒
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	❒	❒	❒	☑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	❒	❒	☑	❒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	❒	❒	❒	☑
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	❒	❒	☑	❒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	❒	❒	☑	❒

Discussion

a) *Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?*

The use, storage and/or disposal of fuels (i.e. gasoline, diesel, oil, etc.), adhesives, paints, solvents, etc., could reasonably be expected as a result of Project construction. Project operation also could involve use of the same types of materials, as well as cleaning and landscape maintenance products during the course of building maintenance and landscaping upkeep. Although it is not anticipated that large quantities of these materials would be permanently used or stored within the Project site, the Project

also will include an emergency generator, vehicle fueling station, and associated aboveground fuel storage tank.

The General Plan includes the following goals and policies which the proposed Project would be required to comply with. In general, the goals and policies regulate the location of hazardous materials and serve to minimize the exposure of hazardous materials to the public.

Goals and Objectives

- 16.47 Strive to Protect Life, Property, and the Environment From Hazardous Material Exposure: Strive to protect public health and safety, environmental quality, and property from the adverse effects of hazardous materials through adequate and responsible management practices.
- 16.48 Strive to Ensure Responsible Hazardous Materials Waste Management: Strive to ensure that hazardous waste generated within San Mateo County is stored, treated, transported and disposed of in a legal and environmentally safe manner so as to prevent human health hazard and/or ecological disruption.
- 16.49 Strive to Reduce Public Exposure to Hazardous Materials: Strive to reduce public exposure to hazardous materials through programs which: (1) promote safe transportation, (2) prevent accidental discharge, and (3) promote effective incident response, utilizing extensive inventory and monitoring techniques.
- 16.50: Reduce Public Exposure to Hazardous Waste: Strive to reduce public exposure to hazardous waste through programs which: (1) emphasize decreased generation of hazardous waste, (2) promote increased disposal capability for small generators of hazardous waste, including households and small businesses, (3) promote safe transportation of hazardous waste, (4) promote treatment and processing techniques as alternatives to landfill disposal of hazardous waste, and (5) prevent illegal disposal of hazardous waste.

Regulation of Development

- Regulate Location of Hazardous Material Uses: Regulate the location of uses involving the manufacture, storage, transportation, use, treatment, and disposal of hazardous materials to ensure community compatibility. Provide adequate siting, design, and operating standards.
- Encourage Public Disclosure of Hazardous Materials: Encourage businesses utilizing or storing hazardous materials within the unincorporated area to publicly disclose the types, quantities and health risks of hazardous materials present on-site so as to effect timely and effective emergency response and community risk assessment, improved land use planning and general public awareness.

Given that it is not anticipated that large quantities of the aforementioned materials would be permanently used or stored within the Project site, and with compliance with the above goals and policies, the use, storage, and/or disposal of hazardous materials would not result in a significant hazard to the public or environment. Further, because the Project is replacing the existing Fire Station 41 and not expected to increase operations above and beyond existing conditions, the overall impacts related to this

threshold would therefore result in a *less than significant impact.* No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

As discussed in above in Section VIII.a, operation of the Project would involve the storage and use of common cleaning products, building and landscape maintenance products, paints, and solvents. In addition, the Project includes an emergency generator, vehicle fueling station, and an associated aboveground fuel storage tank. However, given that the Project would replace an existing Fire Station 41 and is not expected to increase operations above and beyond existing conditions, in addition to compliance with the General Plan goals and policies listed above in Section VIII.a, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release if hazardous materials. Therefore, impacts would be *less than significant.* No mitigation measures are required and this issue will not be discussed further in the EIR.

c) *Would the project emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?*

The El Granada Elementary School, a Cabrillo Unified District-kindergarten through 5th grade school, is located approximately 500 feet (0.10 mile) from the Project site's southwest border. To the east, directly across Coronado Street, is the Wilkinson School, a private school for kindergarten through 8th grade students.

As discussed in Section VIII.a and VIII.b above, operation of the Project would involve the storage and use of common cleaning products, building and landscape maintenance products, paints, and solvents. However, given that the Project is not expected to increase operations and would include replacing the existing Fire Station 41, the Project's potential to emit hazardous emissions or handle hazardous materials would not be significant different than those associated with existing operation of the Fire Station 41, albeit the proposed Project is closer to the school. In addition, the Project would be required to comply with the General Plan goals and policies listed in Section VIII.a which serve to safeguard and minimize the handling of hazardous materials. Consequently, because operations of the Project would not be drastically different than those of the existing Fire Station 41 and compliance with General Plan goals and policies, and other federal and State laws related to the handling of hazardous materials, impacts would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

d) *Would the project be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?*

A search of the Department of Toxic Substance Control's (DTSC's) online EnviroStor database[33] and the State Water Resources Control Board's (SWRCB's) online Geotracker database[34] on May 29, 2015 revealed that the Project site is not included on a list of hazardous material sites compiled pursuant to Government Code section 65962.5, and, as a result, would not create a significant hazard to the public or the environment. Implementation of the proposed Project, therefore, would result in *no impact* with regard to this threshold. No mitigation measures are required and this issue will not be discussed further in the EIR.

e) *For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

The Project site is located approximately 1.5 miles southeast of Half Moon Bay Airport and is within the Airport Influence Area (AIA) established by the City/County Association of Governments (C/CAG) of San Mateo County Airport Land Use Compatibility Plan (ALUCP) for the Environs of the Half Moon Bay Airport.[35] The ALUCP indicates that the Project site is just within Safety Zone 7, which is the outer most area of flight paths. Safety Zone 7 is considered to have a low risk of aircraft accident and only requires plan review by the Airport Land Use Commission for structures 100 feet or higher given that objects shorter than 100 feet in height will not typically be airspace obstructions.[36] The Project proposes a maximum height of approximately 30 feet at the center bay of the proposed Project, which is well below the 100 foot height limit that would trigger ALUC airspace review. Additionally, the Project site is not within the noise exposure area of the Half Moon Bay Airport.[37] Consequently, given that the Project would be constructed at a height significantly less than the 100 foot threshold for review by the ALUC, and because the Project is not within the noise exposure area of the airport, the Project is not expected to result in a safety hazard for people residing or working in the Project area. Therefore, this would be a *less-than-significant* impact. No mitigation measures are required and this issue will not be discussed further in the EIR.

f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

There are no private airstrips in the vicinity of the proposed Project. Therefore, there would be *no impact*. No mitigation measures are required and this issue will not be discussed further in the EIR.

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[33] http://envirostore.dtsc.ca.gov/public

[34] http://geotracker.waterboards.ca.gov/public

[35] City/County Association of Governments (C/CAG) of San Mateo County San Mateo County Airport Land Use Compatibility Plan for the Environs of Half Moon Bay Airport, September 2014, Half Moon Bay Safety Zones, Exhibit 4C.

[36] City/County Association of Governments (C/CAG) of San Mateo County San Mateo County Airport Land Use Compatibility Plan for the Environs of Half Moon Bay Airport, September 2014, page 4-24.

[37] City/County Association of Governments (C/CAG) of San Mateo County San Mateo County Airport Land Use Compatibility Plan for the Environs of Half Moon Bay Airport, September 2014, 2032 Noise Exposure Contours, Exhibit 4B.

g) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

The proposed Project would not result in changes to current circulation for emergency vehicles or interfere with existing emergency response plans during construction. Following construction, design of the Project would allow emergency vehicles to access and follow routes similar to those used from the existing Fire Station 41. Implementation of the proposed Project, therefore, would result in a *less-than-significant* impact. No mitigation measures are required and this issue will not be discussed further in the EIR.

h) *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

The proposed Project is not located on or immediately adjacent to wild lands. CAL FIRE evaluates fire hazard severity risks according to areas of responsibility (i.e. federal, state, local). According to CAL FIRE,[38] there are no very high fire hazard severity zones (VHFHSZ) within the Local Responsibility Area on or near proximity to the Project site. Likewise, these are no moderate, high, or very high fire hazard severity zones in the State Responsibility Areas in the vicinity of the Project site.[39] Although San Mateo County identifies the Project site to be located within a Community at Risk zone (i.e. neighborhoods or communities that interface with wild lands), compliance with applicable buildings codes and ordinances of the County of San Mateo, including California Building Code, Chapter 7A, Materials and Construction for Exterior Wildfire Exposure, and the very nature of the Project (i.e. Fire Station 41 replacement), would reduce the risk of loss, injury, or death resulting from wildland fire and impacts would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

IX. HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	❒	❒	☑	❒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a significant lowering of the local groundwater table level?	❒	❒	☑	❒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	❒	❒	☑	❒

[38] California Department of Forestry and Fire Protection, 2008. San Mateo County Very High Fire Hazard Severity in LRA map, accessed on May 29, 2015.

[39] California Department of Forestry and Fire Protection, 2007. Fire Hazards and Severity Zones in State Responsibility Areas, http://frap.cdf.ca.gov/webdata/maps/sanmateo/fhszs_map.43.pdf, accessed on May 29, 2015.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	❒	❒	☑	❒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems?	❒	❒	☑	❒
f) Otherwise substantially degrade water quality?	❒	❒	☑	❒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	❒	❒	❒	☑
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☑	❒	❒	❒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	❒	❒	❒	☑
j) Inundation by seiche, tsunami, or mudflow?	❒	❒	☑	❒

Discussion

a) *Would the project violate any water quality standards or waste discharge requirements?*

The proposed Project would disturb approximately 55,000 square feet (1.3 acres) and introduce approximately 33,850 square feet (0.7 acre) of impervious surface. Clearing, grading, excavation, and construction activities associated with the proposed Project have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system. However, the Project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit (GCP) as well as prepare a Storm Water Pollution Prevention Plan (SWPPP) if more than one acre of land is disturbed that requires the incorporation of Best Management Practices (BMPs) to control sedimentation, erosion, and hazardous materials contamination of runoff during construction.

Runoff from buildings and parking lots typically contain oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), as well as fertilizers, herbicides, pesticides, and other pollutants. Precipitation at the beginning of the rainy season may result in an initial stormwater runoff (first flush) with high pollutant concentrations. Water quality in stormwater runoff is regulated locally by the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), which include the C.3 provisions set by the San Francisco Bay Regional Water Quality Control Board (RWQCB). As a new

development creating more than 10,000 square feet of impervious surface, the Project must incorporate site design, source control, and treatment measures to the maximum extent practicable and to use stormwater control measures that are technically feasible and not cost prohibitive. Also, the Project must treat 100 percent of the amount of runoff from the Project's drainage area with on-site Low Impact Development (LID) treatment measures.

Further, the San Mateo County General Plan includes the following goals and policies in which the Project would be required to comply with. In general, the goals and policies serve to protect water resources in the County, including quality and supply.

Goals and Objective

- 1.3 Protect Sensitive Habitats: Protect sensitive habitats from reduction in size or degradation of the conditions necessary for their maintenance.

Resource Protection

- 1.26 Protect Water Resources: Ensure that development will: (1) minimize the alteration of natural water bodies, (2) maintain adequate stream flows and water quality for vegetative, fish and wildlife habitats, (3) maintain and improve, if possible, the quality of groundwater basins and recharge areas, and (4) prevent to the greatest extent possible the depletion of groundwater resources.

Given that implementation of water runoff Best Management Practices (BMPs) and LID features will be required to be implemented during construction and operation, along with compliance with the General Plan goals and policies listed above, which serve to protect water resources, a *less-than-significant* impact would occur. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a significant lowering of the local groundwater table level?*

The proposed Project could result in a significant impact if it would substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The community of El Granada is served by Coastside County Water District (CCWD), which obtains most of its water from surface water supplies. Only 4 percent of the water supply is obtained from groundwater and the nine groundwater wells are located east of Half Moon Bay Airport and over 3 miles from the Project site. Therefore, implementation of the Project should not interfere with groundwater recharge.

The Project site is located within the Half Moon Bay Terrace Groundwater Basin and the El Granada Subbasin, which is in long term equilibrium.[40] The CCWD Urban Water Management Plan (UWMP) states that the District has sufficient water to meet demands during normal years through 2035.[41] Since the proposed Fire Station 41 is moving from one location to another, there should be no increase in water demand for the proposed Project. The General Plan land use designations and zoning districts would

[40] Balance Hydrologics, Inc., 2010. *Midcoast Groundwater Study Phase III, San Mateo County, California.*
[41] West Yost Associates, 2011. *2010 Urban Water Management Plan Prepared for Coastside County Water District.*

regulate any future use of the existing Fire Station 41 site to acceptable levels considered under the existing General Plan. Since both sites are within the urban area of the mid-coast, their development was considered in the growth analysis for this area. In addition, the proposed Project will be built in accordance with California Title 24 building codes that require low flow water fixtures and in accordance with San Mateo County's water efficient landscape ordinance, resulting in a decrease in water usage as compared to existing conditions.

Construction activities could result in short-term impacts to groundwater if the water table is high and construction dewatering was required. The State Water Resources Control Board (SWRCB's) Geotracker website indicates that groundwater in the vicinity of the Project site is typically 24 to 35 feet below ground surface (bgs). Therefore, it is unlikely that groundwater would be encountered during construction activities.

The Project would result in the creation of approximately 33,850 square feet of impervious surface for the building footprint and additional impervious parking areas. However, the Project would be required to comply with the San Mateo County C.3 provisions that encourage on-site infiltration LID measures, which would reduce the impact of increased impervious surfaces on groundwater recharge.

There is sufficient water in future years for the community of El Granada and the Project would not increase water demand. Increases in impervious surfaces will be offset with on-site infiltration requirements. Therefore, the Project would have a *less-than-significant* impact with respect to groundwater supplies and groundwater recharge. No mitigation measures are required and this issue will not be discussed further in the EIR.

c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*

The Project would not involve the alteration of a stream or river, but will result in an increase in impervious surfaces. This could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause erosion or sedimentation in drainage swales or channels. In addition, erosion or siltation may occur during construction, especially given the 15 percent slopes that are present on the Project site. However, compliance with the General Plan goals and policies listed above in Section IX.a, along with compliance with the goals and policies listed above in Section VI.b related to the control and minimization of soil erosion, would ensure that impacts are *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

d) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial flooding on- or off-site?*

The Project would take place at an undeveloped, vacant site, resulting in an increase in impervious surfaces. Although the Project would not alter any streams or rivers, the proposed development most likely would alter existing drainage patterns and would result in increased runoff volumes as compared to existing conditions. The Project would be required to implement stormwater treatment measures to

contain site runoff in accordance with San Mateo County C.3 provisions and to implement BMPs during construction in accordance with the NPDES permit, along with the General Plan goals and policies listed above in Section IX.a. Therefore, this impact is considered to be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

e) *Would the project create or contribute runoff water which would exceed the capacity of the existing or planned stormwater drainage systems?*

The Project site is currently undeveloped and not connected to the existing storm drain system. Development of the Project site would require installation of an on-site storm drain system that connects to the existing system. The proposed Project is on a relatively small site and replaces a similar structure located approximately 0.25 mile to the northwest. Therefore, it is unlikely that runoff from the Project site would exceed the capacity of the existing storm drain system. In addition, the Project would be required to implement on-site infiltration measures to minimize potential runoff from the Project site. Given that implementation of water runoff BMPs and LID features would be required to be implemented during construction and operation, along with compliance with the General Plan goals and policies listed above in Section IX.a, this impact is considered to be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

f) *Would the project otherwise substantially degrade water quality?*

As discussed in Impact a), pollutants commonly associated with construction sites that can impact stormwater are sediments, nutrients, trace metals, pesticides, oil, grease, fuels, and miscellaneous construction wastes. Pollutants generated from the operational phase include sediment, nutrients, organic compounds, trash and debris, bacteria and viruses, oil and grease, and pesticides/herbicides. Implementation of BMPs across the Project site would be required during construction in accordance with the provisions of the SWPPP and operational BMPs will be required to meet the C.3 provisions of the San Mateo County stormwater guidelines, in addition to the General Plan goals and policies listed above is Section IX.a. Compliance with these regulations would ensure that the impact is *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

g) *Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

The Project does not include a housing component and the Project site is not within a 100-year floodplain.[42] Therefore, the proposed Project would result in *no impact*. No mitigation measures are required and this issue will not be discussed further in the EIR.

h) *Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

The Project site is not in the 100-year floodplain, according to FEMA FIRM No. 06081C0140E. However, the Project site is within the mapped area of a coastal base flood and future sea level rise of 55 inches.[43]

[42] Federal Emergency Management Agency (FEMA), 2012. FIRM Map No. 06081C0140E.
[43] Pacific Institute, 2009. *California Flood Risk: Sea Level Rise, Half Moon Bay Quadrangle.*

Although the Project site is within an area subject to future sea level rise, the General Plan contains the following policies that would serve to ensure protection from flood hazards.

Regulation of Development

- 15.12 Locating New Development in Areas Which Contain Natural Hazards:
  a. As precisely as possible, determine the areas of the County where development should be avoided or where additional precautions should be undertaken during review of development proposals due to the presence of natural hazards.
  b. Give preference to land uses that minimize the number of people exposed to hazards in these areas.
  c. Determine appropriate densities and development.
  d. Require detailed analysis of hazard risk and design of appropriate mitigation when development is proposed in these areas, including assessment of hazardous conditions expected to be exacerbated by climate change, such as increase risks of fire, flooding, and sea level rise.

General Policies

- 15.45 Abatement of Flooding Hazards: Support measures for the abatement of flooding hazards, including, but not limited to: (1) removal or relocation of development from flood hazard areas; (2) construction of impoundments or channel diversions provided that adequate mitigation of environmental impacts can be demonstrated; and (3) debris clearance and silt removal programs conducted in a manner so as not disrupt existing riparian communities.

There is a potential for coastal flooding and Policy 15.12 above would require that a detailed analysis of the hazard risk and design of appropriate mitigation be incorporated into the Project. Consequently, this impact is considered to be *potentially significant* and will be addressed in the EIR.

i) *Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?*

The Project site is not in a dam inundation zone;[44] therefore, development of the Project would not expose people or structures to hazards from dam inundation. Also, the Project site is not in an area protected from 100-year floods by a levee. Therefore, the Project would result in *no impact* with regard to exposing people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. No mitigation measures are required and this issue will not be discussed further in the EIR.

[44] County of San Mateo Planning and Building, 2015. *San Mateo County Hazards/Dam Failure Inundation Areas.* Accessed at http://planning.smcgov.org/documents/san-mateo-county-hazards-dam-failure-inundation-areas on May 30, 2015.

j) *Would the project potentially be inundated by seiche, tsunami, or mudflow?*

According to the ABAG interactive debris flow and landslide maps, the Project site is not within an area susceptible to mudflows.[45] However, the Project site is within a mapped tsunami inundation zone.[46] A tsunami is a sea wave caused by a sudden displacement of the ocean floor, most often due to earthquakes. A seiche is a surface wave generated in a closed or partially closed body of water, which can be compared to the back-and-forth sloshing in a bathtub. Seiches can be created by winds, underwater earthquakes, or tsunamis. Bodies of water such as bays or harbors can experience seiches. Since the Project site is susceptible to tsunamis, it is also possible that seiches would occur.

Although the Project site is within a mapped tsunami inundation, the Project is replacing the existing Fire Station 41 in a location that is directly adjacent to its existing location. Therefore, construction of the new station would not represent a significant change regarding inundation by seiche, tsunami, or mudflow above and beyond those of existing conditions. Further, for tsunami warnings generated at a distant location, the County of San Mateo maintains an Emergency Alert System on commercial television and radio, as well as over the National Weather Service All Hazard Radios to notify the public. In addition, the County provides local warnings and instructions to tsunami hazard areas through the county's telephone emergency notification system (TENS) and San Mateo County (SMC) alert, which is an alert notification system used to contact the public during emergency situations via email, cell phone, and/or smartphone devices.

Overall, given that the Project is replacing the existing Fire Station 41 and the emergency notification system, and because the CFPD staff would likely be involved in evacuation of the public, this impact is considered to be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

X. LAND USE AND PLANNING

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	❒	❒	☑	❒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	❒	❒	☑	❒

[45] Association of Bay Area Governments (ABAG), 2015. *Earthquake and Hazards Program: Interactive Map of Debris Flow Source Areas and Existing Landslides.* Accessed at http://gis.abag.ca.gov/website/Hazards/?hlyr=existingLndsld on May 30, 2015.

[46] California Emergency Management Agency, California Geological Survey, and University of Southern California., 2009. *Tsunami Inundation Map for Emergency Planning, Half Moon Bay Quadrangle.* Dated June 15, 2009.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	❒	❒	❒	☑

Discussion

a) *Would the project physically divide an established community?*

Construction of the Project would have a significant environmental impact if it were sufficiently large or otherwise configured in such a way as to create a physical barrier or other physical division within an established community. A typical example would be a project which involved a continuous right-of-way, such as a roadway, which would divide a community and impede access between parts of the community.

As discussed above, the Project site is currently undeveloped and proposes construction of a new 10,000 square foot Fire Station 41. Although the Project site itself is undeveloped, areas surrounding the Project site are generally developed consisting of residential and commercial development along the northern and western borders of the Project site, as well as a vacant parcel south of the Project site. The Project is proposed to be located on the eastern portion of the Project site, leaving the remaining site undeveloped, and does not propose any changes to the existing roadway network. Overall, construction of the proposed Project would not physically divide any established community. Therefore, a *less-than-significant* impact would result with respect to the division of an established community. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

Construction of the Project would have a significant environmental impact if it would conflict with community goals as expressed in adopted plans, policies, or regulations. As previously stated, the Project site has Neighborhood Commercial Urban and Open Space with Park Overlay General Plan Land Use Designations.

In addition, the Project site is zoned C-1/S-3/DR/CD (Neighborhood Business District/ Design Review/Coastal Development) and EG/DR/CD (El Granada Gateway /Design Review/Coastal Development). The proposed Project is to be located on the El Granada Gateway (EG) zoned portion of the property. The EG zoning has limited number of allowed uses and a strict development requirements; however, the County zoning code provides for institutional/public services uses to be located in any zoning district subject to the issuance of a Use Permit.

The proposed Project departs from some of the development standards of the EG district, however the location of the proposed Project is of paramount factor for this necessary public safety service. The zoning code allows for Use Permit exceptions to address height issues and a variance to address setback issues. The Project site has a unique shape that will require an exception to the building setbacks in order

to achieve the proposed building design. Also the Use Permit will be needed for the proposed Project due to the dimensions of the required emergency equipment and other required facilities. The proposed Project is located on the east side of Obispo Road and there is some natural vegetation on the parcel to the west which will partially screen the view of the station from Highway 1. Also the design utilizes natural earth tone colors and materials to blend with the surrounding area and reduce visual impacts. The aesthetics portion of this environmental review also evaluates the design issues.

The Planning Commission must find that the proposed Project would not have a detrimental impact to the surrounding area and can impose any necessary conditions to ensure compliance with those standard findings. Therefore it is reasonable to assume if the Planning Commission makes the necessary findings for the Use Permit and Variance, that the proposed Project would, as conditioned, have a *less-than-significant* impact on the surrounding area. No mitigation measures are required and this issue will not be discussed further in the EIR.

c) *Conflict with any applicable habitat conservation plan or natural community conservation plan?*

The Project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. The San Bruno Mountain Habitat Conservation Plan encompasses an area of approximately 3,600 acres near San Bruno Mountain located 20 miles north of the Project site and does not include areas in the vicinity of the Project site. No such plans have been adopted encompassing the project vicinity, *no impacts* are anticipated, and this criterion will not be discussed further in the EIR.

XI. MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	❒	❒	❒	☑
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	❒	❒	❒	☑

Discussion

a) *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

The California Department of Conservation, Geological Survey (CGS) classifies lands into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act of 1974. These MRZs identify whether known or inferred significant mineral resources are present in areas. Lead agencies are required to

incorporate identified MRZs resource areas delineated by the State into their General Plans.[47] The San Mateo County General Plan does not identify any Land Use designations for mineral resources on the Project site.[48] Therefore, there would be *no impact* with regard to the loss of a valuable mineral resource. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

See Section XI.a above.

XII. NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	❒	❒	☑	❒
b) Exposure of persons to or generation of excessive groundborne vibration or ground borne noise levels?	☑	❒	❒	❒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	❒	❒	☑	❒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☑	❒	❒	❒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	❒	❒	☑	❒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	❒	❒	❒	☑

Discussion

a) *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or other applicable standards of other agencies?*

The Project site is located directly adjacent to single- and multi-family homes along its northern boundary, as well as Wilkinson School across Coronado Street at the Project site's eastern boundary.

[47] Public Resources Code Section 2762(a)(1).

[48] County of San Mateo Planning and Building Department, Map 1.4 – Midcoast Land Use Plan, http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/SMC_Midcoast_LCP_LU.pdf, accessed on May 19, 2015.

Although noises associated with operation of a fire station, such as fire alarms and emergency vehicle sirens, could generate noise levels in excess of County standards, such noise levels would occur only at times of calls for service and/or equipment testing and would be temporary in nature. In addition, given the close proximity of the Project site to the existing Fire Station 41, exposure to or generation of noise levels related to operations would be similar to existing conditions and would therefore not likely result in a substantial permanent increase beyond existing conditions. As such, this impact would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project result in exposure of persons to or generate excessive groundborne vibration or groundborne noise levels?*

As mentioned above, there are single- and multi-family homes along the Project site's northern boundary, as well as Wilkinson School across Coronado Street at the eastern boundary of the Project. Fire stations are not typically associated with the ongoing generation of excessive levels of vibration or groundborne noise from operations and therefore are expected to be negligible. Although the Project would include an on-site emergency generator, the generator is planned to be within an enclosed structure along at the northeast side of the Project site, which would protect neighboring properties from potential excessive groundborne vibration and/or noise from use of the generator. However, construction activities associated with the proposed Project could have the potential to result in significant levels of vibration attributed to equipment that could be used during construction, such as tractors, soil compaction, and vibratory rollers, that may be perceptible at nearby sensitive receptors. Therefore, impacts related to groundborne vibration and noise levels during construction activities could be *potentially significant* and will be addressed in the EIR.

c) *Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Noises associated with the operation of a fire station, such as fire alarms and emergency vehicle sirens, could temporarily and periodically elevate noise levels in areas with ambient noise levels that are in proximity to residential land uses; however, given the close proximity of the Project site to the existing Fire Station 41, increases in permanent ambient noise levels related to operations would be similar to existing conditions and would therefore not likely result in a substantial permanent increase beyond conditions that currently exist. As such, this impact would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

d) *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Although there would be periodic increases in ambient noise levels during times of calls for service and/or from equipment testing related to fire alarms and sirens, the proximity of the Project site to the existing station is such that operation of the proposed Project is not expected to result in a substantial temporary or periodic increase in ambient noise levels above and beyond existing conditions. However, construction activities associated with buildout of the Project could lead to short-lived generation of excessive noise levels which could result in substantial temporary or periodic increases to ambient noise levels attributed to the use of construction equipment. Although noise generation related to construction activities would

be temporary in nature and only last throughout buildout of the Project, impacts could be *potentially significant* and will be addressed in the EIR.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The Airport Land Use Compatibility Plan for the Environs of Half Moon Bay Airport (ALUCP) outlines regulations for compatible land uses within the Half Moon Bay Airport Influence Area (AIA). The Project site is located approximately 1.5 miles to the southeast of Half Moon Bay Airport, and is located within the AIA. While people working in the Project site may be exposed to occasional noise associated with airport use, the Project site is not located within the 60 dBA CNEL 2012 Noise Exposure Contour,[49] and any such exposure is expected to be brief and not expected to occur at levels that would conflict with the Noise Compatibility Criteria outlined in the ALUCP. Further, given that the Project site is in close proximity to the existing Fire Station 41, exposure to excessive noise levels attributed to aircraft noise from a public airport would not likely be substantially different than existing conditions. Therefore, impacts would be *less than significant.* No mitigation measures are required and this issue will not be discussed further in the EIR.

f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

As mentioned above, there are no private airstrips in the vicinity of the proposed Project. Therefore, there would be *no impact* with regard to exposing people residing or working in the vicinity of the Project site to excessive noise levels related to private airstrips. No mitigation measures are required and this issue will not be discussed further in the EIR.

