
III. PROJECT DESCRIPTION

A. INTRODUCTION

The MERA emergency communications system is a network of radio communications sites that link first responders with centralized information and dispatch centers with each other. This system serves first responders with mobile radios in their vehicles, and with hand-held radios when outside vehicles throughout Marin County. The Next Gen System would utilize an updated suite of digital mobile radio communications equipment, developed collaboratively by the Marin Emergency Radio Authority (MERA) and equipment manufacturers, to ensure that two-way radios are interoperable using the latest Project 25 (“P25”) technology standard. This will improve both daily public service and response during critical emergencies with improved radio coverage and reliability throughout the County.

The MERA Next Generation Communications System (Next Gen System, Next Gen, or proposed project) consists of a combination of upgrades to equipment at existing communications sites, and development of facilities on some new sites where public infrastructure facilities already exist such as water tanks, well heads, or other public and private utility and communication facilities. The MERA Next Gen System is designed as a single interconnected communications system. Because of the interconnected nature of the system, no single telecommunications site may stand alone, nor can a single site be removed or relocated without requiring the relocation or redesign of some or all the other sites that comprise the rest of the radio system. Therefore, the telecommunications sites that comprise the MERA Next Gen System are considered a single “project” in compliance with the provisions of the California Environmental Quality Act (CEQA).

B. LOCATION AND SETTING

The proposed Next Gen System would continue to serve Marin County, California through various improvements to the existing radio communication system. Marin County is located north of San Francisco, at the north end of the Golden Gate Bridge, on a broad peninsula between the Pacific Ocean and San Pablo Bay. Marin County’s urbanized areas lie on the east side of the peninsula, along the US Highway 101 corridor, while western Marin County is rural, mountainous, and generally comprised of agricultural land and coastal communities. Coastal mountains make up the major topography of Marin County, including Mount Tamalpais with an elevation of 2,572 feet, making it the highest peak in the County. The Next Gen System relies on selected high-elevation sites, constructed mostly on mountain tops or ridgelines, to provide line-of-sight communications among the County’s coastal mountains, valley locations, and bayside communities.

C. PROJECT NEED

The existing MERA system is the backbone of the 911 emergency communications system in Marin County, and handles 4.4 million radio calls annually (MERA 2014). The existing system was designed for a maximum capacity of 2,500 radios and now supports nearly 3,000 radios.

System projections over 20 years indicate a future need for 5,000 radios. In addition, original system vendors no longer support the older equipment and federal laws will soon require system replacement.

The Next Gen System is vital for continued countywide, inter-jurisdictional emergency voice communications among first responders and other public service providers, in order to effectively respond to daily emergencies, and to coordinate the broader responses needed during major events such as large fires, floods and earthquakes. The combination of older equipment that is difficult to maintain, and recent changes in federal frequency requirements mandated by the *Congressional Jobs Bill HR 3630 (2012)* necessitates an upgrade of all UHF (T-band) public safety radio communications systems, including MERA's, by 2023. Funding for the Next Gen System is generated by a parcel tax that was authorized by Marin County voters in 2014.

The Next Gen System is MERA's response to the federal mandate and the need to upgrade radio communications equipment facilities for Marin County, local municipalities, and public agencies to continue to provide necessary and required emergency communications benefiting county residents, businesses, and visitors. The Next Gen System will improve the current system's ability to provide regional and wide-area conversations between public safety dispatchers and mobile units operating throughout most of Marin County. Individual cities and member agencies will continue to share this common backbone for compartmentalized communication links and inter-departmental group communications, while also retaining autonomous operations.

Project Objectives

MERA's objectives for the Next Gen System were developed over time beginning in 2009 when modernization of the system was first considered. MERA commissioned the *MERA System Design Report* (AECOM, April 2010) to identify a range of feasible designs for the Next Gen System. The report presented various forward-looking plans to modernize the existing MERA system. The report considered system capacity, quality of service, short-term versus long-term needs, costs, interoperability, coverage, population density served, microwave paths, frequency availability, and potential environmental impacts.

Specific project objectives were created to consolidate the multitude of considerations in a few succinct statements that could be used to assess the effectiveness of proposals to modernize and expand the existing MERA system. Member agencies defined the original objectives and they have subsequently been refined and used in conjunction with site selection criteria to evaluate the various Next Gen System design proposals. MERA's Next Gen Project objectives are:

1. Install a new radio communications system as approved in Measure A by a vote of the public in November 2014.
2. Modify the existing aging MERA system with new 700 MHz equipment to meet revised FCC requirements by 2023.

3. Improve Marin County communications coverage to reduce 911 response times and ensure reliable communications among first responders during major events, and everyday operations.
4. Provide Next Gen System communications coverage to meet 97% reliability in the Motorola contracted coverage area with delivered audio quality of 3.4 or better as measured by TSB-88 testing methods.
5. Relocate the radio system's Network Core and Prime Site from the Marin County Civic Center to the Emergency Operations Facility (EOF).
6. Maintain compliance with all applicable land use, permitting, and California Environmental Quality Act (CEQA) requirements.
7. Satisfy the MERA site selection criteria (below) to provide required coverage and reliability with minimum impacts to surrounding communities.

MERA Site Selection Criteria

In order to meet the Project Objectives above, MERA adopted a set of criteria for evaluating proposed designs for the new system (including the selection of new sites), and these criteria have been applied during the development of the design for the system evaluated in this Draft Supplemental EIR (Draft SEIR). Under the MERA criteria, the Next Gen System must:

1. Continue as a land-based microwave/wireless system.
2. Incorporate the Marin County Emergency Operations Facility (EOF).
3. Maximize the use of existing sites and other existing infrastructure facilities.
4. Minimize the number of new sites while still meeting the project's objective for improved coverage.
5. Combine facilities and equipment to minimize new antennas and building space needs.
6. Use previously developed sites, if possible.
7. Locate antennas high enough to keep radio frequency emission levels near the ground well within the limits set by the FCC for uncontrolled public access.
8. Minimize tower heights and visual impact to the fullest extent possible.

D. GENERAL PROJECT DESCRIPTION

Overview of Existing System

The existing MERA System allows for autonomous operation within agencies, as well as interagency radio channels to provide reliable communications among multiple state, county and municipal agencies. The system is integral for day-to-day communications among police, fire and public works crews, and supports first responders in emergency situations. The system can also expand to support disaster response and recovery in acute situations such as earthquakes, floods, and wildfires. The existing MERA System provides communications with acceptable radio coverage in most of Marin County, however radio coverage is marginal in West Marin coastal and rural communities, including Muir Beach and Tomales.

The existing MERA system currently includes 16 active communications sites. The MERA sites are connected by microwave radio links to provide common communication channels and centralized management of local and wide-area communications. The new MERA Next Gen System would retain and upgrade ten of the functioning sites, decommission five existing sites, and add equipment to eight new sites not previously part of the MERA system, for a total of 18 active sites.

10 Existing Sites Included in Next Gen System

- Civic Center
- Big Rock Ridge
- Mt. Tamalpais
- Mt. Barnabe
- Point Reyes Hill
- Dollar Hill
- San Pedro Ridge
- Mt. Tiburon
- Sonoma Mountain
- Stewart Point

5 Existing Sites Decommissioned in Next Gen System

- Forbes Hill, San Rafael
- Mt. Burdell, Novato
- Mill Valley City Hall
- Mill Valley Public Safety Building
- Bay Hill Road, Sonoma County

Six dispatch centers also currently interface with the existing MERA system. These dispatch centers are owned and operated by individual member agencies and are not considered part of MERA. The six dispatch facilities are: Sheriff's Communications Center, County backup dispatch, Marin County fire dispatch (Woodacre), Fairfax Police Department (PD) dispatch, Novato PD dispatch, and San Rafael PD dispatch. Each dispatch site is linked to the overall MERA System either by microwave radio links or leased wire connections.

Next Gen System Additions to the Existing MERA System

Eight new sites are proposed as part of the Next Gen System. All sites have some existing infrastructure from previous development, such as existing communications facilities, existing

water storage tanks, or existing water well-heads. Each of the eight sites proposed as part of the Next Gen System are briefly introduced here, with additional information provided in the project description below:

- Prime Site EOF Emergency Operations Facility (EOF)
- Tomales An existing cell tower and equipment site
- Coyote Peak A water well-head site for the Walker Creek Ranch
- Skyview Terrace Marin Municipal Water District (MMWD) water tank site
- Muir Beach Muir Beach Community Services District water tank site
- Wolfback Ridge Broadcast facility with towers
- Mt. Burdell OTA Broadcast facility with tower
- Mill Valley Water Tank MMWD water tank site

Overall Project Summary

The MERA Next Gen System would retain and upgrade 10 of the currently functioning sites, add equipment to eight new sites, including the relocation of the Prime Site from the Marin County Civic Center to the Emergency Operations Facility (EOF), and decommission five sites. Table III-1 summarizes this information (sites new to MERA are shown in blue, current MERA sites proposed for the Next Gen in green, and sites not part of the proposed Next Gen project in white) and Figure III-1 shows each site location within the network configuration. The updates to existing sites and development of new sites are considered together as a change to the current Marin Public Safety and Emergency Communications System (SCH#99092073) under CEQA. This Draft SEIR details changes to the project and analyzes potential environmental impacts.

Table III-1. Summary of MERA Next Gen Site Locations and Actions

Site Name and #	APN	Jurisdiction	Coordinates	2000 EIR	Actions
1. Prime Site EOF^	165-220-11	City of San Rafael	38.019167, -122.541528	No	New at EOF
2. Civic Center	179-270-11	City of San Rafael	37.999056, -122.531306	Yes	Upgrades
3. Big Rock Ridge	164-300-04	Marin County	38.059194, -122.604250	Yes	Upgrades
4. Mt. Tamalpais	197-120-31	Marin County	37.929006, -122.587084	Yes	Upgrades
5. Mt. Barnabe	168-240-01	Marin County	38.026751, -122.716321	Yes	Upgrades
6. Bolinas Fire Station	193-030-20	Marin County	N/A	Yes	Dropped from original system
7. Bolinas Ridge	197-120-30	Marin County	N/A	Yes	Dropped from original system
8. Point Reyes Hill	109-160-23	Marin County	38.079836, -122.866944	Yes	Upgrades
9. Forbes Hill	010-261-02	City of San Rafael	N/A	Yes	Decommission
10. Dollar Hill	011-051-02	City of San Rafael	37.980262, -122.529354	Yes	Upgrades
11. San Pedro Ridge	015-250-21	City of San Rafael	37.990205, -122.500139	Yes	Upgrades
12. Mt. Burdell	125-180-17	City of Novato	N/A	Yes	Decommission
13. Novato PD	153-061-28	City of Novato	N/A	Yes	Dropped from original system
14. Mt. Tiburon	058-261-39	Town of Tiburon	37.890440, -122.464796	Yes	Upgrades
15. Mill Valley City Hall	028-014-16	City of Mill Valley	N/A	Yes	Decommission
16. Mill Valley Public Safety Building*	030-250-01	City of Mill Valley	N/A	Yes	Decommission
17. Bay Hill Road	100-190-07	Sonoma County	N/A	Yes	Decommission
18. Sonoma Mountain	136-190-09	Sonoma County	38.261015, -122.903629	Yes	Upgrades
19. Stewart Point**	188-090-15	Marin County	38.185833, -122.825167	Yes	Upgrades
20. Tomales***	100-050-42	Marin County	38.017000, -122.546000	No	New site with existing cell tower equipment
21. Coyote Peak	106-110-03	Marin County	37.863289, -122.585512	No	New site with existing water wellheads
22. Skyview Terrace Water Tank	165-220-02	City of San Rafael	37.851085, -122.498376	No	New site with existing MMWD water tank
23. Muir Beach	199-262-11	Marin County	38.149888, -122.593239	No	New site with local water tank
24. Wolfback Ridge	200-120-02	Marin County	37.902735, -122.558010	No	New site with existing structure and 100' tower
25. Mt. Burdell OTA^	125-160-01	Marin County	38.261015, -122.903629	No	New site with existing structure and tower
26. Mill Valley Water Tank	046-070-03	Marin County	38.185833, -122.825167	No	New site with existing MMWD water tank
* Added to original system to relay signals from Mill Valley City Hall. ** Added to original EIR with a CEQA Addendum in 2006. *** 2012 Categorical Exemption, added into SEIR to address whole action. ^ EOF = Emergency Operations Facility, BLUE – New MERA Site, GREEN – Existing MERA Site, WHITE – Decommissioned MERA Site OTA = Over-the-Air Broadcasting.					

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E. SITE-SPECIFIC SETTINGS AND PROPOSALS

1. Prime Site EOF

The Prime Site is to be relocated from the Marin County Civic Center to the County Emergency Operations Facility (EOF) in San Rafael, at Assessor's Parcel Number (APN) 165-220-11 (Figure III-2). Access is provided via Los Gamos Road. This location has not been analyzed in previous CEQA documents and is a change from the original EIR (MERA 2000).

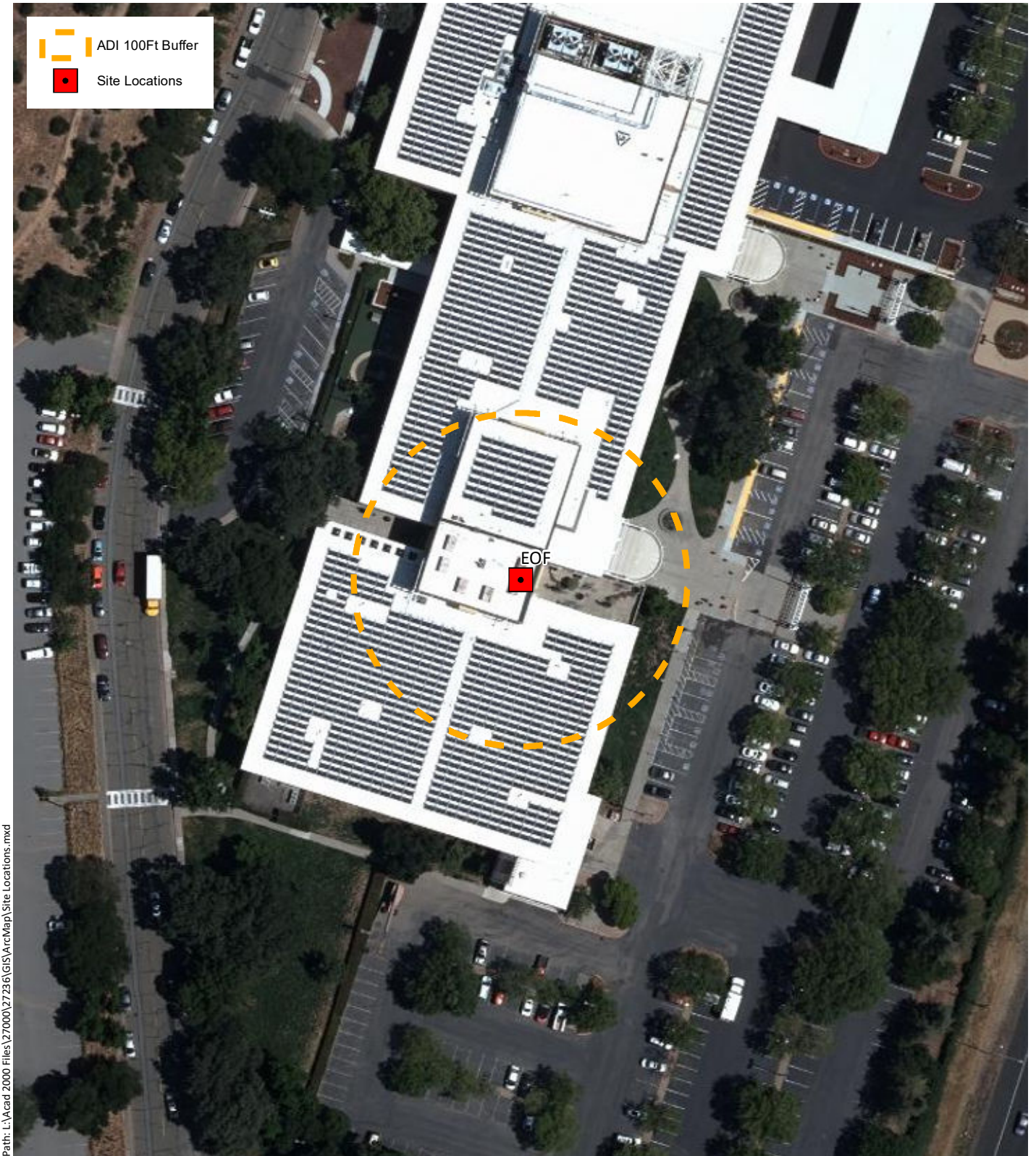
Existing Conditions: Current communications equipment includes 19 County-owned antennas mounted on an exterior lattice structure on the roof of the EOF to support existing dispatch systems. No MERA equipment has yet been installed or constructed at this site. A photo of the site is provided below. The current Prime Site, at the Civic Center, is described next as Site 2.

Next Gen System Proposals: Existing non-MERA equipment and proposed MERA Next Gen adjustments to equipment on the lattice structure are shown in elevation in Figure III-23. (Elevation figures and site plans are at the end of this section.) The MERA Next Gen System would require the following adjustments to the existing communications equipment located on the roof of the EOF, with MERA ultimately controlling about 10% of all visible components in the lattice structure:

- Addition of new 3-foot and 6-foot diameter microwave dishes in and above the lattice structure, and
- Replacement of 12 Yagi-type antennas with 19 vertical pole antennas.



Photo III-1: Site 1 Prime Site EOF, as seen from Highway 101 at Smith Ranch Road. The MMWD water tank at Site 22, Skyview Terrace can be seen on the hill in the background.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-2. Site 1 - Prime Site EOF Location Map

2. Civic Center

The Next Gen System Civic Center site is the same site analyzed in the original EIR, located at APN 179-270-11, with access via Civic Center Drive in San Rafael (Figure III-3). It will no longer serve as the Prime Site, but a microwave radio link to the County EOF (the proposed new Prime Site) will be included in the Next Gen System.

