CITYGATE ASSOCIATES, LLC
FIRE & EMERGENCY SERVICES

CITIES OF SEASIDE AND MARINA, CA

# FIRE STATION LOCATION STUDY

SEPTEMBER 9, 2021

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CITY OF SEASIDE CALIFORNIA

CITY OF MARINA CALIFORNIA

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# EXECUTIVE SUMMARY

The Cities of Seaside and Marina (Cities) retained Citygate Associates, LLC (Citygate) to identify a fire station location to jointly serve the areas of both Cities with existing and future planned development beyond 4:00-minute travel time from current fire stations. The Cities also desired the study to identify and evaluate prospective fire station locations that could provide optimal 4:00-minute travel time coverage for these areas of each City, independent of the joint station analysis.

Citygate's analysis identified any available site along 2nd Avenue between Lightfighter Drive and Imjin Parkway as a suitable joint station location to provide enhanced emergency response travel time to both Cities. After this analysis, both City Managers and Fire Chiefs met to review the results and decided to move forward independently on future fire station location planning, with Marina moving forward on siting a temporary fire station facility at 2nd Avenue and 8th Street.

Citygate subsequently identified the general area of Lightfighter Drive and 2nd Avenue as the preferred location for a second Seaside fire station to optimize fire station spacing and response time using a two-station deployment model. The City subsequently identified two City-owned sites for further analysis, with Site A at Gigling Road and 1st Avenue providing significantly better response coverage and access to the lower sections of the City adjacent to Highway 1 over Site B at General Jim Moore Boulevard and Eucalyptus Road.

## *FINDINGS AND RECOMMENDATIONS*

**Finding #1:** Any site along 2nd Avenue between Lightfighter Drive and Imjin Parkway would be suitable for a joint Seaside/Marina fire station, with a more southern site being more beneficial to Seaside and a more northern site being more beneficial to Marina.

**Finding #2:** Site A (Gigling Road at 1st Avenue) would provide significantly better 4:00-minute travel time coverage for the City of Seaside than Site B (General Jim Moore Boulevard at Eucalyptus Road), as well as significantly better station spacing and access to the Highway 1 corridor.

**Recommendation #1:** Should the Cities of Marina and Seaside decide to pursue a joint fire station venture in the near- to mid-term future, any available site along 2nd Avenue between Lightfighter Drive and Imjin Parkway would be suitable to provide enhanced first-unit travel time coverage for both Cities.

**Recommendation #2:** The City of Seaside should consider Site A (Gigling Road at 1st Avenue) as the preferred location for a second fire station.

# SECTION 1—INTRODUCTION AND BACKGROUND

The Cities of Seaside and Marina Fire Departments (Departments) retained Citygate to identify a fire station location to jointly serve the areas of both Cities with existing and future planned development beyond 4:00-minute travel time from existing fire stations. The Cities also desired the study to identify and evaluate prospective fire station locations that could provide optimal 4:00-minute travel time coverage for these areas of each jurisdiction, independent of the joint station analysis.

Property transferred by the Department of Defense (DOD) to both Cities pursuant to the closure of Fort Ord in the 1990s includes the site of the current DOD Presidio of Monterey (POM) Fire Station on General Jim Moore Boulevard between Lightfighter Drive and Gigling Road in Seaside. Based on planned future development of the area, the City of Seaside notified the DOD in 2021 of its intent not to renew the fire station site lease upon expiration in August 2023. Because of its current location within the study area, the POM Fire Department was invited to participate in this study; however, the POM Fire Chief advised the Cities early in the study that they would be unable to participate.

## 1.1 REPORT ORGANIZATION

This report is organized into the following sections.

Executive Summary: Study summary and all findings and recommendations.

**Section 1** Introduction and Background: An introduction to the study including report goals and limitations, prior study summaries, fire service deployment overview, community outcome expectations, and best practice response goals.

**Section 2** Fire Station Location Analysis: An overview of the study approach and methodology, current deployment model and response coverage, fire station siting guidelines, and analysis of prospective joint fire station locations and independent Seaside Station 2 location.

**Appendix A** Map Atlas: All geographic information system (GIS) maps produced for this analysis.

## 1.2 GOALS OF THE REPORT

This report cites findings and provides recommendations, as appropriate, related to each finding. Findings and recommendations throughout this report are sequentially numbered. A complete list of these findings and recommendations is provided in the Executive Summary.

This report provides technical information about the way fire services are provided and legally regulated, and how the Departments currently deploy and operate. This information is presented in the form of recommendations and policy choices for consideration by the Cities' and Departments' leadership.

The result is a solid technical foundation upon which to understand the advantages and disadvantages of the choices facing the Cities and Departments regarding future fire service deployment and, more specifically, where to locate future planned fire stations to provide optimal response performance and equitable service delivery within each City.

## 1.3 LIMITATIONS OF THIS REPORT

In the United States, there are no federal or state regulations requiring a specific minimum level of fire services. Each community, through the public policy process, is expected to understand the local fire and non-fire risks and its ability to pay, and then choose its level of fire services. *If* fire services are provided at all, federal and state regulations specify how to do so safely for the public and for the personnel providing the services.

While this study can provide a framework for the discussion of future fire services in each City, neither this report nor the Citygate team can make the final decisions. Once final strategic choices receive policy approval, staff from the Departments can conduct any cost and fiscal analysis required as part of the normal operating and capital budget cycle.

## 1.4 PRIOR STUDIES

The City of Seaside previously retained Citygate to evaluate fire station locations in 2003 and 2008. The June 2003 study recommended a second fire station located at Coe Avenue and Monterey Road to provide 4:00-minute first-due travel time coverage to the central area of the City not within 4:00-minute travel time from the existing Station at Broadway Avenue and Yosemite Street. The study also noted that this proposed Station 2 location would not provide 4:00-minute travel time coverage to the northeast City limit where the currently proposed Campus Town project would be located.

The December 2008 study evaluated three parcels for a second fire station:

- Monterey Road at Coe Avenue
- Monterey Road south of Noumea Road
- Gigling Road at Malmedy Road

This 2008 study recommended the Gigling Road at Malmedy Road site as the preferred alternative with more 4:00-minute, 5:00-minute, and 6:00-minute travel time coverage than the other two sites.

In 2005, Seaside and Marina retained Citygate to develop an implementation plan for consolidation of both Fire Departments. This study concluded that cost savings and operational improvements could be achieved by sharing a fire station to serve the Fort Ord Reuse Areas in each City and having a shared administrative support organizational structure.

## 1.5 Fire Service Deployment Overview

Fire service deployment, simply summarized, is about the *speed* and *weight* of the response. *Speed* refers to initial response (first-due), all-risk intervention resources (e.g., engines, trucks, squads, ambulances, etc.) strategically deployed across a jurisdiction for response to emergencies within a specified time interval to control routine to moderate emergencies and prevent them from escalating to greater size or severity. *Weight* refers to multiple-unit responses for more serious emergencies, such as building fires, multiple-patient medical emergencies, vehicle collisions with extrication required, or technical rescue incidents. In these situations, enough firefighters must be assembled within a reasonable time interval to safely control the emergency and prevent it from escalating into a more serious event. The following table illustrates this deployment paradigm.

**Table 1—Fire Service Deployment Paradigm**

| Element | Description | Purpose |
|---|---|---|
| ***Speed of Response*** | Travel time of initial response of all-risk intervention units strategically located across a jurisdiction. | Controlling routine to moderate emergencies without the incident escalating in size or complexity. |
| ***Weight of Response*** | Number of firefighters in a multiple-unit response for serious emergencies. | Assembling enough firefighters within a reasonable time frame to safely control a more complex emergency without escalation. |

Thus, smaller fires and less complex emergencies require a single-unit or two-unit response (engine or specialty resource) within a relatively short response time. Larger or more complex incidents require more units and personnel to control. In either case, if the crews arrive too late or the total number of personnel is too few for the emergency, they are drawn into an escalating and more dangerous situation. The science of fire crew deployment is to spread crews out across a community or jurisdiction for quick response to keep emergencies small with positive outcomes without spreading resources so far apart that they cannot assemble quickly enough to effectively control more serious emergencies.