XIII. POPULATION AND HOUSING

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	❒	❒	❒	☑
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	❒	❒	❒	☑
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	❒	❒	❒	☑

[49] City/County Association of Governments of San Mateo County, Airport Land Use Compatibility Plan for the Environs of Half Moon Bay Airport, 2014, http://ccag.ca.gov/wp-content/uploads/2014/10/HAF-ALUCP-Final.pdf, accessed on May 19, 2015.

Discussion

a) *Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

The Project proposes to construct a new Fire Station 41 to replace the existing Fire Station 41. Although the Project would include on-site living areas for fire staff during their shifts, the proposed Project is not intended to serve as a permanent residence and would replace the existing fire station. As such, the Project would not result in any direct or indirect population growth. Therefore, the Project is not expected to induce substantial population growth, and *no impact* would occur. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?*

The Project site is currently undeveloped and would therefore not result in the displacement of any housing units. Therefore, there would be *no impact.* No mitigation measures are required and this issue will not be discussed further in the EIR.

c) *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

See Section XIII.b above.

XIV. PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	❒	❒	❒	☑
ii. Police protection?	❒	❒	❒	☑
iii. Schools?	❒	❒	❒	☑
iv. Parks?	❒	❒	❒	☑
v. Libraries?	❒	❒	❒	☑

Discussion

a) *Would the project result in substantial adverse physical impacts associated with provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?*

i-v. The primary purpose of a public services impact analysis is to examine the impacts associated with physical improvements to public service facilities required to maintain acceptable service ratios, response times, or other performance objectives. Public service facilities need improvements (i.e. construction of new, renovation or expansion of existing) as demand for services increase. Increased demand is typically driven by increases in population. The Project would have a significant environmental impact if it would exceed the ability of public service providers to adequately serve the residents of El Granada, thereby requiring construction of new facilities or modifications to existing facilities.

As discussed above in Section XIII, Population and Housing, the Project would replace the existing Fire Station 41 and is not expected to result in any direct or indirect increase in population as a result. Further, as described above in the Project Description, operations and staffing levels are not expected to increase as part of the Project; therefore, the Project would not generate any demand for public services above existing conditions, and there would be *no impact* to fire protection, police protection, schools, parks, and libraries. No mitigation measures are required and this issue will not be discussed further in the EIR.

XV. RECREATION

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	❒	❒	❒	☑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	❒	❒	❒	☑

Discussion

a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?*

As discussed above in Section XIII, Population and Housing, the proposed Project would replace the existing Fire Station 41 and is not expected to result in any direct or indirect increase in population as a result. Further, as described above in the Project Description, operations and staffing levels are not

expected to increase as part of the Project; therefore, the Project would not generate any demand for parks and recreational facilities above existing conditions. As such, there would be *no impact* with regards to use of existing parks and recreational facilities. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment?*

See Section XV.a above.

XVI. TRANSPORTATION AND CIRCULATION

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	❒	❒	☑	❒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	❒	❒	☑	❒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	❒	❒	❒	☑
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☑	❒	❒	❒
e) Result in inadequate emergency access?	❒	❒	❒	☑
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☑	❒	❒	❒

Discussion

a) *Would the project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

Regional access to the Project site is provided via Highway 1, which is a 2-lane undivided roadway with limited access to El Granada via Coronado Street and Capistrano Road. Obispo Road, Avenue Alhambra, and Coronado Street are 2-lane undivided roads that provide direct access to residential and commercial land uses. Avenue Alhambra also serves as a cross-town traffic connector that runs parallel to Highway 1.

The proposed Project would be located on the easterly end of a parcel of land fronting on Obispo Road between Avenue Portola and Coronado Street. Access would be provided from two driveways on Obispo Road, designed as a "pull through" facility where firefighting vehicles would enter the bays from the east side of the building and exit from the west side. The eastern driveway would provide access to the proposed 17 on-site parking spaces, of which 14 would be designated for staff, and 3 for public parking. The western driveway would be for exclusive use of firefighting vehicles.

As previously described in the Project Description, the proposed Fire Station 41 will be staffed by a three person company working 2.5 shifts per week. During work hours there would normally be three crew members on site and their private vehicles would be parked in the secure parking lot. During shift changes there would be six crew members on site and their private vehicles parked in the secure lot. The on-site personnel would increase by one or two during training periods as well as management personnel visits. As the fire station would be normally staffed with three crew members working 3-day shifts, there would be minimal trips related to staffing. In addition, there would be trips from calls where vehicles would be dispatched. Assuming a worst-case condition where a company would be dispatched 3 times in an hour, there would be 6 one-way trips related to firefighting vehicle operations. Even assuming that the station would operate three companies simultaneously, the fire station would generate fewer than 20 trips per hour.

The City/County Associations of Governments of San Mateo County's (C/CAG) Congestion Management Program (2013 CMP) requires local jurisdictions to notify C/CAG at the beginning of the CEQA process of all development applications or land use policy changes that are expected to generate a net 100 or more peak hour trips on the CMP network. In addition, San Mateo County does not require the preparation of traffic impact analysis for land use projects that generate less than 500 trips per day or 100 peak hour trips at an intersection.[50] The proposed Project would generate fewer than 20 peak hour trips; therefore, the proposed Project would not result in substantial increases in congestion and delays in the roadway system. As such, this impact would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

[50] County of San Mateo, Traffic Impact Study Requirements, September 2013, page 2.

b) *Would the project conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

The nearest CMP intersection is located 3 miles south of the Project site in Half Moon Bay at Highway 1 at State Route 92. As discussed in response Section XVI.a above, the Project would generate fewer trips than the 100 peak hour trips, which is the threshold for the preparation of traffic impact analysis to the CMP roadway system. As the Project would generate few less trips, the Project would not cause a substantial impact to the CMP roadway network. As such, this impact would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

c) *Would the project result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial safety risks?*

The Project would not affect air traffic patterns and would not cause a change in air traffic levels. *No impact* would occur. No mitigation measures are required and this issue will not be discussed further in the EIR.

d) *Would the project substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?*

The Project would construct two new driveways on Obispo Road, designed as a "pull through" facility where firefighting vehicles would exit from the west driveway. The Wilkinson School, which is a K-8 private school, is located to the east of the Project site across Coronado Street. While there would not be increased firefighting vehicular activity in the vicinity of the school and near the intersections of Coronado Street at Obispo Road and at Highway 1, the Project may result in potential conflicts related to firetruck activity and pedestrian and bicyclist circulation. In addition an analysis would be required to ensure that adequate sight stopping distance at the Project driveways is provided. Impacts could be *potentially significant* and those will be addressed in the EIR.

e) *Would the project result in inadequate emergency access?*

The proposed Project would not result in a change in the roadway network and would not result in congestion on roadways. The proposed Project would improve emergency response times to surrounding communities from this new location per a recent study conducted by Citygate Associates, LLC.[51] The replacement station location is closer to the signaled intersection of Highway One and Coronado Street for superior access. Also the new location would have less potential conflicts with the existing neighborhood commercial traffic on Avenue Portola. *No impact* would occur. No mitigation measures are required and this issue will not be discussed further in the EIR.

[51] Fire Station Replacement Location Analysis, Coastside Fire Protection District, Citygate Associates, LLC, Fire Emergency Services, January 23, 2013. This is included as Appendix B of this Initial Study.

f) *Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance of safety of such facilities?*

Existing circulation facilities include sidewalks on Coronado Street south of Obispo Road and on the north side of Avenue Alhambra and on the south side east of Coronado Street. A new sidewalk would be constructed along the Project site boundary on the north side of Obispo Road. Marked pedestrian crossings are located on the north leg and the west leg on the signalized intersection of Coronado Street at Highway 1, these crosswalks are equipped with pedestrian signals and push buttons to accommodate pedestrian street crossings. In addition, a yellow school crosswalk is located on Avenue Alhambra in front of the Wilkinson School. Pedestrian circulation in the vicinity of the Project site lacks continuous sidewalks and pedestrian crossings are not usually present at intersections. Pedestrians often do not have sidewalks facilities and must use portions of the roadway or their shoulders to walk.

Coronado Street is designated as a Class III bike route where cyclists and automobiles share the roadway without a dedicated right-of-way for the bicyclist, signage is provided to establish the bike route. A multi-use (pedestrian/bicycle) Class I coastal trail runs along the south side of Highway 1 extending south to the City of Half Moon Bay.

SamTrans serves the vicinity of the Project site with paratransit service, and route 17 and 294 buses that run along Avenue Alhambra. The nearest bus stop is located north of the Project site approximately 100 feet from the northwest corner of the intersection of Coronado Street at Avenue Alhambra.

Because emergency vehicle activity would occur in an area where pedestrian and bicycle circulation infrastructure is limited, there would be the potential for additional vehicular and pedestrian/bike conflicts. Impacts could be *potentially significant* and will be addressed in detail in the EIR.

XVII. UTILITIES AND SERVICE SYSTEMS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	❒	❒	☑	❒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	☑	❒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	☑	❒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	❒	❒	☑	❒

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	❒	❒	☑	❒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	❒	❒	☑	❒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	❒	❒	☑	❒

Discussion

a) *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

The Project's land use type is institutional. Wastewater effluent associated with these land uses, such as the proposed Project would not substantially increase pollutant loads as there are no heavy industrial uses or agricultural processing where pollutant loads and wastewater volumes are heavy. Therefore, construction of the proposed Project is not expected to exceed the discharge limits established by the Regional Water Quality Control Board (RWQCB). Impacts to sanitary wastewater quality would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

b) *Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Wastewater treatment in the community of El Granada is provided by the Sewer Authority Mid-Coastside (SAM) Wastewater Treatment Facility, which serves the Granada Community Services District (GCSD), in addition to the City of Half Moon Bay and the Montara Water and Sanitary District, covering a service area of approximately 12 square miles. The SAM wastewater treatment system is permitted for 4.0 million gallons per day (mgd); however, the flows from at the pump stations average from about 0.18 mgd to 0.93 mgd, which is below the permitted capacity. Currently, SAM's average dry weather flow is 1.7 mgd.[52]

Given that the Project would replace the existing fire station and is not expected to increase staffing levels, wastewater output associated with the Project would not result in an increase beyond current output from that of the existing fire station. As such, wastewater treatment demand attributed to the Project is not expected to significantly increase beyond existing conditions and therefore would not require construction of new water or wastewater treatment facilities or expansion of existing facilities to accommodate the Project. Therefore, impacts would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

[52] Sewer Authority Mid-Coastside, Sewer System Management Plan, 2008, page 5.

c) *Would the Project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

The Project site is currently undeveloped and not connected to the existing storm drain system. However, there is residential and commercial development along the Project site's western and northern boundaries and development of the Project site would require connection to the existing storm sewer system. As a new development creating more than 10,000 square feet of impervious surface, the Project would be required to incorporate site design, source control, and treatment measures to the maximum extent practicable and to use stormwater control measures that are technically feasible and not cost prohibitive. Also, the Project must treat 100 percent of the amount of runoff from the Project's drainage area with on-site Low Impact Development (LID) treatment measures. As such, because compliance with these regulatory measures would offset potential runoff from the Project site, it is unlikely that runoff site would exceed the capacity of the existing storm drain system. Consequently, this impact would be considered *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

d) *Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

The Coastside County Water District (CCWD) provides the water supply for the community of El Granada, as well as the City of Half Moon Bay and the unincorporated coastal communities of Miramar and Princeton-By-The-Sea.[53] Approximately 70 percent of CCWD's water is purchased on a wholesale basis from the San Francisco Public Utilities Commission (SFPUC), which in turn derives its water from sources including Pilarcitos Lake and the Upper Crystal Springs Reservoir, and the remaining 30 percent is produced locally from both wells and surface water. The average yield from these sources is approximately 830 million gallons per year.[54] The CCWD Urban Water Management Plan (UWMP) states that the District has sufficient water to meet demands during normal years through 2035. However, the supplies are subject to significantly reduced availability in dry years.[55]

The Project involves replacement of the existing Fire Station 41 to a new location approximately 600 feet to the southeast. The proposed Project is considered a workplace/institutional use; therefore, it would not directly or indirectly result in an increase to the existing coastal population.

The proposed Project would meet all current codes (e.g. California Title 24 and San Mateo County's water efficient landscape ordinance) for water conservation including low flow fixtures for the buildings and native landscaping to keep water demand at a minimum.

The proposed Project would be 6,000 square feet larger than the existing Fire Station 41; however, the overall operations and staffing are not expected to change. The General Plan land use designations and zoning districts would regulate any future use of the existing Fire Station 41 site to acceptable levels

[53] Coastside County Water District, Coastside County Water District Web Page, http://www.coastsidewater.org/, accessed on May 19, 2015.

[54] Coastside County Water District, Water Supply, http://www.coastsidewater.org/water-supply.html, accessed on May 19, 2015.

[55] West Yost Associates, 2011. *2010 Urban Water Management Plan Prepared for Coastside County Water District.*

considered under the existing General Plan. Since both sites are within the urban area of the mid-coast, their development was considered in the growth analysis for this area. Therefore, construction of the Project is not expected to significantly increase water demands and impacts to water supplies would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

e) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

See Section XVII.a and XVII.b above.

f) *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Solid waste disposal in the community of El Granada is provided by Recology of the Coast,[56] which also provides solid waste services to the City of Pacifica,[57] the Miramar district of Half Moon Bay, and the unincorporated communities of Pillar Point, Princeton-by-the-Sea, Montara, and Moss Beach.[58] This solid waste is sorted, and non-recyclable, non-compostable materials are sent to Ox Mountain Sanitary Landfill in Half Moon Bay.[59] The Ox Mountain Landfill has a total maximum permitted capacity of 69,000,000 cubic yards, with a remaining capacity of 28,898,089 cubic yards as of 2011.[60] As such, the Ox Mountain Landfill is well below its total capacity. While, the proposed Project would be larger than the existing Fire Station 41, the overall operations and staffing are not expected to change. CFPD currently employs waste reduction measures and would continue to recycle all appropriate materials to appropriate facilities. The General Plan land use designations and zoning districts would regulate any future use of the existing Fire Station 41 site to acceptable levels considered under the existing General Plan. Since both sites are within the urban area of the mid-coast, their development was considered in the growth analysis for this area. Furthermore, any new use of the existing Fire Station 41 site would also be required to abide by the waste reduction goals of the County. As such, impacts to solid waste disposal would be *less than significant*. No mitigation measures are required and this issue will not be discussed further in the EIR.

g) *Comply with federal, state, and local statutes and regulations related to solid waste?*

In compliance with State Law SB 1016, the Project would target a California Integrated Waste Management Board (CIWMB) target of 15.7 pounds of waste per day per employee. According to

[56] Granada Community Services District, Garbage and Recycling, http://granada.ca.gov/trash-collection/, accessed on May 19, 2015.

[57] Recology of the Coast, Pacifica Residential Recycling, Organics & Garbage Program, http://www.recologyofthecoast.com/index.php/for-homes/residential-pacifica-services, accessed on May 20, 2015.

[58] Recology of the Coast, El Granada, Pillar Point, Princeton, Miramar, Montara & Moss Beach Residential Recylcing, Green Waste & Garbage Program, http://www.recologyofthecoast.com/index.php/for-homes/residential-services, accessed on May 20, 2015.

[59] Porter, Chris. General Manager, Recology of the Coast. Personal communication with Alex Lopez, PlaceWorks. May 20, 2015.

[60] CalRecycle, Facility/Site Summary Details: Corinda Los Trancos Landfill (Ox Mtn)(41-AA-0002), http://www.calrecycle.ca.gov/SWFacilities/Directory/41-AA-0002/Detail/, accessed on June 2, 2015.

CalRecycle, unincorporated San Mateo had a disposal rate of 5.8 pounds of waste per day per employee, which is well below the target of 15.7.[61]

Chapter 4.04 of the San Mateo County Municipal Code address the collection, transport, storage, and disposal of solid wasted within the County. For example, Section 4.04.120 states that solid waste and recyclable materials shall be placed by the person(s) occupying the premises upon which solid waste and recyclable materials are created in a watertight plastic or metal receptacle, or in carts or bins with tight fitting lids provided by the refuse collector, of not less than 20-gallon capacity. Other provisions of the Chapter address solid waste disposal and handling.

Given that the Project would replace the existing Fire Station 41, and operations and staff are not expected to increase, there would be no increase in the generation of solid waste above existing conditions as a result. Further, because the Project site is located directly across the street from the existing Fire Station, solid waste collection and disposal would continue to operate under existing conditions. As such, the Project would continue to comply with federal, State, and local statutes and regulations related to solid waste as it currently does. Therefore, a *less-than-significant* impact would occur. No mitigation measures are required and this issue will not be discussed further in the EIR.

[61] CalRecycle, Jurisdiction Diversion/Disposal Rate Summary (2007-current), http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx, accessed on June 2, 2015.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☑	❒	❒	❒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☑	❒	❒	❒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☑	❒	❒	❒

Discussion

a), c) Potential impacts to the environment related to the topics identified above as being potentially significant will be evaluated in detail in the EIR.

b) Potential cumulative impacts related to the topics identified above as being potentially significant will be evaluated in detail in the EIR.

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APPENDIX A:
PRELIMINARY TREE EVALUATION

Kielty Arborist Services LLC

Certified Arborist WE#0476A
P.O. Box 6187
San Mateo, CA 94403
650-515-9783

June 3, 2015

Coastside Fire Protection District
Attn: Mr. Neil Martin
1191 Main Street
Half Moon Bay, CA 94019

Site: Coastside Fire Station #41, El Granada, CA

As requested on Wednesday, May 27, 2015, I visited the above site to inspect and comment on the trees. New fire station is planned for this site and your concern for the future health and safety of the trees has prompted this visit.

Method:
All inspections were made from the ground; the tree was not climbed for this inspection. The tree in question was located on a "Not- to-Scale" map provided by me. The tree was then measured for diameter at 54 inches above ground level (DBH or diameter at breast height). The tree was given a condition rating for form and vitality. The trees' condition rating is based on 50 percent vitality and 50 percent form, using the following scale.

1	-	29	Very Poor
50	-	69	Fair
70	-	89	Good
90	-	100	Excellent

The height of the tree was measured using a Nikon Forestry 550 Hypsometer. The spread was paced off. Comments and recommendations for future maintenance are provided.

Tree #1 with a large failed leader at the base.

DRAFT

Coastside fire/6/3/15 (2)

Survey:

Tree#	Species	DBH	CON	HT/SP	Comments
1	Monterey pine *(Pinus radiata)*	10.4-9.2	45	35/25	Poor vigor, poor form, leans east, bark beetle on trunk, pine pitch canker.
2	Monterey pine *(Pinus radiata)*	24.4-30	40	40/45	Poor vigor, poor form, large failed leader on ground, failed limbs. Bark beetle at base.
3	Blue gum *(Eucalyptus globulus)*	6.5	55	35/10	Fair vigor, fair form, volunteer.
4	Monterey pine *(Pinus radiata)*	30.6	0	30/35	Dead.
5	Monterey pine *(Pinus radiata)*	20.9-13.4	30	35/25	Poor vigor, poor form, in decline, large failed limbs, bark beetle.
7	Monterey pine *(Pinus radiata)*	9.2	65	25/15	Good vigor, fair form, shares root zone with #8.
8	Monterey pine *(Pinus radiata)*	25.7-26.9	50	45/40	Poor-fair vigor, poor form, codominant at 3 feet. Bark beetle.
9	Acacia *(Acacia longifolia)*	4.2	55	15/20	Fair vigor, poor form, largest trunk of several.
10	Black acacia *(Acacia melanoxylon)*	11.3	45	20/20	Poor-fair vigor, poor form, trunk bends south.
11	Black acacia *(Acacia melanoxylon)*	8.1	40	20/15	Fair vigor, poor form, trunk bends south. One of several.

Summary:
The trees on site are a mix of imported trees, there are no trees native to the El Granada area. The Monterey pines on site are in decline. The trees have a history of large limb and leader failure. Bark beetle has infested the trees and the trees will soon be dead. Pine tree #4 has already dead and the remaining will follow. Remove the Monterey pines prior to construction and replace as required with appropriate trees for the fire station. Natives are highly recommended.

Dead Monterey pine #4. Bark beetle and pine pitch canker has contributed to the death of this tree.

DRAFT

The acacias and the eucalyptus are of an invasive species that are known to be flammable. Remove these invasive trees and replace with appropriate trees at the time of landscaping. If any trees are retained the following tree protection plan should be followed. Tree protection will lessen impacts to retained trees and the riparian area.

Grove of acacias, the photo depicts the invasive nature of the species.

Tree Protection Plan:
Tree protection zones should be established and maintained throughout the entire length of the project. Fencing for the protection zones should be 4 foot orange plastic fencing supported by metal stakes pounded into the ground. The support poles should be spaced no more than 10 feet apart on center. The location for the protection fencing should be as close to the dripline as possible still allowing room for construction to safely continue. Signs should be placed on fencing signifying “Tree Protection Zone - Keep Out”. No materials or equipment should be stored or cleaned inside the tree protection zones. Areas outside the fencing but still beneath the dripline of protected trees, where foot traffic is expected to be heavy, should be mulched with 4 to 6 inches of chipper chips. The riparian area shall be fenced off with construction fencing and no access to the area should be allowed.

Trenching for irrigation, electrical, drainage or any other reason should be hand dug when beneath the driplines of protected trees. Hand digging and carefully laying pipes below or beside protected roots will dramatically reduce root loss of desired trees thus reducing trauma to the entire tree. Trenches should be backfilled as soon as possible with native material and compacted to near its original level. Trenches that must be left exposed for a period of time should also be covered with layers of burlap or straw wattle and kept moist. Plywood over the top of the trench will also help protect exposed roots below.

DRAFT

Normal irrigation should be maintained throughout the entire length of the project. If the trees on this site is traumatized it should receive heavy flood type irrigation 2 times a month. During the fall and winter 1 time a month should suffice. Mulching the root zone of protected trees will help the soil retain moisture, thus reducing water consumption. The redwood trees will require regular irrigation until winter rains saturate the soil.

The information included in this report is believed to be true and based on sound arboricultural principles and practices.

Sincerely,

Kevin R. Kielty
Certified Arborist WE#0476A

DRAFT

APPENDIX B:
FIRE STATION REPLACEMENT LOCATION ANALYSIS

CITYGATE ASSOCIATES, LLC

■ Folsom (Sacramento), CA Management Consultants ■

Fire Station Relocation Study for the Coastside Fire Protection District

Volume 1 of 2 – Main Report

February 19, 2014

■ 2250 East Bidwell St., Ste #100 ■ Folsom, CA 95630
(916) 458-5100 ■ Fax: (916) 983-2090

CITYGATE ASSOCIATES, LLC
FIRE & EMERGENCY SERVICES

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SECTION 1—EXECUTIVE SUMMARY

Citygate Associates, LLC was retained by the Coastside Fire Protection District (the District) to evaluate its response time coverage options for replacing its two aging fire stations in the El Granada (Station 41) and Moss Beach/Montara (Station 44) areas of the District. These two stations are older, and too small to meet District near-term needs. A recent facility assessment commissioned by the District also found that it would not be cost-effective to substantially remodel the stations. Both Stations 41 and 44 are on small parcels, in or very close to housing.

Given these factors, the District asked the question:

"If one new station housing both fire crews could be centrally located on a new, larger parcel, could it still provide response times equivalent to the current two sites?"

In addition, Citygate was tasked to find the two best response time sites, should the single site prove unfeasible due to lengthened response times.

Based on the analysis in this study, Citygate finds:

1. The existing District-wide response times are very good given the challenging topography and street network in this section of the coastline.
2. A single station site in the central or northern part of the District *cannot* provide similar response times as the two existing fire station locations to both neighborhoods.
3. A single fire station site also reduces response time overlap into adjoining fire station areas. This is needed when District units are committed to other emergencies.
4. Response times in the central and northern District can be maintained, or slightly improved, if one or both Stations 41 and 44 were to be relocated to new sites.

Given the technical measures and the findings of this study, Citygate offers the following considerations to the District as it identifies final replacement parcels for Stations 41 and 44:

1. Maintain a three-station deployment model.
2. As some of the differences between site parings are very small, Citygate suggests these factors next be evaluated to narrow down the selections for final cost determination:
    a. Parcel size.
    b. Traffic access for fire trucks.
    c. Land cost and cost of site improvements before a station can be built.
    d. Impacts to neighbors.

SECTION 2—PROJECT BACKGROUND AND CITYGATE METHODOLOGY

Citygate used a combination of prior incident response time history and geographic mapping (GIS) tools to measure prior response times and to project probable response times from a single or new two-station site. In these efforts, we received incident data from San Mateo County's regional fire dispatch center for a 3-year span (12/09/2010 – 12/08/2013).

Citygate then calibrated travel times in the GIS map model, using the District's prior incident records, by programming actual fire truck travel times over the District's unique street topography.

We then set the GIS model with the District's fire unit travel time goal to show predicted coverage. Currently, the District does not have an adopted response time performance policy. In prior years, the District has benchmarked its services against the County Emergency Medical System's (EMS) requirement for the first firefighter-paramedic unit to arrive on scene in 6:59 minutes/seconds from the point of dispatch. Therefore, in this study we subtracted the District's historical crew turnout time (from the incident records) of 1:30 minute/seconds from the 6:59 goal point, and then used a travel time of 5:30 minutes/seconds to evaluate station coverage areas.

Citygate met once on site with Department staff to listen to the needs of the area. Part of the day was spent touring each of the fire stations and major service areas under consideration due to location, age, and size. After the on-site meeting, the Citygate team produced a large quantity of more technical in-depth response statistics and geographic mapping views of the deployment system. This analysis helped all parties to understand how the fire station deployment system can best be updated.

GENERAL FIRE STATION LOCATION BEST PRACTICES

In general, fire stations should serve a 360-degree area, covering the most populated parcels in the least minutes of travel. Thus, stations should not be positioned against barriers such as freeways, rivers, or large parcels, such as industrial institutions, that block cross-city through-streets. Further, stations should not be located in positions that require the first 60-80 seconds of travel to be through open space areas, or on very narrow, congested streets. Such situations waste response time coverage, or hamper it, as the responding unit cannot clear the immediate station area quickly enough to reach the outer edges of its assigned area in an appropriate amount of time. The best station location is one just off a primary or secondary arterial roadway, where with normal traffic signal access near the station, the responding apparatus can enter a higher speed road network that feeds the smaller, more congested neighborhoods and commercial parcels.

In the Coastside Fire Protection District, many of these station location best practices are impeded by the ocean on one side, the coastal hills to the inland side, and one primary north

south arterial roadway. However, to the District's benefit, while the District is fairly long north to south, its resident populations are clustered in three major areas. Each of these areas—Half Moon Bay, El Granada and Moss Beach/Montara—currently have one fire station.

Citygate used the above response time policy, as well as published best practice deployment advice from the National Fire Protection Association (NFPA), the Insurance Service Office (ISO), and the Commission on Fire Accreditation International (CFAI). The analysis was not limited to singular or simple one-size-fits-all measures and recommendations. The District's community's demand on fire and emergency medical services is significant and complex due to geography and development patterns.

As such, an analysis of options needs to consider that each population cluster should, ideally, have *equal* access to a *basic framework* of response that can control common, daily emergencies without them escalating frequently to catastrophic size. This drains all of a department's response resources and causes significant human and economic loss.

SECTION 3—INCIDENT RESPONSE STATISTICS KEY FINDINGS

In addition to this summary level report, Citygate also delivered to the District a comprehensive analysis of prior incident types of calls, response times, and types of properties responded to. The key factors to note in this review of prior incidents are:

- Incidents demand by time-of-day, day-of-week, and month follow typical suburban California coastal community patterns.
- There are demands for service 24/7/365 in all areas, while Half Moon Bay is the busiest area.
- The three current fire station areas have different but significant demand:

Table 1—Percent of Each Engine's Responses by Station Area (Three Years Containing 6,961 Individual Apparatus Responses)

Engine	Station 40	Station 41	Station 44
E40	93.50%	4.53%	1.97%
E41	27.92%	63.80%	8.28%
E44	13.37%	21.28%	65.35%

Regarding response times across the entire District over the 3-year study period, Citygate finds that the District does very well despite being confronted by the challenging topography and road system:

Table 2—District Response Time Performance

Component of Time	Time in Minutes
911 Received to Arrival	7:45-8:15
Dispatch Processing	0:30
Crew Alert (Turnout)	1:20-1:35
Travel Time (Wheels Rolling)	6:30-6:50

Given that the call received to first unit arrival times in the District are at or just over the County EMS system goal, Citygate looked at only travel time performance, and found, at a travel time goal of 5:30 minutes/seconds, that 81.4 to 84.1% of the incidents received service. This result confirms that a three-fire-station site plan, with one station per population area, is delivering customer service within District expectations. This following table shows the travel time in each station area for 90% of the incidents:

Table 3—*Travel* Time to 90% and Incident Count *Inside* Each Station Area (Three Years Containing 5,611 Emergent Apparatus Responses)

Engine	Station 40		Station 41		Station 44	
E40	**06:17**	2,749	10:24	76	12:44	33
E41	10:10	369	**06:13**	1,225	08:43	115
E44	12:59	81	08:58	190	**05:58**	773

While the travel time in each station area, to *90%* of incidents, is a little past the 5:30 minute/second goal, in Citygate's experience this is very good performance across a challenging topography and road network.