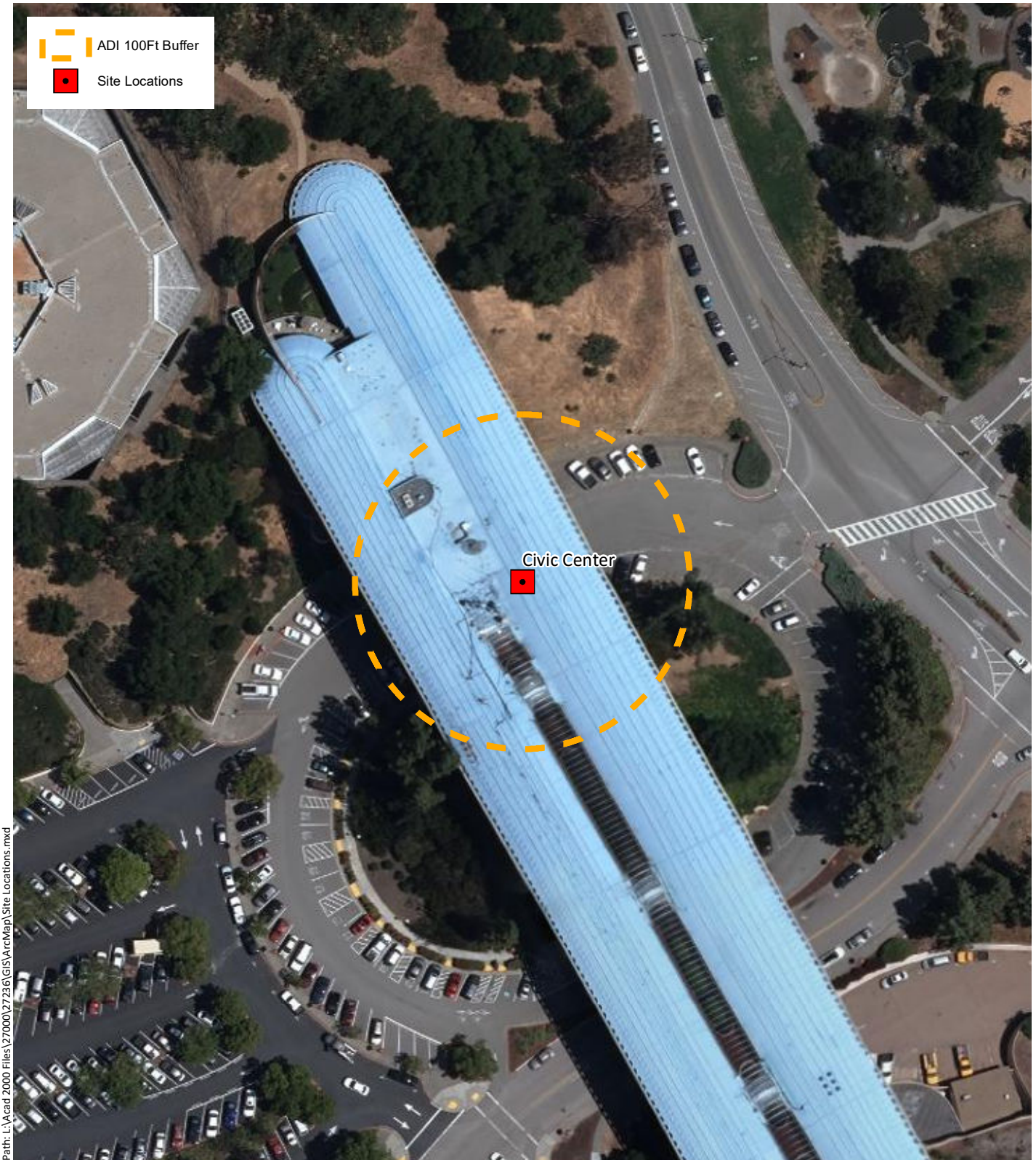
Existing Conditions: The Civic Center site is an existing MERA facility located on the second deck of the Marin County Civic Center building, which is on the Federal Register of Historic Places. Existing communications equipment visible on the roof includes County-owned microwave dishes and antennas mounted directly on the roof, and an unused tripod mount. A photo of the site is provided below.

Next Gen System Proposals: Existing equipment and proposed MERA Next Gen adjustments to equipment elevations at the Civic Center site are provided in Figure III-24. A site plan for the Civic Center site can be viewed in Figure III-25. (Elevation figures and site plans are at the end of this section.) The MERA Next Gen System would require the following minor modifications to the existing equipment, with MERA controlling about 5% of the visible equipment on the roof:

- One new 3-foot diameter microwave dish to be installed on the unused tripod mount.



Phot III-2: Site 2 Civic Center, as seen from Southbound Highway 101.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-3. Site 2 - Civic Center Location Map

3. Big Rock Ridge

The Big Rock Ridge site is the same site analyzed in the original EIR, located on Big Rock Ridge between Lucas Valley and Novato in unincorporated Marin County, at APN 164-300-04 (Figure III-4). The Big Rock Ridge site is a privately-owned shared communications site with numerous tenants. MERA leases space on the existing tower and in one of the existing buildings. Access is provided by a gated and locked four-wheel-drive (4WD) road from the southwest.

Existing Conditions: The Big Rock Ridge site consists of a privately owned 100-foot-high, four legged lattice tower and two small buildings totaling 400 square feet in area and 9 feet in height. MERA leases space for their equipment at the site, which consists of four 4-foot diameter and two 6-foot diameter microwave dishes, two 4-foot high panel antennas, and one 15-foot long vertical pole antenna on the privately-owned tower. A photo of the site is provided below.

Next Gen System Proposals: Existing equipment and proposed MERA Next Gen adjustments to equipment elevations, including alternatives (in blue), are provided in Figure III-26. A site plan for the Big Rock Ridge Site can be viewed in Figure III-27, at the end of this section. The MERA Next Gen System would require the following minor modifications, with MERA ultimately controlling less than 5% of the visible components at the site:

- Existing Tower: Remove four microwave (MW) dishes. Add four vertical pole antennas; remove one pole and two panel antennas.
- Add one new 20' pipe mount to the existing building with two microwave dishes, one 6' and one 3' diameter, and one 6' microwave dish on the side of the existing building.
- Alternative Mounting Locations for Three MW Dishes:
 - 1 - Remount all dishes on existing tower (preferred) and reinforce foundation.
 - 2 - Mount one dish on the side of the existing building, Mount two dishes on a 30' tall tapered monopole near the base of the existing tower.



*Photo III-3: Site 3 Big Rock Ridge (left), and the State of California Communications Site (right)
from the trail in Terra Linda Ridge Open Space.*



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-4. Site 3 - Big Rock Ridge Location Map

4. Mt. Tamalpais

The Next Gen Mt. Tamalpais site is the same site analyzed in the original EIR, located at APN 197-120-31 within a fully developed gated and locked privately owned mountain top radio operations site in unincorporated Marin County (Figure III-5). Access is provided via the Panoramic Highway, Ridgecrest Boulevard and the secured Middle Peak Road.

Existing Conditions: The site contains two privately owned concrete buildings; MERA leases 300 square feet of space within the smaller building, the other building is 30 feet in diameter with a dome-shaped roof painted green. Communications equipment visible on the site includes eight 60-foot tall monopoles in a row at the top of the peak supporting 129 existing antennas. Surrounding the peak are 28 microwave dishes on eight to ten-foot poles or small lattice structures. MERA currently leases space for two antennas on one existing 60-foot monopole, and for five of the 28 microwave dishes at the site. A photo is provided below.

Next Gen System Proposals: Existing equipment and proposed MERA Next Gen adjustments to equipment elevations can be viewed in Figure III-28. Proposed monopole and lattice tower changes are provided in Figure III-29 and a Mt. Tamalpais site plan can be viewed in Figure III-30. Figures III-28 through III-30 are at the end of this section. The Next Gen System would require the following minor modifications to the existing equipment, with MERA ultimately controlling less than 5% of the visible equipment at the site:

- Reinforcement of the existing MERA monopole foundation,
- Add four vertical pole antennas and remove two antennas from a single monopole,
- Installation of a new generator and propane tank and replacement of the HVAC, and
- Replacement of five 8 to 10-foot-tall lattice towers with 20-foot-tall lattice towers, including the addition of seven microwave dishes and the removal of five microwave dishes.



Photo III-4: Site 4 Mt. Tamalpais Middle Peak as seen from the East Peak parking lot.



Figure III-5. Site 4 - Mt. Tamalpais Location Map

5. Mt. Barnabe

The Mt. Barnabe site is an existing MERA facility analyzed in the original EIR, located at APN 168-240-01, with access provided via unnamed dirt roads to the south (APN 168-240-21) and west (APN 168-080-09) in unincorporated Marin County (Figure III-6).

Existing Conditions: Existing communications equipment visible on the site includes a County Fire Lookout Tower and a 70-foot tall three-legged lattice tower with 32 antennas. The highest antennas extend 13 feet above the top of the tower. MERA owns an equipment shelter, generator, propane tank, and a 25-foot-tall microwave monopole which supports six antennas. A photo of the site is provided below.

Next Gen System Proposals: Existing equipment as well as proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-31, and a site plan for the Mt. Barnabe site can be viewed in Figure III-32 at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA ultimately controlling about 35% of the visible equipment at the site:

- Reinforcement of the existing monopole and tower foundations,
- Addition of three vertical pole antennas and removal of two antennas from the existing lattice tower, and
- Addition of two microwave dishes and removal of three microwave dishes from the existing monopole.



Photo III-5: Site 5 Mt. Barnabe, as seen from the end of Portola Avenue, near Forest Knolls.

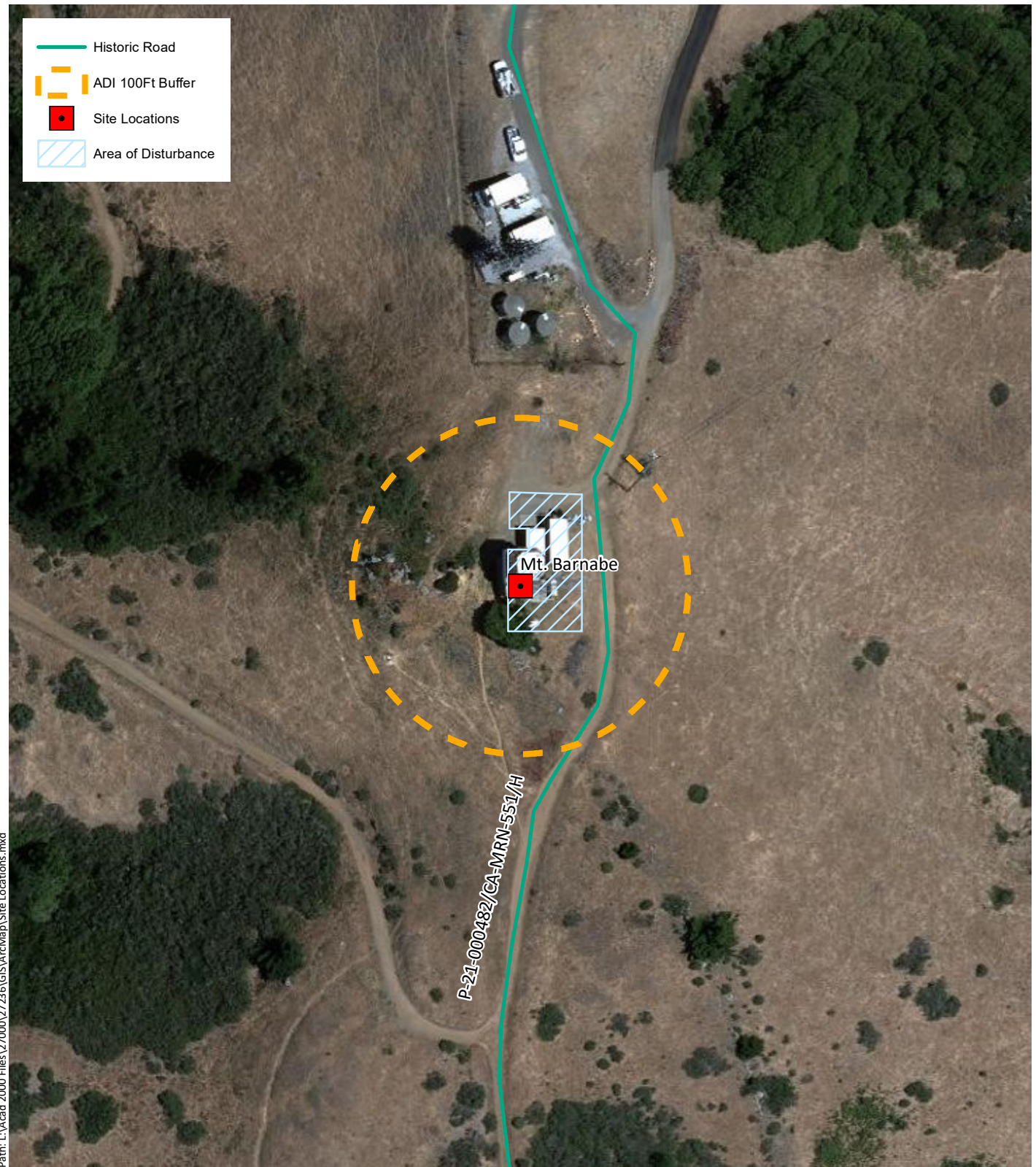
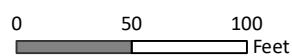


Figure III-6. Site 5 - Mt. Barnabe Location Map



6. Bolinas Fire Station

The Bolinas Fire Station site was dropped from the original MERA System and never constructed. Therefore, this site would not need to be decommissioned and no action would occur on this site for the Next Gen System project.

7. Bolinas Ridge

The Bolinas Ridge site was dropped from the original MERA System and never constructed. Therefore, this site would not need to be decommissioned and no action would occur on this site for the Next Gen System project.

8. Point Reyes Hill

The Point Reyes Hill site is an existing gated and locked MERA facility analyzed in the original EIR, located at APN 109-160-23, with access provided via Drakes View Drive and Mt. Vision Road in unincorporated Marin County (Figure III-7).

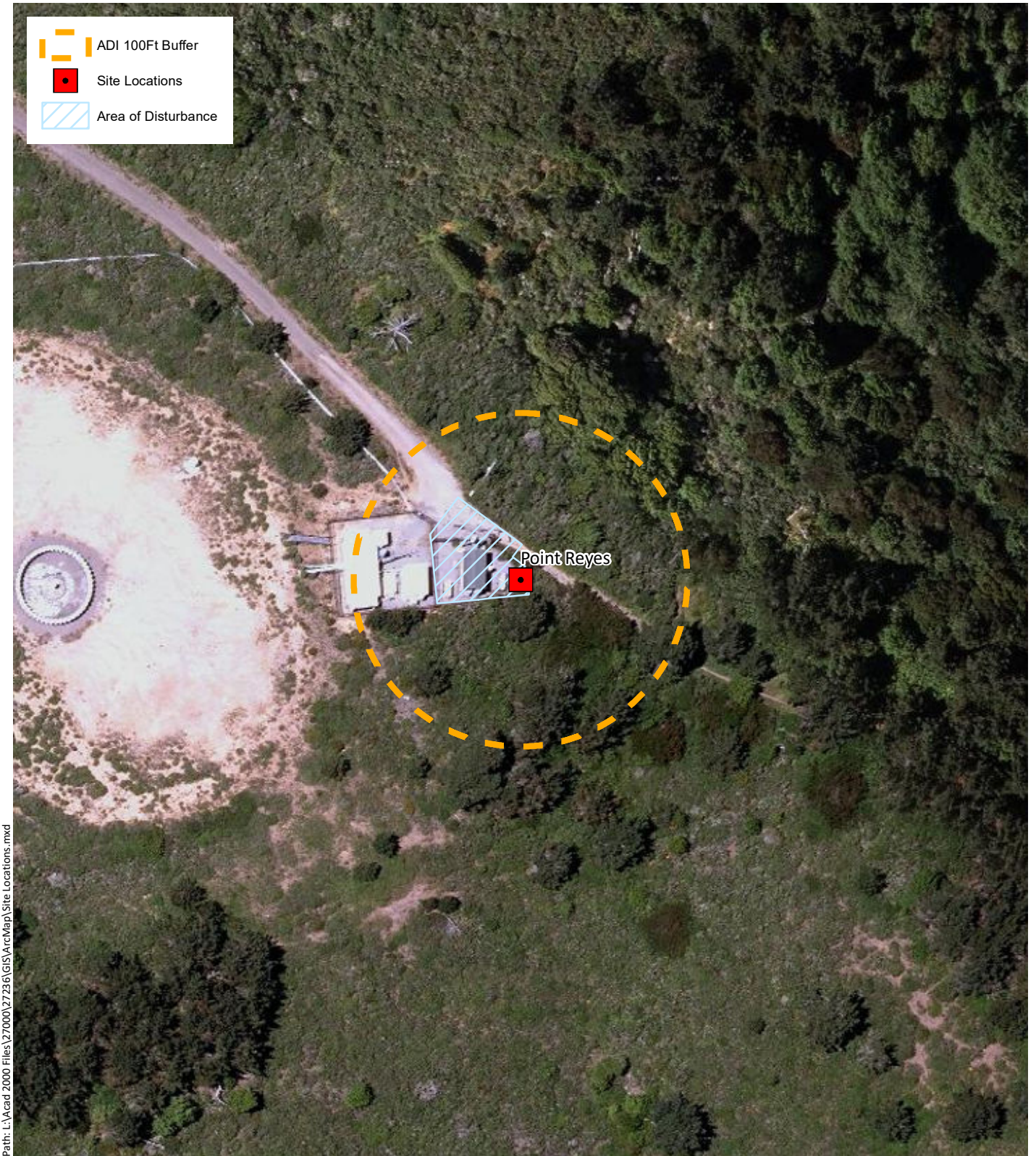
Existing Conditions: The site is occupied by the existing MERA enclosure and a Federal Aviation Administration (FAA) communications and radio navigation enclosure. The FAA site includes a large, visually concealed VORTAC radio navigation antenna and two existing buildings within a small fenced site surrounded by Point Reyes National Seashore. The adjacent fenced MERA compound is built on National Park Service land and includes a 200 square foot prefabricated shelter, an emergency generator, a propane fuel tank, two 17-foot-tall, 12-inch-diameter monopoles with multiple antennas and one 29-foot-tall wooden MERA utility pole supporting an FAA-owned Yagi-type (small horizontal) antenna. A site photo is below.

Next Gen System Proposals: Existing MERA equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-33. A site plan for the Point Reyes Hill site can be viewed in Figure III-34, at the end of this section. The MERA Next Gen System would require the following modifications to the existing equipment and structures, with MERA ultimately controlling about 60% of the visible components (including the FAA antenna on the MERA monopole) within their enclosure:

- Reinforcement of the existing monopole foundation,
- Replacement of the existing 29-foot wood utility pole with a new 40-foot steel monopole to support reinstalled FAA antenna and two new MERA 3-foot diameter microwave dishes,
- New cable bridge between the MERA shelter and the new monopole, and
- Addition of three antennas and removal of three antennas on the existing monopoles, and replace the HVAC units in the existing MERA shelter.



Photo III-6: Site 8 Point Reyes Hill, as seen from the end of Mt. Vision Road.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-7. Site 8 - Point Reyes Hill Location Map

9. Forbes Hill

The Forbes Hill site is an element of the current MERA System, but it will be decommissioned and will not be operational as part of the Next Gen System. It is located at APN 010-261-02 with access via Hepburn Heights Road in San Rafael.

Existing Conditions: The Forbes Hill site is an existing gated MERA communications facility comprised of one radio equipment building of 400 square feet, a 60-foot antenna tower, a generator, and a fuel tank within a fenced enclosure. The public has access to the area around the enclosure, which is next to MMWD's Forbes Hill Reservoir.

Next Gen System Proposals: MERA would remove the building, generator, fuel tank, tower, dishes, antennas, and perimeter fence and would then regrade the site. Use of the site as a communications facility would cease.



Photo III-7: Site 9 Forbes Hill, and the MMWD water tank as seen from the adjacent open space.

10. Dollar Hill

The Dollar Hill site is an existing MERA facility analyzed in the original EIR, located at APN 011-051-02, with access provided via Robert Dollar Drive in San Rafael (Figure III-8).