## 1.6 Community Outcome Expectations

Positive outcomes to emergency incidents are the goal in most communities, and from that crew size and response time can be calculated to provide efficient fire station spacing. Many medical incidents have the most severe time constraints, including cardiac arrest, stroke, poisoning, anaphylaxis, drowning, choking, and severe blood loss. The brain can only survive four to six minutes without oxygen and resultant irreversible impairment. In a building fire, a small incipient fire can grow to involve the entire room in 6:00 to 8:00 minutes, jeopardizing any occupants and the entire building if not contained to that room of origin. If a community goal is to achieve positive outcomes in severe emergency medical services (EMS) and incipient fire situations, then fire crews must arrive, assess the situation, and deploy effective measures before brain death occurs or the fire spreads beyond the room of origin.

Thus, from the time of 9-1-1 receiving the call, an effective deployment system is *beginning* to manage the problem within a 7:00- to 8:00-minute total response time. This is right at the point that brain death is imminent, and the fire has grown to the point of leaving the room of origin and becoming very serious. Thus, cities like Seaside and Marina need a first-due response goal that is within that 7:00- to 8:00-minute range to facilitate a positive outcome. It is important to note that the fire or medical emergency continues to deteriorate from the time of inception, not from the time the fire department starts to respond to the emergency. Ideally, the emergency is noticed immediately, and the 9-1-1 system is activated promptly. In the best of circumstances, this step of awareness—calling 9-1-1 and giving the dispatcher accurate information—takes 1:00 minute. Crew notification and travel time take additional minutes. Upon arrival, the crew must approach the patient or emergency, assess the situation, and appropriately deploy its skills and tools. Even in easy-to-access situations, this step can take 2:00 minutes or more. This time frame may be increased considerably due to long driveways, apartment buildings with limited access, multiple-story apartments or office complexes, or shopping center buildings.

Unfortunately, there are times when the emergency has become too severe, even before the 9-1-1 notification or fire department response, for the responding crew to reverse it. However, when an appropriate response time policy is combined with a well-designed deployment system, only anomalies like bad weather, poor traffic conditions, or multiple emergencies slow down the response system. Consequently, a properly designed system will give citizens the hope of a positive outcome for their tax dollar expenditure.

## 1.7 Best Practice Response Goals

Fire service response includes three distinct components: 9-1-1 call processing/dispatch, crew turnout, and travel. The 9-1-1 call processing/dispatch component measures the time interval from the first incident time stamp in the fire dispatch center until completion of the dispatch notification process. Crew turnout measures the time interval from the end of the dispatch notification until

apparatus travel movement starts. Travel is the time interval from the start of apparatus travel until arrival at the emergency incident. Thus, if a 7:00- to 8:00-minute total response time for the first responding fire unit is the goal, the following table summarizes 90th percentile best practice performance for each response component in urban jurisdictions.

**Table 2—Best Practice Response Goals**

| Response Component | 90th Percentile Best Practice Goal (Minutes) | Best Practice Reference |
|---|---|---|
| **Call Processing/Dispatch** | 1:30 | Citygate |
| **Crew Turnout** | 2:00 | Citygate |
| **Travel** | 4:00 | NFPA[1]/Citygate |
| **Total** | **7:30** | **Citygate** |

[1] National Fire Protection Association

# SECTION 2—FIRE STATION LOCATION ANALYSIS

## 2.1 APPROACH AND METHODOLOGY

Citygate utilized multiple sources to gather, understand, and model information about the Cities and Departments. Citygate initially requested and reviewed relevant background data and information to better understand current service levels, history of service level decisions, prior studies, and future planned development and related fire service deployment needs. Both City Managers expressed a strong preference for a site currently owned or controlled by either City as opposed to having to acquire a non-City-owned parcel.

Utilizing FireView™, a geographic mapping software program, Citygate modeled travel time from current fire station locations, including automatic/mutual aid stations, to identify the percentage of public road miles covered within 4:00-minute travel time. In collaboration with Departments' leadership, Citygate then identified the general location for a joint fire station, and subsequently modeled 4:00-minute travel time coverage from that location.

After the joint station location analysis, Citygate identified the general area and evaluated 4:00-minute travel time coverage for a second Seaside fire station from that location. Seaside subsequently requested a 4:00-minute travel time analysis from two specific City-owned parcels.

## 2.2 CURRENT DEPLOYMENT

The City of Seaside Fire Department currently deploys two apparatus, each staffed with three personnel, plus one Chief Officer, for a total of seven personnel from its current single fire station at Broadway Avenue and Yosemite Street.

The City of Marina deploys one engine staffed with three personnel and one Chief Officer from its main fire station on Palm Avenue east of Del Monte Boulevard, and one squad staffed with two personnel from Station 2 at the Marina Municipal Airport.

Both City Fire Departments are dispatched by the Monterey County Emergency Communications Department, which provides 9-1-1 and dispatch services for nearly all public safety agencies within Monterey County. Both Departments have automatic mutual aid agreements with adjacent fire agencies except POM Fire (mutual aid only) and are also signatories to the Monterey County Fire Mutual Aid Plan.

The POM Fire Department deploys one engine staffed with four personnel and one Chief Officer from its station on General Jim Moore Boulevard, and one engine staffed with four personnel from its station at the Defense Language Institute in Monterey. The POM Fire Department, upon expiration of its lease at the current site, is considering relocation of its station to the former Fort Ord Chapel site at General Jim Moore Boulevard and Chapel Road (referred to as the Chapel site).

POM Fire Department is dispatched by the POM Police Department and provides mutual aid to other agencies within Monterey County upon request and as available. Map 1 in Appendix A shows the jurisdictional boundaries and existing fire station locations within the study area.

While the POM Fire Department currently provides fire suppression, emergency medical, rescue, and related emergency services to federal properties and buildings within its jurisdiction, as well as mutual aid to other jurisdictions, all federal buildings protected also lie within the boundaries of the Cities of Seaside, Marina, or Monterey. While there may be a future need for some level of federal fire protection of the open areas formerly used for live-fire military training, the DOD could conceivably defer its structural fire and emergency medical response responsibilities to the cities in which those assets are located under concurrent jurisdiction, like what the Naval Support Services did when it closed the Naval Postgraduate School Fire Department in Monterey in approximately 2005. In Citygate's opinion, neither Seaside nor Marina should depend long-term on a federal fire presence to support its fire department deployment needs.

## 2.3 Fire Station Siting Guidelines

Over more than 20 years of conducting fire service deployment studies, Citygate has developed the following guidelines for consideration in determining fire station siting:

1. Serve the greatest population in the shortest travel time possible
2. Provide a 360-degree first-due service area
3. Avoid political, natural, and human-built barriers within the first-due travel time goal[1]
4. Provide direct access to primary response routes in all cardinal directions.

## 2.4 Joint Fire Station Location Analysis

### 2.4.1 Existing Station Coverage

**Map 2 in Appendix A**—This map shows 4:00-minute travel time from existing fire stations within the study area including automatic and mutual aid resources from Monterey County Regional Fire District (shown on maps as MCR), the Monterey Fire Department (shown on maps as MFD), and the POM Fire Department (shown on maps as Ord). As Map 2 illustrates and Table 3 summarizes, this equates to 85 percent of public road miles in Seaside and 70 percent of public road miles in Marina. *Without* including POM Station 61 (shown on maps as Ord 61), 4:00-minute travel time coverage is reduced by 28 percent in Seaside (from 85 percent to **57 percent** of total public road

[1] This guideline may not apply in automatic aid or "boundary drop" situations.

miles), and by 15 percent (from 70 percent to **55 percent** of total public road miles) in Marina as shown in Table 3.

**Map 3 in Appendix A**—This map shows the Insurance Services Office (ISO) recommendation that urban stations cover a 1.5-mile *distance* response area. Depending on a jurisdiction's road network, the 1.5-mile measure usually equates to a 3:30- to 4:00-minute travel time. However, a 1.5-mile measure is a reasonable indicator of station spacing and overlap. As can be seen, the 1.5-mile ISO coverage is slightly worse than the 4:00-minute travel time coverage in Map 2.