Having established that response times for the primary assigned unit per area are very good, the next question becomes, "What are the response times for a second-due unit, when either more firefighters are needed, or the primary unit is already committed to a prior incident?" The table below shows the travel time for each unit into *other* station areas:

Table 4—*Travel* Time to 90% and Incident Count into *Other* Station Areas (Three Years Containing 5,611 Emergent Apparatus Responses)

Engine	Station 40		Station 41		Station 44	
E40			08:30	35	09:34	12
E41	09:28	235			08:40	82
E44	12:59	39	08:58	125		

This data shows that second-due unit performance into the most immediate adjoining station area is under 10 minutes. This, again, is very good considering the District's topography and road network.

When the third-due unit has to cross into the farthest station area, the travel times are longer and approach the limit of what a rural system should be expected to deliver. If only one fire station were to serve both populated areas north of Half Moon Bay, this must be considered. if only one fire station were to serve both populated areas north of Half Moon Bay. In that event, both northern units would (depending on location) have equal travel times into all areas. Thus, the area that "lost" a fire station would experience increased travel times for the first-due unit.

The following Google Earth map image shows, by small measurement areas, the volume of incidents per area over three years. The color indicates good response time (green) or slower response time (red). This image illustrates the data in the travel timetables above. Specifically, emergency volumes are highest in the more populated areas.

Figure 1—Volume of Incidents per Area over Three Years

SECTION 4—EXISTING GEOGRAPHIC COVERAGE MODELS

To analyze first-due fire unit travel time coverage, Citygate used a geographic mapping tool, called *FireView*, that can measure theoretical travel time over the street network. For this portion of the study, Citygate GIS staff used the base map and posted street speed limits calibrated to actual fire company travel times from previous responses to simulate real world *fire* apparatus (not passenger car) coverage. Using these tools, Citygate ran several station re-location tests and measured their impact on various parts of the District. The travel time measure used was 5:30 minutes/seconds over the road network.

The images are published in Volume 2 of this report, in full size, for ease of viewing small detail. The following descriptions will explain the images and the re-located fire station scenarios.

The first few maps are plots of current station locations and where prior incidents have occurred across the District. This is important context because, ideally, stations should not be moved further from historical incident location patterns.

Map #1 – General Geography and Station Locations

This view shows the existing District fire station locations within the District's boundaries. This is a reference map for the other map displays that follow.

Map #2 – All Incident Locations

This map is an overlay of the exact location for all incident types using a 3-year data set. It is apparent that there is a need for Fire Department services on almost every street segment of the District. The greatest concentration of calls is also where the greatest concentration of Fire Department resources is available.

Map #3 – All Fire Type Locations

This map identifies the location of all fires in the District over the previous 3 years. All fires include <u>any</u> type of fire call, from auto, to dumpster, to building. Obviously, there are fewer fires than medical or rescue calls. Given this, it is evident that all first-due engine districts experience fires.

Map #4 – EMS and Rescue Incident Locations

This map further breaks out only the emergency medical and rescue call locations. Again, with the majority of the calls for service being emergency medical, virtually all areas of the District need emergency medical services.

Map #5 – Hot Spots for All Incident Locations

Using the 3-year data set, this map examines, by mathematical density, where clusters of incident activity occurred. In this set, the darker density color plots the highest concentration of all

incidents. This type of map makes the locations of frequent workload more meaningful than simply mapping the locations as done in Map #2. This perspective is important because overlap of units is critical to ensure the delivery of a good concentration of units for a multiple-apparatus response to serious emergencies.

Map #6 – All Fire Location Densities

This map shows the hot spot activity for all fires. In this case, the call for service density is slightly more scattered, reflecting small fires, such as auto fires, in areas where the population density is lower than the urban core.

Map #7 – EMS and Rescue Incident Location Densities

This map is similar to Map #4, but only the medical and rescue hot spots of activity are plotted. The clusters of activity look very similar to the all-incident set in Map #5 because medical calls are such a large portion of the total.

Map #8 – First-Due Unit Coverage at 5:30 Minutes/Seconds Engine Travel

This map shows, in green colored street segments, the *distribution*, or first-due response time, for each station per the response goal of 5:30 minutes/seconds *travel* time. Therefore, the limit of color per station area is the time an engine could reach within this travel time. In lay terms, the color shows how far an engine can travel in 5:30 minutes/seconds. This map ***assumes*** responders are in-station and encounter no unusual traffic delays. Thus, the projection is optimal, or "perfect-world."

Real dispatch data *shows* response times to be a little slower in some edge areas. Most likely, this is due to the effects of the non-grid street design, and the upslope, hilly areas. The purpose of computer response mapping is to determine, and balance, station locations. This geo-mapping design is then checked in the study against actual dispatch time data. There should also be some overlap between station areas so that a second-due unit can have a chance of an adequate response time when it covers a call in another fire company's first-due area.

It is not possible to serve every road segment out to the edge of the District in 5:30 travel minutes; however, these maps show that most of the District is covered to this goal point.

SECTION 5—RELOCATION OF FIRE STATION COVERAGE MODELS

With an understanding of prior travel time coverage, and predicated on computer model coverage from the existing stations, Citygate then analyzed a series of test scenarios. One of the benefits of the GIS computer models is that they not only make maps to visualize coverage, but they have the ability to measure the quantity of road miles actually covered within a time measure for existing and proposed sites. This quantifies the differences between sites much better than a map.

Citygate asked District staff to review local zoning and identify possible open parcels that might accommodate a fire station. That review found several vacant land sites to from which to project possible fire unit travel time. It needs to be stressed that these sites may not be for sale or survive the due diligence needed for community, District, legal, environmental, and cost acceptance.

At this early test point, it is not feasible for the GIS model to find a "best-fit" fire station site if that site contains buildings in use, or land with zoning or environmental restrictions that would prevent the parcel from being considered. However, by starting with several vacant parcels in each neighborhood, the District leadership can determine if one or two replacement fire stations are needed, and if so, a best fit location within a few tenths of a mile in either direction.

The District provided 11 alternative northern-area station locations. Given that some were on adjacent plots, some locations were plotted as a single site. Thus, Citygate tested seven sites:

- 240 Capistrano
- 11820 Cabrillo Hwy
- Obispo Rd (next to existing station)
- Vermont/Hwy 1
- 9700 Cabrillo Hwy
- 8888 Cabrillo Hwy
- 1st St / Hwy 1

From these sites, eight scenarios were designed to test a single or various two-station moves. The GIS model calculated the "as is" **base case** comparison measure that the three existing fire stations cover to be **122.6** road miles *within 5:30* minutes/seconds of travel, totaling **78%** of the total public, paved road miles in the District. In simpler terms, the three current fire stations can reach 122.6 of the District's 158 road miles within 5:30 minutes/seconds. Citygate placed all of the road mile coverage measures by scenario into an MS-Excel spreadsheet that is sortable by different priorities. This tool, along with the map images, was given to the District so that it can continue to compare the final site choices. In the scenario descriptions below, Citygate will cite road mile coverage measures from these GIS and spreadsheet tools.

Map #9 – Test Fire Station Locations

This map view shows the existing District fire station locations along with all of the test parcel locations.

The following table was taken from the MS-Excel spreadsheet and depicts road mile coverage measurements from the possible test fire station sites identified in Map #9:

Table 5—Road Mile Coverage for All Scenarios

Map	Stations	Total Road Miles (CFPD)	Miles Covered	Percent Loss of Road Miles @ 5:30	Overlap Miles Between Proposed Location(s) and Existing Station(s)	Overlap Miles Between All Locations
8	Existing Deployment: #40, #41, #44	158	122.6	78%	na	8.5
10a	#40, #44, 240 Capistrano	158	122.5	78%	16.9	16.9
10b	#40, #44, 11820 Cabrillo Hwy	158	123.8	78%	16.4	16.4
10c	#40, #44, Obispo Rd	158	122.7	78%	10	10
11a	#40, #41, Vermont/Hwy 1	158	125.1	79%	14	14
11b	#40, #41, 9700 Hwy 1	158	123.8	78%	19.6	19.6
11c	#40, #41, 8888 Cabrillo Hwy	158	124.3	79%	5	5
11d	#40, #41, 1st St/Hwy 1	158	124.9	79%	1.5	1.5
12a	#40, 1st St/Hwy 1, 240 Capistrano	158	124.8	79%	2	14.9
12b	#40, 1st St/Hwy 1, 11820 Cabrillo Hwy	158	126.1	80%	4	14.4
12c	#40, 1st St/Hwy 1, Obispo Rd	158	125	79%	6.5	8
12d	#40, 8888 Cabrillo Hwy, 240 Capistrano	158	124	78%	2	18.7
12e	#40, 8888 Cabrillo Hwy, 11820 Cabrillo Hwy	158	125.3	79%	4	18.2
12f	#40, 8888 Cabrillo Hwy, Obispo Rd	158	124.4	79%	6.5	11.5
12g	#40, Vermont/Hwy 1, 240 Capistrano	158	123.4	78%	2	29.1
12h	#40, Vermont/Hwy 1, 11820 Cabrillo Hwy	158	124.7	79%	4	28.6
12i	#40, Vermont/Hwy 1, Obispo Rd	158	125.2	79%	6.5	20.5
12j	#40, 9700 Hwy 1, 240 Capistrano	158	122.1	77%	2	34.6
12k	#40, 9700 Hwy 1, 11820 Cabrillo Hwy	158	123.4	78%	4	34.1
12l	#40, 9700 Hwy 1, Obispo Rd	158	123.9	78%	6.5	26
9a	#40, 240 Capistrano	158	102.8	65%	2	2
9b	#40, 11820 Cabrillo Hwy	158	101.6	64%	4	4
9c	#40, Obispo Rd	158	91.6	58%	6.5	6.5
9d	#40, Vermont/Hwy 1	158	100.2	63%	0	0
9e	#40, 9700 Hwy 1	158	104.5	66%	4	4
9f	#40, 8888 Cabrillo Hwy	158	90.5	57%	0	0
9g	#40, 1st St/Hwy 1	158	87.5	55%	0	0

Scenario #1 – Maps #9a-c – Merging the Two Northern Stations into One Site in Station 41's Area

This scenario tests three sites in Station 41's area. Of sites 9a through 9c, Citygate finds that the 240 Capistrano parcel is the best fit. It has the least overlap coverage to the south, meaning it

does not duplicate or waste travel time coverage that Station 40 can provide. Utilizing this single location will reduce the amount of road miles covered within 5:30 minute/seconds to 102.8, a 13% reduction.

Scenario #2 – Maps #9d-g – Merging the Two Northern Stations into One Site in Station 44's Area

This scenario tests four sites in Station 44's area. Of sites 9a through 9c, Citygate finds that the 9700 Highway 1 parcel is the best fit. It has no overlap coverage to the south. As for road mile coverage, this single location will **reduce** travel time coverage the least at 5:30 minute/seconds by 12%. As a comparison, if the 1st Street and Highway 1 site were selected, road mile coverage would reduce by 23% district-wide.

Scenario #3 – Maps #10a-c – Using Three Fire Stations, Testing Three Sites in Station 41's Area

This scenario tests three sites in Station 41's area. In this test, Station 44 does not move. Of sites 10a through 10c, Citygate finds that the 240 Capistrano parcel is the best fit. This location provides the same overall road mile coverage at 78%, but has the best overlap north into Station 44's area. This means its second-due times to the north are better in case Station 44 is on a prior incident.

Scenario #4 – Maps #11a-d – Using Three Fire Stations, Testing Four Sites in Station 44's Area

This scenario tests four sites in Station 44's area. In this test, Station 41 does not move. Of sites 11a through 11c, Citygate finds that the Vermont and Highway 1 parcel is the best fit. This location *increases* overall road mile coverage to 79%, and has slight overlap south into Station 41's area. The 1st St and Highway 1 site is too far to the north, with very limited overlap to Station 41's area.

Scenario #5 – Maps #12a-c – Using Three Fire Stations, Moving Both Stations 41 and 44

In this scenario, Station 44 is relocated to 1st Street and Highway 1 and is kept fixed as three locations are tested for Station 41. The best-fit site for Station 41 is at 11820 Cabrillo Highway, increasing road mile coverage up to 80%. This location provides overlap to the north and south.

Scenario #6 – Maps #12d-f – Using Three Fire Stations, Moving Both Stations 41 and 44

In this scenario, Station 44 is relocated to 8888 Cabrillo Highway 1 and is kept fixed as three locations are tested for Station 41. The best-fit site for Station 41 is at 11820 Cabrillo Highway, increasing road mile coverage up to 79%. This location provides overlap to the north and south.

Scenario #7 – Maps #12g-i – Using Three Fire Stations, Moving Both Stations 41 and 44

In this scenario, Station 44 is relocated to Vermont and Highway 1 and is kept fixed as three locations are tested for Station 41. The best-fit site for Station 41 is again at 11820 Cabrillo Highway, increasing road mile coverage up to 79%. This location provides overlap to the north and south.

Scenario #8 – Maps #12j-l – Using Three Fire Stations, Moving Both Stations 41 and 44

In this scenario, Station 44 is relocated to 9700 Highway 1 and is kept fixed as three locations are tested for Station 41. The best-fit site for Station 41 is again at 11820 Cabrillo Highway, where road mile coverage is unchanged at 78%. This location provides good overlap to the north and south station areas.

SECTION 6—FINDINGS AND CONSIDERATIONS

Given all of the analysis in this study, along with the exhibits provided to the District, Citygate makes the following findings:

1. Merging the two northern District fire stations into one station lowers the existing neighborhood response times, which are very good.
2. Such a station consolidation also reduces overlap into adjoining areas when cover or multiple units are needed in each population cluster in the District.
3. Scenario #6, Map #12e is the best fit two-station model at:
    a. 11820 Cabrillo Highway (Station 41's area)
    b. 8888 Cabrillo Highway (Station 44's area)
4. Placing the Moss Beach replacement Station 44 at 8888 Cabrillo Highway allows it to cover <u>all</u> of the occupied streets to the north at 5:30 minutes/seconds travel, *and* provides some overlap down into Station 41's area.

Citygate values this more northern coverage over increased overlap southerly into Station 41's area. This is due to the fact that there is no fire station to the immediate north, in Devil's Slide, to cover the northern-most neighborhoods in the District. Thus, we would "start" the coverage from the northern-most streets with homes and let the coverage extend as far as it can to the south, where at least another unit can come up northbound to meet it. However, the differences between some of the site parings are small, and the District will have to look at all other factors in siting a new station before it can make a final, conclusive determination.

Based on our findings and our experience relocating fire stations, Citygate suggests these considerations as the District moves forward:

1. Maintain a three-station deployment model.
2. As some of the differences between site parings are very small, Citygate suggests these factors next be evaluated to narrow down the selections for final cost determination:
    a. Parcel size.
    b. Traffic access for fire trucks.
    c. Land cost and cost of site improvements before a station can be built.
    d. Impacts to neighbors.

CITYGATE ASSOCIATES, LLC

■ Folsom (Sacramento), CA Management Consultants ■

Fire Station Relocation Study for the Coastside Fire Protection District

Volume 2 of 2 – Map Atlas

February 19, 2014

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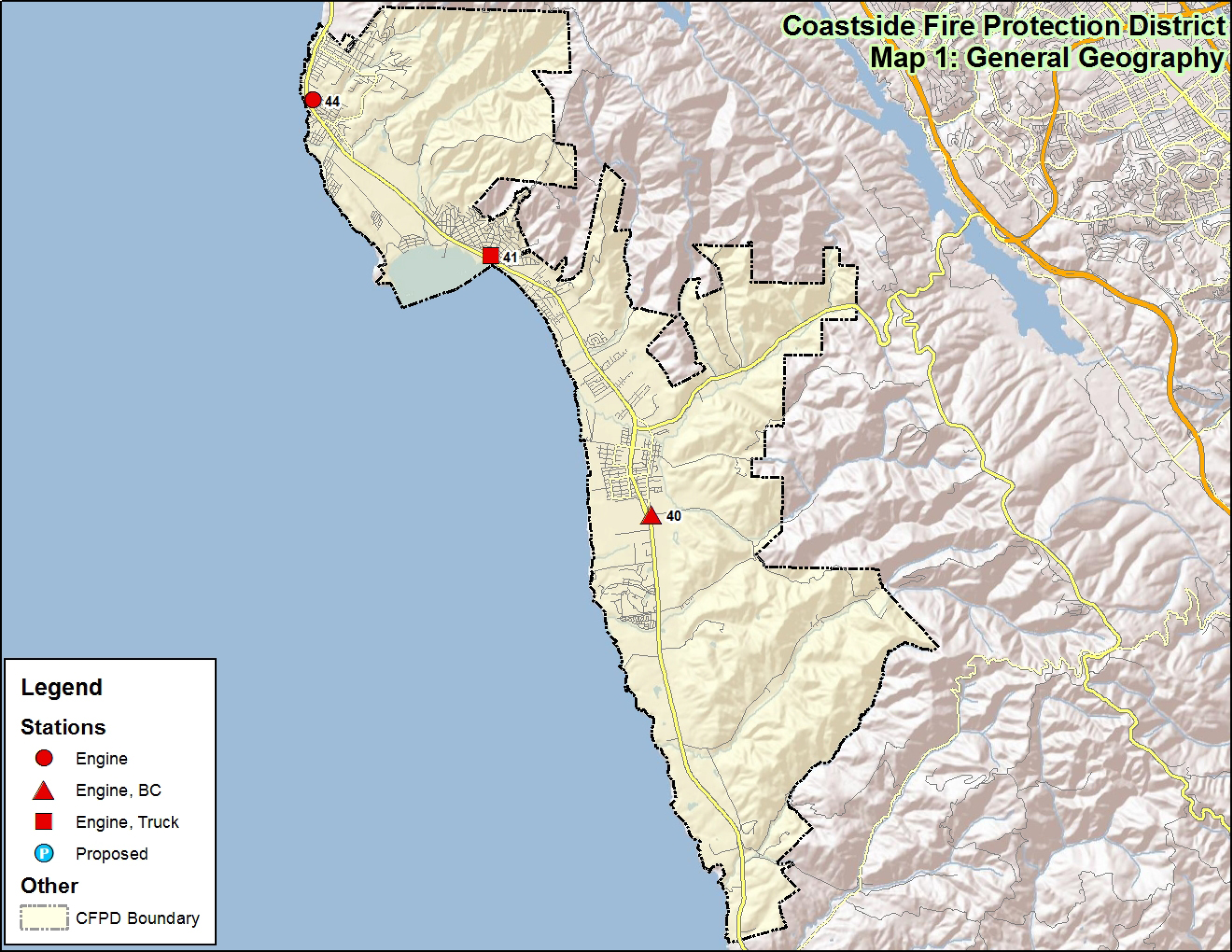
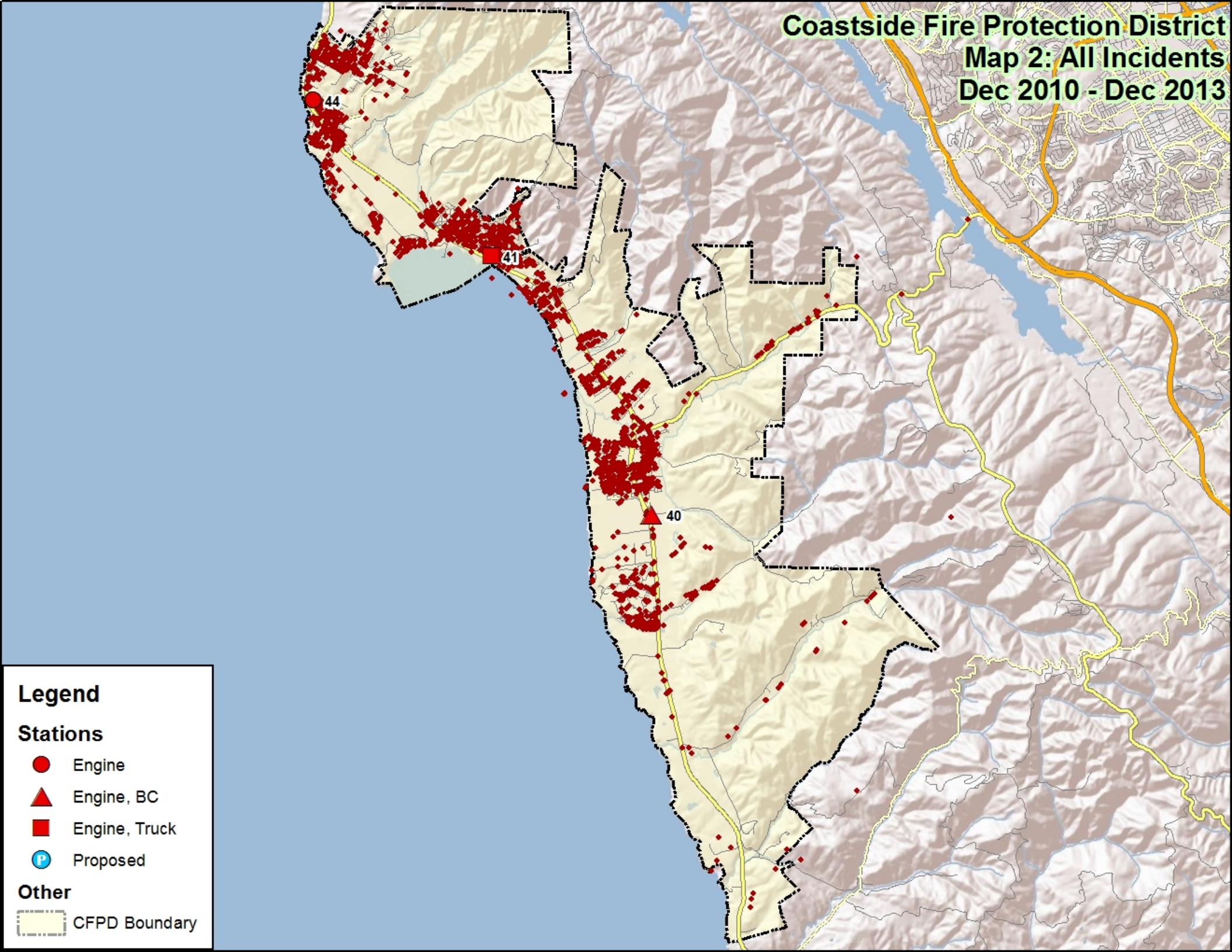
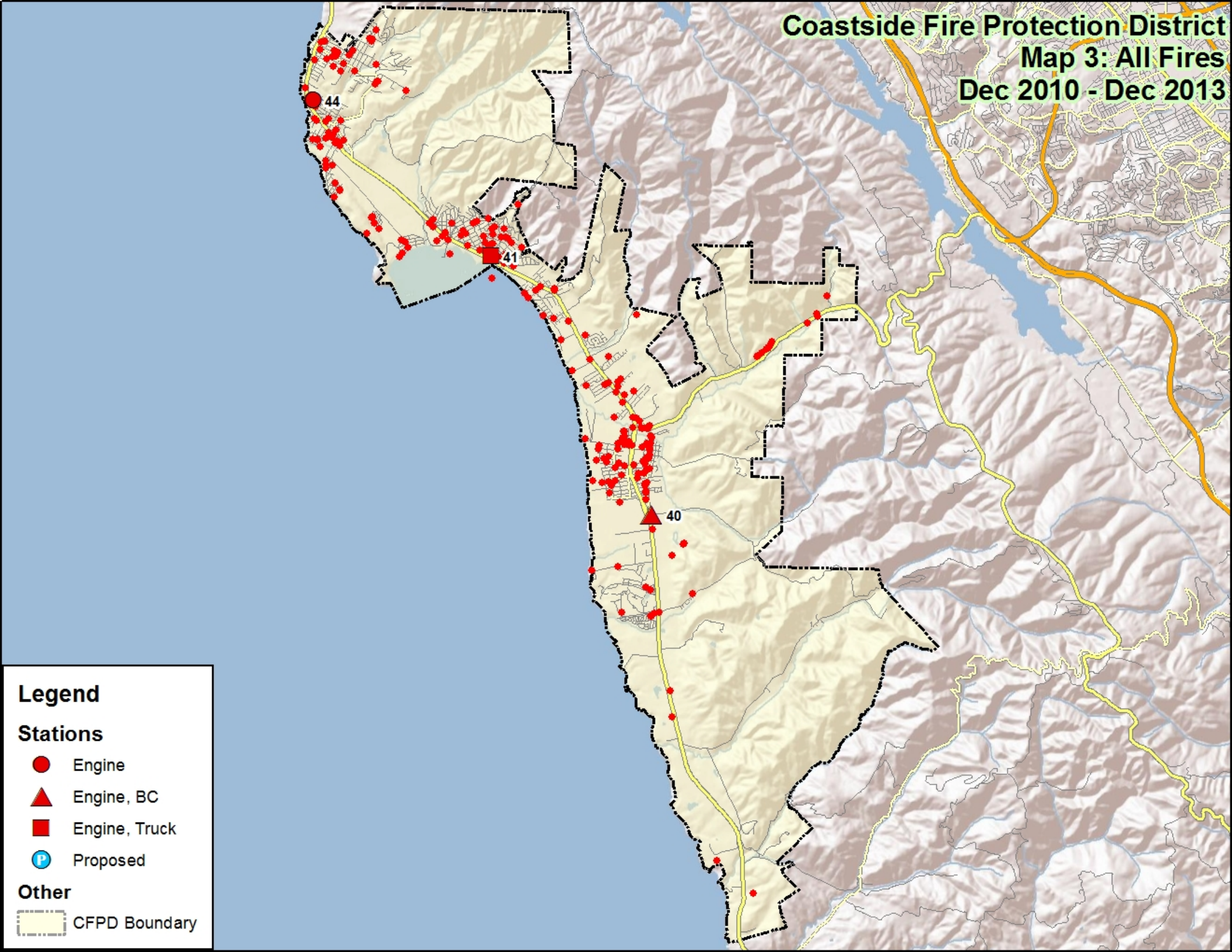
(916) 458-5100 ■ Fax: (916) 983-2090