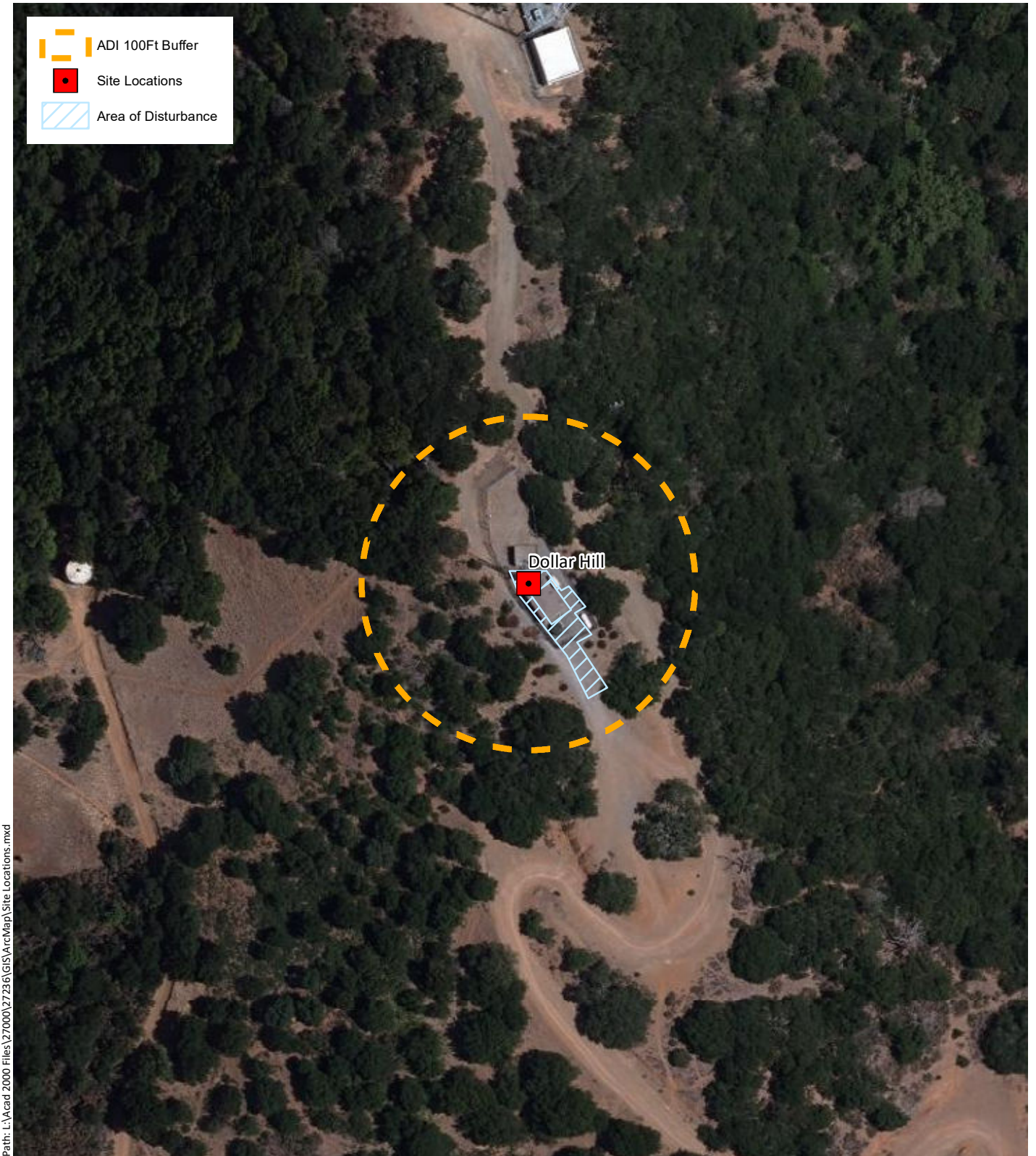
Existing Conditions: The site contains two existing CBA buildings, each 200 square feet in area and nine feet high, plus a water tank and pump. Existing communications equipment visible on the site includes a shelter, generator, propane tank and a 60-foot-tall three-legged tower with 18 antennas, of which five belong to MERA. The larger three-sided tower 350-feet to the north (to the right in the photo below) is a completely separate communications site not related to MERA.

Next Gen System Proposals: Existing MERA equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-35, and a site plan for the Dollar Hill site can be viewed in Figure III-36 at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA ultimately controlling about 70% of the visible equipment at this specific site:

- Reinforcement of the existing tower foundation,
- Addition of two 6-foot-diameter microwave dishes and removal of two microwave dishes from the existing tower, and
- Addition of ten antennas and removal of three antennas from the existing tower.



Photo III-8: Site 10 Dollar Hill, as seen from San Rafael High School ballfield. The MERA tower is at the top center of Dollar Hill, the triple tower (right) is privately owned and not affiliated with MERA.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-8. Site 10 - Dollar Hill Location Map

11. San Pedro Ridge

The privately-owned San Pedro Ridge site contains an existing MERA facility analyzed in the original EIR, located at APN 015-250-21. San Pedro is an existing gated and locked communications site, with access provided via Bay Hills Drive in San Rafael (Figure III-9).

Existing Conditions: The site contains one existing concrete building in a fenced enclosure. The site is located on the San Pedro Ridge northeast of downtown San Rafael. Existing communications equipment visible on the site includes microwave dishes and 52 antennas placed on a privately owned 100-foot-tall tower with three legs and 12 feet wide sides. MERA leases space on this tower. A photo of the site is provided below.

Next Gen System Proposals: Existing equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-37 and a site plan for the San Pedro Ridge site can be viewed in Figure III-38 at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA ultimately controlling about 15% of the visible equipment at the site:

- Reinforcement of the existing tower foundation,
- Addition of one 3-foot-diameter and one 6-foot-diameter microwave dishes and removal of two microwave dishes from the existing tower, and
- Addition of four vertical pole antennas and removal of three antennas from the existing tower.



Photo III-9: Site 11 San Pedro Ridge, as seen from Main Drive near Glenwood Elementary School.

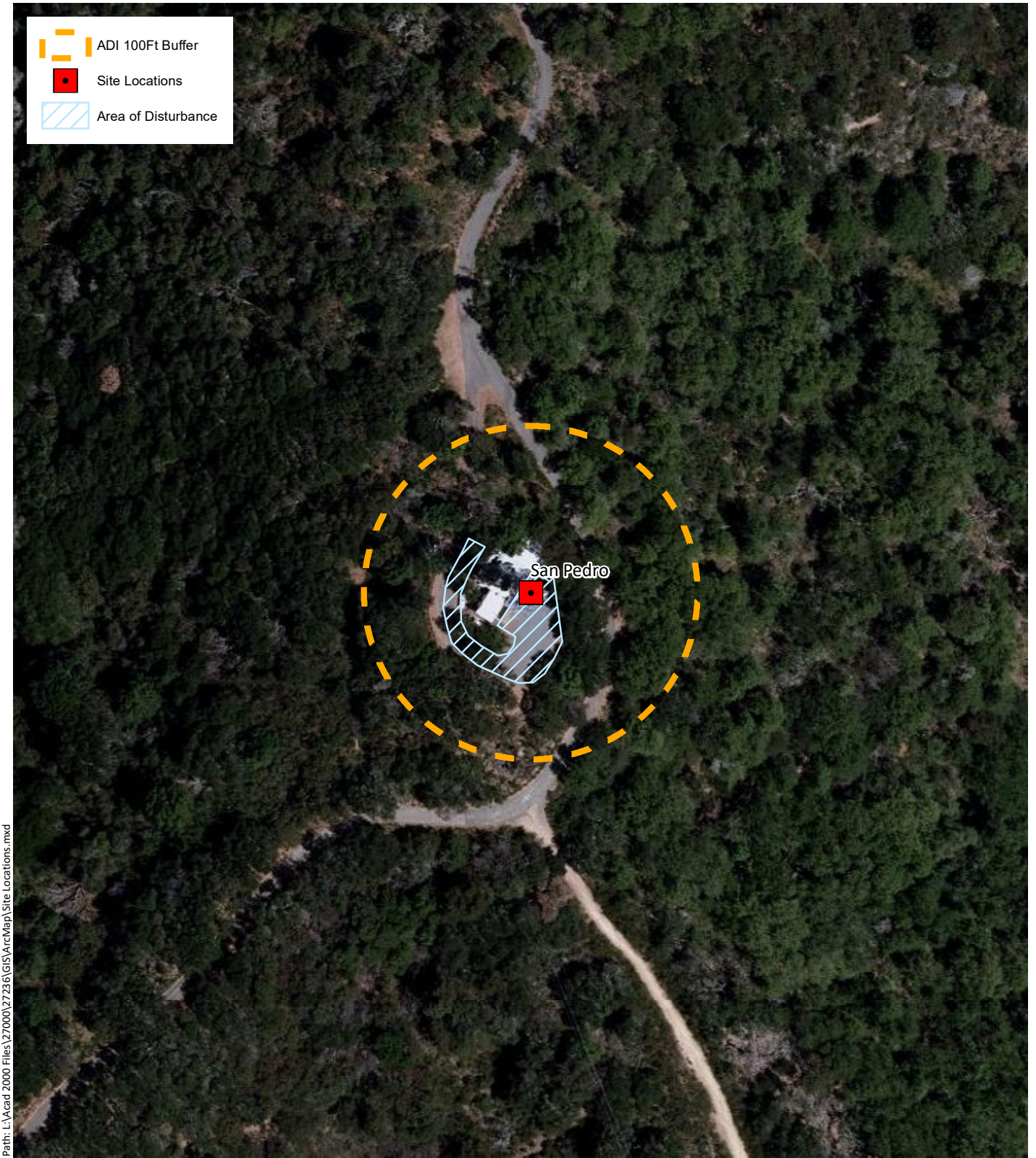


Figure III-9. Site 11 - San Pedro Ridge Location Map

12. Mt. Burdell

The privately-owned Mt. Burdell site is an element of the current MERA System, but it will be decommissioned and will not be operational as part of the Next Gen System. It is located at APN 125-180-17, at the end of the Burdell Mountain Fire Road on the northern border of the City of Novato.

Existing Conditions: The site is located on the southwestern slope of Mt. Burdell within an existing AT&T telecommunications facility. Existing communications equipment includes a 79-foot-tower with four legs.

Next Gen System Proposals: MERA will not renew the lease on this site and decommissioning will include the removal of all MERA equipment. MERA will cease all maintenance activities, but the site will remain operational and will be maintained by existing owners and lessees.

13. Novato Police Department

The Novato Police Department site was dropped from the original MERA System and never constructed. Therefore, this site would not need to be decommissioned and no action would occur on this site for the Next Gen System project. It should be noted that the City of Novato does operate their own police dispatch equipment which is connected to the MERA system.

14. Mt. Tiburon

The Mt. Tiburon site is an existing MERA facility analyzed in the original EIR, located at APN 058-261-39 on the Tiburon Peninsula. Access is provided via Mt. Tiburon Road (Figure III-10).

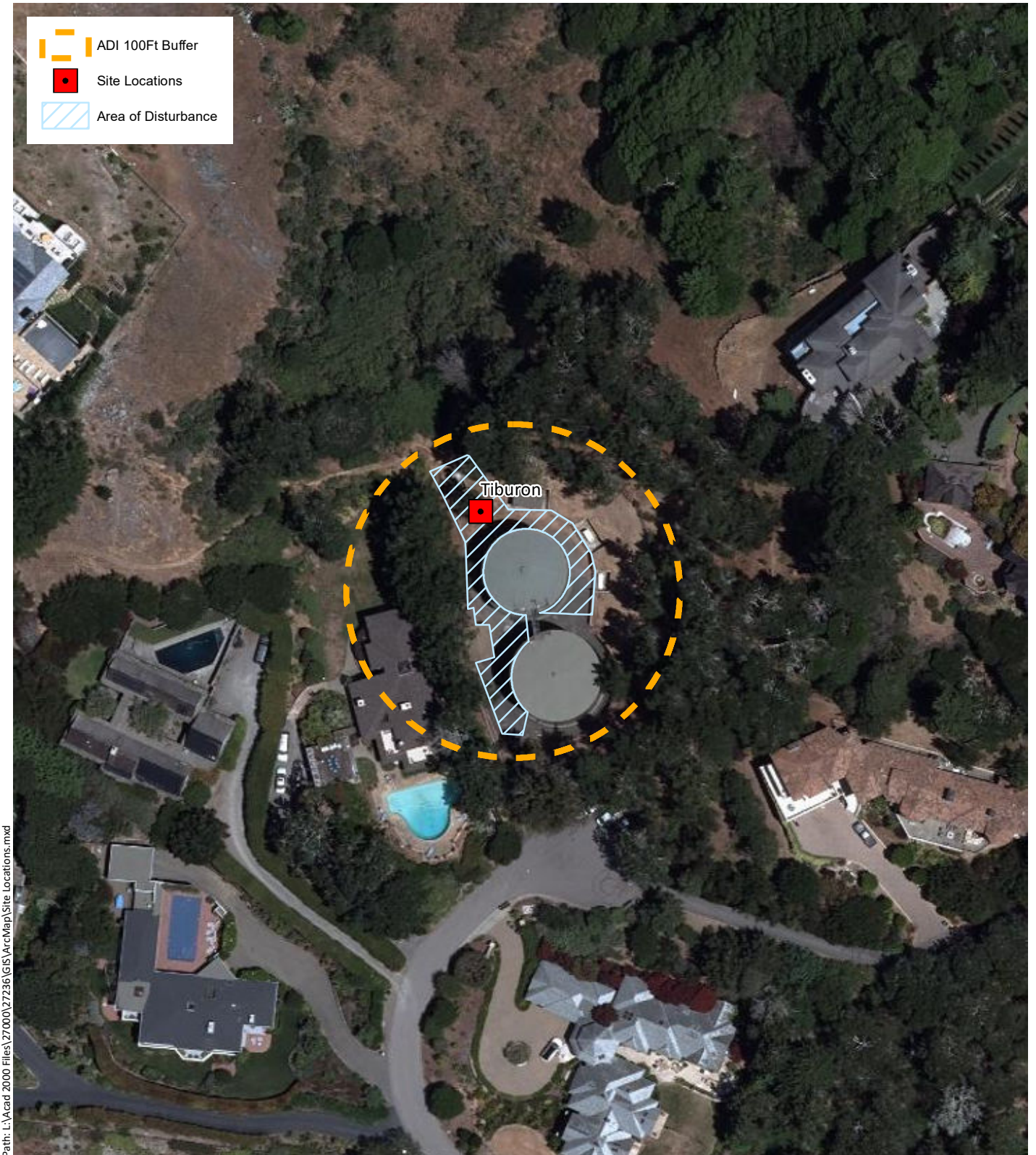
Existing Conditions: The gated and locked site has two MMWD water tanks, two small MMWD equipment shelters, and a small amount of Southern Marin Dispatch agency communications equipment. MERA-owned equipment at this site includes a 14-ft x 10-ft equipment shelter, an emergency power generator, a propane fuel tank, a 60-foot-tall monopole (with the highest antennas reaching to 70 feet) and two microwave dishes on a 22-foot-tall monopole. A photo of the site is provided below.

Next Gen System Proposals: Existing MERA equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-39 and a site plan for the Mt. Tiburon site can be viewed in Figure III-40 at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures with MERA ultimately controlling nearly all of the visible communications equipment at the site:

- Reinforcement of the existing monopole foundations,
- Addition of one 3-foot-diameter and one 4-foot-diameter microwave dishes and removal of two microwave dishes from the existing 22-foot monopole, and
- Addition of four antennas and removal of three antennas from the existing 60-foot monopole.



*Photo III-10: Site 14 Mt. Tiburon, as seen from Tiburon Ridge Trail.
The monopoles and two water tanks on the site are camouflaged in green.*



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-10. Site 14 - Mt. Tiburon Location Map

15. Mill Valley City Hall

The Mill Valley City Hall site is an element of the current MERA System, but it will be decommissioned and will not be operational as part of the Next Gen System. It is located at APN 028-014-16 with access via Corte Madera Avenue in Mill Valley, Marin County.

Existing Conditions: The site is comprised of communications equipment on the roof of the Mill Valley City Hall, which is used for emergency telecommunications.

Next Gen System Proposals: Decommissioning will include the removal of all MERA equipment.

16. Mill Valley Public Safety Building

The Mill Valley Public Safety Building site is an element of the current MERA System, but it will be decommissioned and will not be operational as part of the Next Gen System. It is located at APN 030-250-01 with access via Hamilton Drive in Mill Valley.

Existing Conditions: The site is comprised of communications equipment on the roof of the Mill Valley Public Safety Building, which is used for city administration, police and fire protection, and public safety and emergency telecommunications.

Next Gen System Proposals: Decommissioning will include the removal of all MERA equipment.

17. Bay Hill Road

The Bay Hill Road site is an element of the current MERA System, but it will be decommissioned and will not be operation as part of the Next Gen System. It is located in Sonoma County at APN 100-190-07, with access provided via Bay Hill Road followed by a gated dirt road.

Existing Conditions: The site is comprised of an existing communications facility on a hill near the intersection of Bay Hill Road and State Highway 1, amidst agricultural land in southwestern unincorporated Sonoma County, approximately 2.5 miles east of Bodega Bay.

Next Gen System Proposals: MERA will not renew the lease on this property. Decommissioning will include the removal of all MERA equipment and MERA will cease all maintenance activities, but the site will remain operational for other existing owners and lessees.

18. Sonoma Mountain

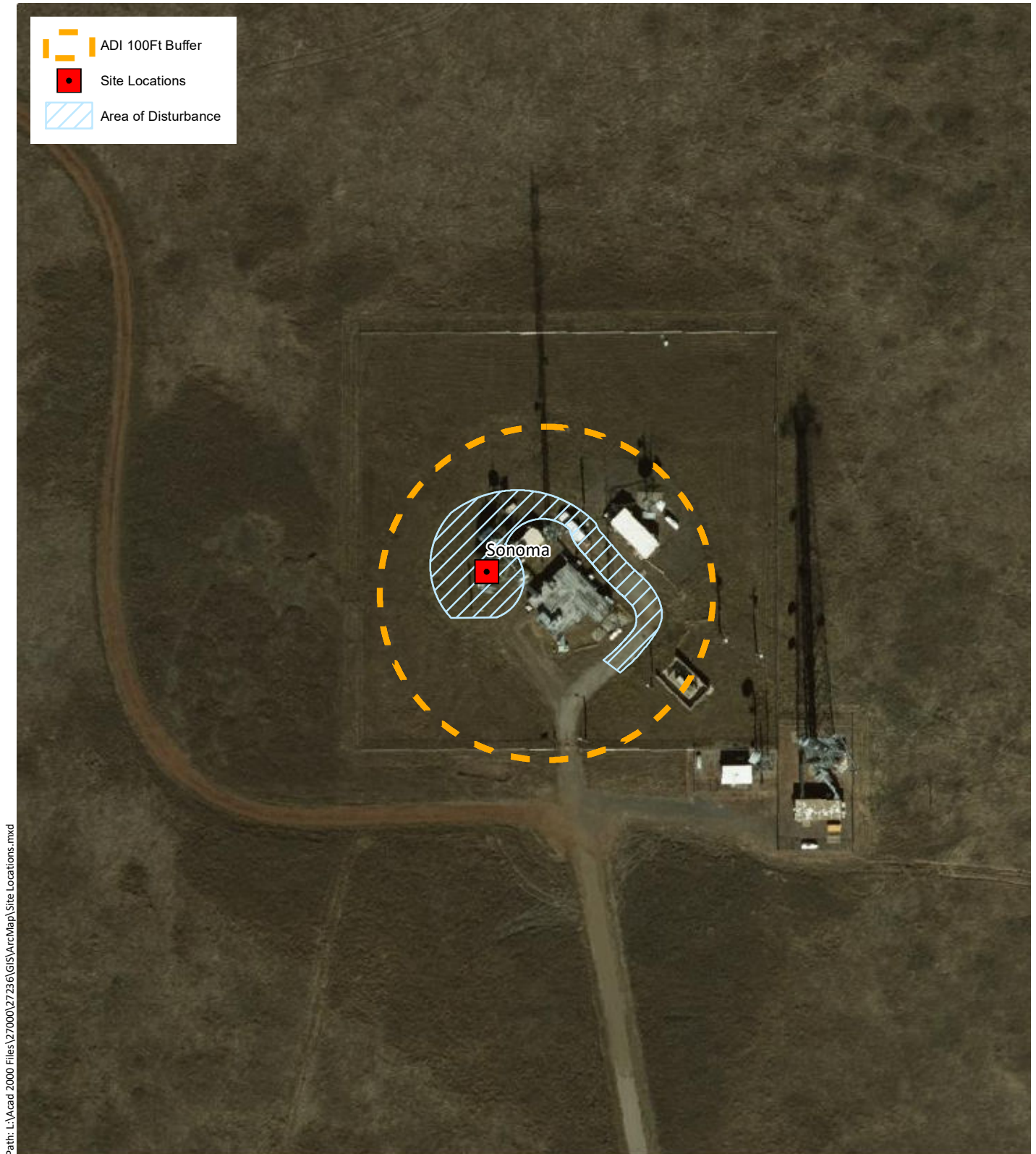
The Sonoma Mountain site contains an existing MERA facility analyzed in the original EIR, located at APN 136-190-09, on the northwest side of Sonoma Mountain in unincorporated central Sonoma County (Figure III-11). Access is provided by Adobe Road to Sonoma Mountain Road.