### 2.4.2 Coverage Scenarios with Prospective Fire Station Locations

Based on 4:00-minute travel time coverage in Map 2 and the City Managers' preference for a City-owned/controlled site, Citygate next evaluated 4:00-minute travel time coverage from the following prospective fire station locations:

- **Scenario 1**—2nd Avenue at Divarty Street
- **Scenario 2**—2nd Avenue at 8th Street
- **Scenario 3**—Lightfighter Drive at 2nd Avenue

**Scenario 1 in Appendix A—**As this map illustrates, a joint fire station at 2nd Avenue and Divarty Street would improve 4:00-minute travel time coverage 20 percent for Seaside (from 57 percent to **77 percent** of total public road miles) *without* including POM Fire, with no change in 4:00-minute travel time coverage with POM Fire at its current site or relocated to the nearby POM Chapel site. For Marina, the 2nd Avenue and Divarty Street location would *improve* 4:00-minute travel time coverage 23 percent (from 54 percent to **77 percent** of total public road miles) *without* including POM Fire.

**Scenario 2 in Appendix A—**Moving a prospective joint station site anywhere else along the 2nd Avenue corridor between Imjin Parkway and Lightfighter Drive would slightly impact 4:00-minute travel time coverage for each City depending on the direction moved from Divarty Street as summarized in Table 3 (Scenario 2 and Scenario 3) and illustrated in maps Scenario 2 and Scenario 3 in Appendix A.

After completing this analysis, both City Managers and Fire Chiefs met to review the results to date and discuss the joint fire station concept. After this meeting, Citygate was informed of the Cities' intent to move forward independently on future fire station location planning. Should the Cities decide to pursue a joint station venture in the future, any location along the 2nd Avenue corridor would be suitable in Citygate's opinion; with a more southern site along 2nd Avenue being of more benefit to Seaside than a more northern site, and vice versa.

| | |
|---|---|
| **Finding #1:** | Any site along 2nd Avenue between Lightfighter Drive and Imjin Parkway would be suitable for a joint Seaside/Marina fire station, with a more southern site being of more benefit to Seaside and a more northern site being of more benefit to Marina. |

| | |
|---|---|
| **Recommendation #1:** | Should the Cities of Marina and Seaside decide to pursue a joint fire station venture in the near- to mid-term future, any available site along 2nd Avenue between Lightfighter Drive and Imjin Parkway would be suitable to provide enhanced first-unit travel time coverage for both Cities. |

## 2.5 SEASIDE FIRE STATION 2 LOCATION ANALYSIS

After the joint station analysis, Citygate was asked to identify and evaluate potential locations for a second dedicated Seaside fire station to maximize first-due travel time coverage in the City and to provide appropriate response travel time coverage for the planned future Main Gate and Campus Town development projects.

**Scenario 3 in Appendix A—**In collaboration with Department leadership, Citygate identified Lightfighter Drive and 2nd Avenue as a potential station site. As the Scenario 3 map in Appendix A illustrates and Table 3 summarizes for road mile coverage, this prospective site would improve 4:00-minute Citywide travel time coverage by 26 percent (from 57 percent to **84 percent** of total public road miles) *without* POM Fire. Due to proximity of this site to the current POM Fire Station and prospective future POM Fire Station relocation to the Chapel site further south on General Jim Moore Boulevard, 4:00-minute coverage with POM Fire included is essentially identical to existing 4:00-minute travel time coverage as illustrated in Map 2. Alternate prospective sites within approximately a quarter mile of this location would have essentially the same 4:00-minute travel time coverage. In Citygate's experience, this level of first-due travel time coverage (84 percent) is very good for a city the size of Seaside.

After this analysis, Citygate was tasked to evaluate 4:00-minute travel time coverage from two specific City-owned parcels:

- **Site A**—Northwest corner of Gigling Road at 1st Avenue
- **Site B**—Northeast corner of General Jim Moore Boulevard at Eucalyptus Road

**Scenario 4 in Appendix A—**The mapped coverage from Site A (Gigling Road at 1st Avenue) shows this location would improve 4:00-minute Citywide travel time coverage 28 percent (from

57 percent to **85 percent**) from current 4:00-minute coverage *without* POM Fire as illustrated in the Scenario 4 map and detailed in Table 3. This prospective site is also less than half a mile south of the Lightfighter Drive at 2nd Avenue site previously evaluated as a joint station location (Scenario 3) and would result in very good first-due coverage for the City. This site also conforms with three of the four fire station siting considerations discussed in Section 2.3, with 4:00-minute travel time coverage extending north to approximately 8th Street in Marina.

**Scenario 4a in Appendix A**—As shown in this map, a combination of Site A and the POM Fire Station (relocated to the Chapel site) provides significant overlap across north Seaside, but as previously cited, Citygate recommends Seaside *not* consider POM Fire in its long-range fire deployment planning due to uncertainty regarding future response capacity and location.

**Scenario 5 in Appendix A—**Analysis of Site B (General Jim Moore Boulevard at Eucalyptus Road) shows this location would improve 4:00-minute Citywide travel time coverage 18 percent (from 57 percent to **76 percent**) from current 4:00-minute coverage *without* POM Fire as illustrated in the Scenario 5 map and detailed in Table 3. In addition to providing 10 percent *less* 4:00-minute travel time coverage than Site A, this site does not meet three of the four fire station siting considerations discussed in Section 2.3 by essentially abutting the eastern developable City boundary. This location also does not provide 4:00-minute travel time coverage to significant portions of the proposed Campus Town development as well as the Main Gate development and most of the current military housing within in the Gigling Road / Monterey Road / Coe Avenue / Highway 1 quadrant, nor quick access to the Highway 1 corridor. In addition, this site is only 1.3 miles from the existing Station 1 location at Broadway Avenue and Yosemite Street resulting in approximately 50 percent overlap of Station 1's 4:00-minute travel time coverage. For these reasons, Citygate considers this prospective site a poor choice compared to Site A to optimize fire station spacing (distribution/concentration) and response time coverage for Seaside with a two-station deployment model.

**Scenario 5a in Appendix A**—As shown in this map, a combination of Site B and the POM Fire Station (relocated to the Chapel site) provides significant overlap across north Seaside, but as previously cited, Citygate recommends Seaside *not* consider POM Fire in its long-range fire deployment planning due to uncertainty regarding future response capacity and location.

| | |
|---|---|
| **Finding #2:** | Site A (Gigling Road at 1st Avenue) would provide significantly better 4:00-minute travel time coverage for the City of Seaside than Site B (General Jim Moore Boulevard at Eucalyptus Road), as well as significantly better station spacing and access to the Highway 1 corridor. |

**Recommendation #2:** The City of Seaside should consider Site A (Gigling Road at 1st Avenue) as the preferred location for a second fire station.

## 2.6 FIRE STATION TRAVEL TIME ANALYSIS SUMMARY

The following table summarizes 4:00-minute travel time coverage from existing fire station locations (Map 2) both with and without automatic/mutual aid, as well as the various joint station scenarios evaluated in Section 2.4 and independent Seaside Station 2 scenarios in Section 2.5.