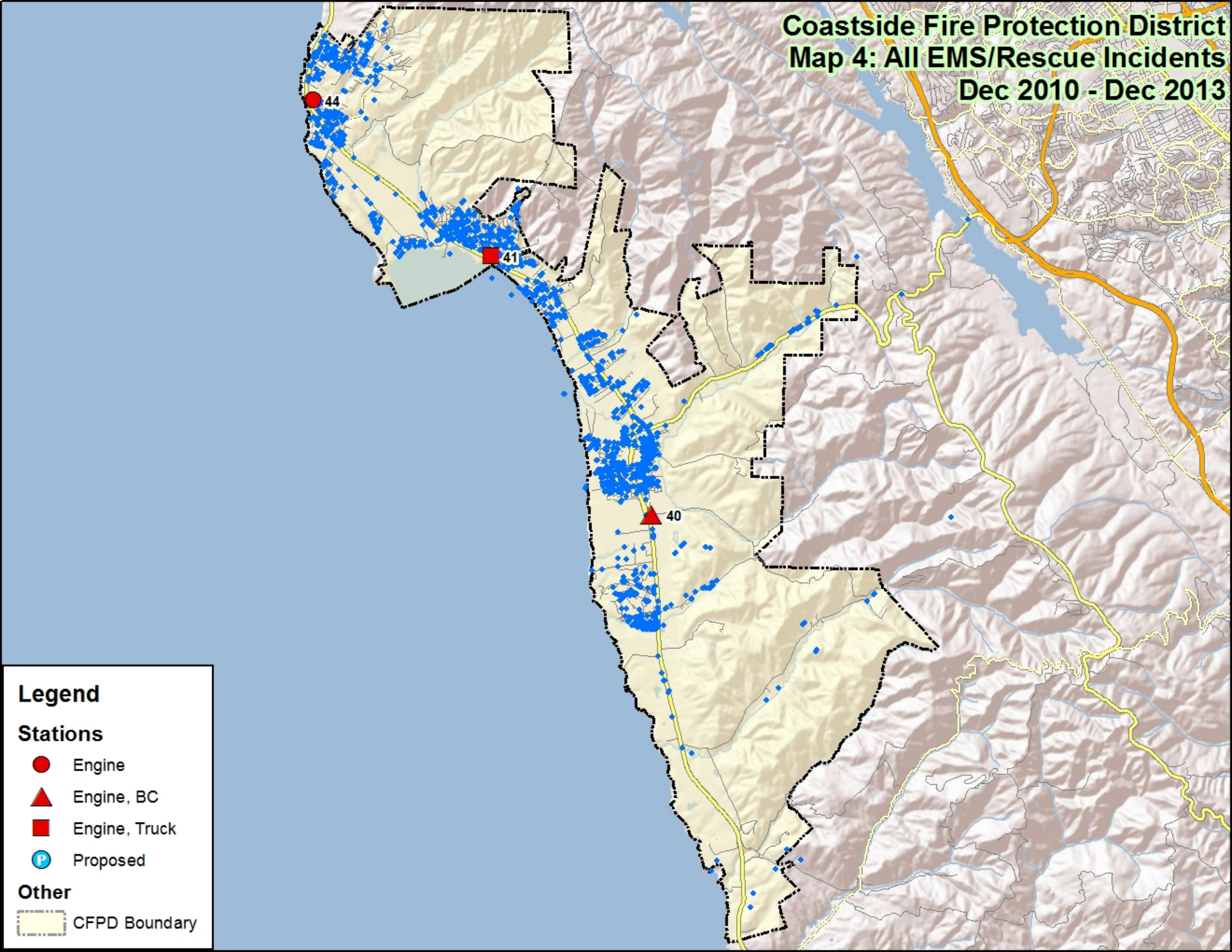
CITYGATE ASSOCIATES, LLC
FIRE & EMERGENCY SERVICES

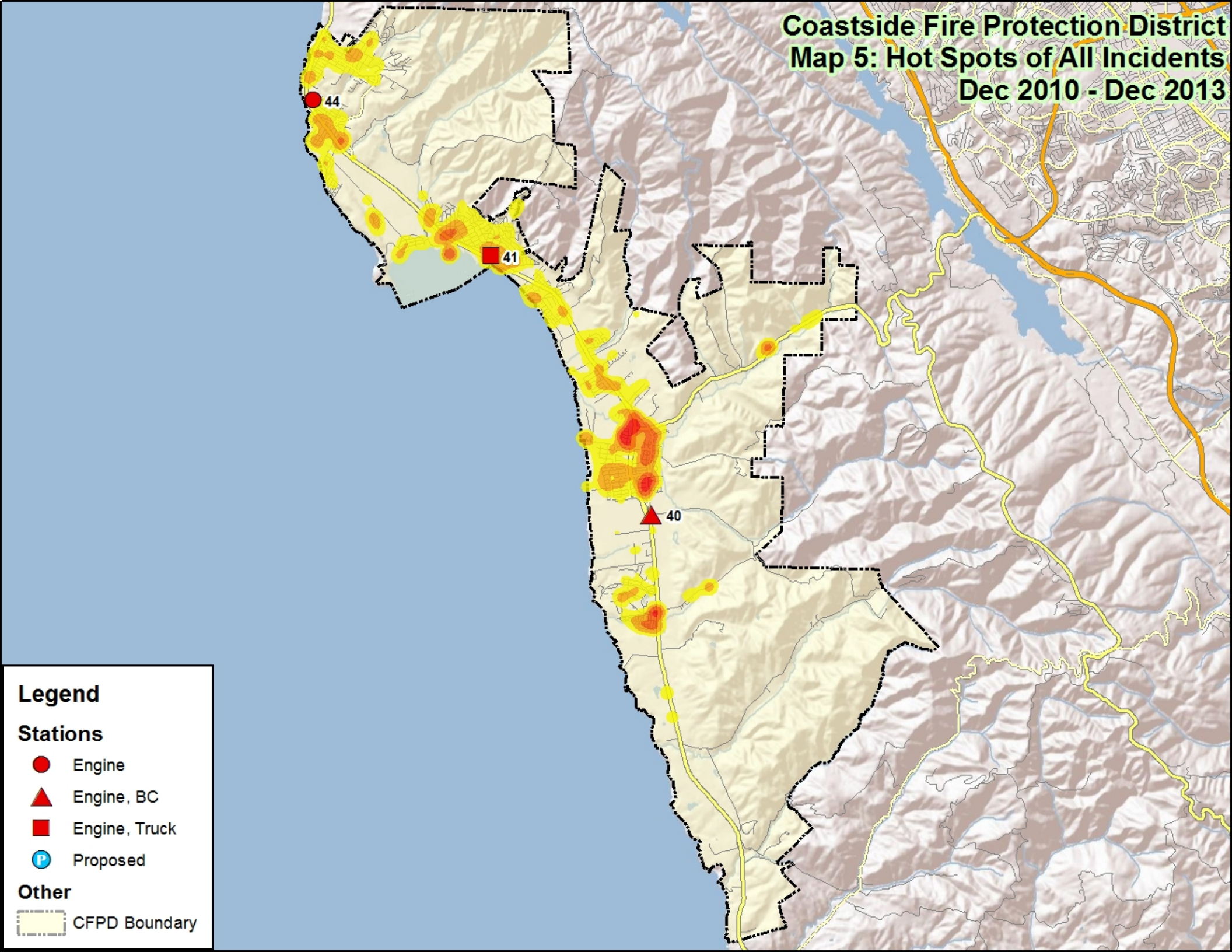
Coastside Fire Protection District
Map 1: General Geography

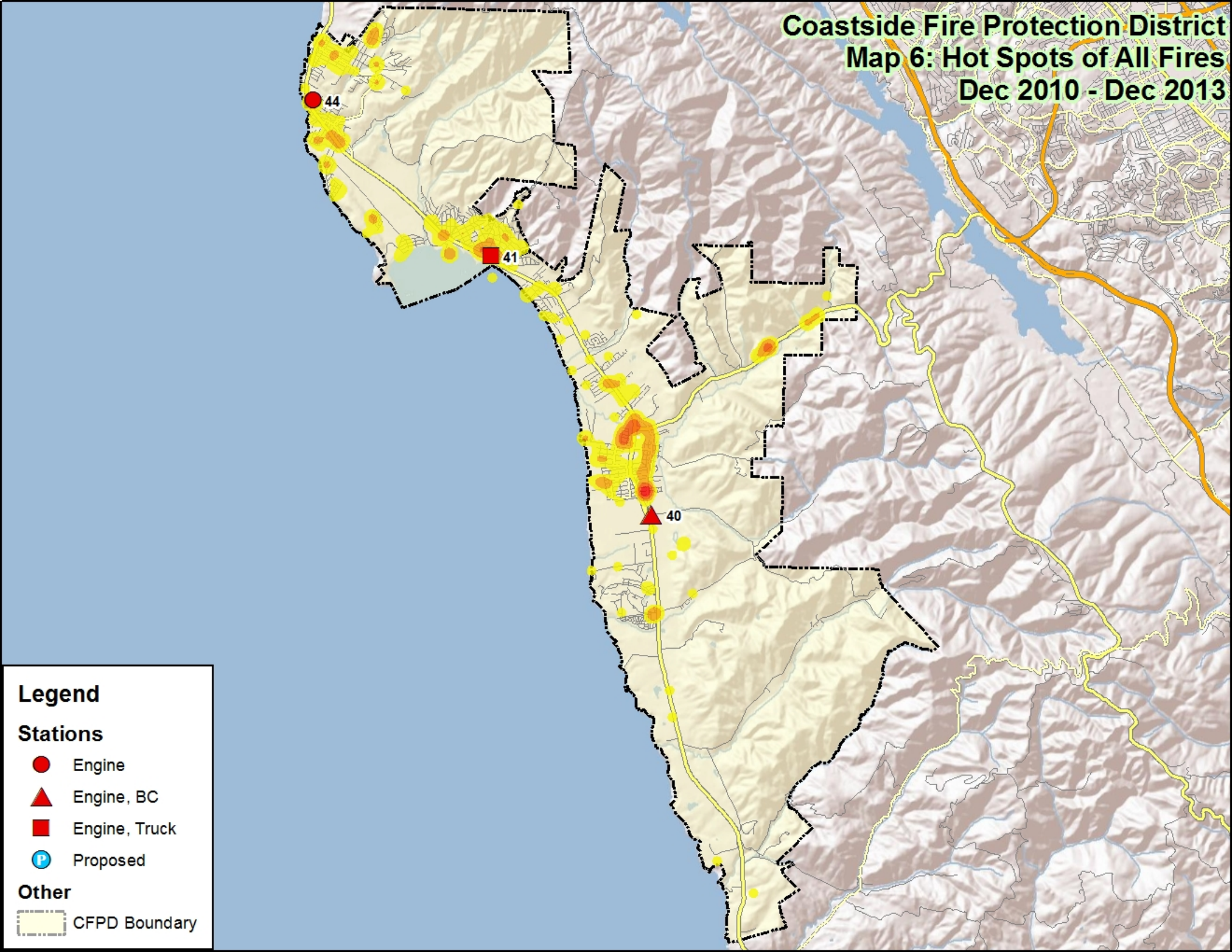


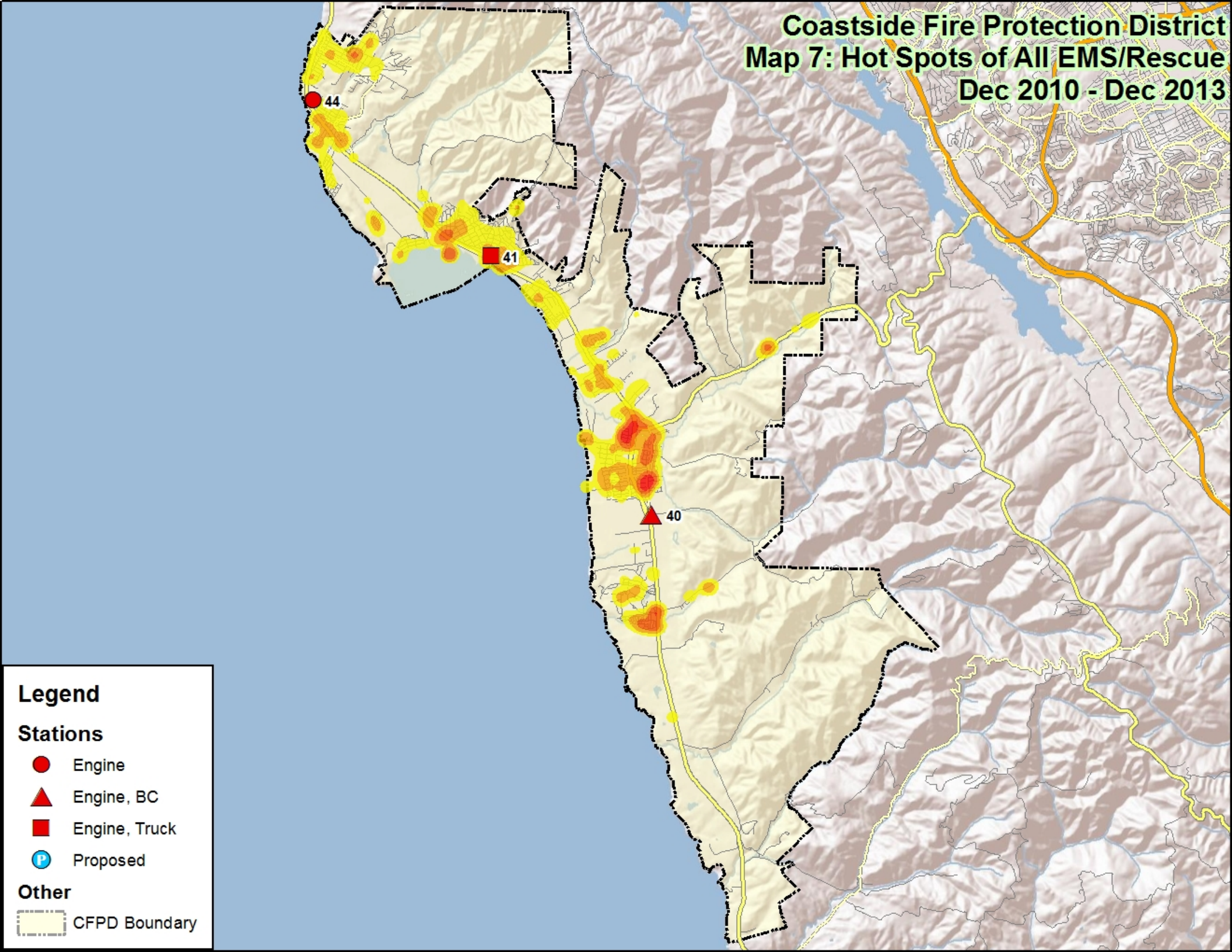

Coastside Fire Protection District
Map 2: All Incidents
Dec 2010 - Dec 2013
44
41
40
Legend
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

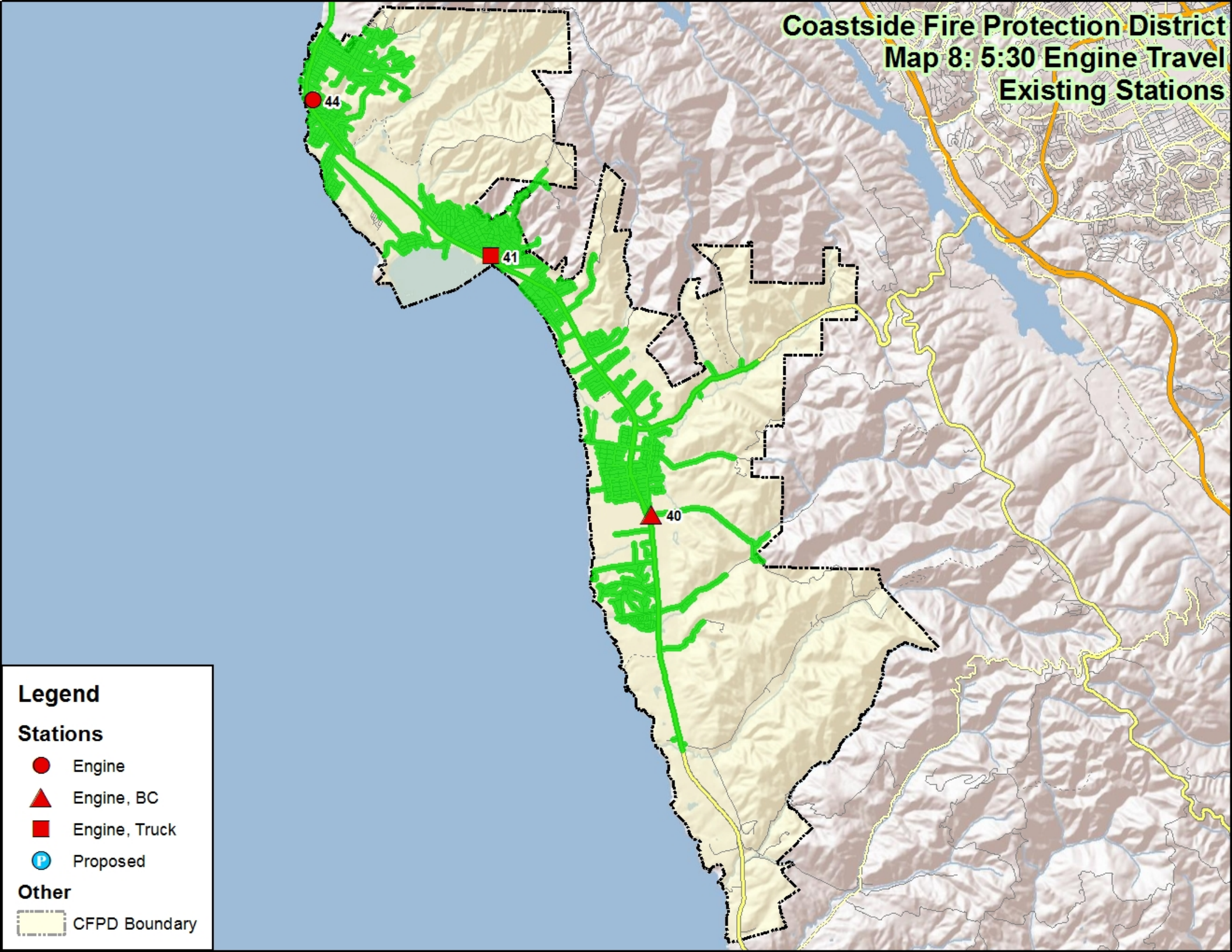

Coastside Fire Protection District
Map 3: All Fires
Dec 2010 - Dec 2013
44
41
40
Legend
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 4: All EMS/Rescue Incidents
Dec 2010 - Dec 2013
44
41
40
Legend
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

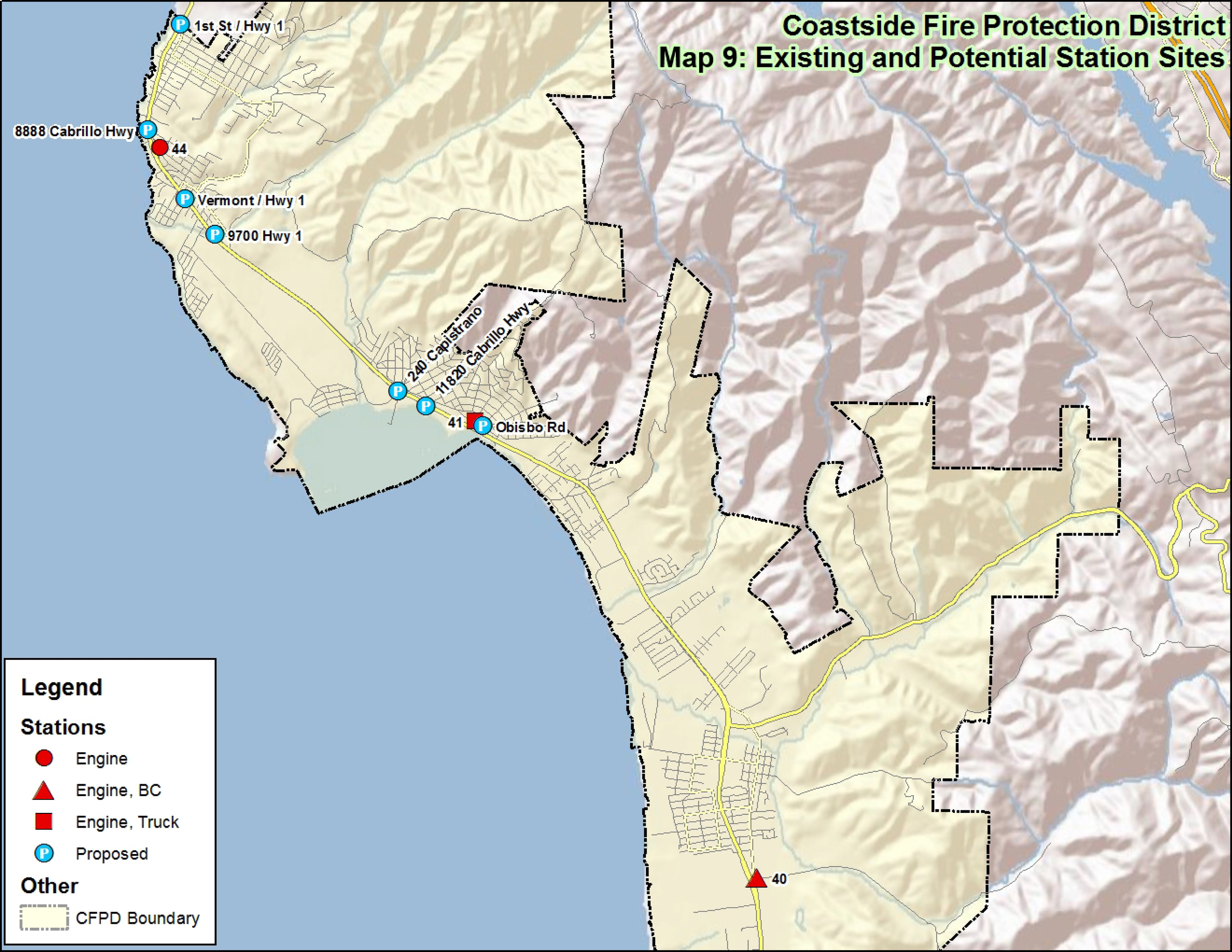

Coastside Fire Protection District
Map 5: Hot Spots of All Incidents
Dec 2010 - Dec 2013
44
41
40
Legend
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

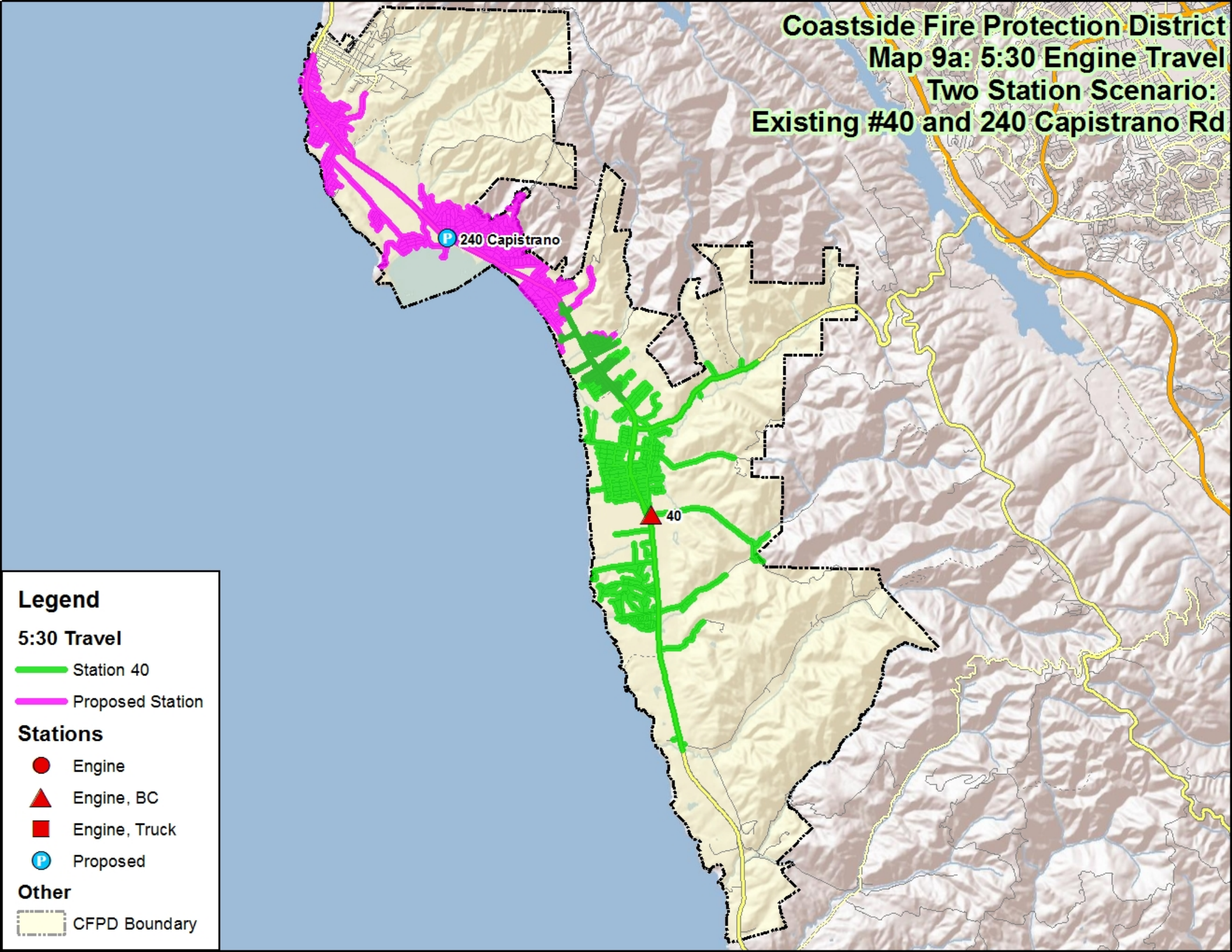

Coastside Fire Protection District
Map 6: Hot Spots of All Fires
Dec 2010 - Dec 2013
44
41
40
Legend
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

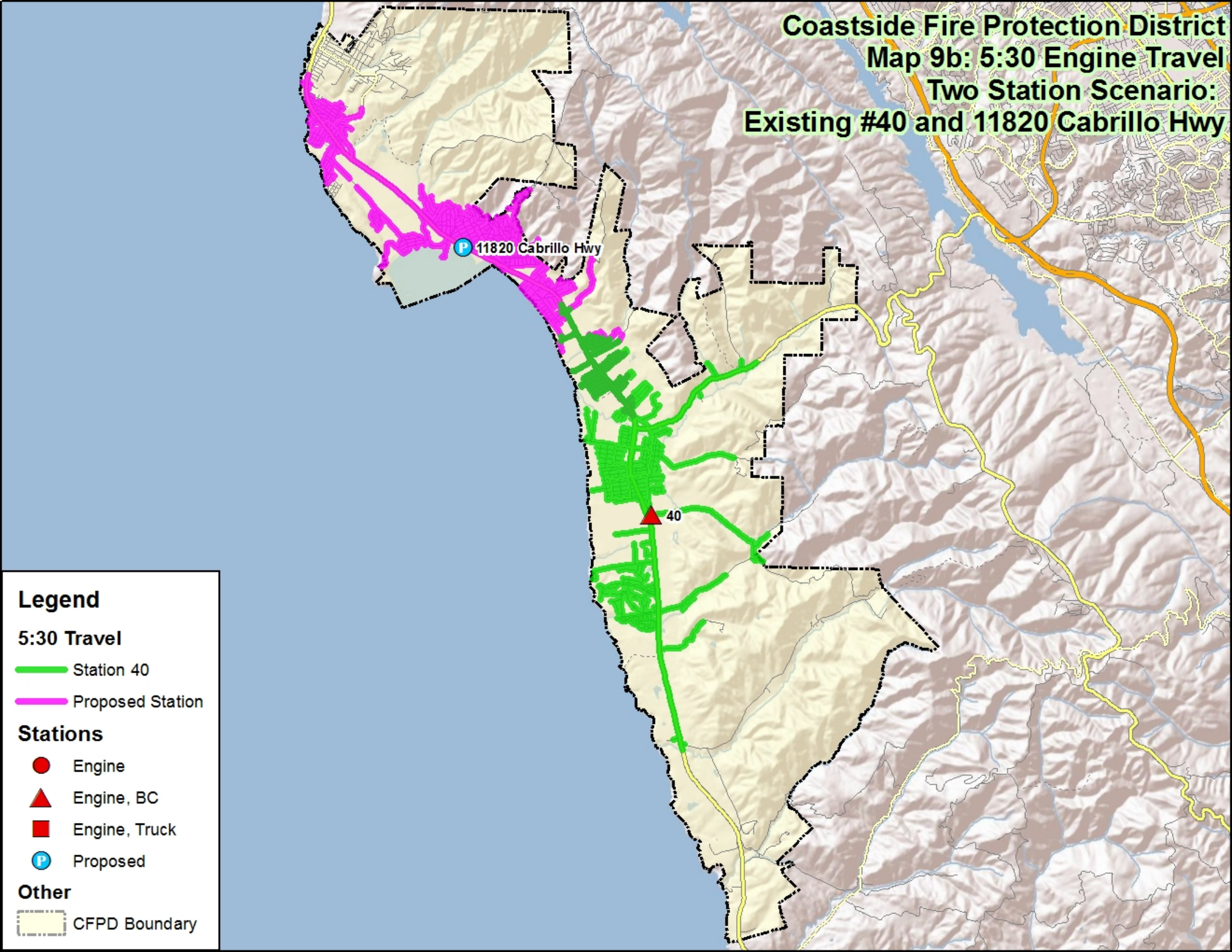

Coastside Fire Protection District
Map 7: Hot Spots of All EMS/Rescue
Dec 2010 - Dec 2013
44
41
40
Legend
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