Existing Conditions: The gated and locked site is an existing telecommunications facility and contains two tall towers, two shorter microwave towers, generators with fuel tanks, and three existing buildings. Sonoma County owns the existing 190-foot three-legged guyed lattice radio tower (taller tower to the left in the photo below), on which 39 antennas are mounted, none of which are owned by MERA. MERA constructed, and now Sonoma County owns, the smaller three-legged 40-foot-tall microwave tower (face width of 12 feet) which has 32 antennas, none of which are owned by MERA. An adjacent compound with a larger tower is next to the Sonoma County compound.

- Next Gen System Proposals: Existing MERA and non-MERA equipment, as well as proposed MERA Next Gen adjustments to equipment elevations, are provided in Figure III-41 and a site plan for the Sonoma Mountain site can be viewed in Figure III-42, at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA ultimately controlling less than 5% of the visible communications equipment at the site: Addition of two 6-foot diameter microwave dishes to the existing 40-foot microwave tower (far left).



Photo III-II: Site 18 Sonoma Mountain, as seen from the air looking north to Mount Saint Helena. This is a multi-user site no MERA equipment is located on either of the tall towers.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-11. Site 18 - Sonoma Mountain Location Map

19. Stewart Point

The Stewart Point site is an existing MERA facility, added to the original EIR with a CEQA Addendum in 2006, located at APN 188-090-15 on the Bolinas Peninsula in unincorporated Marin County (Figure III-12). Direct access to the site is provided by a graded fire road coming from Mesa Road.

Existing Conditions: The gated and locked site, often referenced as the Martinelli property, contains an existing prefabricated shelter measuring 150 square feet and nine feet high, an emergency generator and fuel tank. Existing communications equipment visible on the site includes a 35-foot-tall by 12-inch diameter monopole, with 11 antennas. The highest antennas reach to 45 feet in height. MERA leases the site from a private landowner but owns the tower and nearly all of the equipment. A photo of the site is provided below.

Next Gen System Proposals: Existing MERA equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-43 and a site plan for the Stewart Point site can be viewed in Figure III-44. All elevation figures and site plans are included at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA continuing to control all visible communications equipment at the site:

- Reinforcement of the existing monopole foundation,
- Addition of one 4-foot-diameter microwave dish and three vertical pole antennas to the existing monopole,
- Removal of one microwave dish and two antennas from the existing monopole,
- Replacement of the existing emergency generator, and
- Replacement of the existing HVAC unit in the equipment shelter.



Photo III-12: Site 19 Stewart Point, from the dirt access road on the Martinelli Ranch

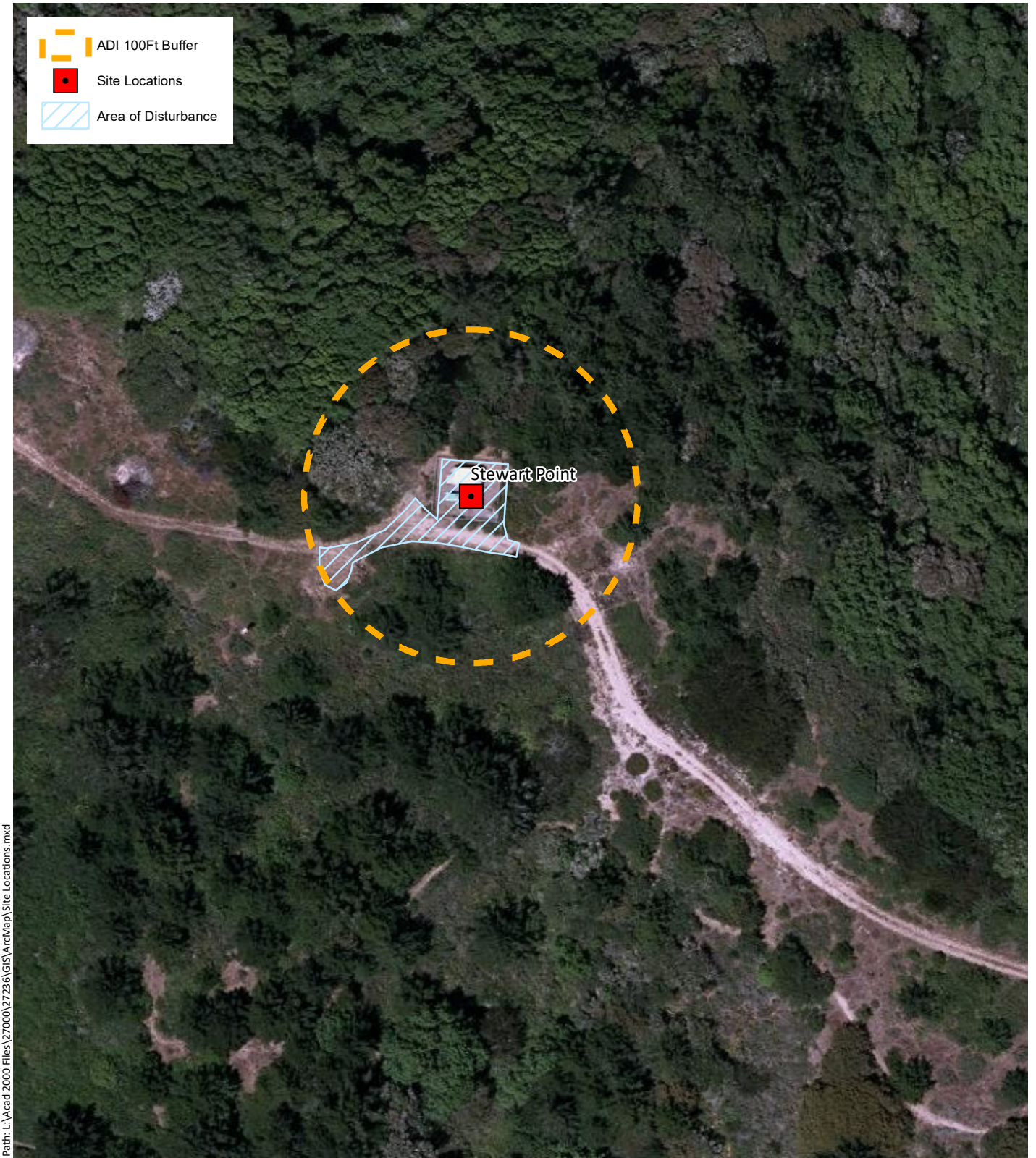


Figure III-12. Site 19 - Stewart Point Location Map

20. Tomales

The Tomales site is located at APN 100-050-42 at Parks Ranch near Tomales, with access provided via a dirt driveway off of State Route 1 (Figure III-13). There are aboveground and belowground utilities along State Route 1 as well, approximately 500 and 700 feet from the site, respectively (Figure III-14). The site was approved for MERA's use in 2012 pursuant to the Categorical Exemption to CEQA for construction of small structures and facilities, Section 15303, Class 3 of the CEQA Guidelines.

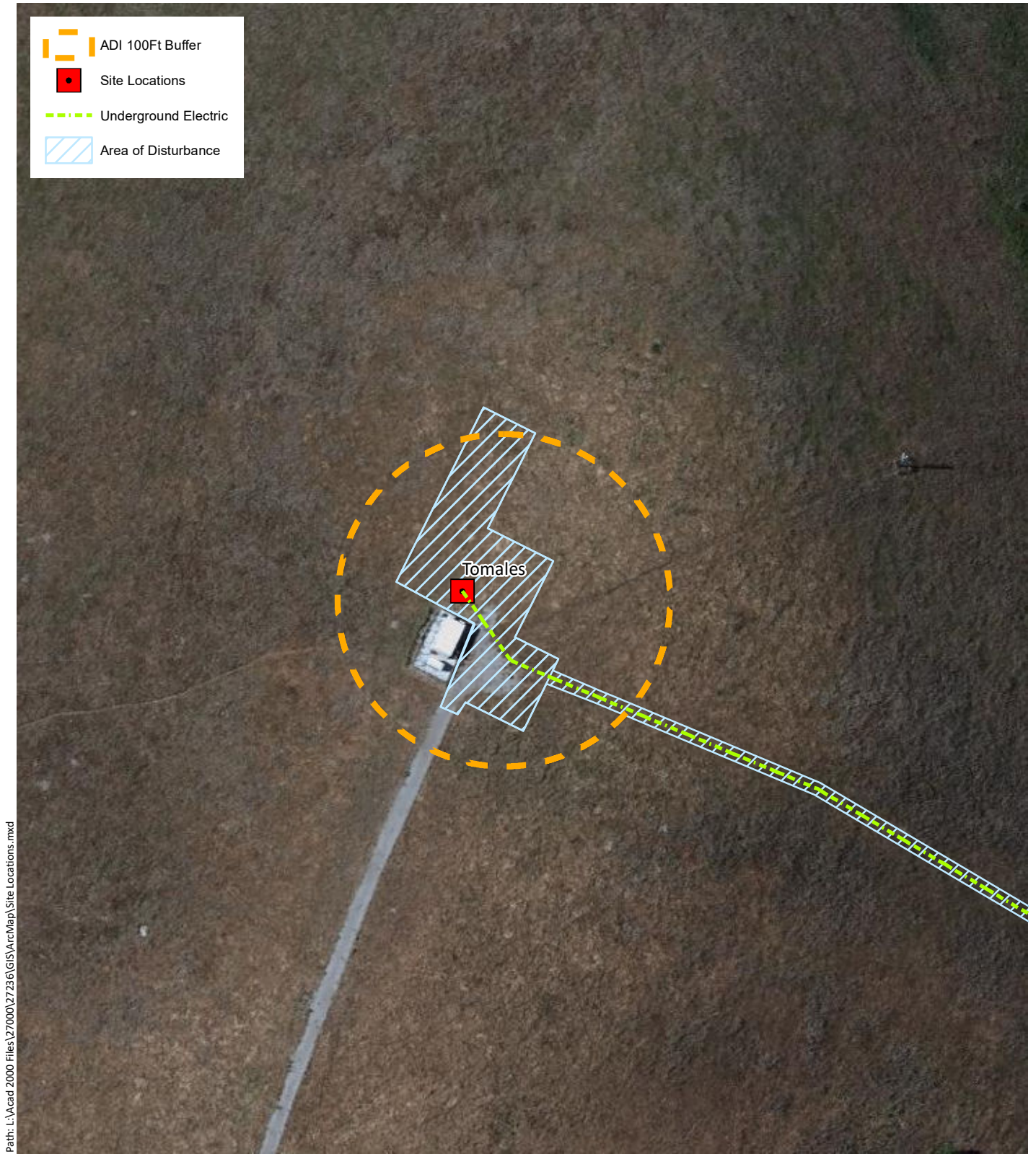
Existing Conditions: The site supports an existing cell tower site, with two small towers and an equipment shelter. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-45, an overall site plan in Figure 46, and a detailed Tomales site plan in Figure III-47. All elevation figures and site plans are included at the end of this section. The MERA Next Gen System would require the following improvements with MERA ultimately controlling about 70% of the visible communications equipment at the site:

- New 75-foot-tall monopole mounted with one 3-foot-diameter and one 6-foot-diameter microwave dishes, and three vertical pole and five dipole antennas,
- New equipment shelter measuring 150 square feet in area and 10 feet high,
- New generator and fuel tank,
- New 6-foot-tall perimeter fence, and
- New belowground power cable from the southeast corner of the site to follow the same path as the existing underground line.



Photo III-13: Site 20 Tomales, near the trees, as seen from the private access road.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-13. Site 20 - Tomales Location Map

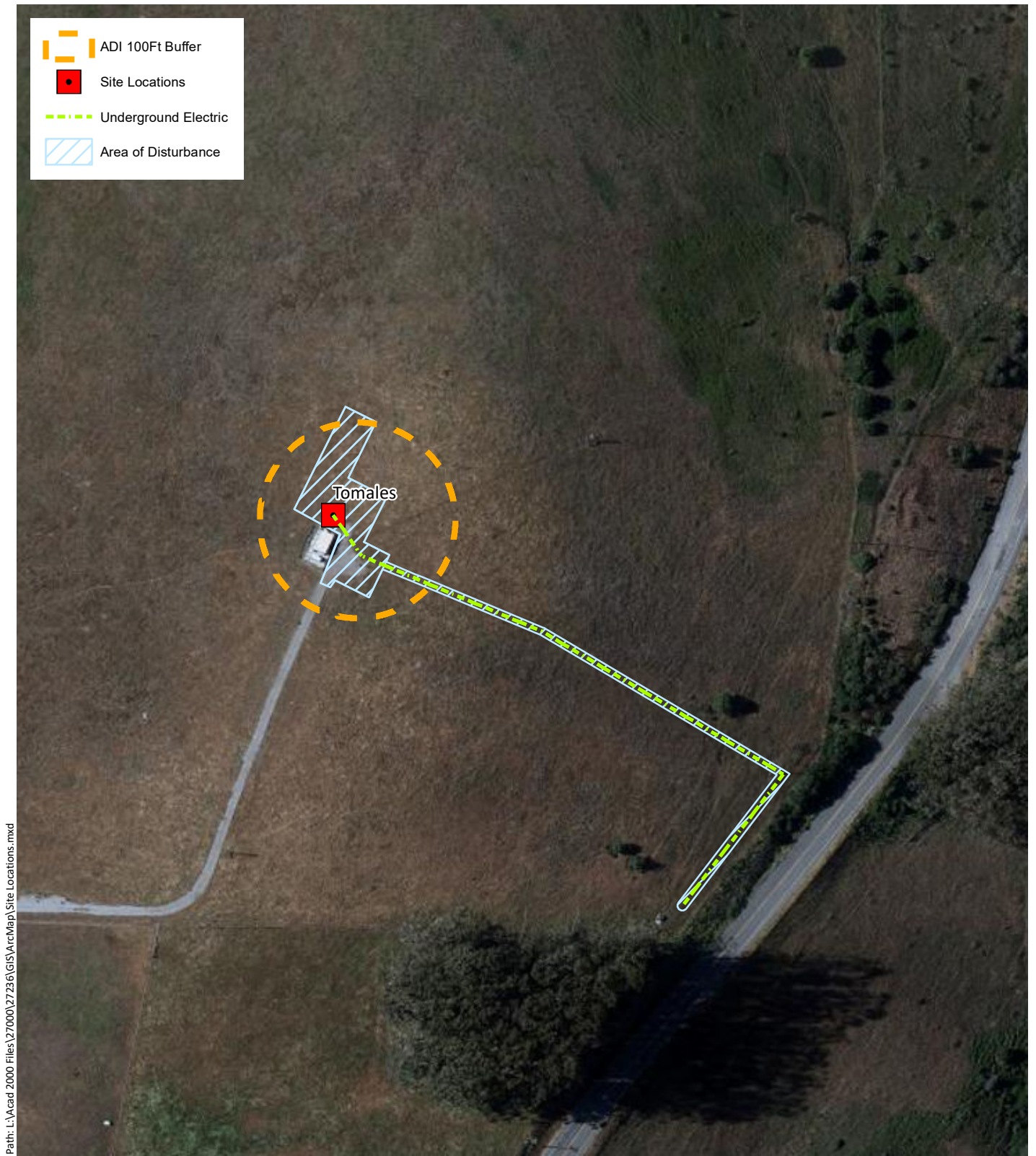


Figure III-14. Site 20 - Tomales Underground Electric Location

21. Coyote Peak

The Coyote Peak site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 106-110-03 in unincorporated Marin County, with access provided through Walker Creek Ranch, a Marin County Outdoor Education Facility operated by the Marin County Office of Education (Figures III-15 and III-16). Walker Creek Ranch is located at 1700 Marshall Petaluma Road, and the site is on a hilltop, accessible with 4WD behind two locked gates.

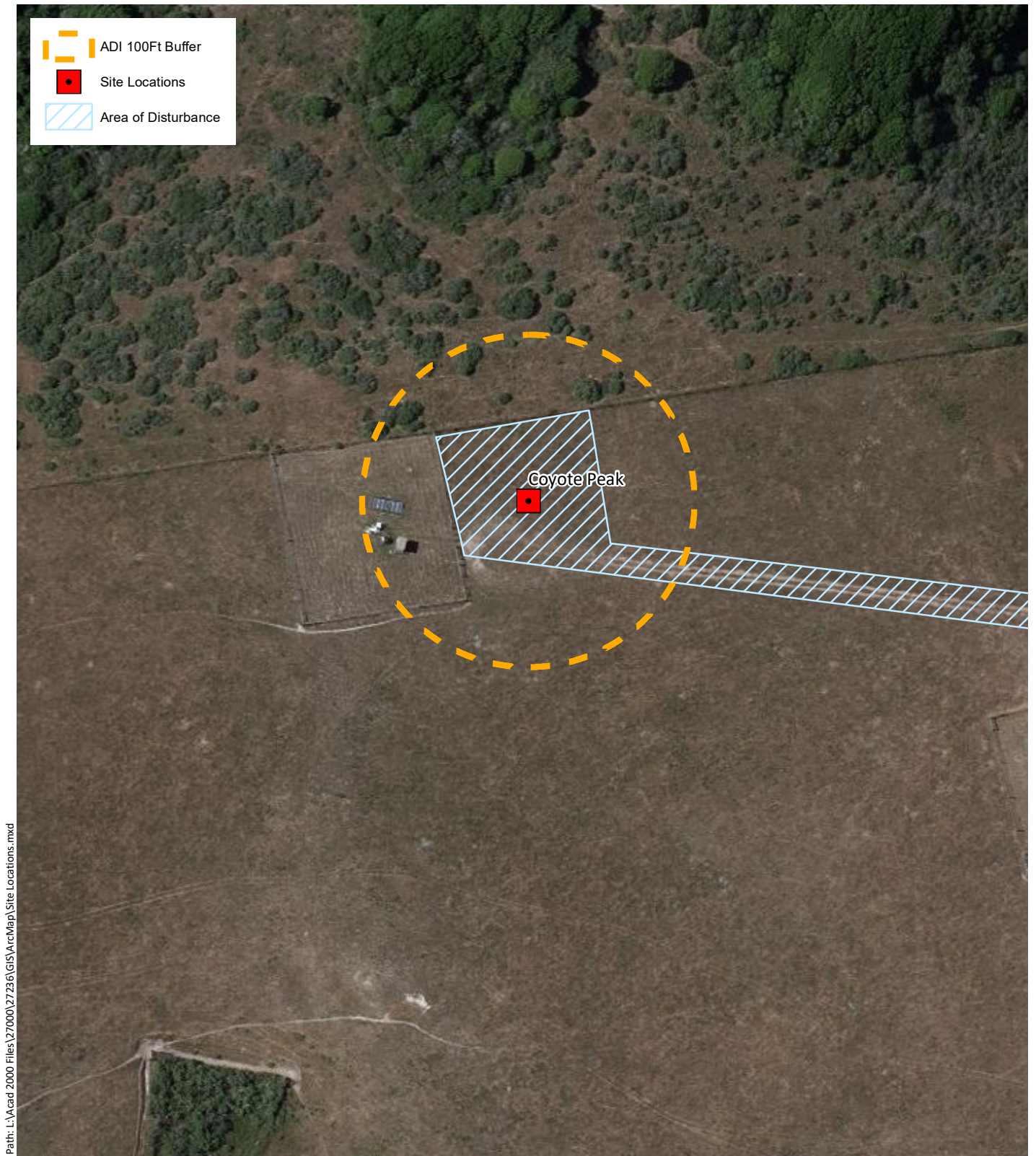
Existing Conditions: Marin County Office of Education (MCOE) owns the site which includes two existing water wellheads surrounded by actively grazed range lands. Each fenced wellhead enclosure contains solar panels and a small shed. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-48, an overall site plan in Figure III-49, and a detailed Coyote Peak site plan in Figure III-50, at the end of this section. The MERA Next Gen System would require improvements listed below, with MERA ultimately controlling about 98% of all visible equipment at the hilltop site:

- New 60-foot-tall monopole mounted with two 3-foot-diameter microwave dishes and three vertical pole antennas,
- New equipment shelter measuring about 240 square feet in area and 10 feet high,
- New generator and fuel tank,
- New 6-foot high perimeter fence,
- Grading of 1.5-mile road, with cuts of three to eight feet deep in short sections, plus widening of three turns for equipment access (Figure III-15), and
- Installation of new underground power line beneath regraded road.