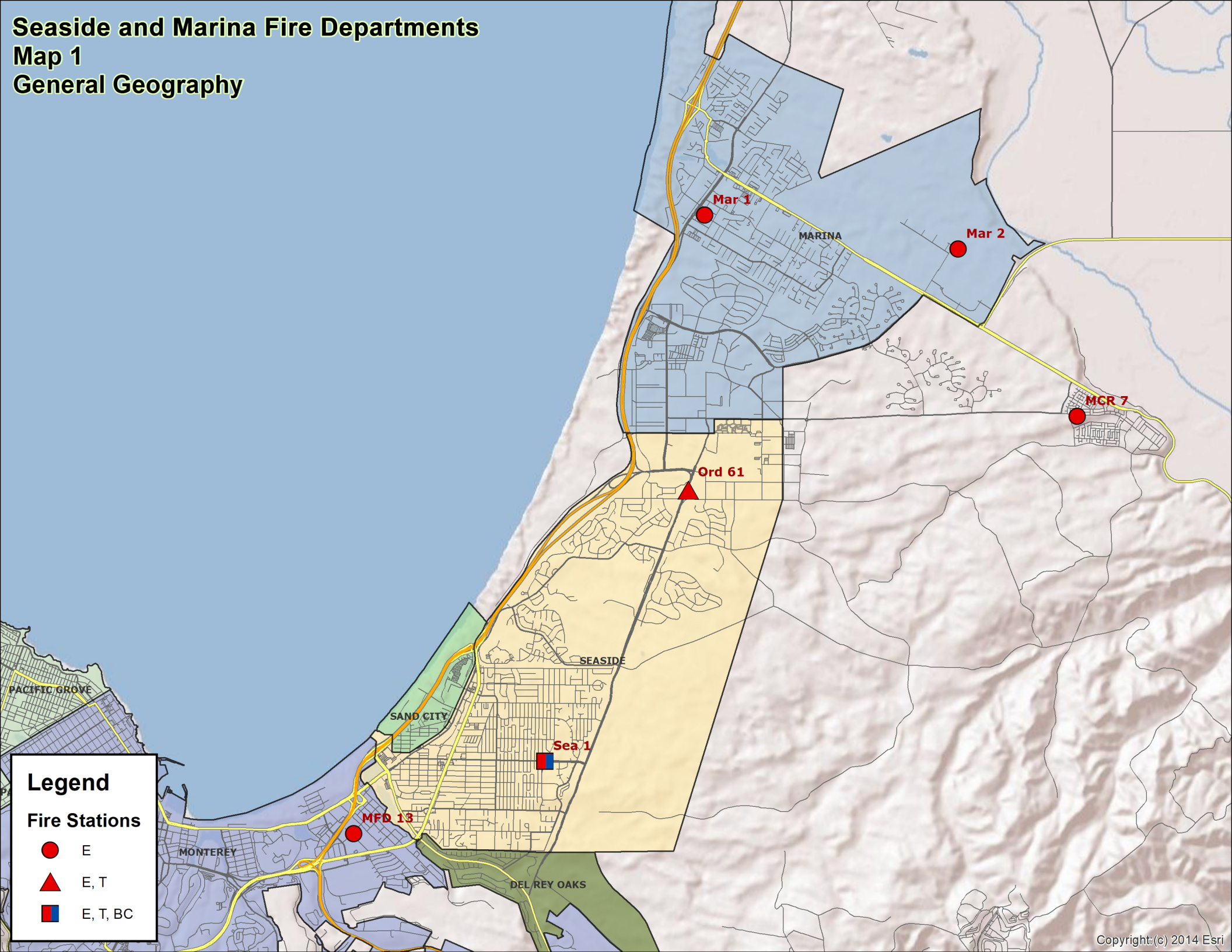
**Table 3—Travel Time Analysis Summary**

| Map or Scenario No. | Travel Time Measure | Seaside | | | Marina | | |
|---|---|---|---|---|---|---|---|
| | | Total Public Road Miles | Miles Covered | Percent of Total Miles Covered | Total Public Road Miles | Miles Covered | Percent of Total Miles Covered |
| Map 2 | **4:00-Minute 1st-Due** – Current Station Locations (*with* Ord 61) | **136** | 116 | **85.29%** | **106** | 74 | **69.81%** |
| Map 2 | **4:00-Minute 1st-Due** – Current Station Locations *(no* Ord 61) | **136** | 78 | **57.35%** | **106** | 58 | **54.72%** |
| Scenario 1 | **4:00-Minute 1st-Due** – Joint Station at 2nd Ave. @ Divarty St. (*no* Ord 61) | **136** | 105 | **77.21%** | **106** | 82 | **77.36%** |
| Scenario 2 | **4:00-Minute 1st-Due** – Joint Station at 2nd Ave. @ 8th St. (*with* relocated Ord 61) | **136** | 116 | **85.29%** | **106** | 91 | **85.85%** |
| Scenario 3 | **4:00-Minute 1st-Due** – Joint Station at Lightfighter Dr. @ 2nd Ave. (*no* Ord 61) | **136** | 114 | **83.82%** | **106** | 76 | **71.70%** |
| Scenario 4 (Site A) | **4:00-Minute 1st-Due** – **Site A** Proposed Seaside Station 2 at Gigling Rd. @ 1st Ave. (*no* Ord 61) | **136** | 116 | **85.29%** | **106** | 68 | **64.15%** |
| Scenario 4a (Site A) | **4:00-Minute 1st-Due** – **Site A** Proposed Seaside Station 2 at Gigling Rd. @ 1st Ave. (*with* relocated Ord 61) | **136** | 118 | **86.76%** | **106** | 70 | **66.04%** |
| Scenario 5 (Site B) | **4:00-Minute 1st-Due** – **Site B** Proposed Seaside Station 2 at Gen. Jim Moore Blvd. @ Eucalyptus Rd. *(no* Ord 61) | **136** | 103 | **75.74%** | **106** | 60 | **56.60%** |
| Scenario 5a (Site B) | **4:00-Minute 1st-Due** – **Site B** Proposed Seaside Station 2 at Gen. Jim Moore Blvd. @ Eucalyptus Rd. *(with* relocated Ord 61) | **136** | 121 | **88.97%** | **106** | 69 | **65.09%** |