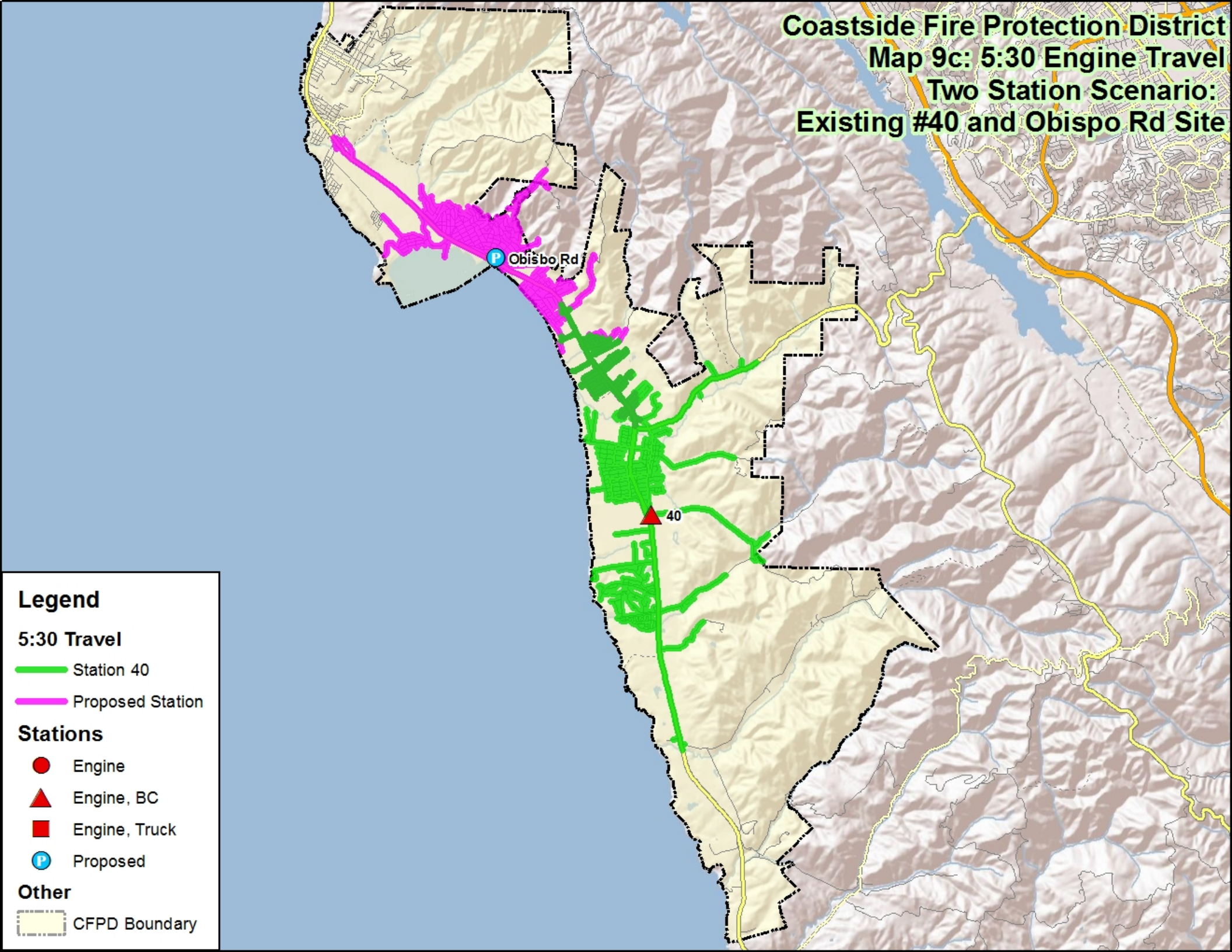

Coastside Fire Protection District
Map 8: 5:30 Engine Travel
Existing Stations
44
41
40
Legend
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

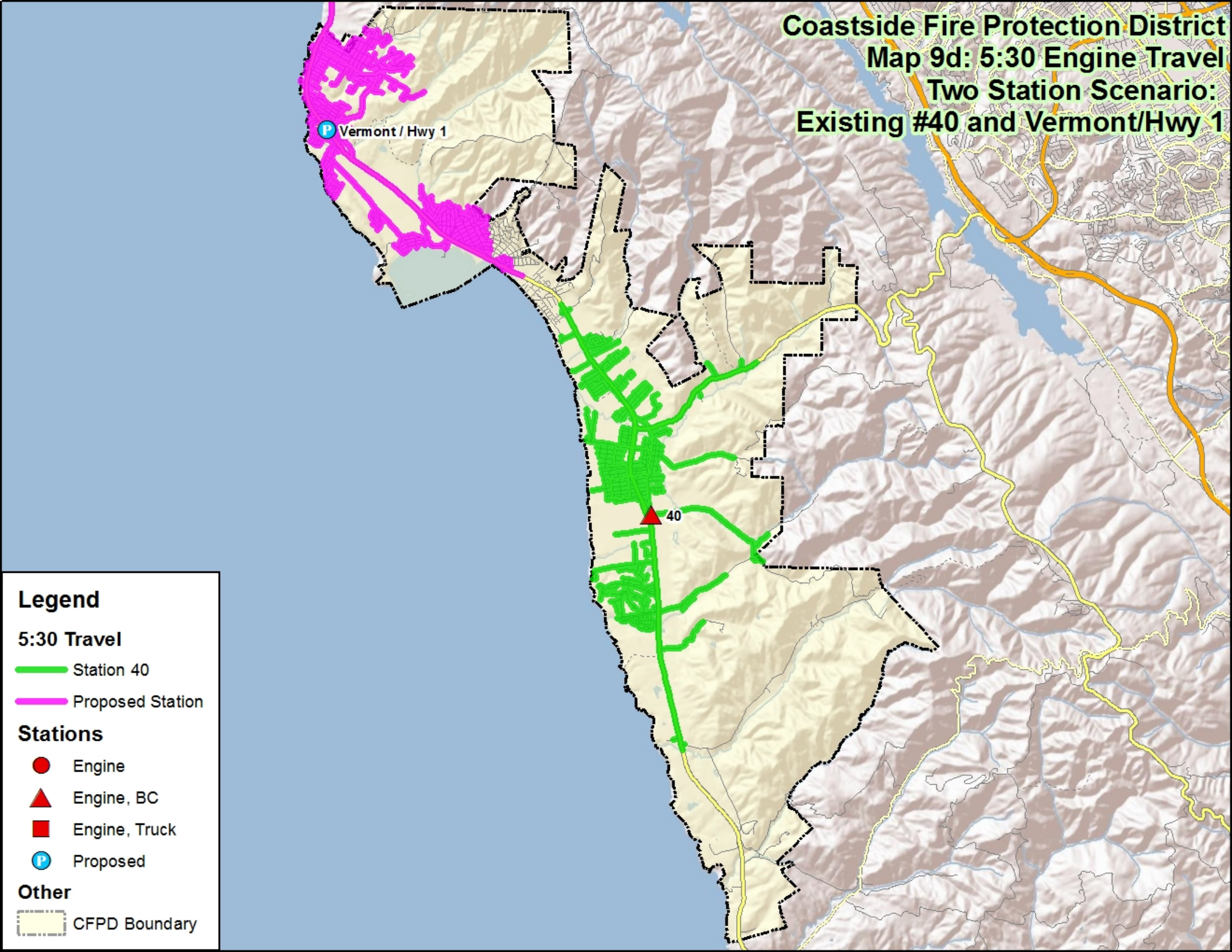
Coastside Fire Protection District
Map 9: Existing and Potential Station Sites

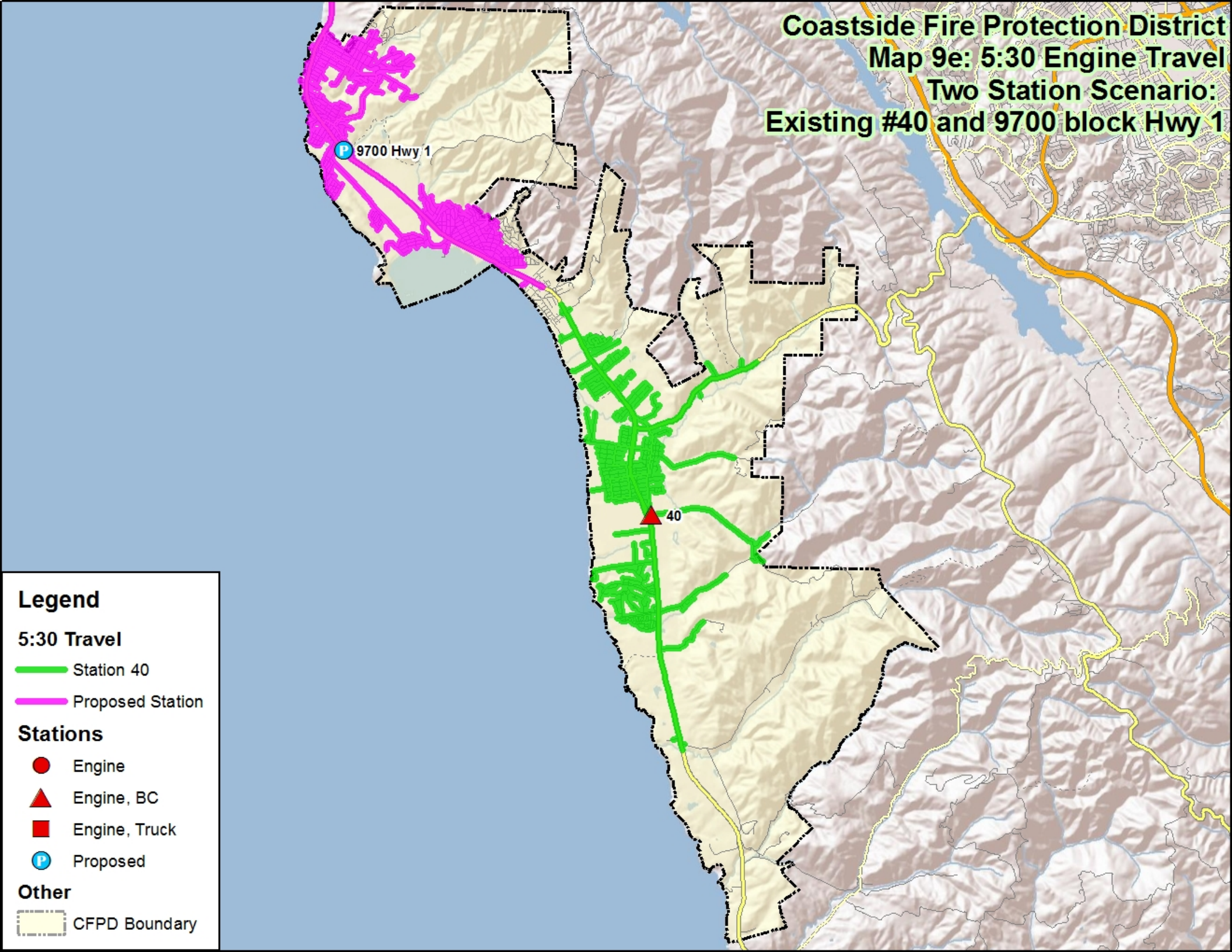


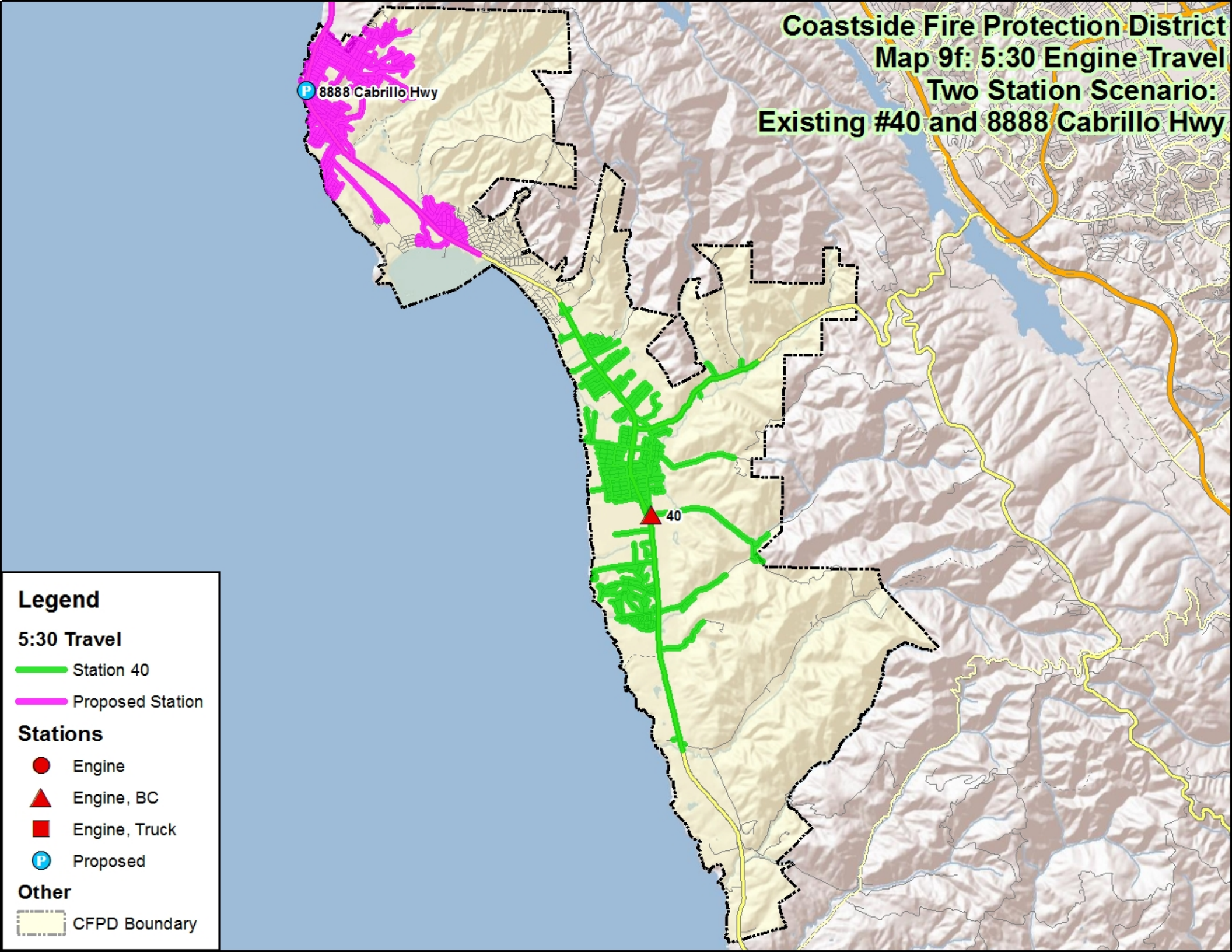

Coastside Fire Protection District
Map 9a: 5:30 Engine Travel
Two Station Scenario:
Existing #40 and 240 Capistrano Rd
240 Capistrano
40
Legend
5:30 Travel
Station 40
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

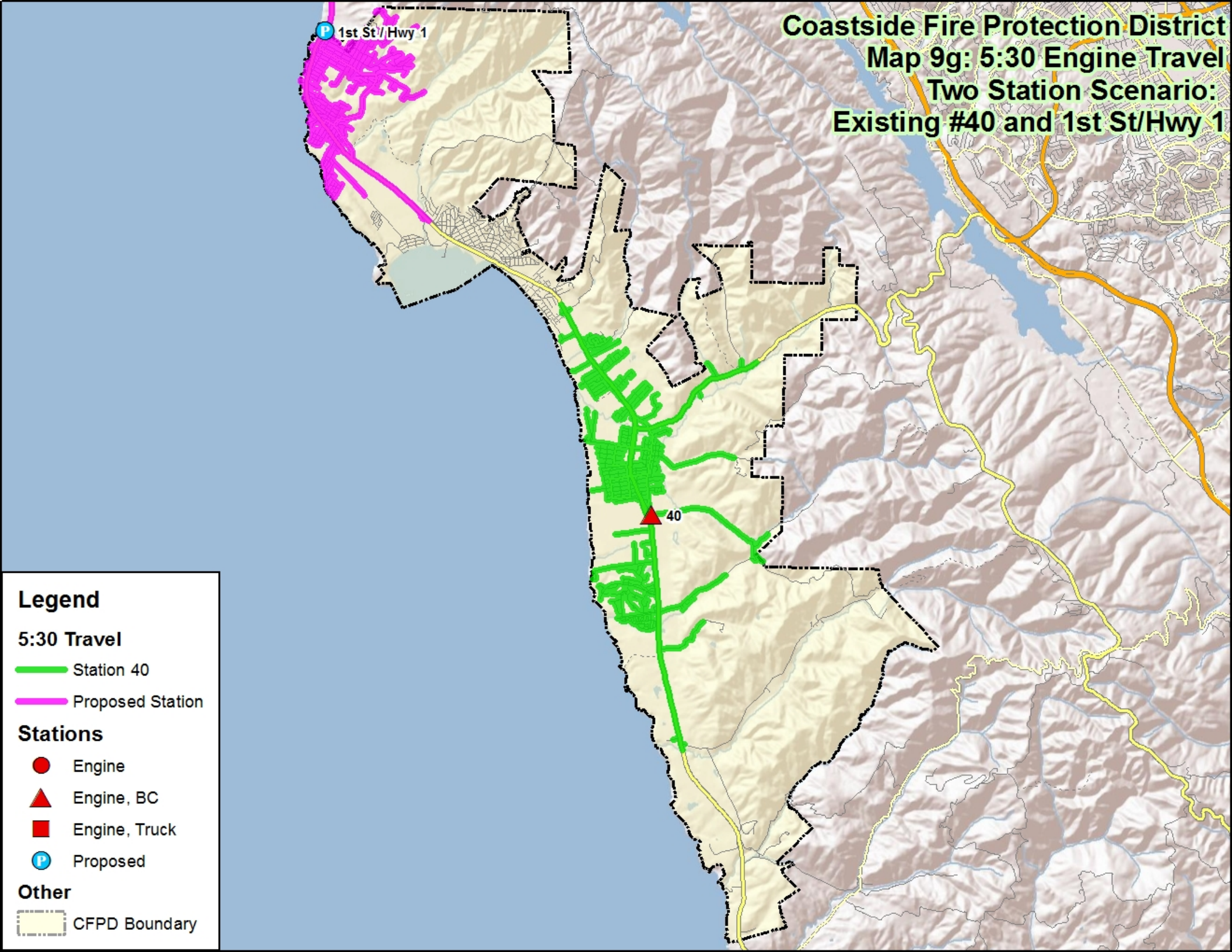

Coastside Fire Protection District
Map 9b: 5:30 Engine Travel
Two Station Scenario:
Existing #40 and 11820 Cabrillo Hwy
11820 Cabrillo Hwy
40
Legend
5:30 Travel
Station 40
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

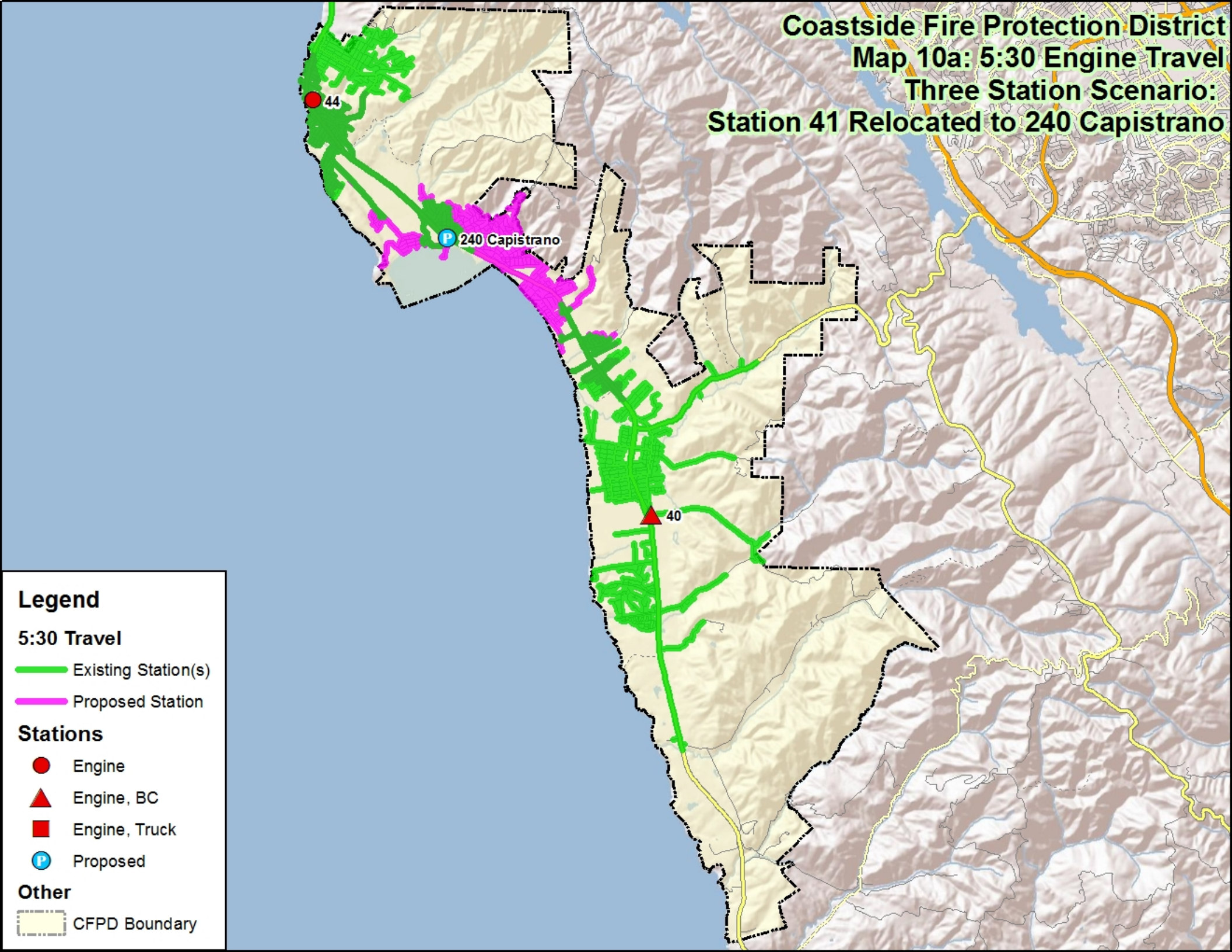

Coastside Fire Protection District
Map 9c: 5:30 Engine Travel
Two Station Scenario:
Existing #40 and Obispo Rd Site
Obispo Rd
40
Legend
5:30 Travel
Station 40
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

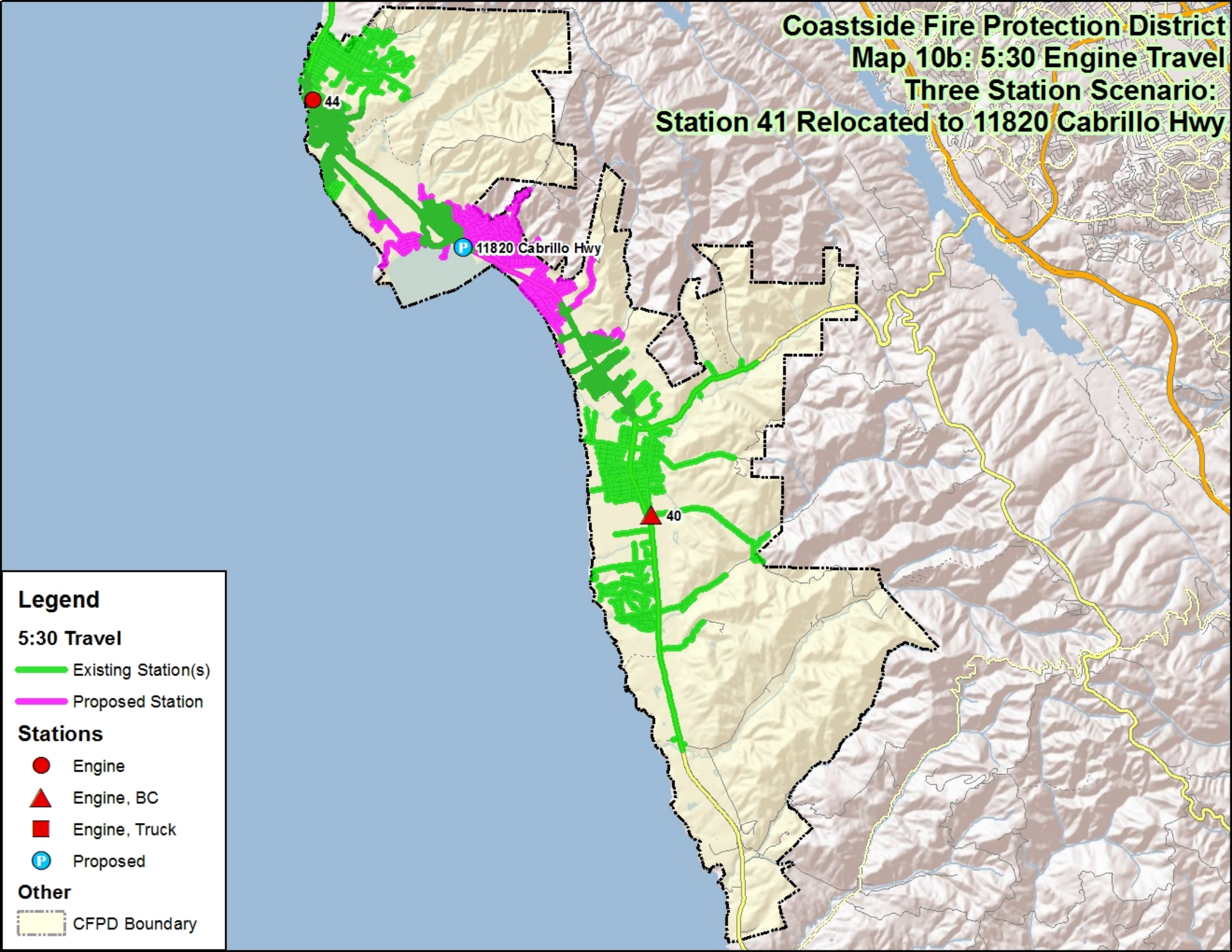

Coastside Fire Protection District
Map 9d: 5:30 Engine Travel
Two Station Scenario:
Existing #40 and Vermont/Hwy 1
Vermont / Hwy 1
40
Legend
5:30 Travel
Station 40
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