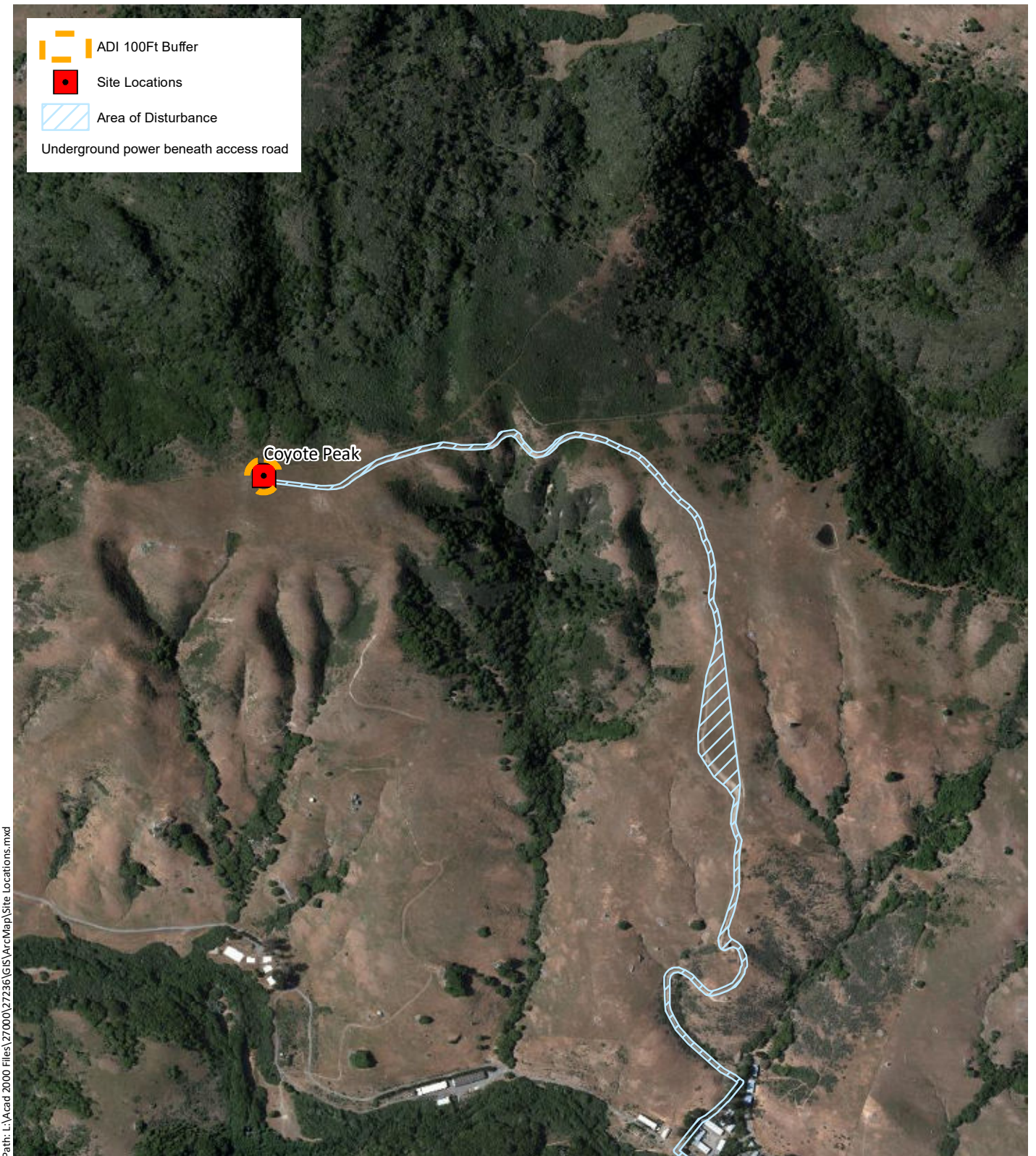


Photo III-14: Site 21 Coyote Peak with existing water well pump house for Walker Creek Ranch.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-15. Site 21 - Coyote Peak Location Map



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-16. Site 21 - Coyote Peak Access Road

22. Skyview Terrace (Near Existing MMWD Water Tank)

The Skyview Terrace site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 165-220-02 near Lucas Valley Road with access via Skyview Terrace to a 300 yard segment of 4WD road behind a locked gate, in San Rafael (Figure III-17).

Existing Conditions: The site is currently developed with an MMWD water tank which is mostly shielded by a berm but still somewhat visible from State Route 101. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-51, and an overall and detailed site plan can be viewed as Figures III-52 and III-53, respectively, as included at the end of this section. With the water tank, overall MERA equipment at the site would be about ~40% of the total, but since the tank is hidden behind the berm, the estimated visible total of MERA equipment occupying the site increases to approximately 80%. The MERA Next Gen System would require the following improvements:

- New 35-foot-tall monopole mounted with two 3-foot-diameter microwave dishes,
- New equipment shelter measuring 150 square feet in area and 10 feet high,
- New generator and fuel tank,
- New six-foot-tall perimeter fence, and
- Installation of new underground power line beneath access road.



Photo III-15: Site 22 Skyview Terrace, looking south from MMWD water tank to Mt Tamalpais. The equipment shelter and 35-foot tall monopole would be placed in the flat area to the left of the truck.

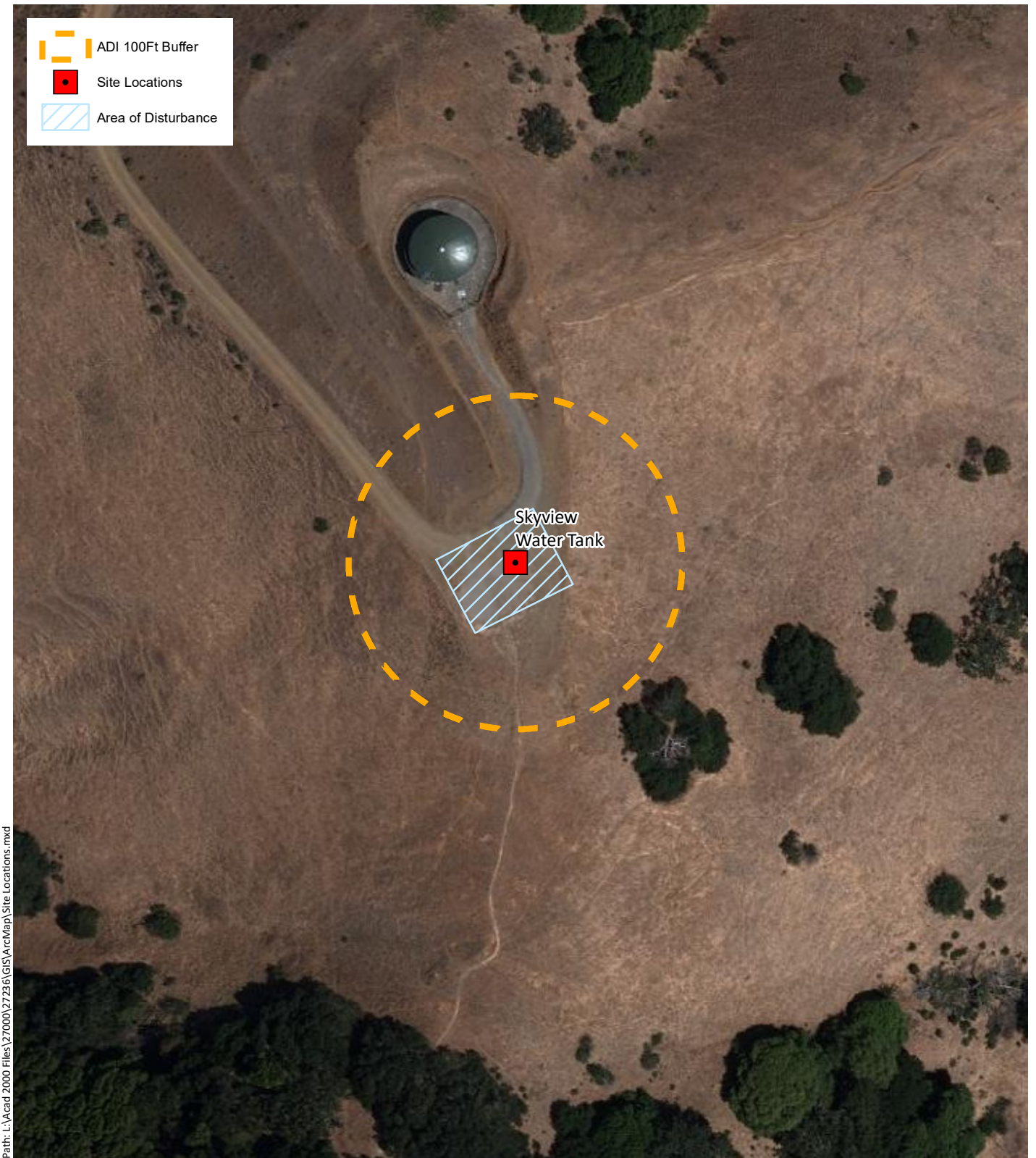


Figure III-17. Site 22 - Skyview Terrace Water Tank Location Map

23. Muir Beach

The Muir Beach site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 199-262-11, with access provided via State Route 1 and the Muir Beach Overlook in unincorporated Marin County (Figure III-18).

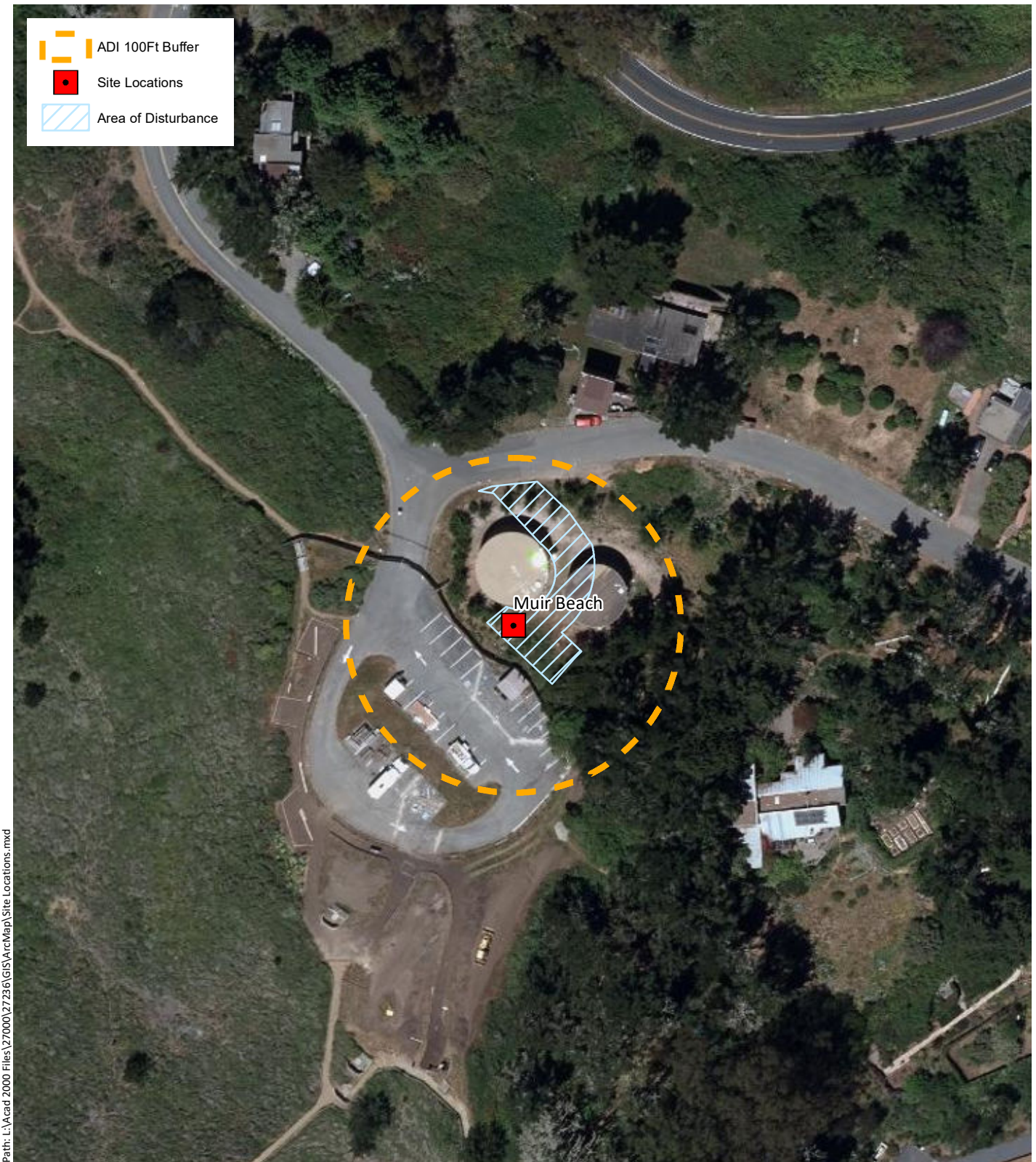
Existing Conditions: The site is currently developed with a Muir Beach Community Services District (MBCSD) water tank and is adjacent to an existing Golden Gate National Recreation Area (GGNRA) scenic overlook parking lot and public restrooms. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-54 and a site plan for the Muir Beach site can be viewed in Figure III-54, as included at the end of this section. The MERA Next Gen System would require improvements listed below, with MERA ultimately controlling about 40% of the visible equipment (when the MBCSD water tank and GGNRA restrooms are considered) at the site:

- New 60-foot-tall monopole mounted with three vertical pole antennas with the highest antenna reaching to 70 feet,
- One new 3-foot diameter microwave dish mounted on existing water tank,
- New equipment shelter measuring 150 square feet in area and 10 feet high,
- New generator,
- New six-foot-tall perimeter fence, and
- Installation of new underground power line from Seacape Drive.



Photo III-16: Site 23 Photo from within Muir Beach Community Services District Water Tank site. The foundation is from a previously demolished water tank, the NPS restroom is in the center and the Muir Beach overlook is beyond. The proposed MERA facility would be between the old foundation and the restroom.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-18. Site 23 - Muir Beach Location Map

24. Wolfback Ridge

The Wolfback Ridge site is an existing radio, television, and telecommunications site. The site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 200-120-02, with access provided via Wolfback Ridge Road and Sundial Road (a dirt road) in unincorporated Marin County (Figure III-19).

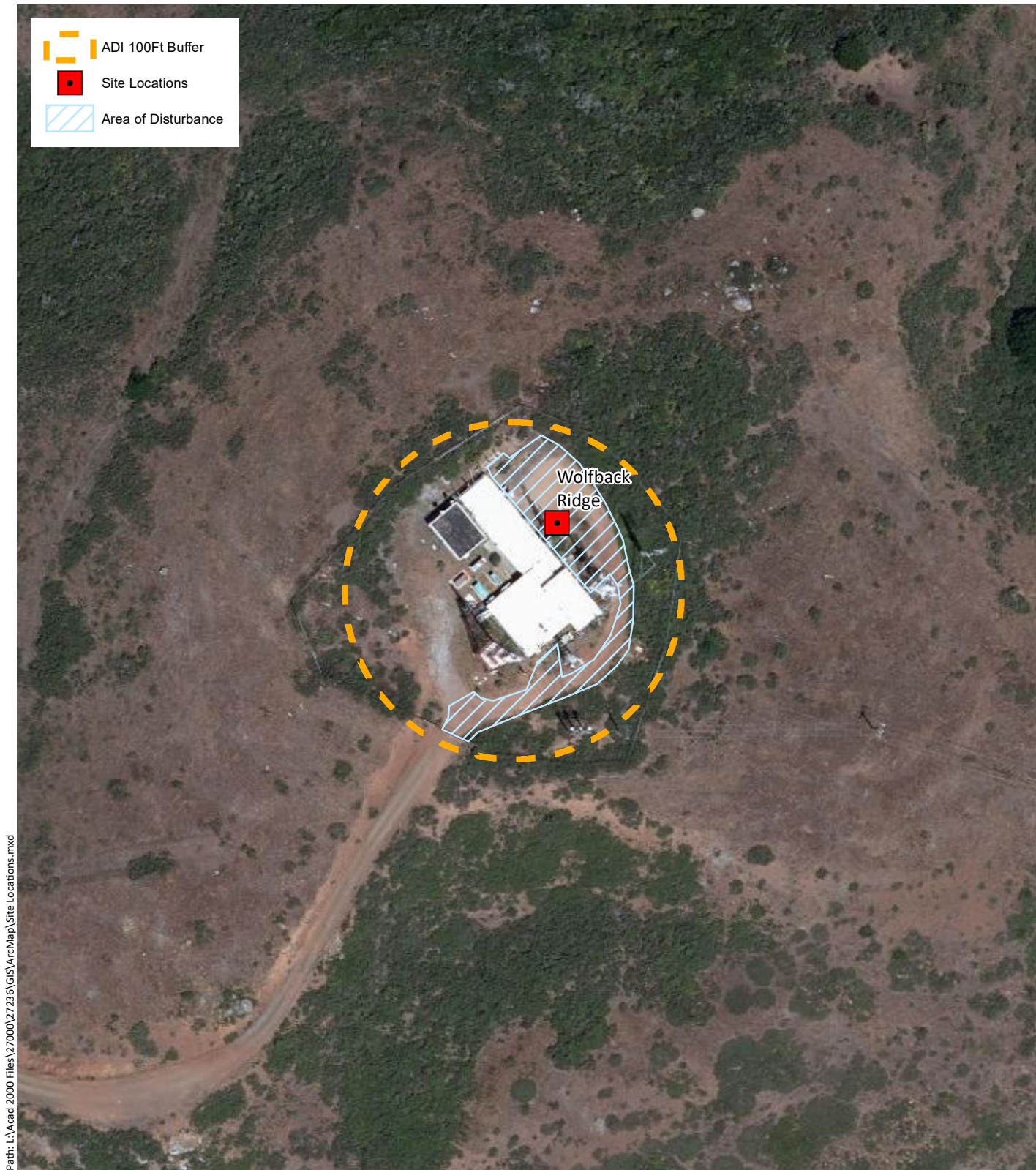
Existing Conditions: The privately owned site is currently developed as an active antenna site with 60 antennas on seven towers up to 100-feet tall. The private hilltop site (owned by Sundial Broadcasting) is surrounded by GGNRA land. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-56 and a site plan for the Wolfback Ridge site can be viewed in Figure III-57 as included at the end of this section. MERA would lease space for four vertical pole antennas and two microwave dishes on existing towers. The MERA Next Gen System would utilize the existing building and fence and would require the following improvements, with MERA ultimately controlling less than 5% of the visible components at the site:

- Reinforcement of the existing 100-foot-tall tower foundation,
- Four new vertical pole antennas on existing privately owned 100-foot tower and one six-foot diameter and one three-foot-diameter microwave dishes on existing privately owned 20-foot monopole, and
- New generator and fuel tank.