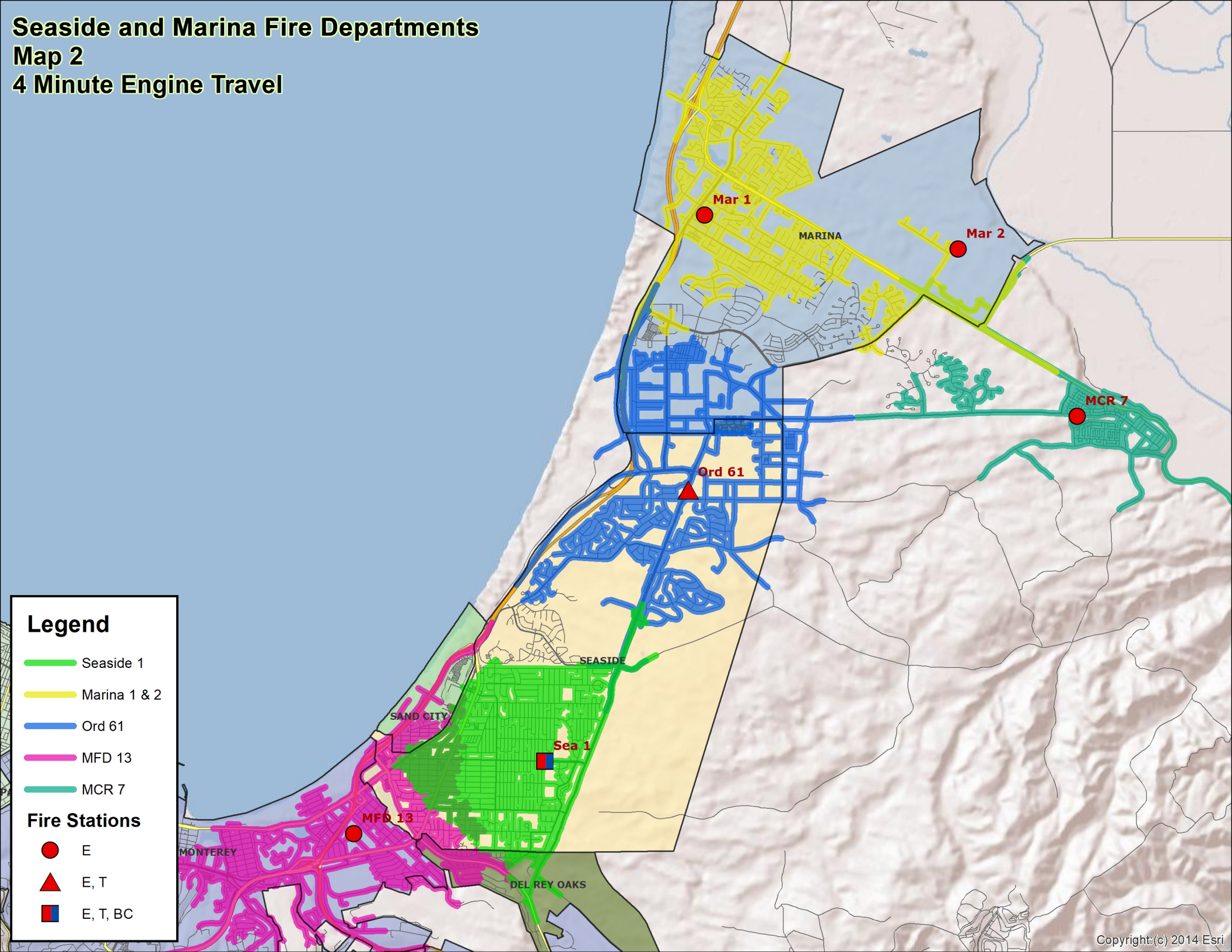
# APPENDIX A

# MAP ATLAS

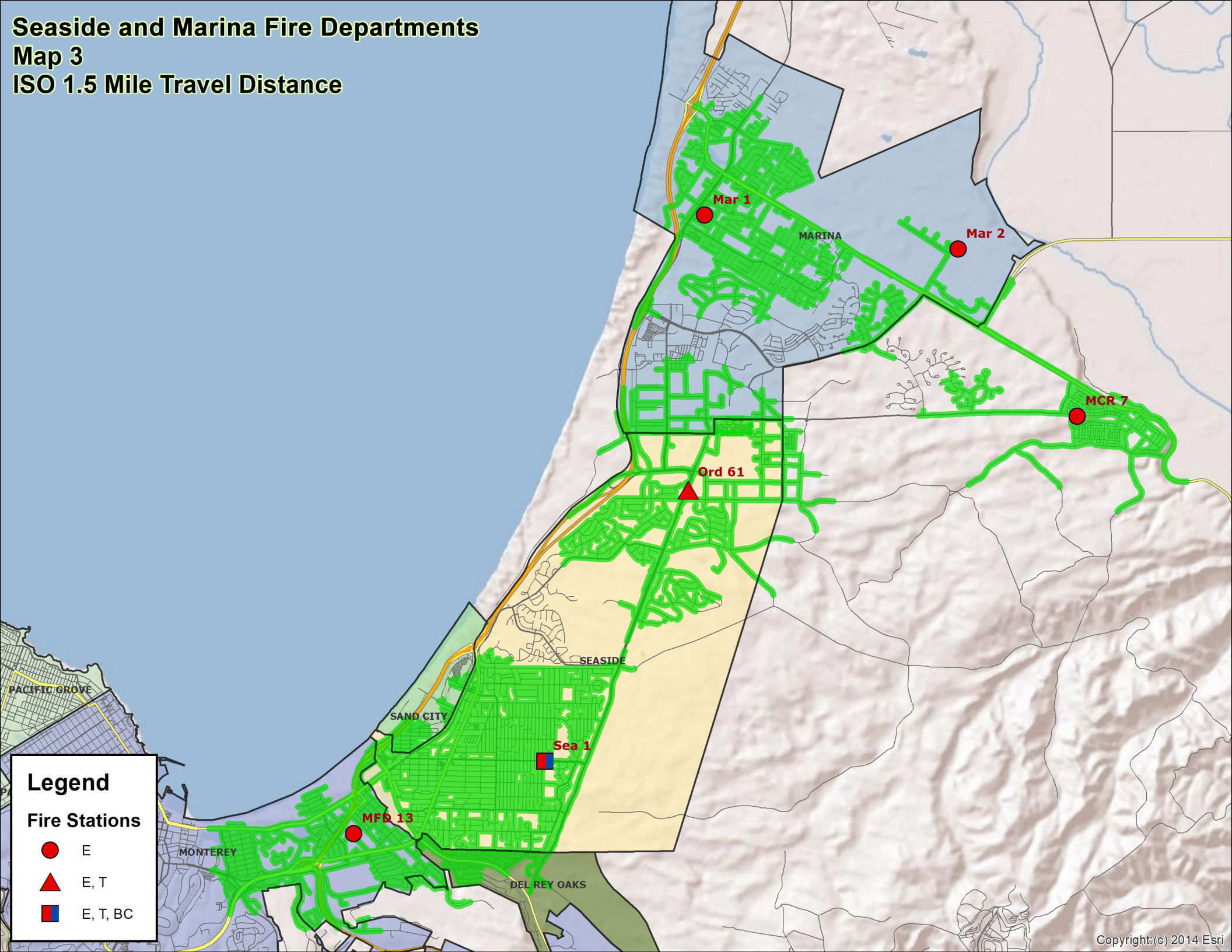
# Seaside and Marina Fire Departments
# Map 1
# General Geography



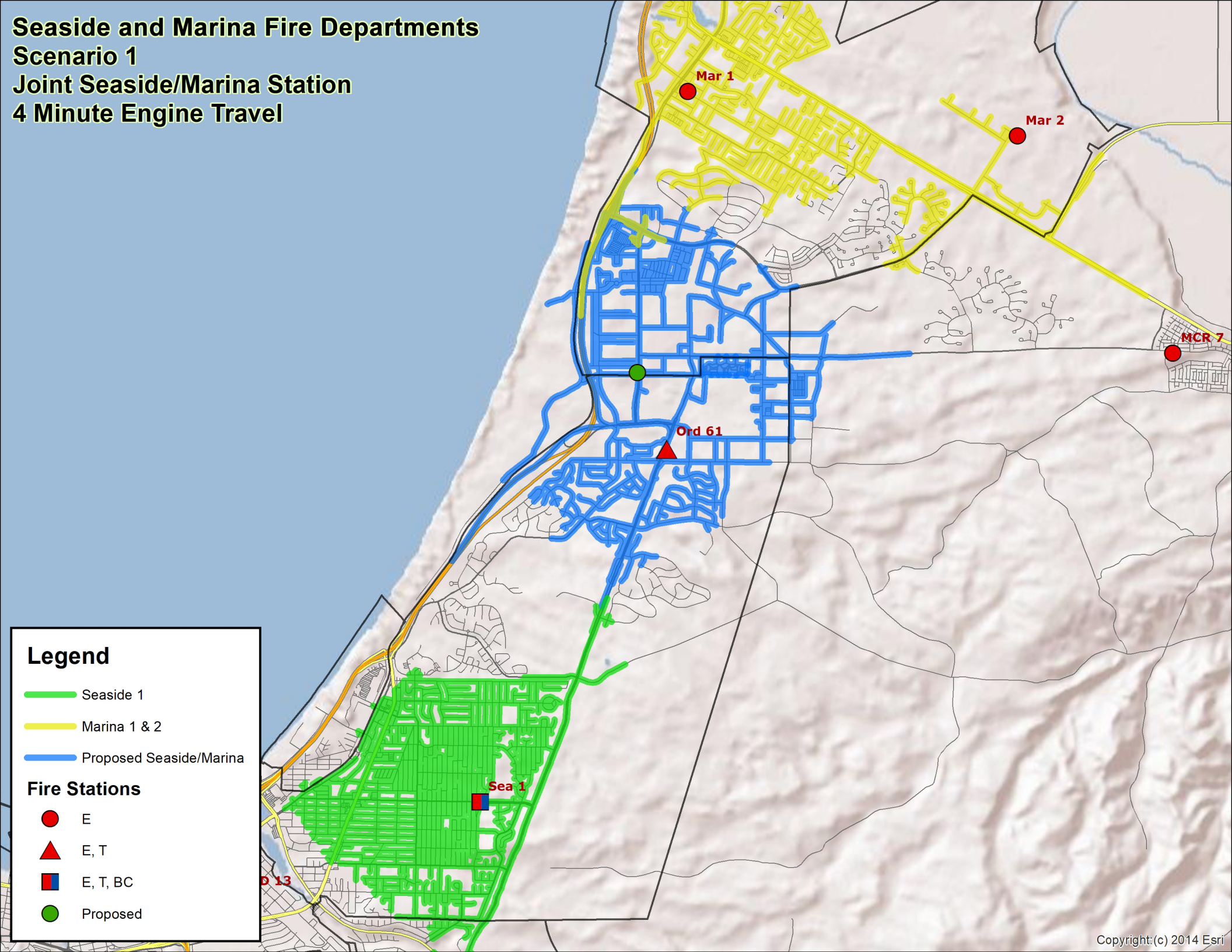
# Seaside and Marina Fire Departments
# Map 2
# 4 Minute Engine Travel