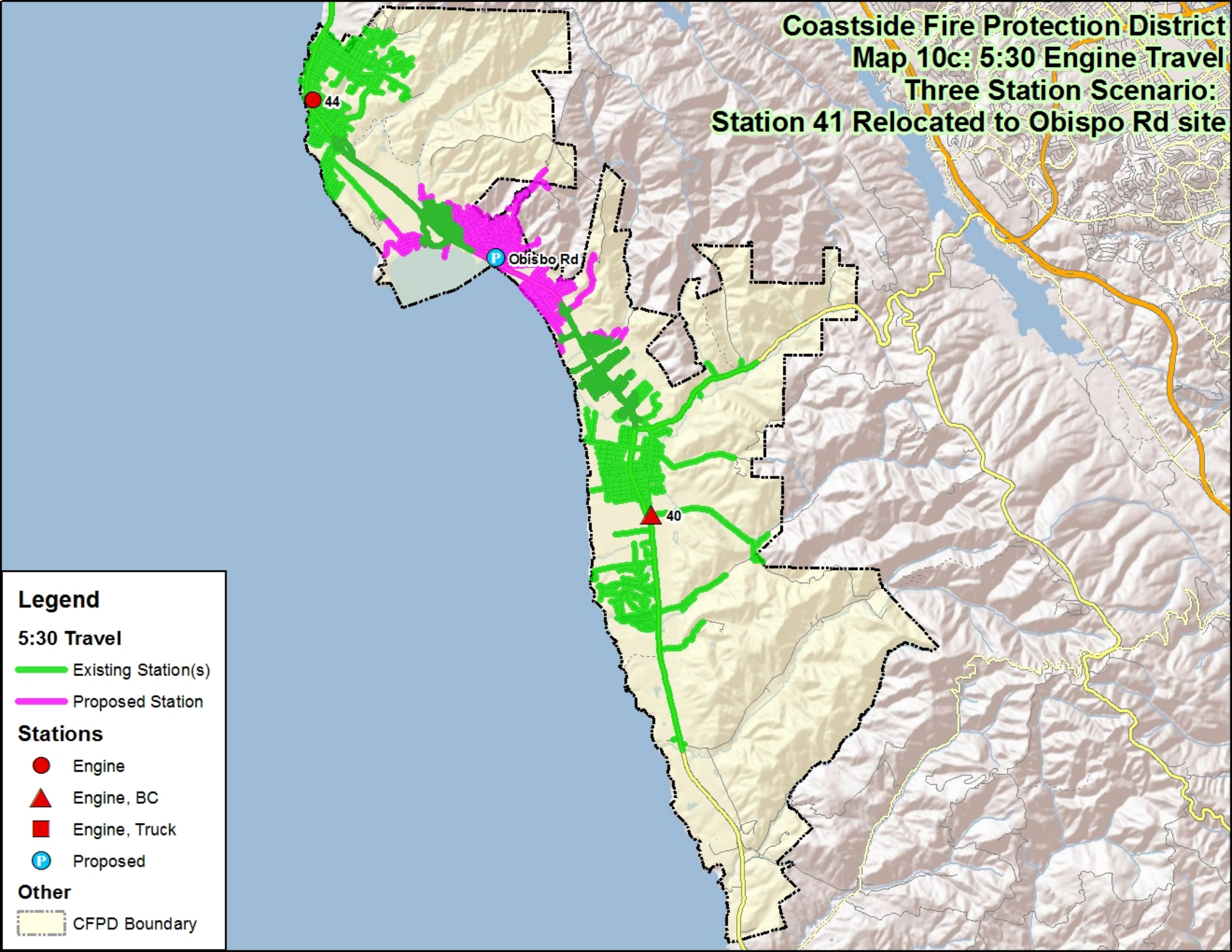

Coastside Fire Protection District
Map 9e: 5:30 Engine Travel
Two Station Scenario:
Existing #40 and 9700 block Hwy 1
9700 Hwy 1
40
Legend
5:30 Travel
Station 40
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

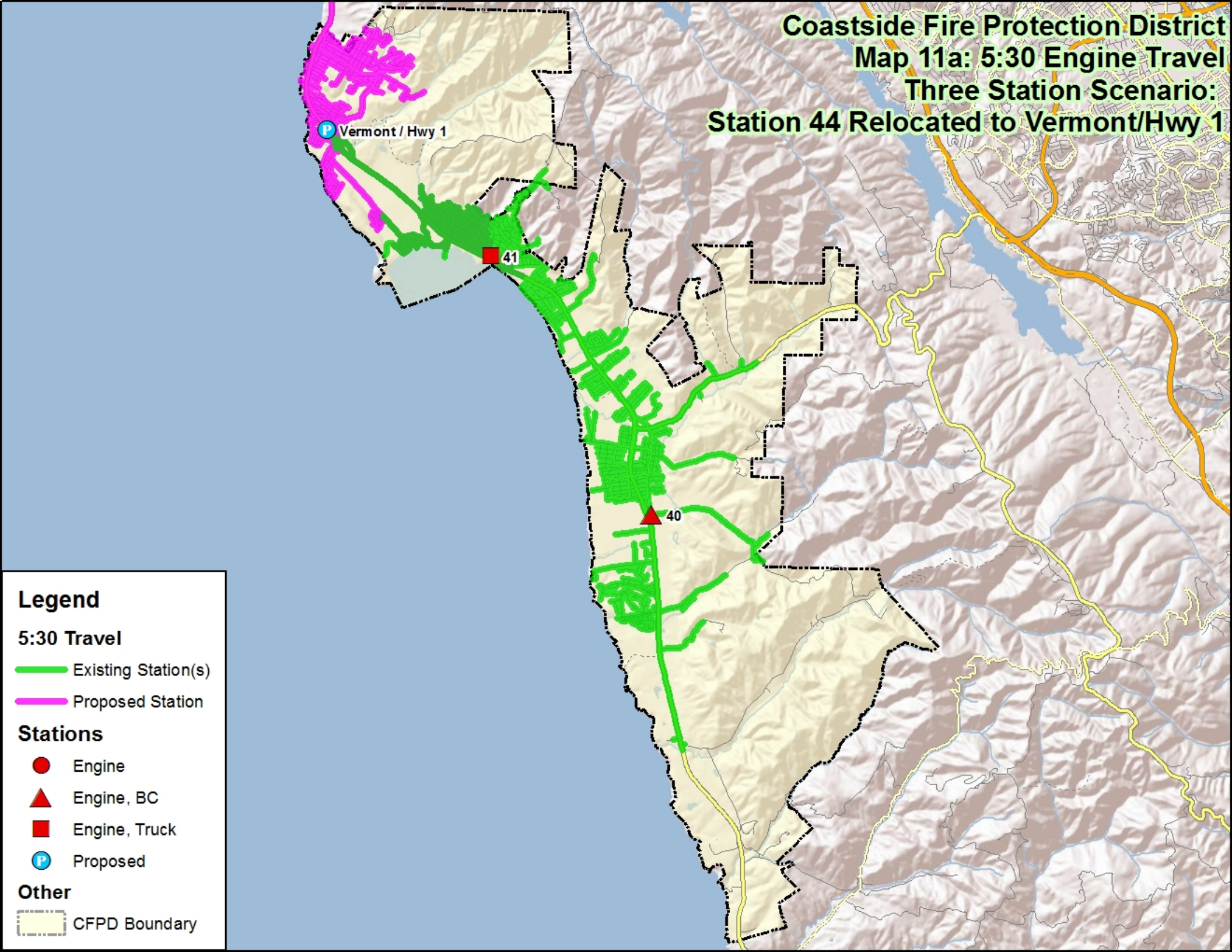

Coastside Fire Protection District
Map 9f: 5:30 Engine Travel
Two Station Scenario:
Existing #40 and 8888 Cabrillo Hwy
8888 Cabrillo Hwy
40
Legend
5:30 Travel
Station 40
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

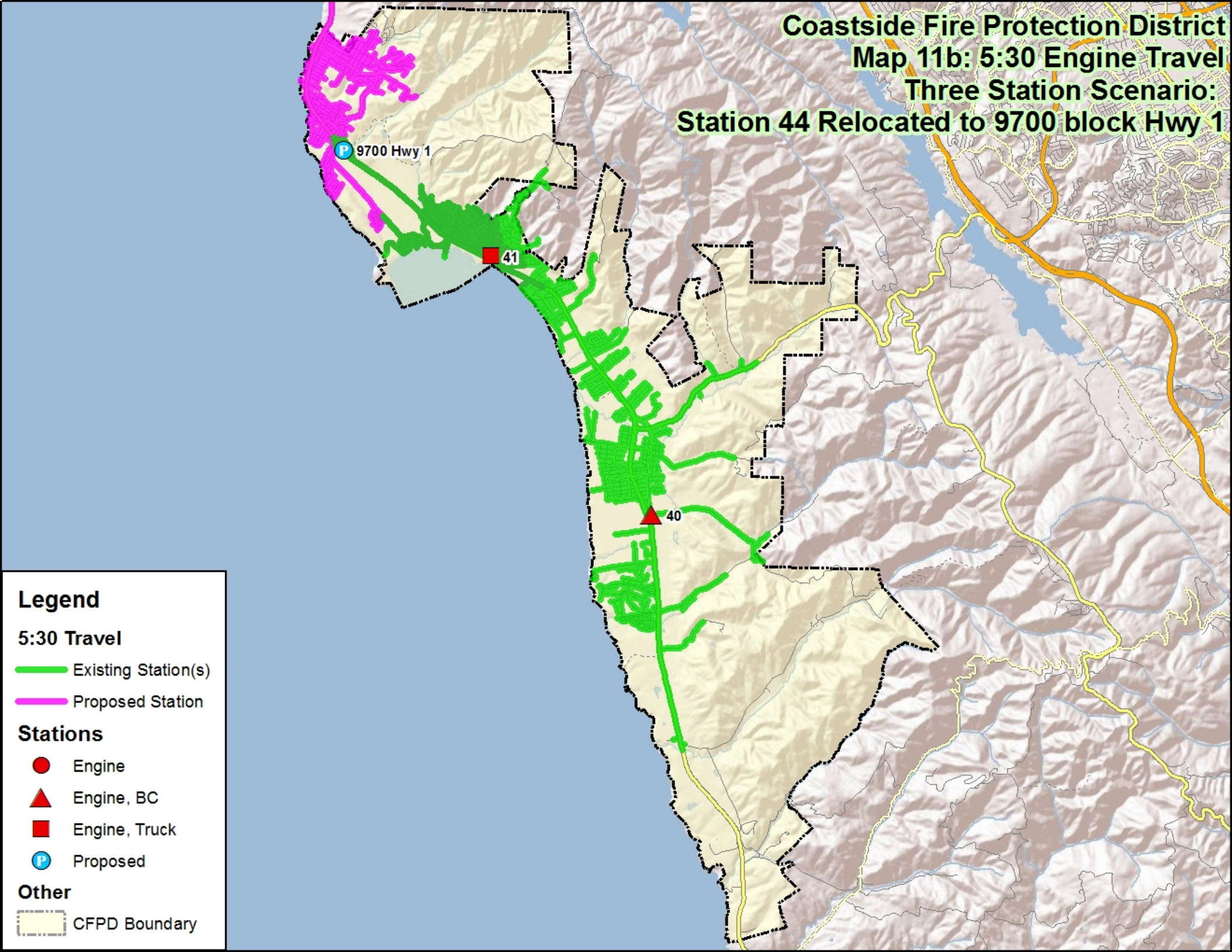

Coastside Fire Protection District
Map 9g: 5:30 Engine Travel
Two Station Scenario:
Existing #40 and 1st St/Hwy 1
1st St / Hwy 1
40
Legend
5:30 Travel
Station 40
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

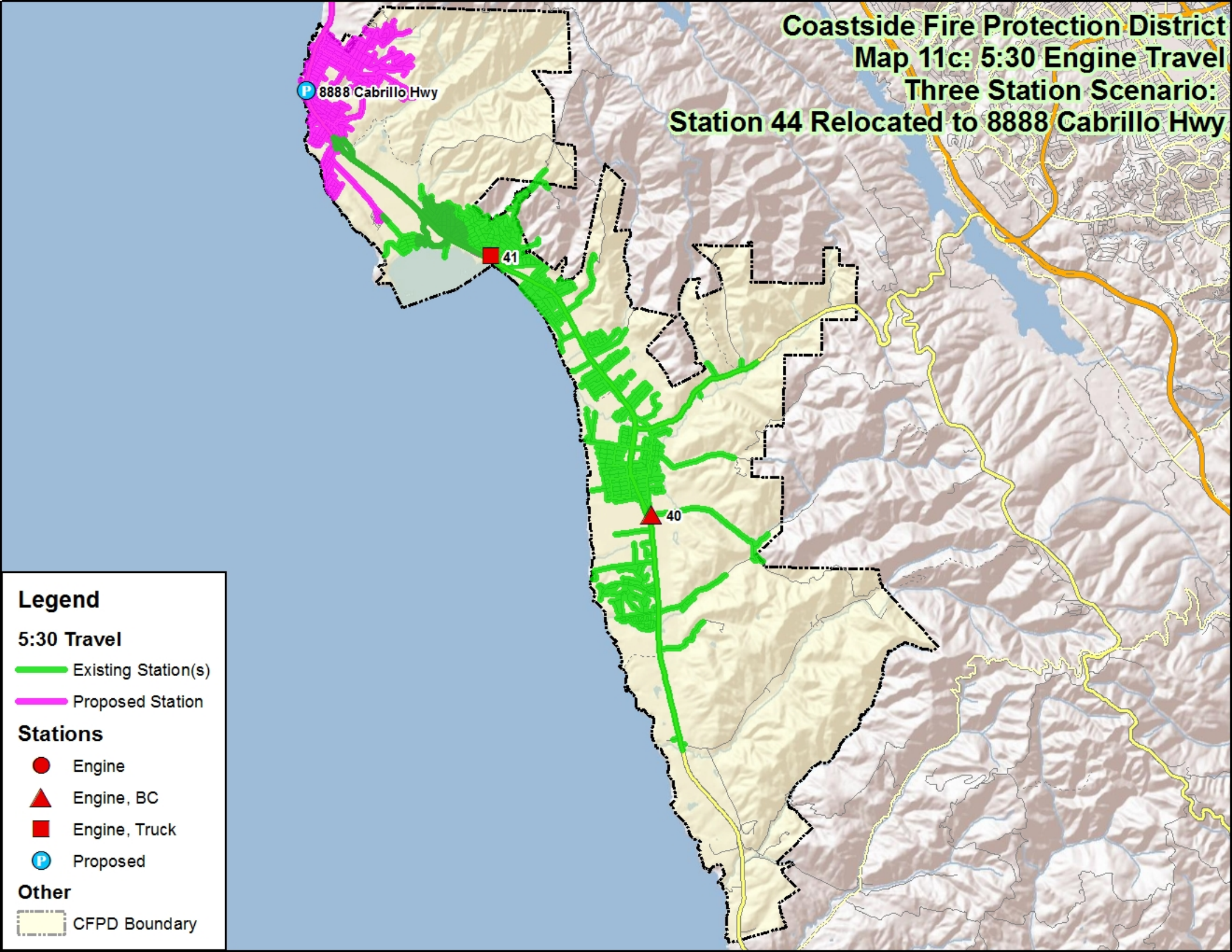

Coastside Fire Protection District
Map 10a: 5:30 Engine Travel
Three Station Scenario:
Station 41 Relocated to 240 Capistrano
44
240 Capistrano
40
Legend
5:30 Travel
Existing Station(s)
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

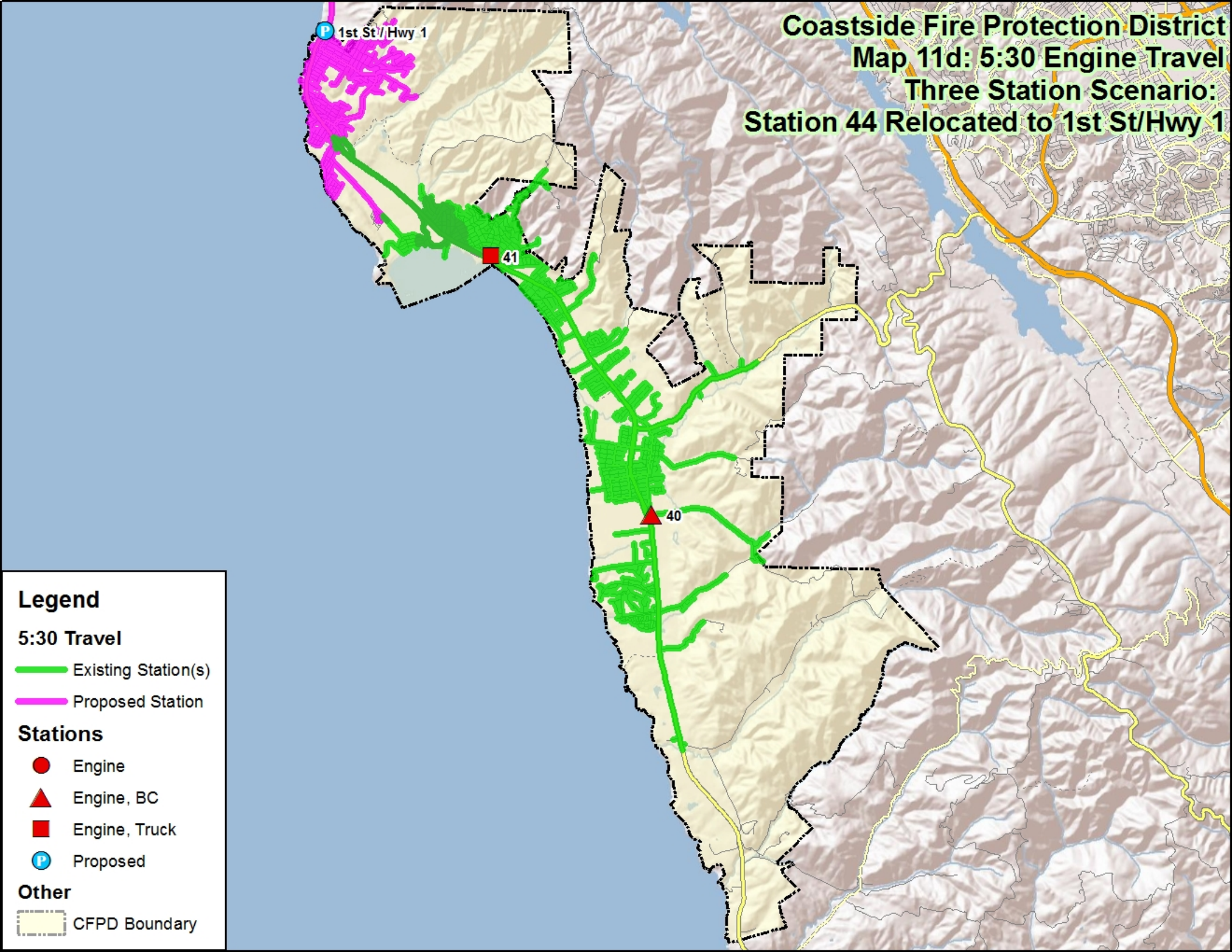

Coastside Fire Protection District
Map 10b: 5:30 Engine Travel
Three Station Scenario:
Station 41 Relocated to 11820 Cabrillo Hwy
44
11820 Cabrillo Hwy
40
Legend
5:30 Travel
Existing Station(s)
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

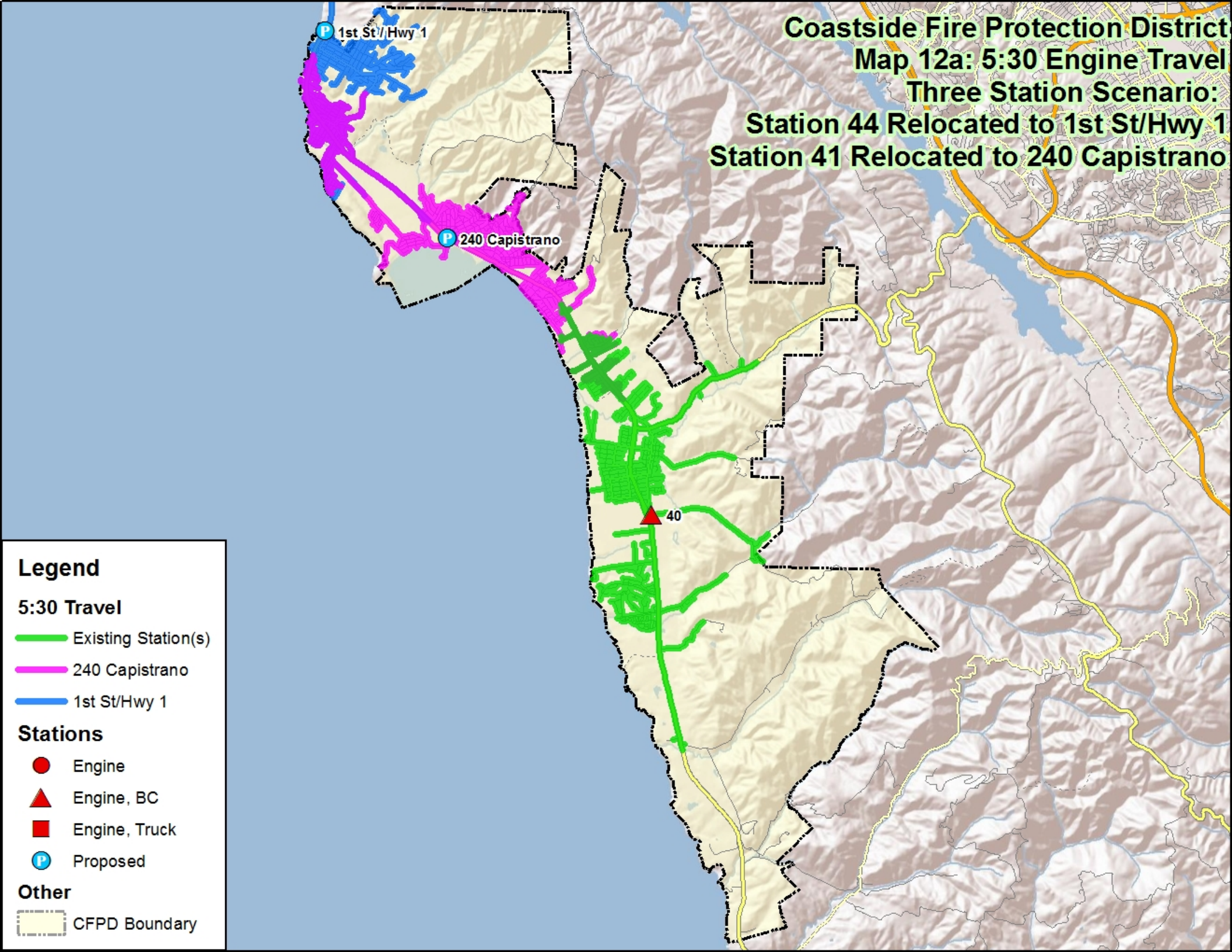

Coastside Fire Protection District
Map 10c: 5:30 Engine Travel
Three Station Scenario:
Station 41 Relocated to Obispo Rd site
44
Obispo Rd
40
Legend
5:30 Travel
Existing Station(s)
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

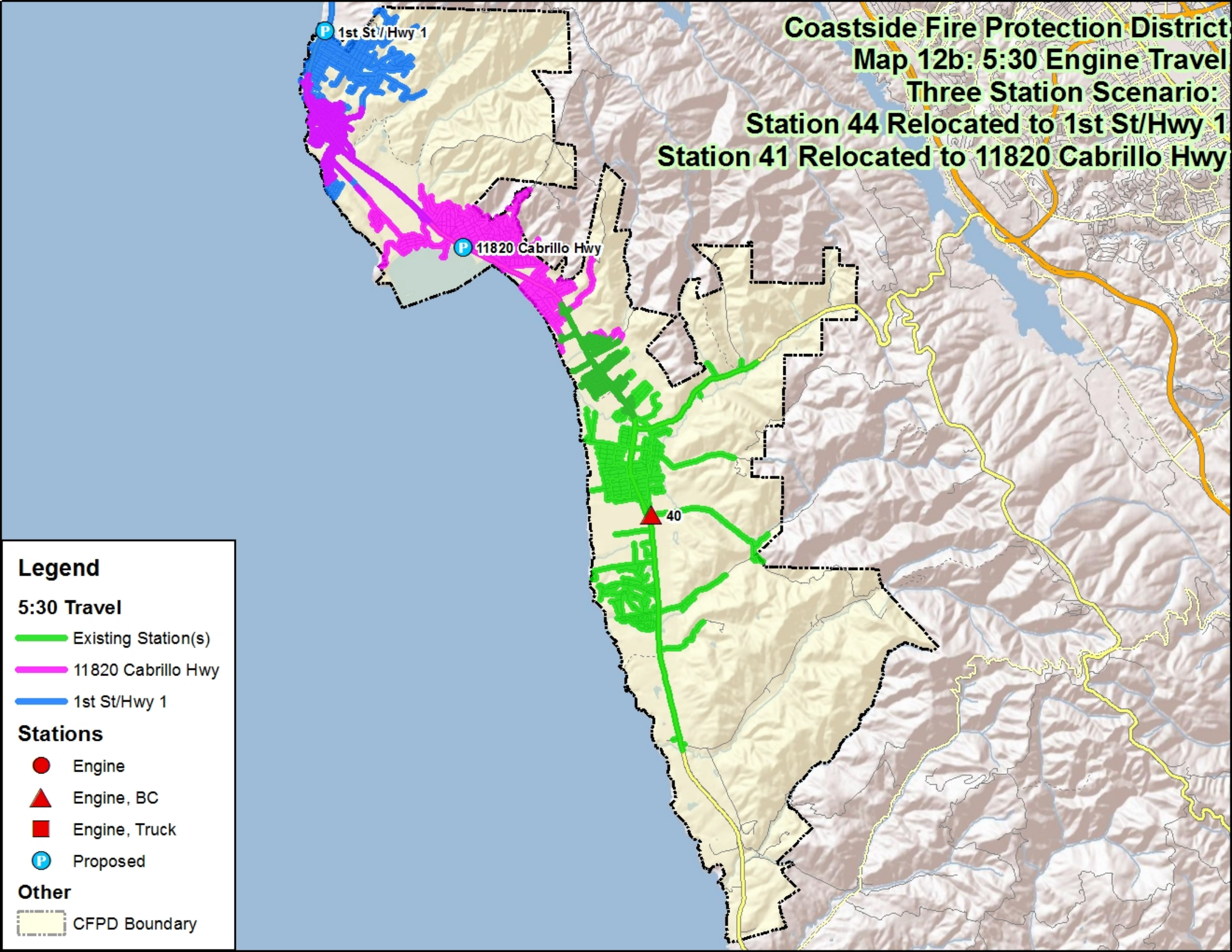

Coastside Fire Protection District
Map 11a: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to Vermont/Hwy 1
Vermont / Hwy 1
41
40
Legend
5:30 Travel
Existing Station(s)
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

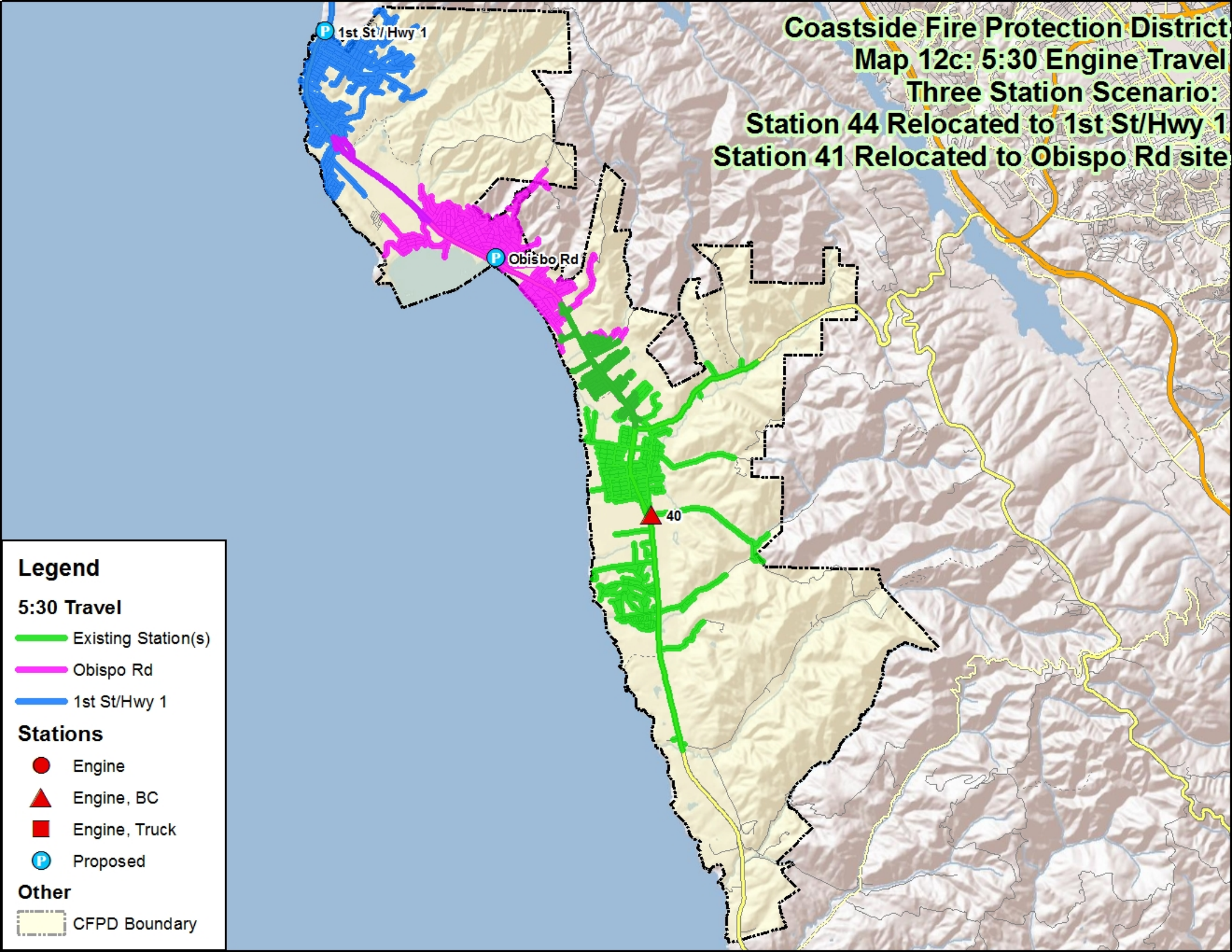

Coastside Fire Protection District
Map 11b: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 9700 block Hwy 1
9700 Hwy 1
41
40
Legend
5:30 Travel
Existing Station(s)
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