Photo III-17: Site 24 Wolfback Ridge, from Gerbode Valley Trail near Fort Cronkite looking east. Wolfback Ridge communications tower is to the right and power line towers are to the left.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-19. Site 24 - Wolfback Ridge Location Map

25. Mt. Burdell OTA Broadcasting

The Mt. Burdell OTA site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 125-160-01, with access provided via access roads to the west at APN 125-120-03 in unincorporated Marin County (Figure III-20).

Existing Conditions: The site is developed as a commercial broadcasting site with an existing two-story building, a 60-foot-tall monopole, and perimeter fencing. MERA is removing their equipment from the existing MERA Mt. Burdell site and adding new equipment to this OTA site, where currently no MERA equipment is installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-58 and a site plan is provided in Figure III-59, as included at the end of this section. The MERA Next Gen System would require the following improvements, with MERA ultimately controlling less than 10% of the visible components at the site:

- Reinforcement of the existing monopole foundation,
- Addition of two 6-foot-diameter microwave dishes and four vertical pole antennas to existing monopole,
- Removal of one 20-foot tall broadcast antenna from existing pole, and
- Replacement of existing HVAC unit in the existing equipment shelter.



Photo III-18: Site 25 Mt. Burdell OTA, from the north access on Burdell Mountain.



Figure III-20. Site 25 - Mt. Burdell OTA Location Map

26. Mill Valley Water Tank

The Mill Valley Water Tank site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 046-070-03 at the intersection of Edgewood Avenue and Sequoia Valley Road in Mill Valley (Figure III-21).

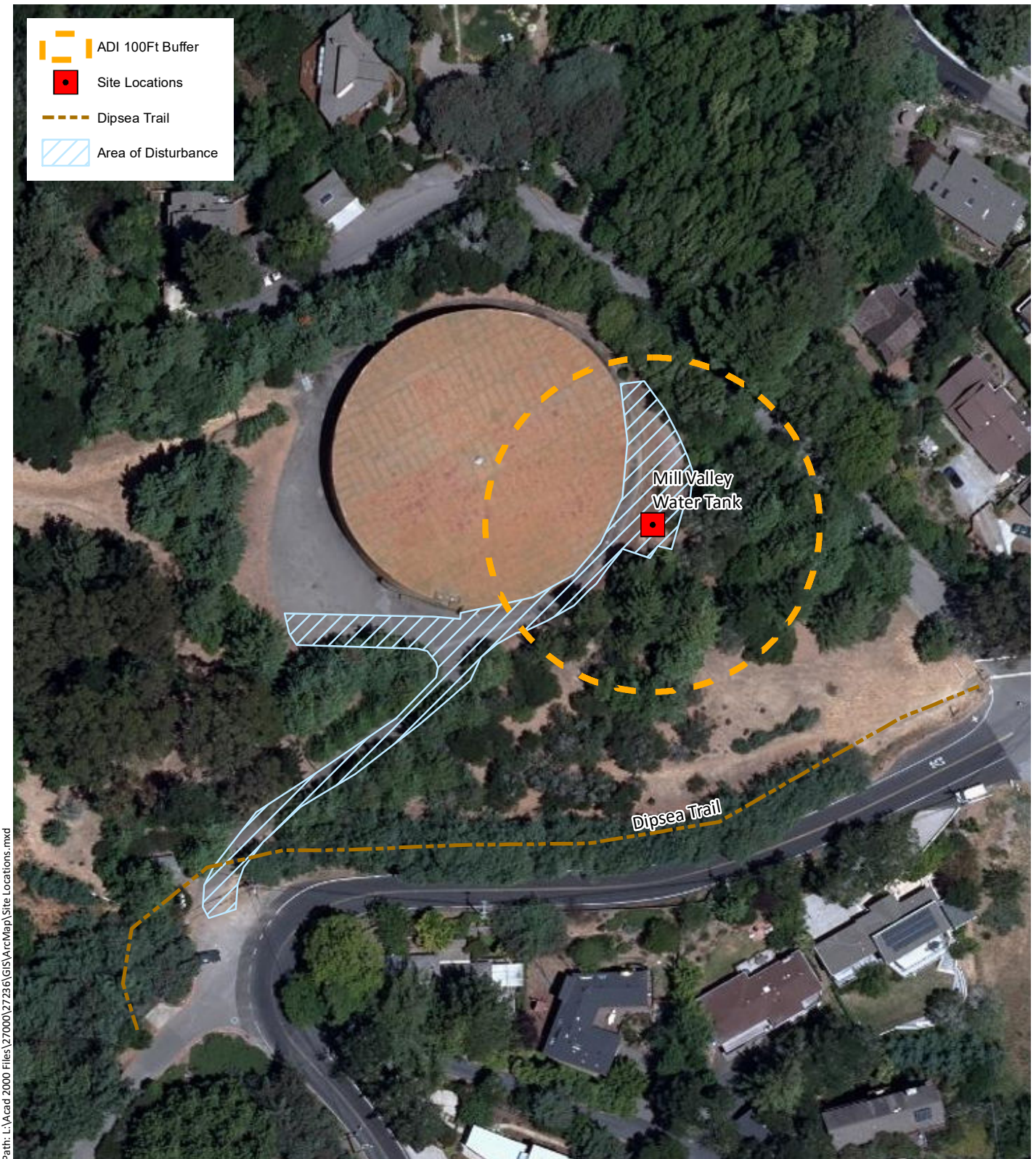
Existing Conditions: The site is currently developed with an existing 500,000 gallon MMWD water tank which is mostly screened from view by trees. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-60 and a site plan for the Mill Valley Water Tank site is provided in Figure III-61, as included at the end of this section. The MERA Next Gen System would require the following improvements, with MERA ultimately controlling about 20% of the visible components at the site, (as seen from the Edgewood Avenue intersection and without screening vegetation which will be retained):

- New 55-foot-tall monopole, with one 3-foot-diameter microwave dish and four vertical pole antennas that rise 11-feet above the monopole.
- New 10-foot tall retaining wall along the northeast side of the new shelter,
- New equipment shelter measuring 240 square feet in area and 10 feet high,
- New generator and fuel tank,
- New 6-foot-tall perimeter fence, and
- Installation of new underground power line beneath access road.



Photo III-19: Site 26 Mill Valley Water Tank, as seen from the access road at the Dipsea Trail.



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-21. Site 26 - Mill Valley Water Tank Location Map

F. Construction Activities and Schedule

Construction could begin after this SEIR is certified and the final engineering design is approved by the MERA Governing Board. Sites located within the jurisdiction of the California Coastal Commission will require a coastal development permit before construction can begin on these sites. Site construction would take less than one year for the entire Next Gen System. After construction, the change-over period would last approximately one-year to allow for complete testing of the new system while the existing system provides continuous communications. Both the existing MERA system and the proposed Next Gen System would be operational during the change-over period. Upon completion of testing, original equipment would be removed and the completed Next Gen Communications system would be fully operational.

The duration of construction at any given site would vary according to the nature and extent of the proposed facilities. Most sites have only minor equipment changes, such as new antennas or microwave dishes on existing towers or monopoles. Construction duration at these sites would range from a few days to a few weeks. Removal of original equipment would take another few weeks. Other sites, shown below in Table III-2 would require monopole or tower foundation improvements to meet seismic safety standards. These sites could require deeper excavations directly adjacent to the existing monopole or tower and construction duration may take up to 8 weeks to complete the foundation work.

Table III-2. Sites with Foundation Improvements

Site #	Site Name
3	Big Rock Ridge
4	Mt. Tamalpais
5	Mt. Barnabe
8	Pt. Reyes
10	Dollar Hill
11	San Pedro Ridge
14	Mt. Tiburon
19	Stewart Point

Five new sites, which do not have existing communications infrastructure, would have more extensive construction requirements. These five sites include: Site 20 Tomales, Site 21 Coyote Peak, Site 22 Skyview Terrace, Site 23 Muir Beach, and Site 26 Mill Valley Water Tank (Site 24 Wolfback Ridge and Site 25 Mt. Burdell OTA are existing communications facilities with towers and equipment, which MERA would lease). These five sites would require grading of the immediate area around the proposed tower, a deep foundation for a new monopole, and shallow slab foundations for the small equipment building, fuel tank, and generator. Small laydown areas at the generally flat sites would receive shallow grading to remove grass and shrubby vegetation

to provide a clean assembly space for tower construction, materials, and equipment. Construction at these sites would include a new shelter building, installation of a monopole, a generator, and fuel tank. A six-foot tall perimeter fence would provide protection for each site.

Coyote Peak is the one site that would require more extensive grading of two overly steep sections of the existing 1.5-mile graded dirt access road. Access road construction would necessarily precede any site construction. Underground power lines would also be installed to serve the Coyote Peak site. At present, power is only available at lower elevation on the valley floor. At Coyote Peak, the site construction would last six months during the dry summer season.

Upon completion of all construction, Motorola would conduct testing and optimization of the system, which would take approximately one year. Regular operation of the Next Gen System would begin in 2021, and is required by 2023. The proposed project, similar to the original MERA system, is expected to operate for approximately 20 years. During that time, regular inspections and maintenance would occur on each site, requiring monthly routine maintenance trips. A summary of the construction activities and physical changes at each site is provided as Table III-3, and a preliminary construction schedule is provided as Figure III-22 below.

Table III-3. Summary of Construction Activities by Site

Note: Sites are listed in the same order as evaluated in the original EIR. Sites new to MERA for the Next Gen System are displayed in blue, current MERA sites proposed for the Next Gen System are shown in green, and sites with no color are not part of the proposed Next Gen project.

Site #	Site Name	APN	Coordinates	Ground Elevation (ft)	Existing Infrastructure at Site	Proposed Physical Changes at Site for MERA Next Gen System
1	Prime Site EOF (Emergency Operations Facility)	165-220-11	38.019167, -122.541528	29.0	Existing rooftop communications equipment at EOF with 19 existing antennas on lattice structure supporting existing dispatch systems.	New Prime Site for MERA Next Gen System. 12 Yagi-type antennas would be removed and replaced with 19 vertical pole antennas). New 3' diameter and 6' diameter microwave dishes would be placed above lattice structure.
Existing MERA Sites Proposed for Next Gen System (Green)						
2	Civic Center	179-270-11	37.999056, -122.531306	46.0	Existing antennas on roof, no tower. Building is on Federal Register of Historic Places and has design guidelines to be considered.	Add one new 3' diameter microwave dish on roof, no tower.
3	Big Rock Ridge	164-300-04	38.059194, -122.604250	1,886.0	Existing 100' tower w 4 legs, with 12' sides. 2 Ex. Buildings, each ~20' x 20' x 9' high.	Existing Tower: Remove four microwave (MW) dishes. Reinforce foundation. Add four vertical pole antennas; remove one pole and two panel antennas. Add one new 20' pipe mount to the existing building with two microwave dishes, one 6' diameter and one 3' diameter, and one 6' microwave dish on the side of the existing building. Alternative Mounting Locations for Three MW Dishes: 1 - Remount all dishes on existing tower (preferred); 2 - Mount one dish on the side of the existing building. Mount two dishes on a 30' tall tapered monopole near the base of the existing tower.
4	Mt. Tamalpais	197-120-31	37.929006, -122.587084	2,516.0	Existing 60' tall monopole is among eight others at developed mountain top radio operations site surrounded by 28 microwave dishes on 8-10' poles. 2 existing concrete buildings: MERA building is H9', W15', L 20'. Second building is 30' diameter with dome shaped roof.	4 antennas added, 2 antennas removed on existing monopole and reinforce foundation. New MERA generator, propane tank, replace HVAC in existing MERA building. Replace five 8'-10' tall lattice towers radiating around monopole with 20' tall lattice towers. 7 dishes added, 5 dishes removed.
5	Mt. Barnabe	168-240-01	38.026751, -122.716321	1,470.0	Existing County fire lookout and radio tower. Existing 70' tall 3 leg tower with 12' wide sides. Antennas reach to 83' height. Existing 25' tall x 2' diameter microwave monopole. Existing shelter and emergency generator.	3 antennas added, 2 antennas removed on existing tower. 2 microwave dishes added, 3 microwave dishes removed on existing monopole. Reinforce tower/ monopole foundations, replace HVAC units in existing building.
6	Bolinas Fire Station	193-030-20	Dropped from Original MERA System - Not Proposed for Next Gen System			No action.

Site #	Site Name	APN	Coordinates	Ground Elevation (ft)	Existing Infrastructure at Site	Proposed Physical Changes at Site for MERA Next Gen System
7	Bolinas Ridge	197-120-30	Dropped from Original MERA System - Not Proposed for Next Gen System			No action.
8	Point Reyes Hill	109-160-23	38.079836, -122.866944	1,324.0	Existing hilltop site occupied by large, visually concealed FAA VORTAC antenna surrounded by Point Reyes National Seashore. 2 existing CBA buildings within FAA fenced enclosure. One existing shelter in MERA enclosure. Two existing 17' tall x 12" diameter monopoles with multiple antennas, and one 29' wood utility pole with one Yagi-type antenna.	Replace existing 29' wood utility pole with a new 40' monopole to support reinstalled Yagi-type antenna and two new 3' diameter microwave dishes. New cable bridge between E. building and new monopole. Replace HVAC units in existing building. 3 antennas added, 2 antennas removed on existing monopole and reinforce foundation.
9	Forbes Hill	010-261-02	MERA Decommission - Not Proposed for Next Gen System			MERA would remove the building, generator and fuel tank, the tower, dishes, antennas and perimeter fence and regrade the site. Use of the site as a communications facility would cease.
10	Dollar Hill	011-051-02	37.980262, -122.529354	663.0	60' tall, 3 Leg tower with 12' face width. 2 existing CBA buildings. Existing water tank and pump.	2 microwave dishes and 10 antennas added, 2 microwave dishes and 3 antennas removed on existing tower and reinforce foundation.
11	San Pedro Ridge	015-250-21	37.990205, -122.500139	1,062.0	100' tall, 3 leg tower each with 12' face width. Existing concrete building 9' x 15' x 9H.	2 microwave dishes and 4 antennas added, 2 microwave dishes and 3 antennas removed on existing tower and reinforce foundation.
12	Mt. Burdell* (#25 is Next Gen OTA site)	125-180-17	MERA Decommission - Not Proposed for Next Gen System			MERA will not renew the lease at this site, will remove all MERA equipment, and will perform no additional maintenance. The site will remain operational and will be maintained by existing owners and lessees.
13	Novato Police Dept	153-061-28	Dropped from Original MERA System - Not Proposed for Next Gen System			No action. Microwave link and dispatch center owned by City of Novato to remain.
14	Mt. Tiburon	058-261-39	37.890440, -122.464796	518.0	Existing 60' tall monopole and another 22' tall monopole. Existing equipment shelter and generator. Two 50' diameter MMWD water tanks and water equipment shelter	2 microwave dishes and 4 antennas added, 2 microwave dishes and 3 antennas removed on existing towers and reinforce existing tower foundations. Replace HVAC in existing shelter.
15	Mill Valley City Hall	028-014-16	MERA Decommission - Not Proposed for Next Gen System			All MERA equipment to be removed.
16	Mill Valley Public Safety Building	030-250-01	MERA Decommission - Not Proposed for Next Gen System			All MERA equipment to be removed.
17	Bay Hill Road	100-190-07	MERA Decommission - Not Proposed for Next Gen System			MERA will not renew the lease and remove all MERA equipment, no additional maintenance will be performed. The site will remain operational for existing owners and lessees.

Site #	Site Name	APN	Coordinates	Ground Elevation (ft)	Existing Infrastructure at Site	Proposed Physical Changes at Site for MERA Next Gen System
18	Sonoma Mountain	136-190-09	38.348389, -122.578333	2,448.0	Hill top has 3 buildings and two towers. 190' tower is 3 leg guyed lattice with 20" face. 40' microwave tower is 3 leg, w/ face width of 12'.	2 microwave dishes added to existing 40' microwave tower.
19	Stewart Point (CEQA Amendment)	188-090-15	37.930389, -122.720194	779.0	Existing 35' tall x 12" dia. monopole. Existing equipment shelter. ~10' x 15' x 9"H with generator.	1 microwave dish and 3 antennas added, 1 microwave dish and 2 antennas removed to/from existing monopole and reinforce foundation. Replace HVAC in existing building.
New Sites Proposed for Next Gen System (Blue)						
20	Tomales (Categorical Exemption)	100-050-42	38.261015, -122.903629	487.0	Existing Cell tower and equipment shelter sited to minimize visual impacts.	Propose new 75' tall monopole, new shelter, fence, generator, and fuel tank. New antennas include 2 microwave dishes and 8 antennas. New below ground power cable from SE corner of site to follow same path as existing underground line.
21	Coyote Peak (Walker Creek Ranch)	106-110-03	38.185833, -122.825167	968.0	Two water well pump heads on ridgetop within actively grazed range lands. Controlled access through Walker Creek Ranch, a Marin County. Outdoor Education Facility.	Propose new 60' tall monopole, shelter, fence, generator, and fuel tank. New antennas include 2 microwave dishes and 3 antennas. 1.5 Mile road requires regrading with cuts 3-8 feet deep in short areas, and widening of three turns. Underground power line, from valley floor to ridge, to be under the road.
22	Skyview Terrace	165-220-02	38.017000, -122.546000	387.0	Next to existing MMWD water tank near Lucas Valley Road. Visible from Hwy 101.	Propose new 35' tall monopole with 2 microwave dishes, shelter, fence, generator, underground power line, and fuel tank.
23	Muir Beach	199-262-11	37.863289, -122.585512	367.0	Existing Muir Beach Community Services District Water Tank. Next to existing GGNRA scenic overlook parking lot and public restrooms.	Propose new 60' tall monopole with 3 antennas, a shelter, fence, generator and fuel tank, plus one new MW dish on existing water tank.
24	Wolfback Ridge	200-120-02	37.851085, -122.498376	1,115.0	Very active antenna site with multiple towers on private hilltop site surrounded by GGNRA.	Propose 2 microwave dishes and 4 antennas on existing 100' tower, new generator, and fuel tank. Reinforce existing tower foundation. Propose use of existing building and fence.
25	Mt. Burdell OTA	125-160-01	38.149888, -122.593239	1,573.0	Existing communications site with existing 60' tall monopole. MERA is moving from existing Mt. Burdell site (#12).	Will use existing 60' monopole, remove one antenna, and add 2 additional microwave dishes and 4 additional antennas. Reinforce existing tower foundation and replace existing HVAC in existing shelter.
26	Mill Valley Water Tank	046-070-03	37.902735, -122.558010	565.0	Existing MMWD 500,000 Gal Water Tank in trees. At Sequoia at Edgewood.	Propose new 55' tall monopole, with 1 microwave dish and 4 antennas on the south side of the existing water tank. A new shelter, fence, generator, and fuel tank below a wall and in the trees proposed on east side of existing water tank.