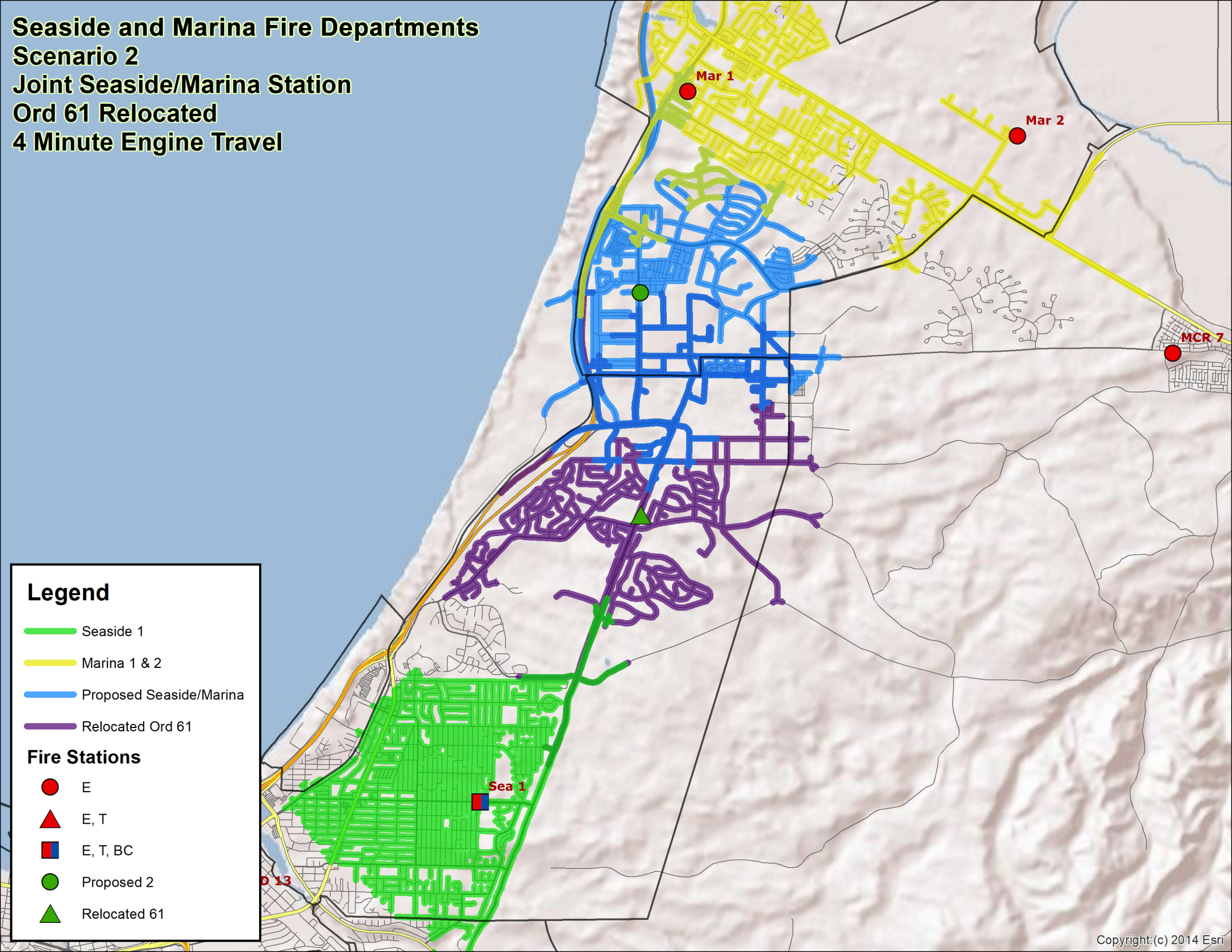
# Seaside and Marina Fire Departments
# Map 3
# ISO 1.5 Mile Travel Distance



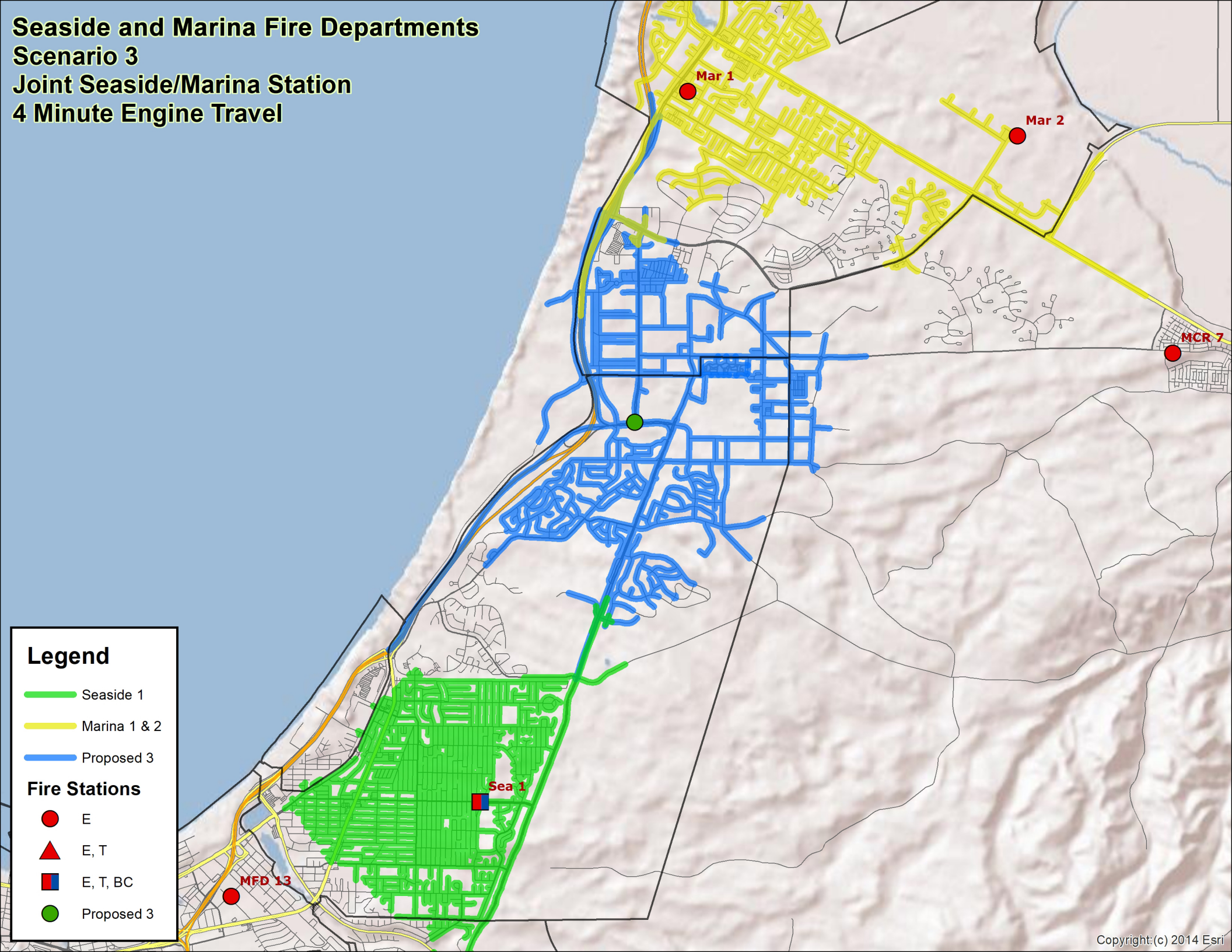
# Seaside and Marina Fire Departments
# Scenario 1
# Joint Seaside/Marina Station
# 4 Minute Engine Travel