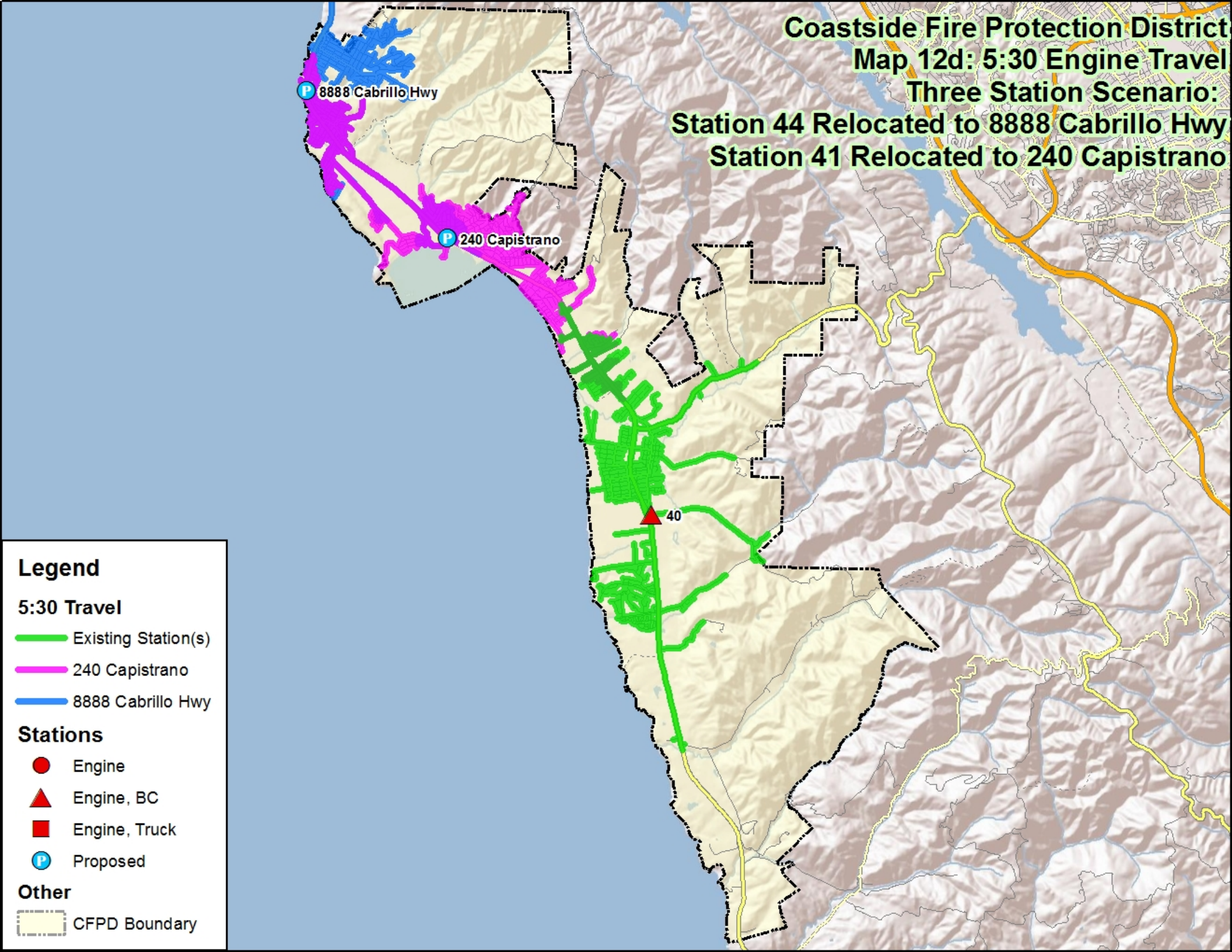

Coastside Fire Protection District
Map 11c: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 8888 Cabrillo Hwy
8888 Cabrillo Hwy
41
40
Legend
5:30 Travel
Existing Station(s)
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

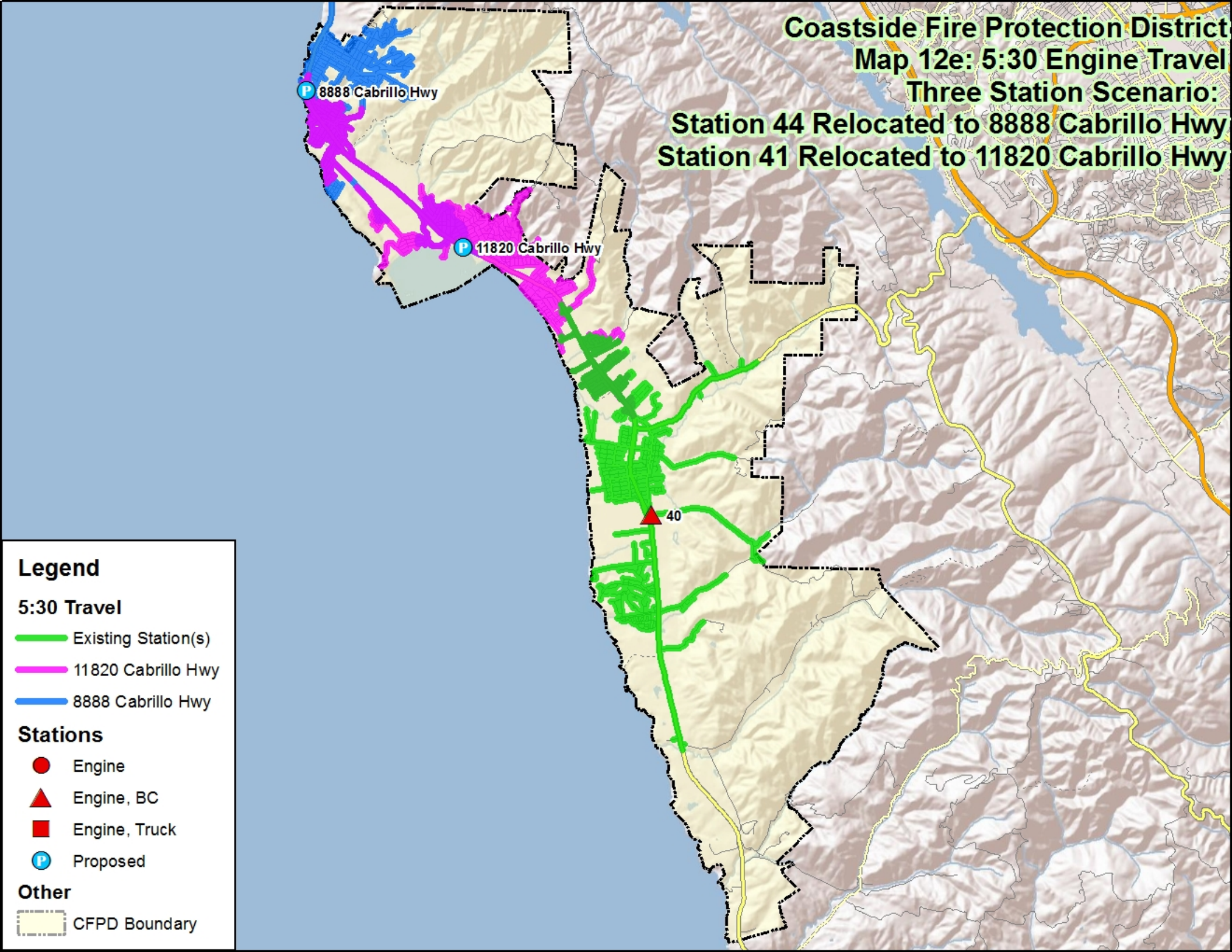

Coastside Fire Protection District
Map 11d: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 1st St/Hwy 1
1st St / Hwy 1
41
40
Legend
5:30 Travel
Existing Station(s)
Proposed Station
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

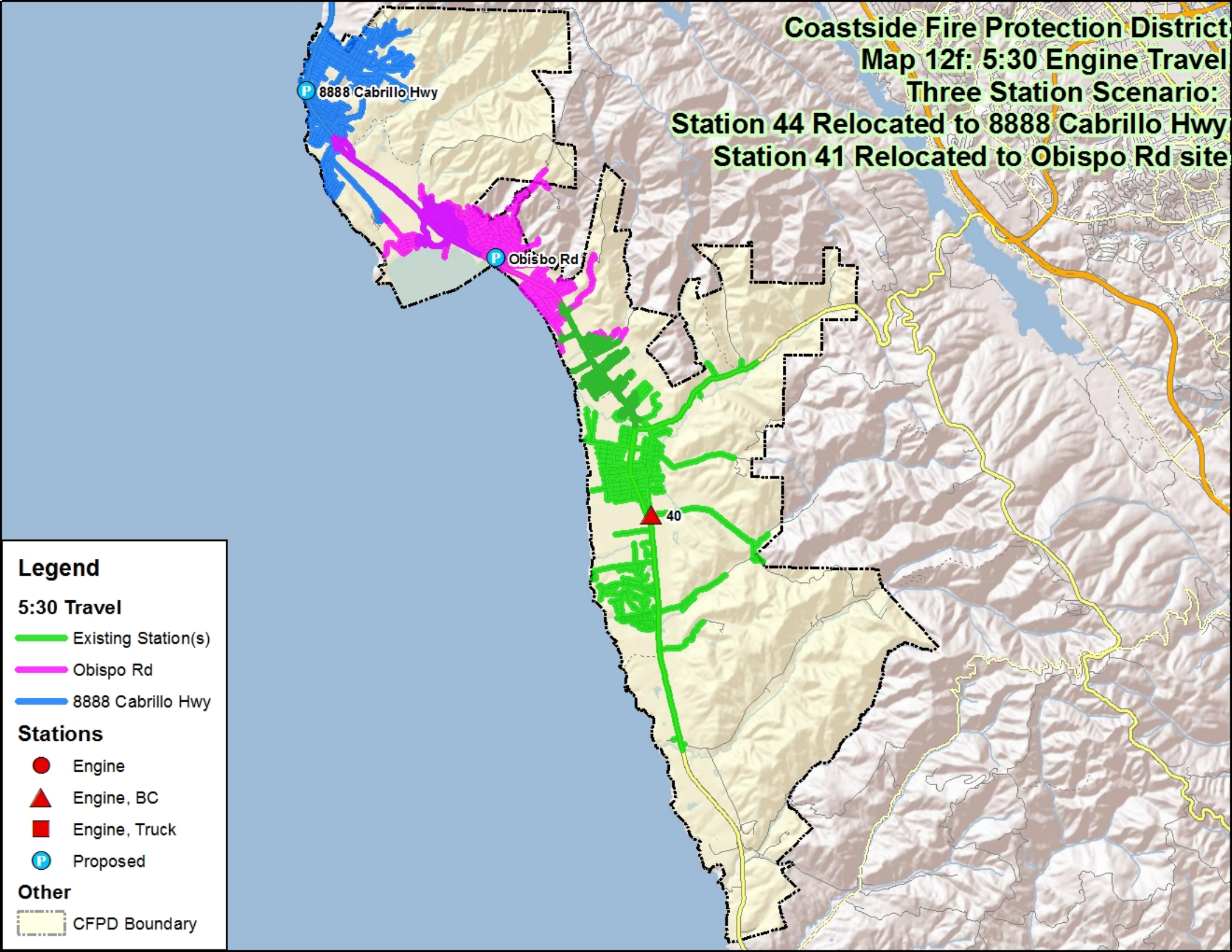

Coastside Fire Protection District
Map 12a: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 1st St/Hwy 1
Station 41 Relocated to 240 Capistrano
1st St / Hwy 1
240 Capistrano
40
Legend
5:30 Travel
Existing Station(s)
240 Capistrano
1st St/Hwy 1
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

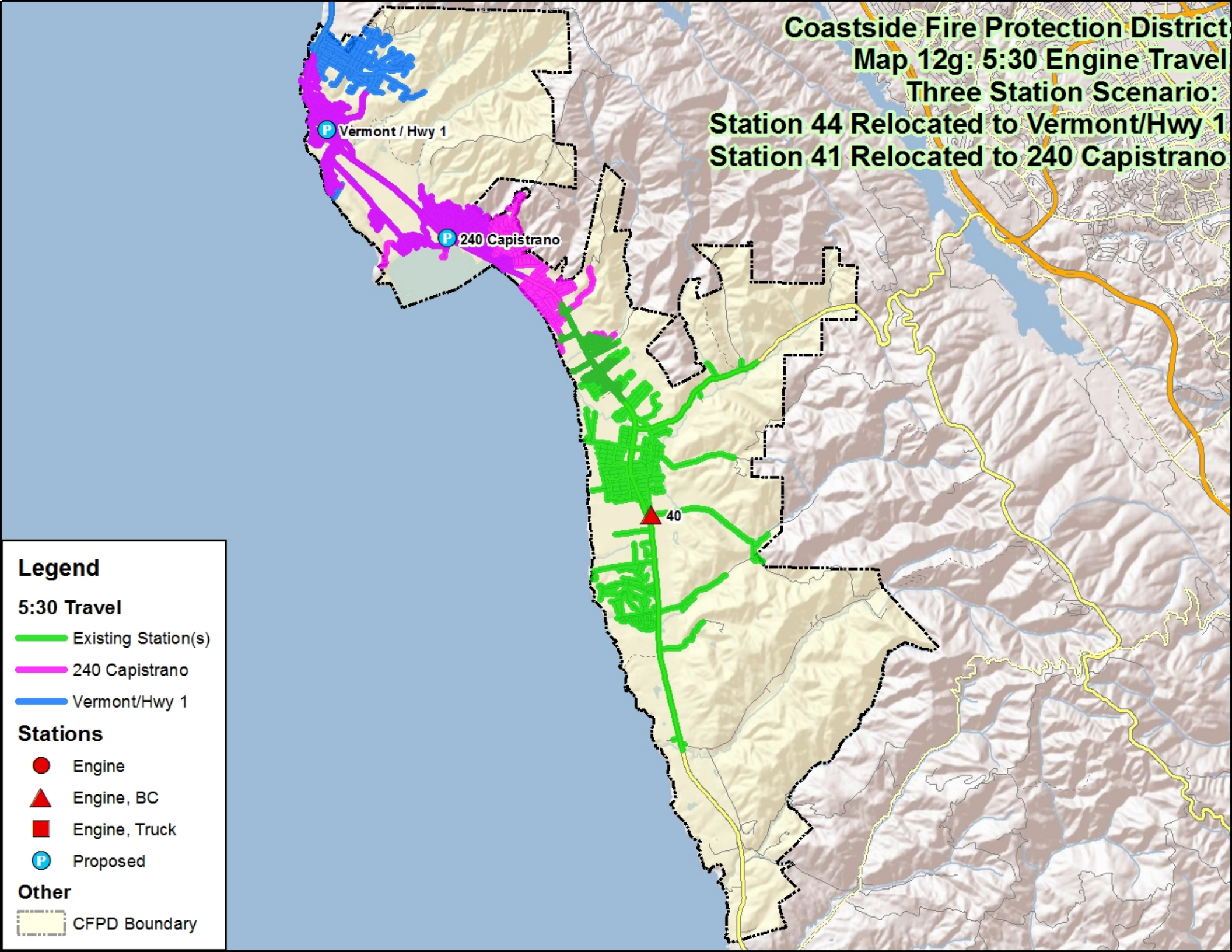

Coastside Fire Protection District
Map 12b: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 1st St/Hwy 1
Station 41 Relocated to 11820 Cabrillo Hwy
1st St / Hwy 1
11820 Cabrillo Hwy
40
Legend
5:30 Travel
Existing Station(s)
11820 Cabrillo Hwy
1st St/Hwy 1
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