MERA Next Gen Communications System Construction and Testing Schedule

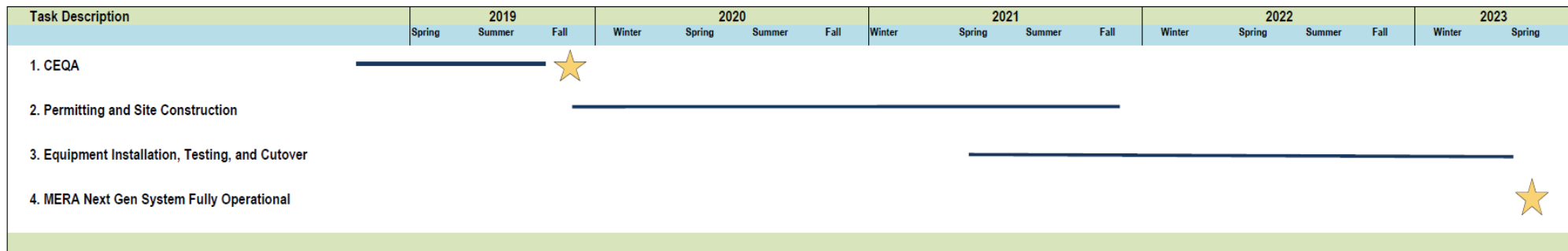


Figure III-22. Preliminary MERA Construction and Testing Schedule

MERA Next Gen Communications System SEIR

G. Best Management Practices

The following Best Management Practices (BMPs) will be implemented by MERA staff and all contractors throughout the construction and operational phase of the project, as relevant.

Fuel Containment BMPs:

Transportation of Fuels:

- All project equipment will be inspected for leaks prior to being brought on-site and regularly throughout construction.
- Prior to transporting fuels, vehicles will be inspected for leakage and other potential safety problems.
- Vehicles carrying fuels will be equipped with: Shovels, barrier tape, absorbent socks or pads, four- to six- millimeter plastic bags or heavy-duty trash bags, personal protective clothing (e.g., gloves), and absorbent pads to contain a small spill should one occur during transport.
- All fuels will be properly signed (placard) and/or marked and properly containerized and labeled at all times, including during transportation.
- Transfer of materials from large to small containers will not be done by hand pouring, but will be accomplished using appropriate equipment including pumps, hoses, and safety equipment.

Construction Phase:

Equipment will be fueled, to the extent possible, at local gas stations and material/staging yards. In cases where it is not feasible to transport equipment off of the site for fueling purposes, a fueler/oiler truck or pickup with a bulk tank, will fuel the piece of equipment on-site.

Routine equipment maintenance will occur at designated staging areas or commercial facilities. In the case of equipment failure on-site, maintenance may need to occur. Any equipment maintenance conducted on-site will be done with care to ensure that hazardous materials are not spilled during the maintenance activities. In addition, additional spill control materials will be on-site to provide adequate protection to soil and other resources from contamination.

Storage of Fuels:

Fuels will only be stored in the designated material yards. The Prime Construction Contractor will not be allowed to store large containers without approval from MERA.

Precautions at the material yard will include limiting the quantity of fuels stored, fortifying barriers or providing additional containment between fuel materials, and using trained personnel to monitor activities at the yard. Clean-up materials, including absorbent spill pads and plastic bags (spill kits) will also be stored in these areas.

- **Storage Containers:** Containers will be compatible with the wastes stored in the containers. If the container is damaged or leaks, the waste will be transferred to a container in good condition. The Prime Construction Contractor will inspect containers at least weekly to discover any leaks in the containers or the containment systems. Containers used for transportation will comply with USDOT requirements.
- **Incompatible Wastes:** Wastes that are not compatible with other wastes will not be stored in the same container or in an unwashed container that previously held an incompatible material.
- **Ignitable or Reactive Wastes:** Wastes that may ignite or are reactive will be located at least 50 feet from the material yard (fly yard) property line and "NO SMOKING" signs will be posted in conspicuous places wherever there is a hazard from ignitable or reactive waste.
- **Container Management:** Containers holding hazardous waste will be kept closed during transfer and storage, except when it is necessary to add or remove waste.
- **Secondary Containment:** Secondary containment will consist of bermed or diked areas that are lined and capable of holding 110 percent of the volume of the stored material and will be provided for fuel and oil tanks stored on-site.

The Prime Construction Contractor will be responsible for maintaining an adequate inventory of spill response and clean-up materials at project work areas to provide for quick and immediate response to spills.

This equipment includes a minimum of two spill kits (kept in 55-gallon drums or compatible containers) containing the following items and available on-site at the material yard:

- Shovels
- Absorbent pads/materials
- Personal protective gear
- Medical first-aid supplies
- Bung wrench (non-sparking)
- Phone list with emergency contact numbers
- Storage containers
- Communications equipment
- All fuel and service vehicles will carry a minimum 20 pounds of suitable absorbent material to handle potential spills.
- Radios or other communication equipment will be maintained in construction vehicles and other easily accessible locations so that project personnel can quickly report spills.

Wildfire BMPs:

- Information will be kept on-site and discussed at a tailboard before each construction day regarding precautions to be taken during high fire danger, a list of tools, available

communications, and water supply to be kept on hand, as well as other actions to reduce ignition risk and to ensure rapid control of a fire during the early stage.

- All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors to reduce the potential for igniting a wildland fire.
- Portable tools powered by gasoline-fueled internal combustion engines will not be used within 25 feet of any flammable materials.
- Flammable materials will be removed to a minimum distance of 10 feet from any equipment that could produce a spark, fire, or flame.
- The Marin County Fire Department will approve final Project plans to ensure adequate fire access. In addition, as a condition of Project approval, fire flow tests will be performed and verified by Marin County Fire Department to ensure compliance with the Fire Code.

RF Safety BMPs:

- MERA is responsible for ensuring that all site owners post the appropriate NOTICE, CAUTION, or WARNING sign at the main site access points and other locations as required. Signs will inform everyone who has access to this site that beyond posted signs there may be RF levels in excess of the limits prescribed by the FCC. In addition to RF Advisory Signage, RF Guideline Signage will be posted at the main site access points. The signs below are examples of signs meeting FCC Guidelines. Signs will be posted at other locations as required by FCC Guidelines.



- MERA is responsible for coordinating with all site owners to ensure that site doors remain locked or appropriately controlled to deny access to the general public.
- MERA is responsible for ensuring that all individuals needing access to the main area of any site, or the area indicated to be in excess of General Public MPE, will wear a personal RF Exposure monitor, successfully complete proper RF Safety Awareness training, and have and be trained in the use of appropriate personal protective equipment.
- MERA is responsible for ensuring that all individuals needing access to the main area of any site will be instructed to read and obey all posted placards and signs.
- MERA is responsible for ensuring that all sites will be routinely inspected with the addition of any antennas or upon any change to the RF environment.

H. Permits

MERA is subject to all applicable State and federal permits, but as a Joint Powers Authority operating under the laws applicable to the County, MERA is not subject to county and local permitting requirements. The applicable state and federal permits for the MERA Next Gen System vary depending upon the proposed construction at each of the sites. Below is a list of applicable construction permits as they affect each site:

Coastal Development Permits

Coastal Development Permits are state permits issued for projects within the Coastal Zone issued by the Marin County Community Development Agency (CDA) as an agent of the California Coastal Commission. CDA reviews project applications for consistency with the Local Coastal Programs (LCP) Units 1 and 2 in Marin County. The LCP is intended to ensure that the local government's development plans, policies, and ordinances conform to the Coastal Act of 1976. The Act's goals are to protect and conserve the state's coastal resources and to maximize public use and enjoyment of them. The program's policies and objectives address land use for new development, assessment of hazard areas, shoreline access and natural habitat protection. The full policy language can be found in Appendix D.

LCP-Unit 1 regulates land use in the southern portion of Marin County, which includes Stewart Point (Site 19) and Muir Beach (Site 23). Stewart Point operates under an existing coastal permit, but Muir Beach would need to apply for a Coastal Development Permit under LCP-Unit 1.

LCP-Unit 2 regulates land use in the northern portion of Marin County, which specifically affects Point Reyes Hill (Site 8), and Tomales (Site 20). A Coastal Development Permit was acquired for the proposed Tomales site after it was approved by MERA in 2012, but the permit was allowed to expire in anticipation of the site being included in this Draft SEIR in order to assess the whole of MERA's Next Gen project. The Point Reyes Hill site operates under an existing right-of-way permit issued by the National Park Service. MERA will submit a new "Application for Transportation and Utility Systems and Facilities on Federal Lands" when proposed site changes and related environmental impacts are confirmed.

Waste Discharge Requirements (WDR) Permit

The WDR is issued by the San Francisco Regional Water Quality Control Board (RWQCB) for any portion of the project that affect waters of the state under the Porter Cologne Act. Waters of the state are broadly defined and generally affect all water. In terms of permitting most of MERA's antenna sites do not generate appreciable runoff, nor are they sited near wetlands, surface waters, or any other areas of water concentration.

The road to Coyote Peak (Site 21) is the one exception, as temporary fills would affect minor wetlands associated with roadside ditches that are otherwise in uplands. The existing road to Coyote Peak also crosses two small upland drainages that currently flow through culverts under the road. Temporary road widening of about four additional feet, upstream of the existing culvert, would accommodate larger than usual construction equipment, and would be temporarily bridged with steel plates to keep fill from entering these two upland seasonal drainages, particularly below

designated top-of-bank lines. The RWQCB determines at its discretion if a WDR Permit is required.

Unites States Army Corps of Engineers (Corps) 404 Permit to Fill Wetlands

The Corps permit would be issued by the San Francisco regional office and is typically required to fill any waters of the U.S. There is however an exception for wetlands associated with roadside ditches in uplands. For the minor wetland fills on Coyote Peak Road, MERA would qualify for the exception; however, confirmation is always at the discretion of the Corps.

California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA)

CDFW issues SAA's when there are impacts to streambeds that are below top-of-bank. At Coyote Peak, the two four-foot sections of streambeds temporarily affected by road widening for construction would be temporarily shaded, but because they would be bridged, there would be no fill affecting any area below top-of-bank. CDFW typically does not provide advance confirmation that a permit would NOT be required. Marin County offers a permit review process with all permitting agencies to provide advance feedback for project proponents in advance of permitting.

I. FIGURES

Table III-4 below provides a reference list of all site plan and elevation figures for each of the 18 MERA Next Gen sites referenced throughout this chapter of the SEIR. Figures III-1 through III-22 (the Next Gen configuration overview and site-specific location figures) are positioned throughout the Project Description immediately after they are referenced. Figures III-23 through III-61 (site-specific elevation figures and site plans) are located sequentially below.

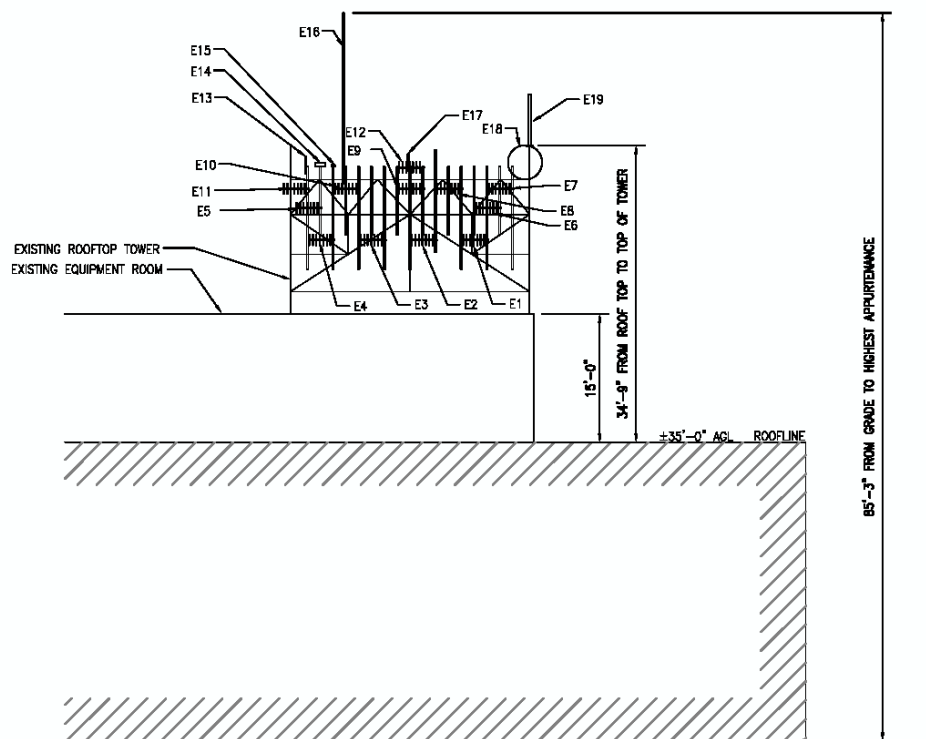
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Table III-4. Reference Table of Site Plan and Elevation Figures

Note: Sites new to MERA for the Next Gen System are displayed in blue, current MERA sites proposed for the Next Gen System are shown in green.

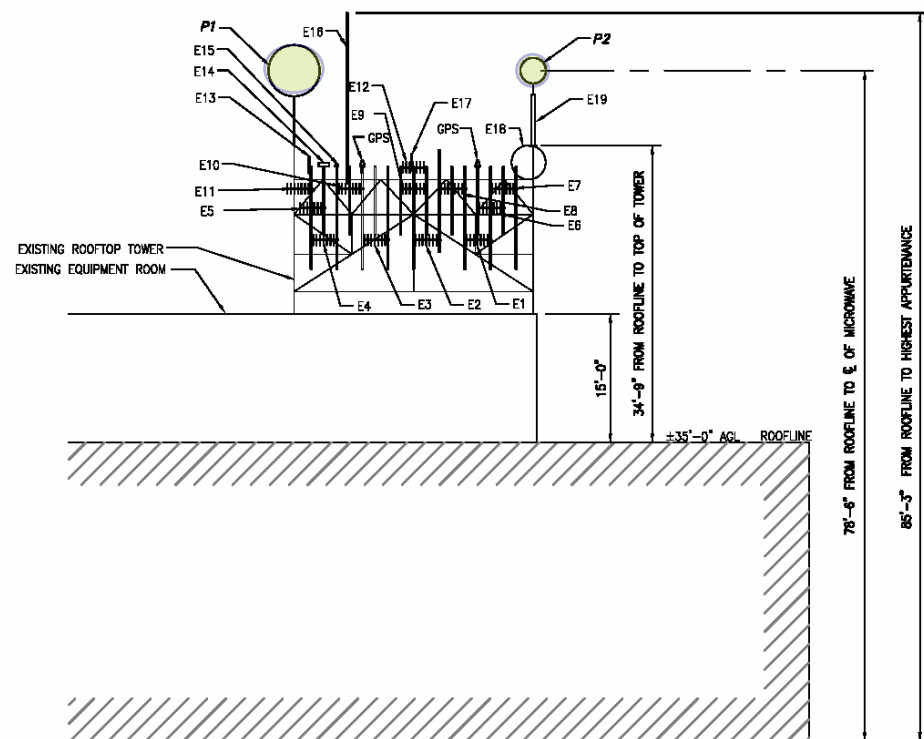
Ch. V Section	Site #	Site Name	Location Figure #	Elevation Figure #	Site Plan Figure #
		Next Gen Overview	1	N/A	N/A
A	1	Prime Site EOF	2	23	N/A
B	2	Civic Center	3	24	25
C	3	Big Rock Ridge	4	26	27
D	4	Mt. Tamalpais	5	28-29	30
E	5	Mt. Barnabe	6	31	32
F	8	Point Reyes Hill	7	33	34
G	10	Dollar Hill	8	35	36
H	11	San Pedro Ridge	9	37	38
I	14	Mt. Tiburon	10	39	40
J	18	Sonoma Mountain	11	41	42
K	19	Stewart Point	12	43	44
L	20	Tomales	13-14	45	46-47
M	21	Coyote Peak	15-16	48	49-50
N	22	Skyview Terrace	17	51	52-53
O	23	Muir Beach	18	54	55
P	24	Wolfback Ridge	19	56	57
Q	25	Mt. Burdell OTA	20	58	59
R	26	Mill Valley Water Tank	21	60	61
		Preliminary Construction Schedule	22	N/A	N/A

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1 EXISTING SOUTH ELEVATION

4' 0' 4' 8' 16'
(IN FEET)



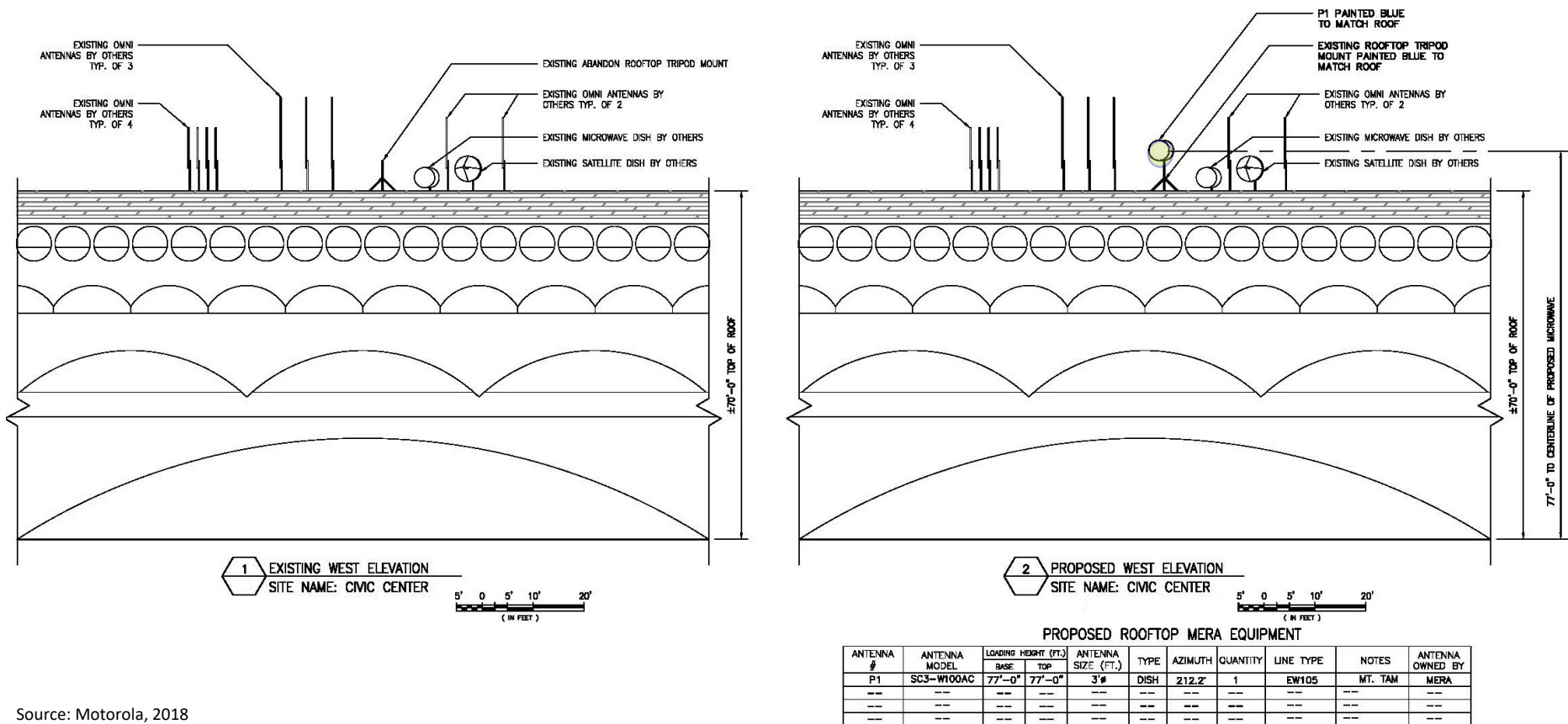
2 PROPOSED SOUTH ELEVATION

4' 0' 4' 8' 16'
(IN FEET)