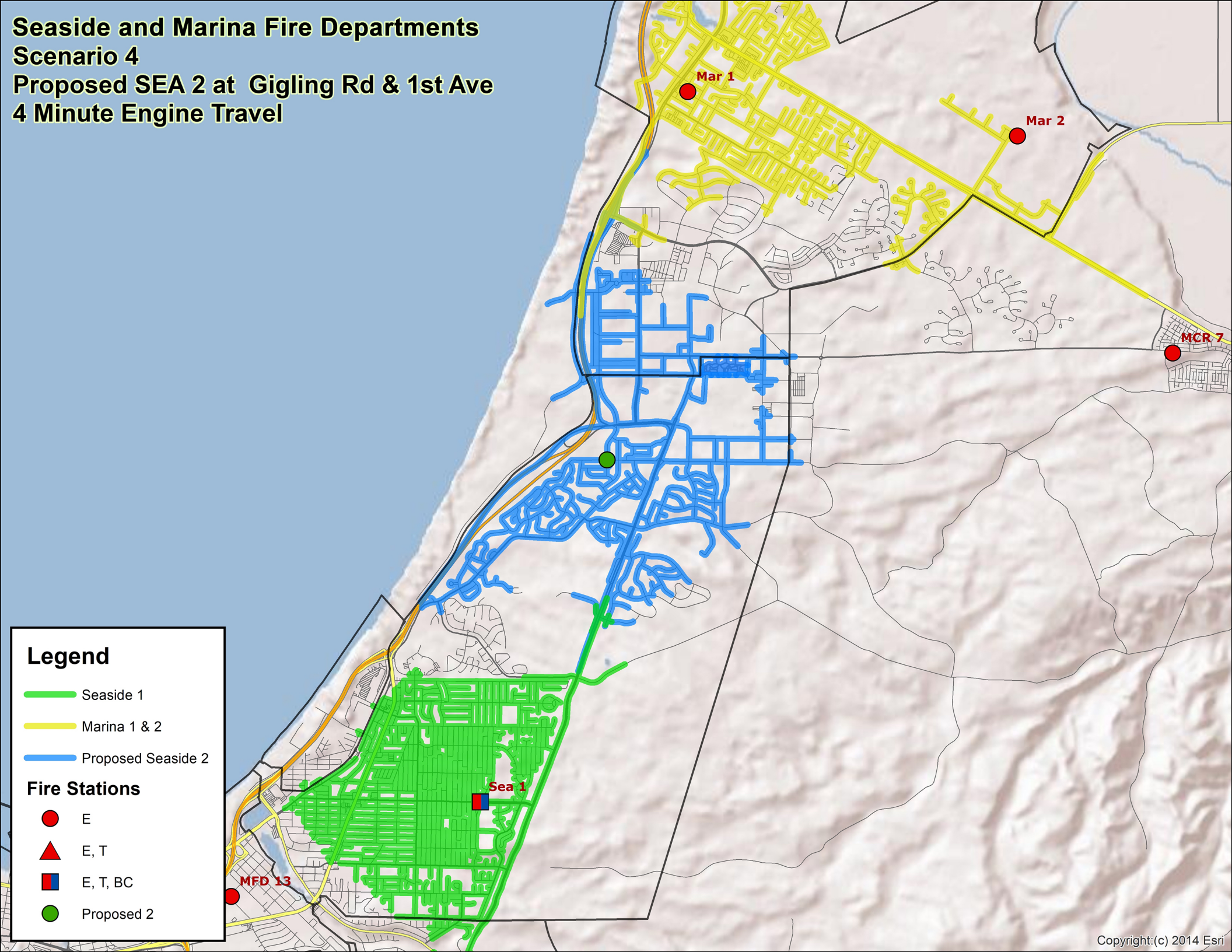


# Seaside and Marina Fire Departments
# Scenario 2
# Joint Seaside/Marina Station
# Ord 61 Relocated
# 4 Minute Engine Travel