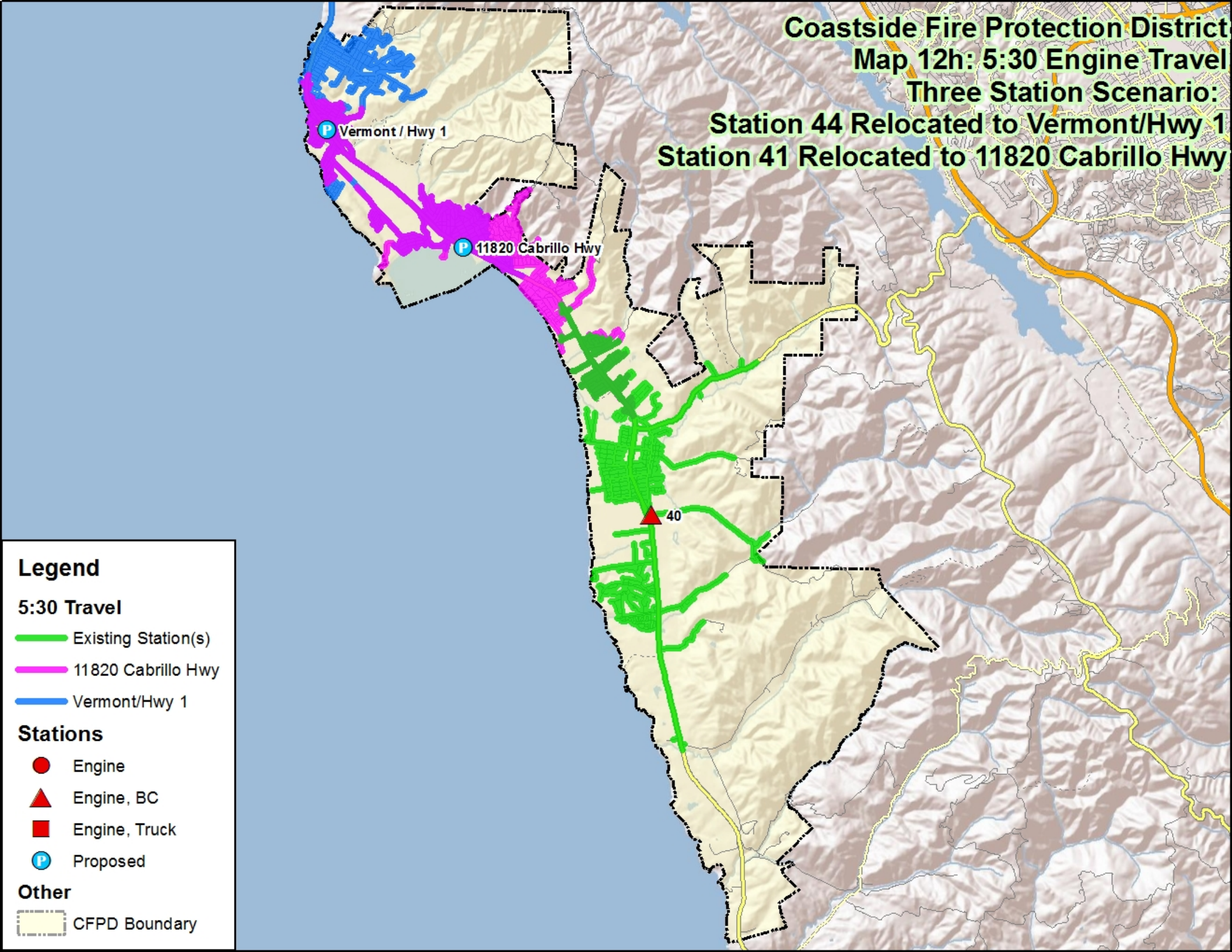

Coastside Fire Protection District
Map 12c: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 1st St/Hwy 1
Station 41 Relocated to Obispo Rd site
1st St / Hwy 1
Obispo Rd
40
Legend
5:30 Travel
Existing Station(s)
Obispo Rd
1st St/Hwy 1
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 12d: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 8888 Cabrillo Hwy
Station 41 Relocated to 240 Capistrano
8888 Cabrillo Hwy
240 Capistrano
40
Legend
5:30 Travel
Existing Station(s)
240 Capistrano
8888 Cabrillo Hwy
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 12e: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 8888 Cabrillo Hwy
Station 41 Relocated to 11820 Cabrillo Hwy
8888 Cabrillo Hwy
11820 Cabrillo Hwy
40
Legend
5:30 Travel
Existing Station(s)
11820 Cabrillo Hwy
8888 Cabrillo Hwy
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 12f: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 8888 Cabrillo Hwy
Station 41 Relocated to Obispo Rd site
8888 Cabrillo Hwy
Obispo Rd
40
Legend
5:30 Travel
Existing Station(s)
Obispo Rd
8888 Cabrillo Hwy
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 12g: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to Vermont/Hwy 1
Station 41 Relocated to 240 Capistrano
Vermont / Hwy 1
240 Capistrano
40
Legend
5:30 Travel
Existing Station(s)
240 Capistrano
Vermont/Hwy 1
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 12h: 5:30 Engine Travel
Three Station Scenario:
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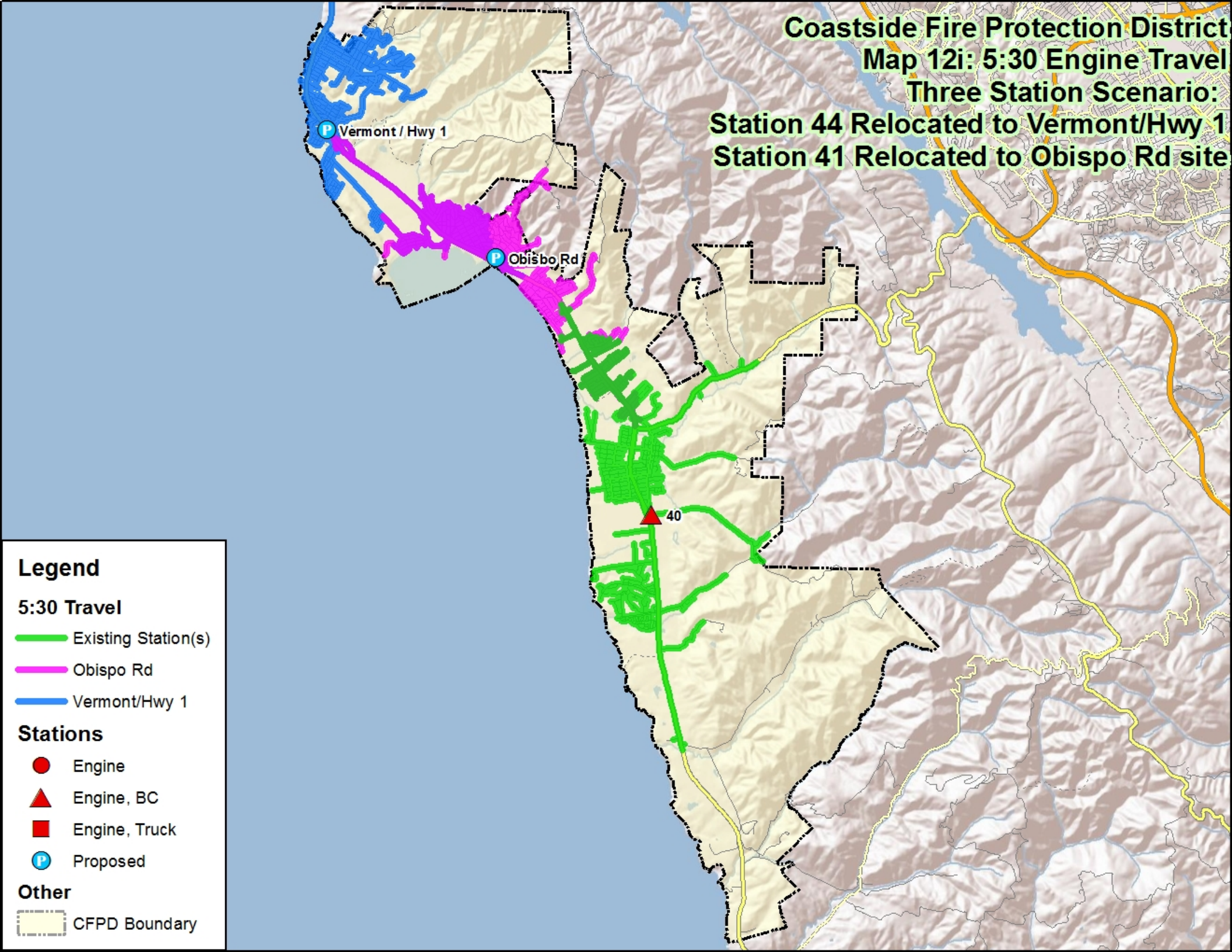
Station 41 Relocated to 11820 Cabrillo Hwy
Vermont / Hwy 1
11820 Cabrillo Hwy
40
Legend
5:30 Travel
Existing Station(s)
11820 Cabrillo Hwy
Vermont/Hwy 1
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 12i: 5:30 Engine Travel
Three Station Scenario:
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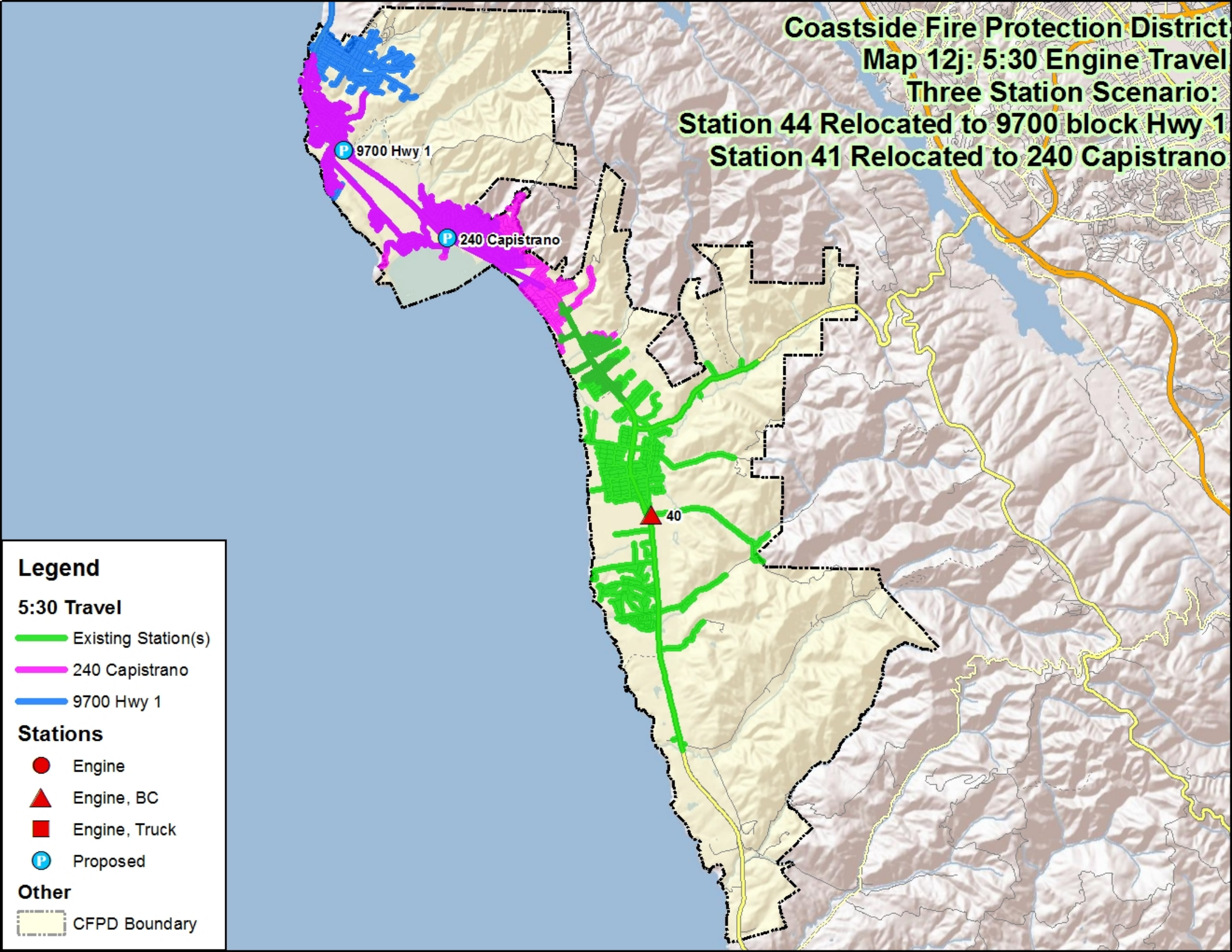
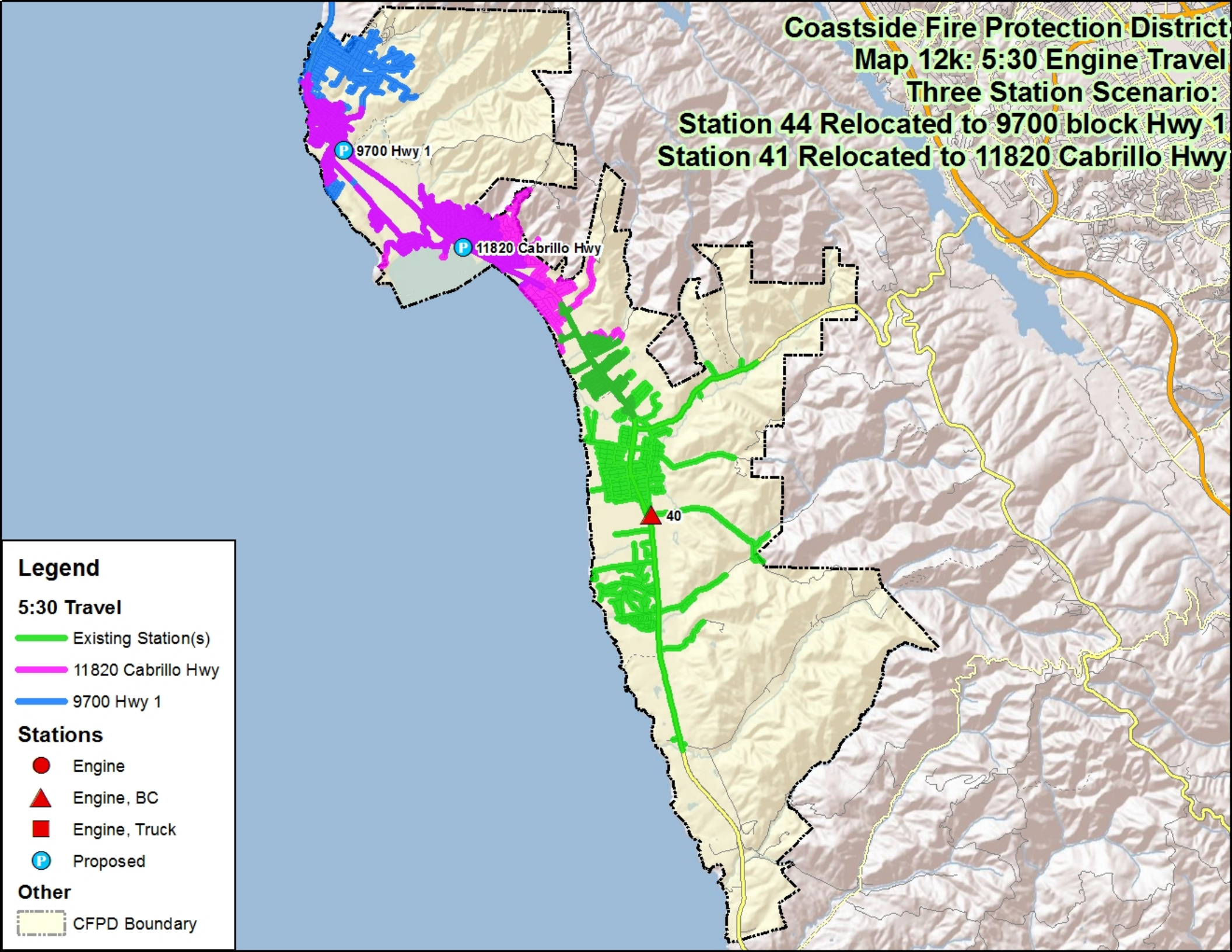
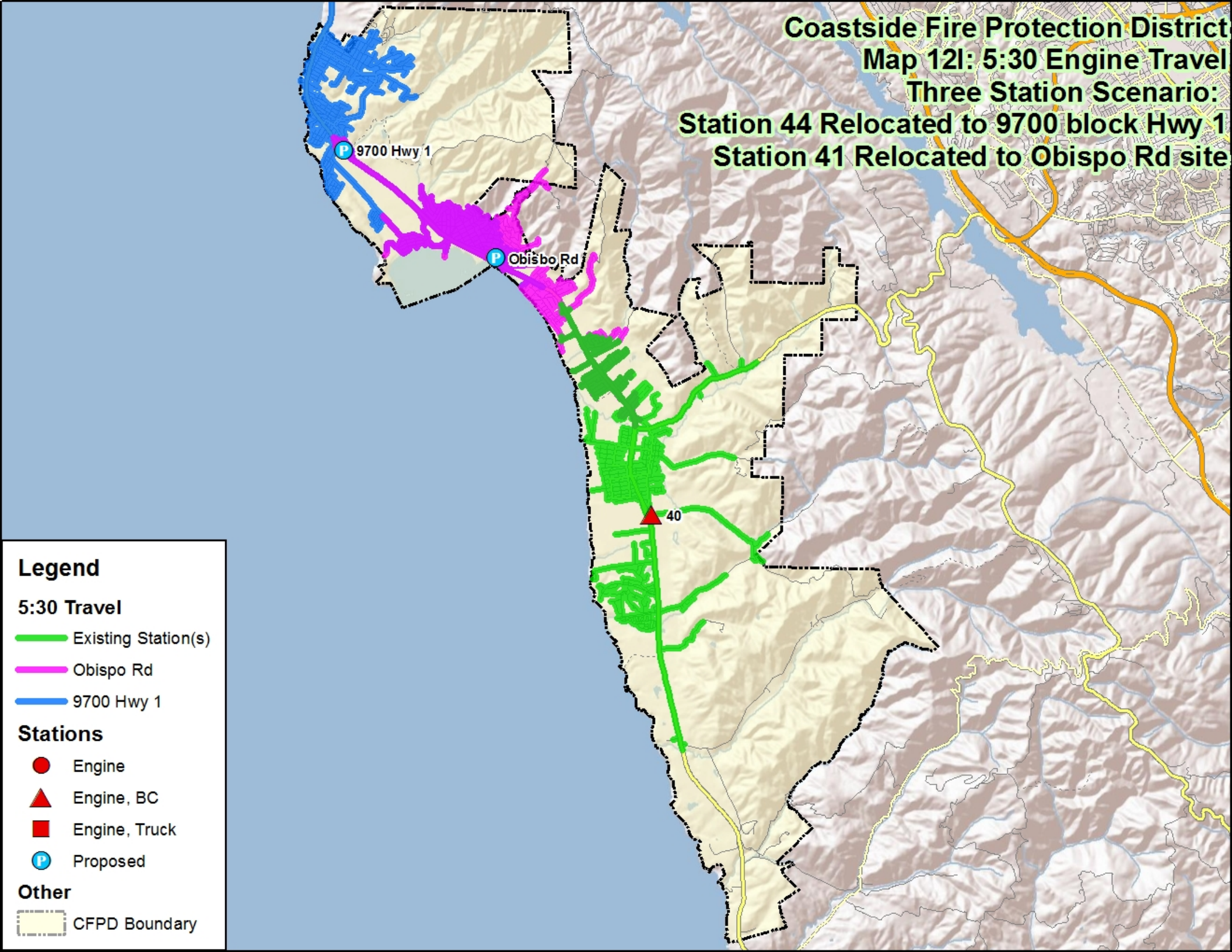
Station 41 Relocated to Obispo Rd site
Vermont / Hwy 1
Obispo Rd
40
Legend
5:30 Travel
Existing Station(s)
Obispo Rd
Vermont/Hwy 1
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 12j: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 9700 block Hwy 1
Station 41 Relocated to 240 Capistrano
9700 Hwy 1
240 Capistrano
40
Legend
5:30 Travel
Existing Station(s)
240 Capistrano
9700 Hwy 1
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 12k: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 9700 block Hwy 1
Station 41 Relocated to 11820 Cabrillo Hwy
9700 Hwy 1
11820 Cabrillo Hwy
40
Legend
5:30 Travel
Existing Station(s)
11820 Cabrillo Hwy
9700 Hwy 1
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary


Coastside Fire Protection District
Map 12I: 5:30 Engine Travel
Three Station Scenario:
Station 44 Relocated to 9700 block Hwy 1
Station 41 Relocated to Obispo Rd site
9700 Hwy 1
Obispo Rd
40
Legend
5:30 Travel
Existing Station(s)
Obispo Rd
9700 Hwy 1
Stations
Engine
Engine, BC
Engine, Truck
Proposed
Other
CFPD Boundary

APPENDIX C:
BIOLOGICAL RESOURCES

Coastside Fire Protection District, Riparian Setback Analysis, TRA Environmental Sciences, Inc., August 7, 2014

TRA ENVIRONMENTAL SCIENCES, Inc.

545 MIDDLEFIELD ROAD, SUITE 200
MENLO PARK, CA 94025
650.327.0429
WWW.TRAENVIRO.COM

August 7, 2014

Mr. Paul Cole
Coastside Fire Protection District Headquarters
1191 Main Street
Half Moon Bay, CA 94019

SUBJECT: Riparian Setback Analysis – Obispo Road Property

Dear Mr. Cole,

As requested, TRA Environmental Sciences, Inc. (TRA) has conducted an evaluation of the riparian habitat adjacent to the proposed new fire station at the corner of Obispo Road and Ave Portola in Half Moon Bay, California. There is a narrow band of riparian habitat situated off of the property, south of the intersection of Obispo Road and Ave Portola, where an unnamed drainage (Drainage 1) daylights and discharges to the Pacific Ocean. A second unnamed drainage divides the east and west sides of the property (Drainage 2) (Figure 1). On August 1, 2014, TRA staff conducted a survey of the two drainages to determine what type of setback would be required to comply with Policy 7.11 of the San Mateo County Local Coastal Program (LCP).

The property is situated approximately 300 feet north of the Pacific Ocean, east of Ave Portola and north of Obispo Road. The west side of the property consists of non-native annual grassland habitat with an unimproved dirt road that crosses the site between Obispo Road and Drainage 2. Drainage 2 is surrounded by a band of dense riparian habitat approximately 200 feet in width. This band of riparian habitat continues south, and consumes the majority of the parcel between the subject property and the Pacific Ocean. The eastern portion of the property is made up of non-native annual grassland with scattered native and non-native trees. There are no structures or other developed areas on the property, but a housing development defines the northern boundary of the site. To the south is an undeveloped parcel, with Drainage 1 defining its western boundary. Drainage 1 and 2 both discharge to the Pacific Ocean.

During the site visit, TRA staff walked both Drainage 1 and Drainage 2, compiling a list of plant and animal species present. It was determined during the site visit that both drainages meet the definition of Riparian Corridors as defined under Policy 7.7 of the LCP. Policy 7.7 defines Riparian Corridors as freshwater bodies such as streams and lakes that have at least 50% cover of some combination of "red alder, jaumea, pickleweed, big leaf maple, narrow-leaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood and box elder". Both drainages are comprised of riparian cover dominated by an equal mix of acacia (*Acacia* sp.) and arroyo willow (*Salix lasiolepis*).

Policy 7.11 of the LCP requires that a buffer zone of 50 feet be extended from both sides of the limit of riparian vegetation for perennial streams, and 30 feet outward for intermittent streams. Perennial streams are streams that have year round flow in all or part of their streambed, whereas intermittent streams contain water for only part of the year, typically during the winter

and spring. Drainage 1 and 2 contained standing water at the time of the site visit, which is particularly significant considering the current drought conditions that the state is experiencing. That, and the density and age of the riparian vegetation, indicate that that both Drainage 1 and 2 are perennial streams, requiring a 50-foot setback buffer.

Figure 1 shows the limits of the riparian vegetation associated with Drainage 1 and Drainage 2 as well as the LCP Policy 7.7 required 50-foot buffer. Figure 2 shows photographs of the site taken during the site visit. Tables 1 and 2 include a list of plant and animal species observed in Drainage 1 and 2 and on the subject property during the site visit.

Table 1 – Plant Species Observed

Common Name	Scientific Name
Coast live oak	*Quercus agrifolia*
California bay	*Umbellularia californica*
Ornamental fig	*Ficus benjamina*
Acacia	*Acacia* sp.
Arroyo willow	*Salix lasiolepis*
Cotoneaster	*Cotoneaster* sp.
English ivy	*Hedera helix*
Himalayan blackberry	*Rubus armeniacus*
Coyote brush	*Baccharis pilularis*
Ripgut brome	*Bromus diandrus*
Dune bent grass	*Agrostis pallens*
Soft rush	*Juncus effusus*
Curly dock	*Rumex crispus*
Loosestrife	*Lysimachia* sp.
Poison hemlock	*Conium maculatum*
English plantain	*Plantago erecta*
Mugwort	*Artemisia douglasiana*
Pincushion	*Chaenactis* sp.
Black mustard	*Brassica nigra*
Wild radish	*Raphanus raphanistrum*
Cheeseweed	*Malva parviflora*
Primrose	*Oenothera* sp.
Nasturtium	*Tropaeolum majus*
Watercress	*Nasturtium officnale*
Seep monkeyflower	*Mimulus guttatus*

Common Name	Scientific Name
Common borage	*Borago officinalis*
Aster	*Aster* sp.
Sweet alyssum	*Allysum* sp.
Fumitory	*Fumeria* sp.
Scarlet pimpernel	*Anagallis arvensis*

Table 2 – Animal Species Observed

Common Name	Scientific Name
Common garter snake	*Thamnophis sirtalis*
Forster's tern	*Sterna forsteri*

TRA has appreciated the opportunity to work with you on this project. Please do not hesitate to contact me should you have any questions or concerns or are in further need of our services.

Sincerely,

Robin Dakin
Senior Biologist
(408) 439-2938 (mobile)
dakin@traenviro.com

Figure 1
Coastside Fire District
Riparian Habitat with
50' Buffer

BCFS

Figure 2 – Site Photos

Drainage 1 looking southwest from south of Obispo Road

Drainage 2 looking south from north end of drainage.

Preliminary Environmentally Sensitive Habitat Areas Assessment at the Proposed Coastside Fire District Project in El Granada, San Mateo County, California,
WRA Environmental Consultants,
April 16, 2015

April 16, 2015

Chief Paul Cole
Coastside Fire Protection District
531 Obispo Road
El Granada, CA 94018

Re: Preliminary Environmentally Sensitive Habitat Areas Assessment at the Proposed Coastside Fire District Project in El Granada, San Mateo County, California

Dear Chief Cole,

The purpose of this letter is to provide you of the results of the preliminary Environmentally Sensitive Habitat Areas (ESHAs) assessment for the proposed Coastside Fire District Project located along Obispo Road between Avenue Portola and Coronado Street in El Granada, San Mateo County, California (Project Area). The site visits were conducted on March 26 and 27, 2015.

The focus of the site reconnaissance was to provide an analysis of potential constraints related to ESHAs, specifically setbacks related to riparian habitat and the potential for presence of California red-legged frog (CRLF; *Rana draytonii*) and San Francisco gartersnake (SFGS; *Thamnophis sirtalis tetrataenia*). Typical mitigation measures for projects near potential CRLF and SFGS habitats are also described. Other potentially sensitive species or resources known in the vicinity are not addressed in this letter.

Project Area Description

The proposed Project Area (APN 047-261-030) is located in downtown El Granada immediately north of Obispo Road between two busy thoroughfares (Avenue Portola and Coronado Street). It consists of undeveloped ruderal uplands and a riparian corridor. The ruderal uplands are dominated by weedy vegetation including cheeseweed mallow (*Malva parviflora*), ripgut brome (*Bromus diandrus*), slender oats (*Avena barbata*) and wild radish (*Raphanus sativus*). The riparian corridor is dominated by arroyo willow (*Salix lasiolepis*) with dense understory vegetation composed of silktree mimosa (*Albizia julibrissin*), English ivy (*Hedera helix*), garden nasturtium (*Tropaeolum majus*) and cape ivy (*Delairea odorata*). The Project Area is bounded by development and roads. Commercial and residential development present to the north and west, Obispo Road and an unpaved beach access parking lot are to the south, and Coronado Street and development are to the east.

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Riparian Corridor

Unnamed, culverted waters with intermittent flows are present through the central portion of the proposed Project Area. The waters are culverted through most of El Granada beginning at Columbus Street and do not daylight until the Project Area. The waters are also culverted under Obispo Road (approximately 24-inch concrete culvert) at the southern border of the Project Area and under Pacific Coast Highway at which the waters terminate at an outfall to the Pacific Ocean. This feature contained a small amount of running water at the time of the site visit.

A stormwater ditch directly connected to surface stormwater flows is present southeast of the proposed Project Area. The ditch ends at a box grate which connects the ditch to the stormwater system at the intersection of Coronado Street and Pacific Coast Highway. Although dry at the time of the site visit, there was evidence of intermittent hydrology consisting of drift deposits, rack lines, and sediment deposits.

Immediately south of the intersection of Obispo Road and Avenue Portola, are other culverted waters with intermittent flows extending across the adjacent property. Although this feature is not within the proposed Project Area, it is in close proximity and needs to be considered in determination of setbacks in accordance with the local regulations. This feature contained a small amount of running water at the time of the site visit. The feature supports riparian vegetation consisting of arroyo willow for approximately 75 linear feet, after which it is largely unvegetated prior to entering a culvert under Pacific Coast Highway and emptying into the Pacific Ocean.

Riparian Corridor and Buffer Zones

Based on available USGS topographic maps (USGS 2015, 1978, and 1956) and aerial photographs (Google Earth 2015), these features are intermittent waters. Pursuant to the San Mateo County Local Coastal Program (LCP; County of San Mateo 2013), riparian corridors are defined as an association of plant and animal species containing at least 50 percent cover of the following species: red alter, jaumea, pickleweed, big leaf maple, narrow-leaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood, and box elder. Accordingly, the arroyo willow areas identified in the proposed Project Area qualify as riparian corridors under the San Mateo LCP. For intermittent streams, the LCP requires a buffer 30 feet outward from the limit of riparian vegetation. Where no riparian vegetation exists, buffer zones along intermittent streams extend 30 feet from the stream midpoint as shown in the attached figure.

Within riparian corridors, the following uses are permitted: 1) education and research; 2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code, 3) fish and wildlife management activities, 4) trails and scenic overlooks on public lands, and 5) necessary water supply projects. Relevant permitted uses in buffer zones include 1) uses permitted in riparian corridors, 2) residential uses on existing legal building sites, set back 20 feet from the limit of riparian vegetation only if no feasible alternative exists and if no other building site on the parcel exists, 3) on parcels designated as Agriculture, Open Space, or Timber Production on the LCP Land Use Plan Map, residential structures or impervious surfaces only if no feasible alternative exists.

Potential for CRLF and SFGS

California red-legged frog

Typical CRLF breeding habitat is characterized by deep and still or slow-moving water associated with emergent marsh and/or riparian vegetation. CRLF often undergoes estivation (a period of inactivity) during the dry months, over-summering in small mammal burrows, moist leaf litter, incised stream channels, or large cracks in the bottom of dried ponds (Jennings and Hayes 1994). Adult and sub-adult CRLF may disperse between breeding habitats and nearby riparian and/or estivation habitats during the respective rainy season and summer. During such dispersals, frogs can travel up to one mile over a variety of topographic and habitat types during rain events or wet weather (Bulger et al. 2003, Fellers and Kleeman 2007, USFWS 2010); however, typical dispersal distances are less than 0.5 mile (Fellers 2005). Dispersal habitat is defined as accessible upland or riparian habitats between occupied locations within one mile of each other that allow for movement between these sites and do not contain barriers to movement (USFWS 2010). Moderate to high density urban or industrial developments, large reservoirs and heavily traveled roads without bridges or culverts are considered barriers to dispersal (USFWS 2010).

San Francisco gartersnake

The preferred habitat of the SFGS is a densely vegetated pond near an open hillside where they can sun themselves, feed, and find cover in rodent burrows; however, considerably less ideal habitats can be successfully occupied. Temporary ponds and other seasonal freshwater bodies are also used. Emergent and bankside vegetation such as cattails (*Typha* spp.), bulrushes (*Scirpus* spp.) and spike rushes (*Juncus* spp.and *Eleocharis* spp.) apparently are preferred and used for cover. The area between stream and pond habitats and grasslands or bank sides is used for basking, while nearby dense vegetation or water often provide escape cover (USFWS 2006). During periods of heavy rain or shortly after, SFGS may make long-distance movements of up to 1.25 miles along drainages within the dense riparian cover, and are not documented to travel over open terrain (McGinnis 2001).

Potential for Occurrence

A review of California Natural Diversity Database records (CDFW 2015) reveals documented locations of both CRLF and SFGS to be north and east of the proposed Project Area, the nearest 0.6 mile north. Occurrence data for SFGS are confidential and exact locations cannot be released publicly; however, both CRLF and SFGS locations are in habitats discontinuous with the proposed Project Area. The community of El Granada is a complete barrier to dispersal from occurrences to the north and east for both CRLF and SFGS because of the high density residential development and high traffic conditions. In addition, all intermittent streams have been culverted between the occupied open spaces to the north and the proposed Project Area, approximately 0.3 mile. High traffic roads including Highway 1 and development are barriers between CRLF occurrences to the northwest, and there are no occurrences near the shoreline south of the proposed Project Area. In addition, Highway 1 and the community of Miramar are present between the proposed Project Area and the intermittent Arroyo de en Medio Creek 0.75 mile to the south, the nearest potential habitat for CRLF or SFGS. The nearest documented occurrence of CRLF south of the proposed Project Area is in Frenchmans Creek 1.6 miles south.

The proposed Project Area does not contain habitat for either CRLF or SFGS, nor is the Project Area contiguous with habitat for either species. The intermittent stream within the proposed Project Area does not contain breeding habitat for CRLF, and therefore CRLF individuals would have to disperse to the Project Area from further breeding habitats. The nearest suitable habitat is in Arroyo de en Medio Creek and the nearest potential breeding habitat is in Frenchmans Creek. As mentioned above, typical dispersal distances are at most 0.6 mile over open habitats. Both creeks are farther than this distance (0.75 mile and 1.6 miles, respectively) and have major dispersal barriers between these creeks and the proposed Project Area, such as Pacific Coast Highway and residential development. In addition, there are no pond habitats in the vicinity for SFGS to occupy and creeks are typically only used for dispersal and movement corridors if contiguous or near to pond habitats. The intermittent streams and stormwater drainages within and adjacent to the proposed Project Area are not contiguous with occupied habitats or potential breeding habitats to qualify as dispersal habitat or corridors for either species. Therefore, the proposed Project Area does not contain any habitat elements for CRLF or SFGS.

Based upon habitat characteristics, distance from known occupied habitat or potentially occupied habitat, and dispersal barriers, there is no potential for CRLF or SFGS to occur in the proposed Project Area. However, the standard avoidance and minimization measures for sites where CRLF and/or SFGS may be present are provided below for consideration. These measures are based upon accepted measures by federal and state agencies for projects in the vicinity. These standard measures may be employed for this project in lieu of consultation with USFWS and/or CDFW to confirm absence of either species at the site. Alternatively, the applicant may conduct protocol-level surveys in coordination with USFWS to confirm absence.

- *Wildlife exclusion fence*: At a minimum, wildlife exclusion fence shall be installed along the proposed Project boundaries with riparian habitat and for a distance of at least 100 feet perpendicular to riparian habitat. Silt fence material may be used to also provide erosion control; however, per CRLF and SFGS fence standards, it must be at least 42 inches in height (at least 36 inches above ground and buried at least 6 inches below the ground) and stakes must be placed on the inside of the Project (side on which work will take place).

- *Pre-construction survey*: Pre-construction surveys for CRLF and SFGS shall be conducted prior to initiation of project activities (including fence installation) and within 48 hours of the start of ground disturbance activities following completion of exclusion fence installation. Surveys are to be conducted by approved qualified biologist with experience surveying for each species. If Project activities are stopped for greater than 7 days, a follow-up pre-construction survey may be required within 48 hours prior to re-initiation of Project activities.

- *Work only during dry weather*: No work shall take place during rain events when there is potential for accumulation greater than 0.25 inch in a 24-hour period. In addition, no work shall occur for 48 hours following rain events in which 0.25 inch of rain accumulated within 24 hours.

- *Biological monitoring*: An approved biologist shall be required to inspect and approve installation of the exclusion fence and may be required to conduct daily or weekly inspections of the exclusion fence during all grading and/or ground-disturbing activities.

- *Erosion Control Materials:* Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic mono-filament netting (erosion control matting), rolled erosion control products, or similar material shall not be used.

SUMMARY

There is an intermittent stream present in the proposed Project Area and immediately south of the Project Area which require a setback of 30 feet from the limit of riparian vegetation per the San Mateo County LCP. Although a riparian corridor is present, neither CRLF nor SFGS are anticipated to occur within the proposed Project Area because of distance from occupied habitats, barriers to dispersal, and lack of breeding habitat in the vicinity. However, standard avoidance and minimization measures accepted by federal and state agencies for projects in the vicinity where CRLF and/or SFGS may be present were outlined for consideration. These measures are likely to include pre-construction surveys and installation of exclusion fencing near riparian habitats.

The analysis provided is a preliminary review of potential resources in the vicinity of the Proposed project and does not constitute a full biological review. Further studies are necessary for species and resources not addressed in this letter. Should you have any questions, comments, or concerns, please do not hesitate to contact our office.

Sincerely,

Patricia Valcarcel
Wildlife Biologist

Attachment: Proposed Project Area Map with Riparian Setbacks

REFERENCES

Bulger, J. B., S. J. Norman, and R. B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frogs (*Rana aurora draytonii*) in coastal forests and grasslands. Biological Conservation 110 (2003) 85–95.

California Department of Fish and Wildlife (CDFW). 2015. Natural Diversity Database, Wildlife and Habitat Data Analysis Branch. Sacramento.

Fellers, G. 2005. Rana draytonii Baird and Girard, 1852b California red-legged frog. Pages 553-554 in M. Lanoo (ed). Amphibina declines: the conservation status of United States species. University of California Press, Berkeley, California.

Fellers, G. M. and Kleeman, P. M. 2007. California Red-Legged Frog (Rana draytonii) Movement and Habitat Use: Implications for Conservation. Journal of Herpetology 41(2):276-286.

Jennings, M. R. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report submitted to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. Contract No. 8023.

McGinnis, S. M. 2001. Past and Present Habitats for the San Francisco Garter Snake and California Red-Legged Frog on the Original Cascade Ranch Property, With Additional Comments on Potential Movement Pathways and Suggestions for Critical Habitat Enhancement Measures. Unpublished. January.

USFWS. 2006. San Francisco Garter Snake (Thamnophis sirtalis tetrataenia) 5-Year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office. September.

U.S. Fish and Wildlife Service (USFWS). 2010. Endangered and Threatened Wildlife and Plants: Revised Designation of Critical Habitat for California Red-legged Frog; Final Rule. Federal Register, Vol. 75, No. 51. 12815-12959.

Attachment 1.

Proposed Project Area Map with Riparian Setbacks

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ENVIRONMENTAL CONSULTANTS

Coastside Fire District ESHA Assessment

El Granada, San Mateo County, California

Attachment 1.

Proposed Project Area with Riparian Setbacks

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Map Prepared Date: 4/9/2015
Map Prepared By: pkobylarz
Base Source: Esri Streaming Imagery
Data Source(s): WRA

Path: L:\Acad 2000 Files\25000\25070\GIS\ArcMap\Attachment 1 Riparian Setbacks.mxd