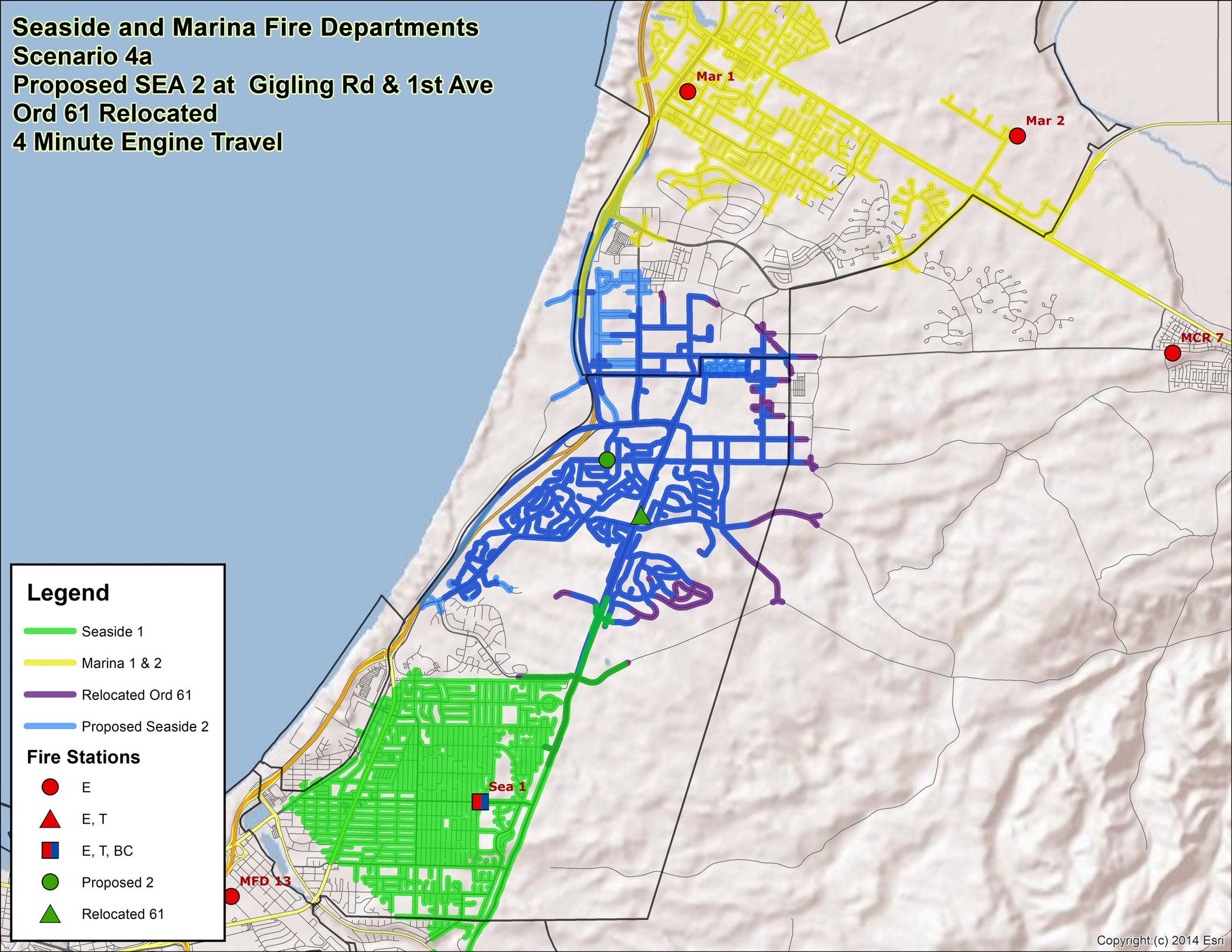


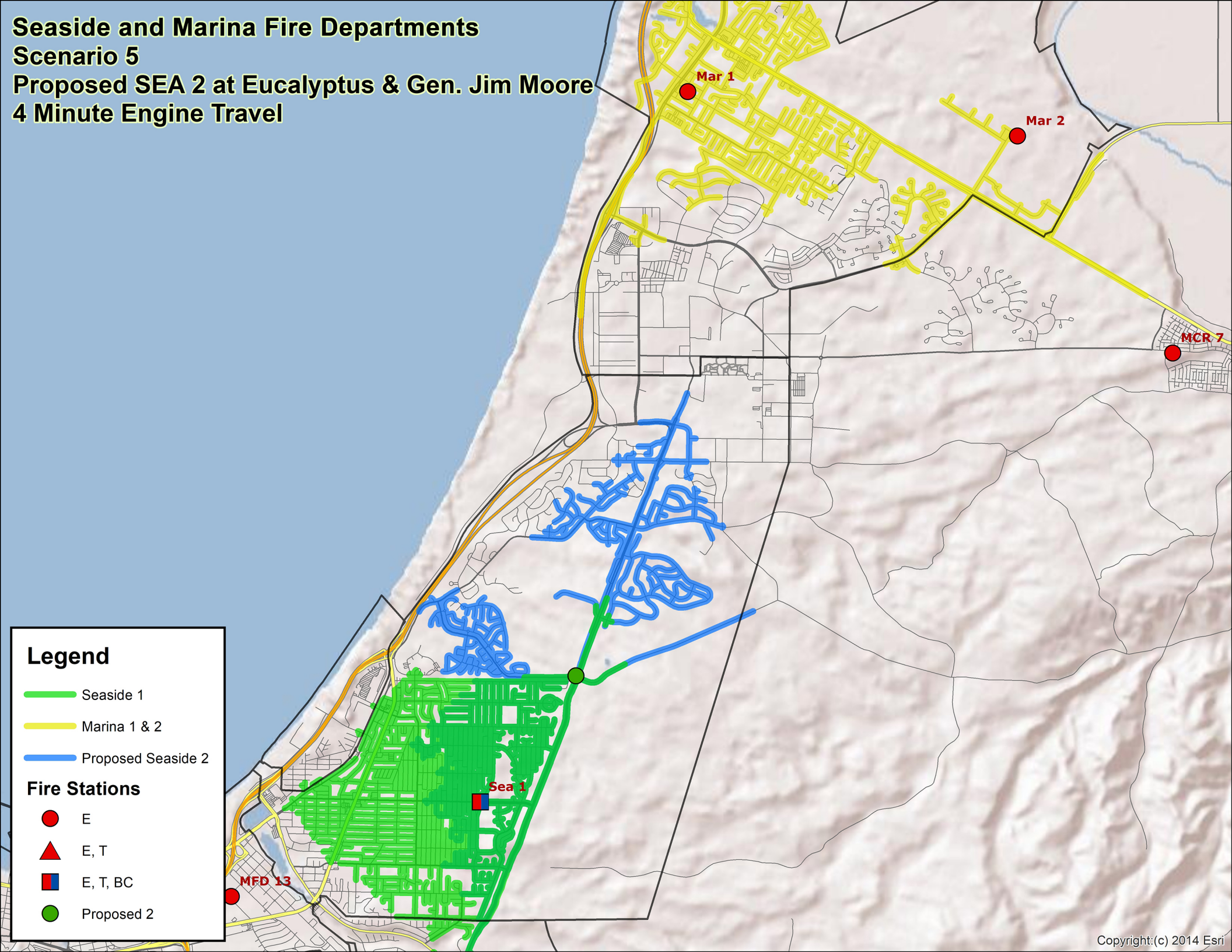
# Seaside and Marina Fire Departments
# Scenario 3
# Joint Seaside/Marina Station
# 4 Minute Engine Travel




Seaside and Marina Fire Departments
Scenario 4
Proposed SEA 2 at Gigling Rd & 1st Ave
4 Minute Engine Travel
Mar 1
Mar 2
MCR 7
Sea 1
MFD 13
Legend
Seaside 1
Marina 1 & 2
Proposed Seaside 2
Fire Stations
E
E, T
E, T, BC
Proposed 2
Copyright:(c) 2014 Esri

# Seaside and Marina Fire Departments
# Scenario 4a
# Proposed SEA 2 at Gigling Rd & 1st Ave
# Ord 61 Relocated
# 4 Minute Engine Travel




Seaside and Marina Fire Departments
Scenario 5
Proposed SEA 2 at Eucalyptus & Gen. Jim Moore
4 Minute Engine Travel
Mar 1
Mar 2
MCR 7
Sea 1
MFD 13
Legend
Seaside 1
Marina 1 & 2
Proposed Seaside 2
Fire Stations
E
E, T
E, T, BC
Proposed 2
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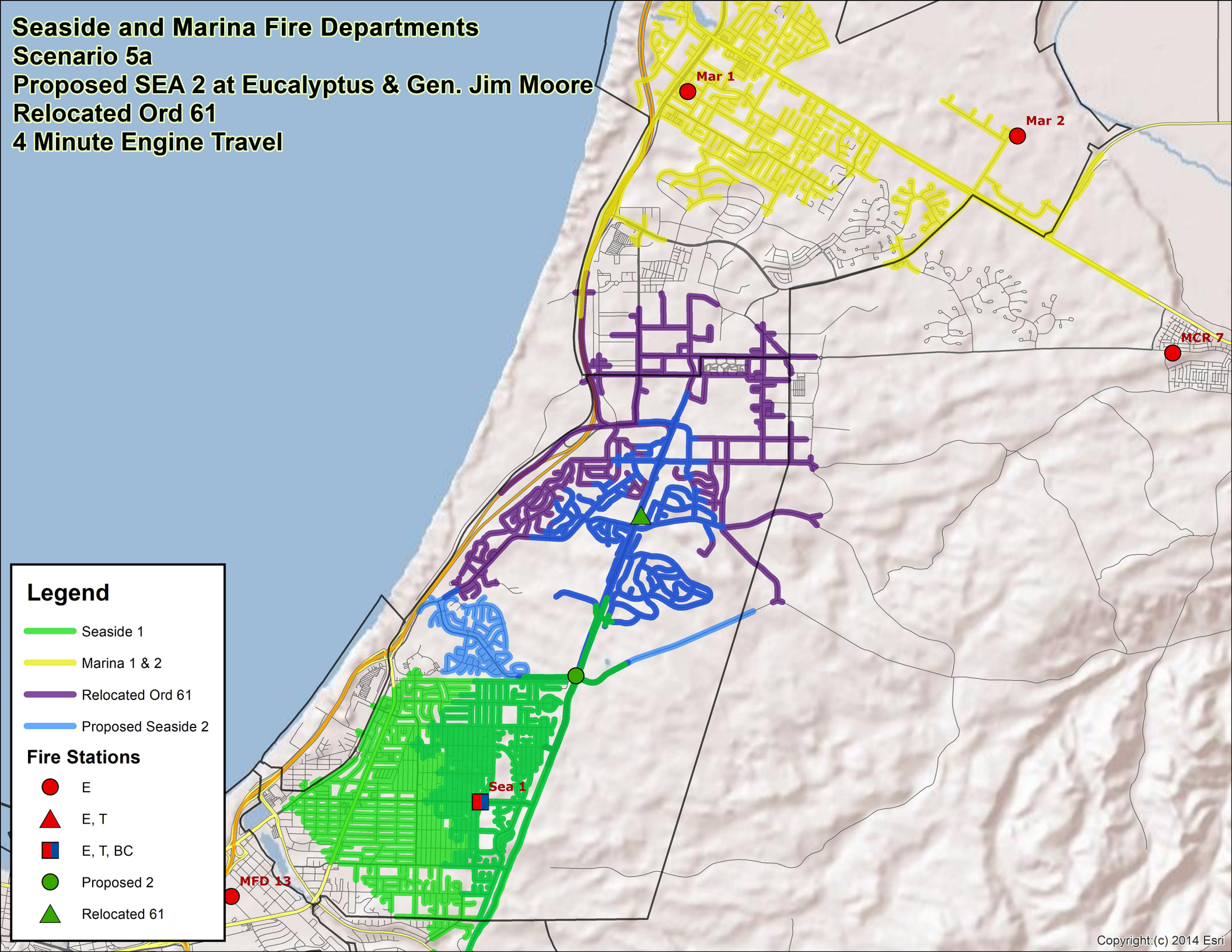
Seaside and Marina Fire Departments
Scenario 5a
Proposed SEA 2 at Eucalyptus & Gen. Jim Moore
Relocated Ord 61
4 Minute Engine Travel
Mar 1
Mar 2
MCR 7
Sea 1
MFD 13
Legend
Seaside 1
Marina 1 & 2
Relocated Ord 61
Proposed Seaside 2
Fire Stations
E
E, T
E, T, BC
Proposed 2
Relocated 61
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