Source: Motorola, 2018

Figure III-23. Site 1 - Prime Site EOF Existing and Proposed Elevations

MERA Next Gen Communications System SEIR



Source: Motorola, 2018

Figure III-24. Site 2 - Civic Center Existing and Proposed Elevations

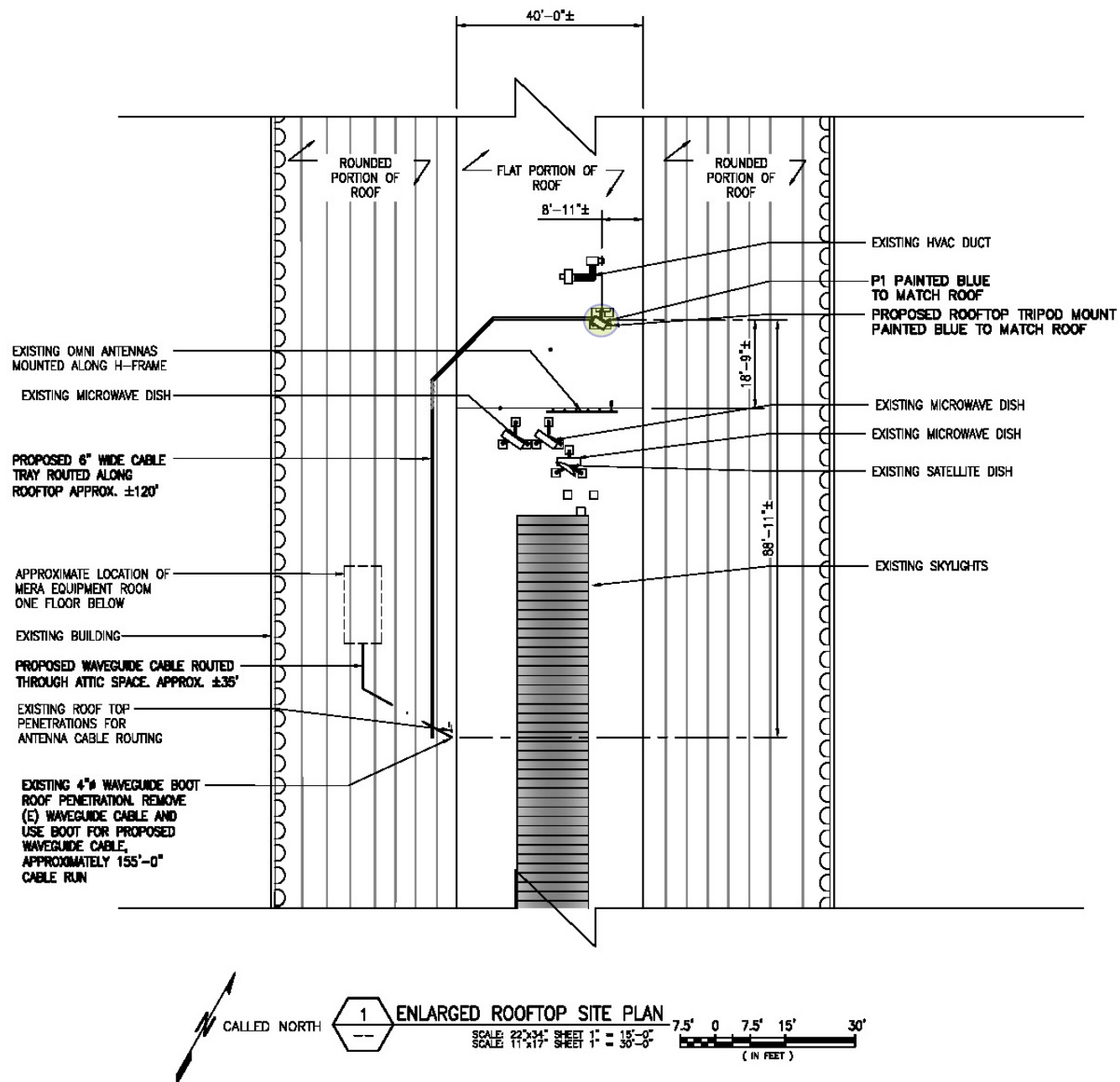
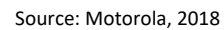


Figure III-25. Site 2 - Civic Center Site Plan



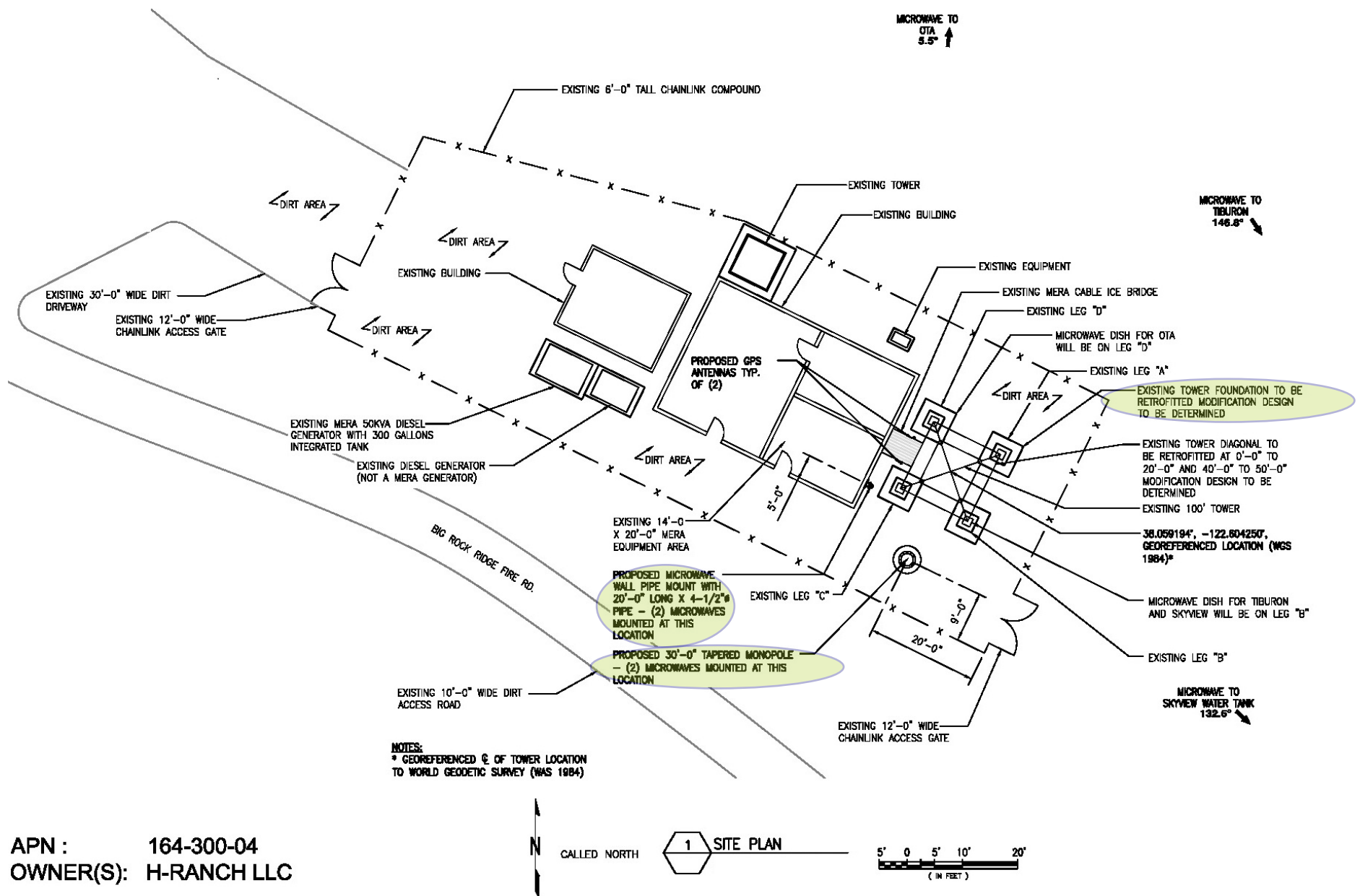
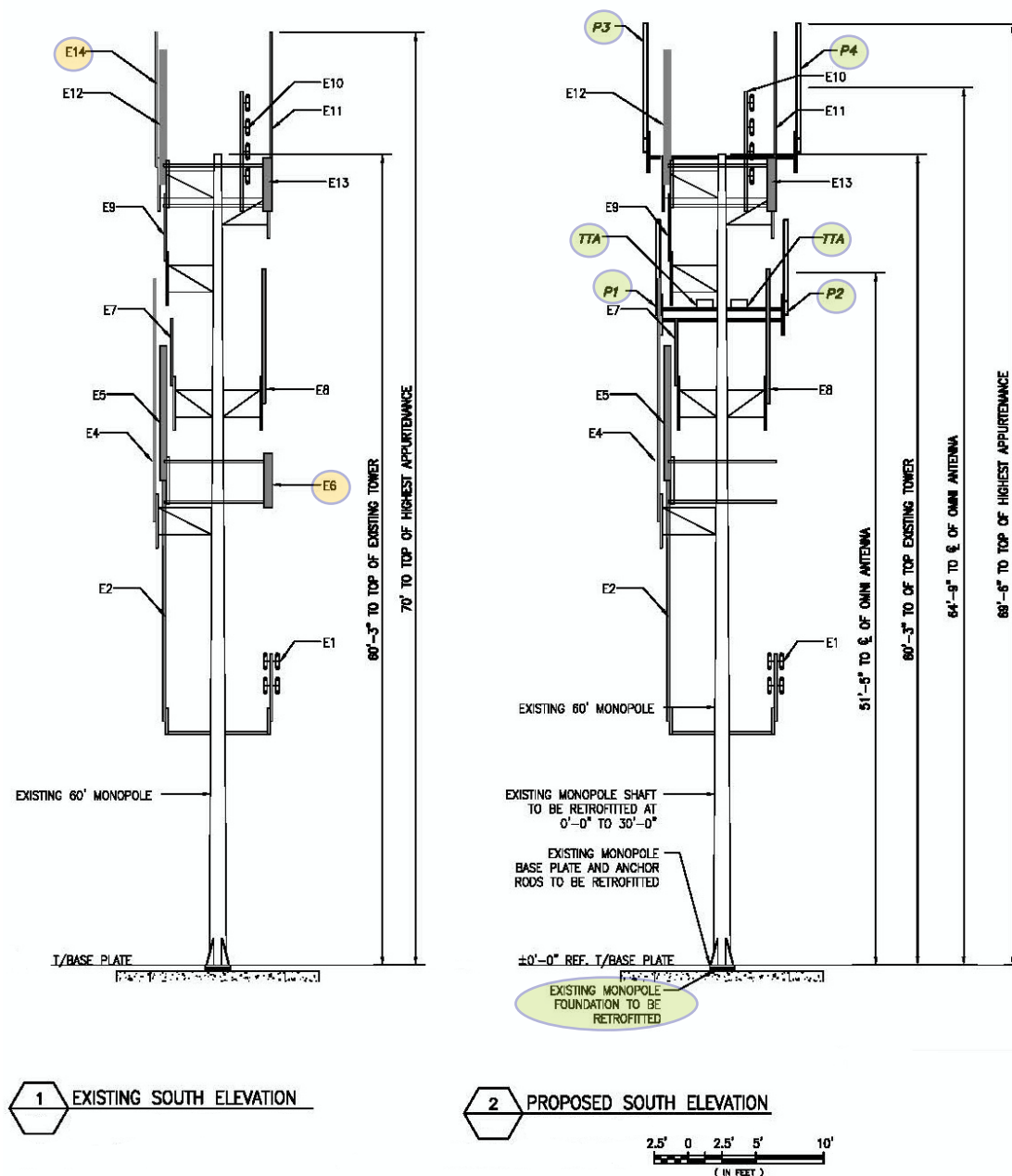


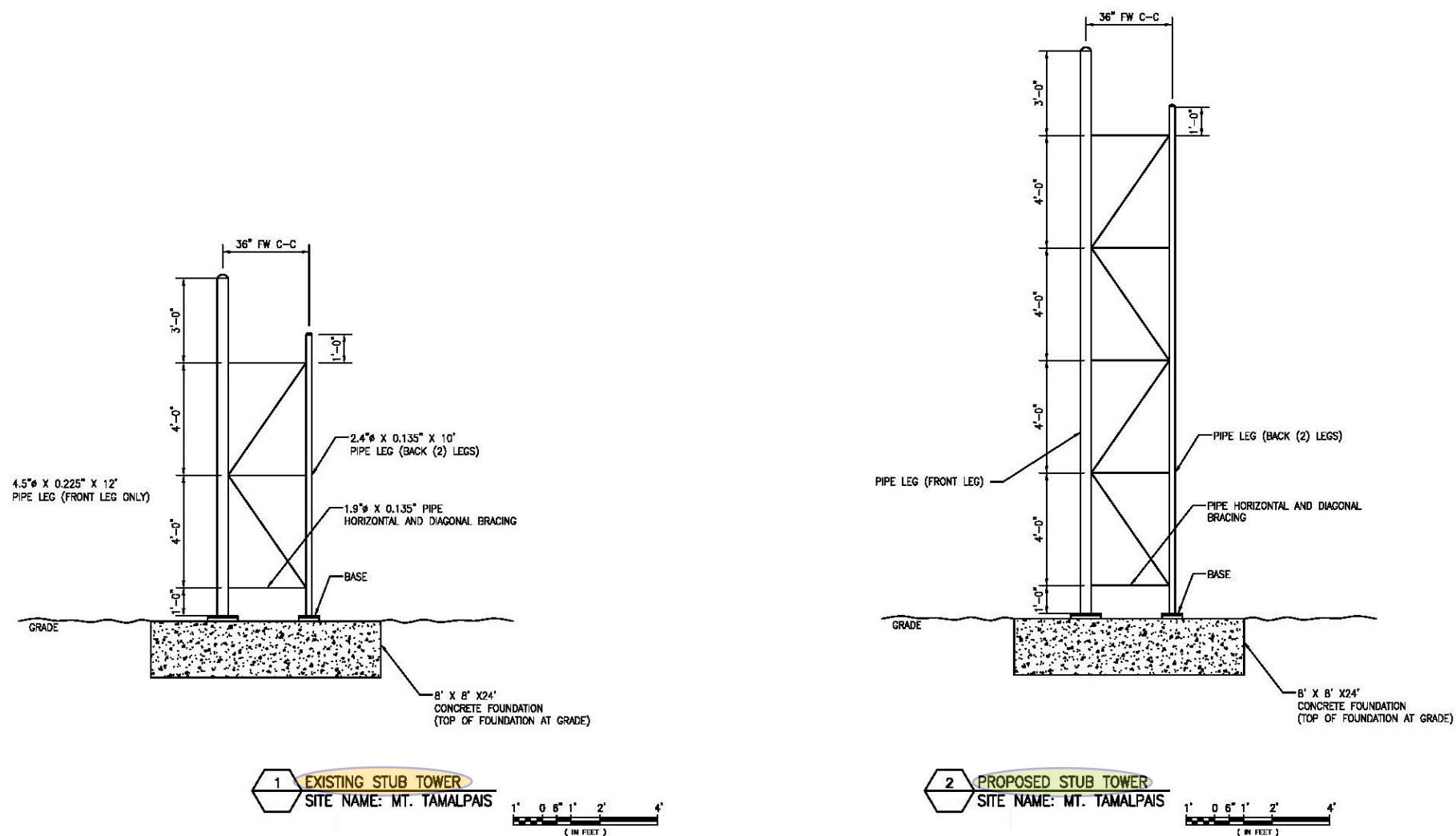
Figure III-27. Site 3 - Big Rock Ridge Site Plan



Source: Motorola, 2018

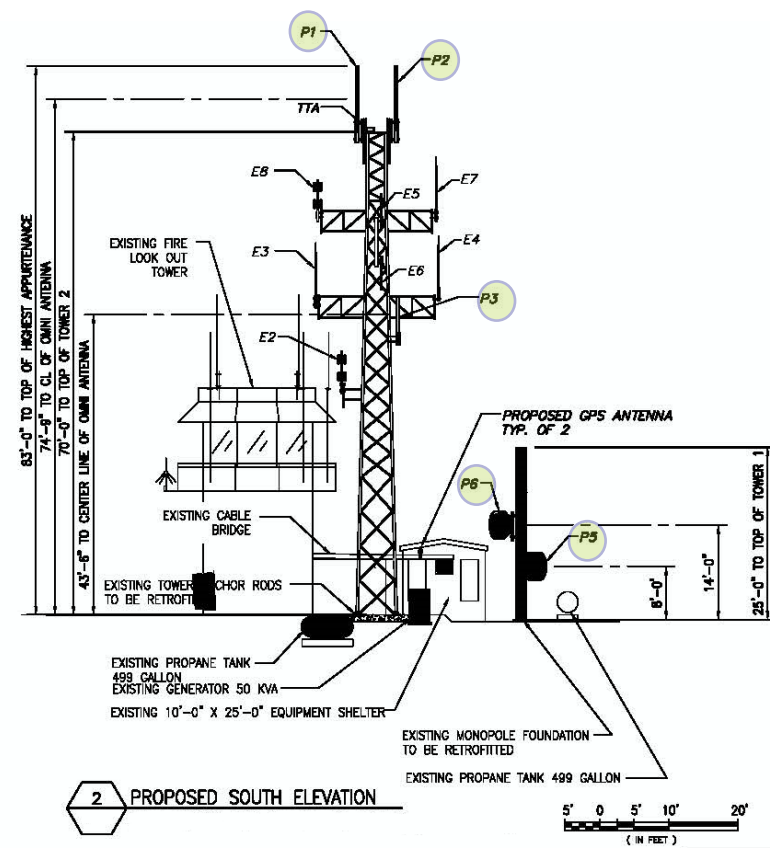
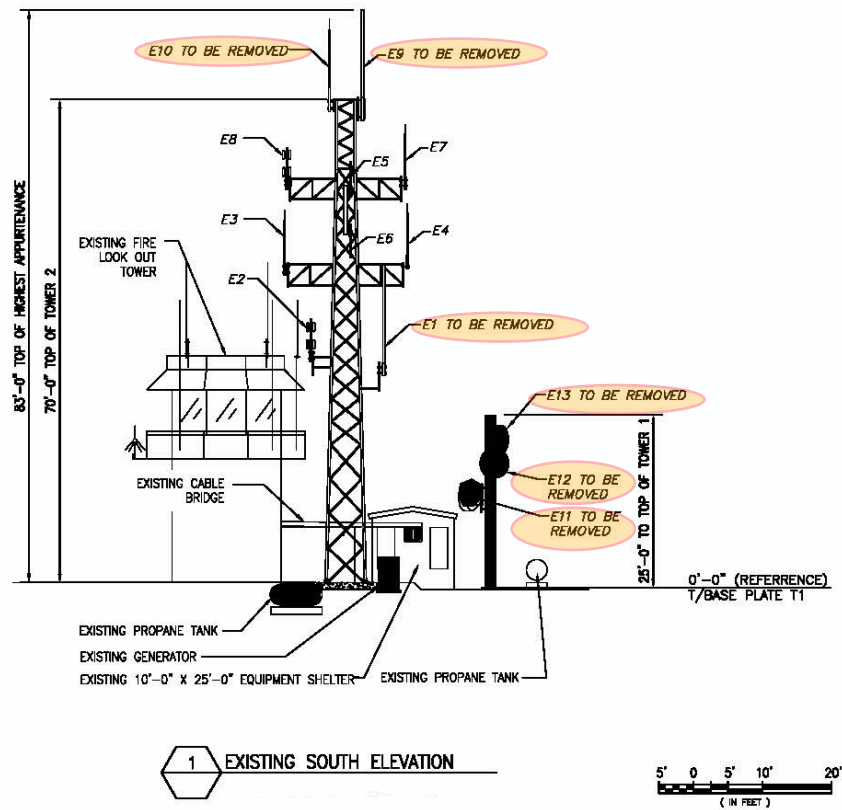
Figure III-28. Site 4 - Mt. Tamalpais Existing and Proposed Elevations

MERA Next Gen Communications System SEIR



Source: Motorola, 2018

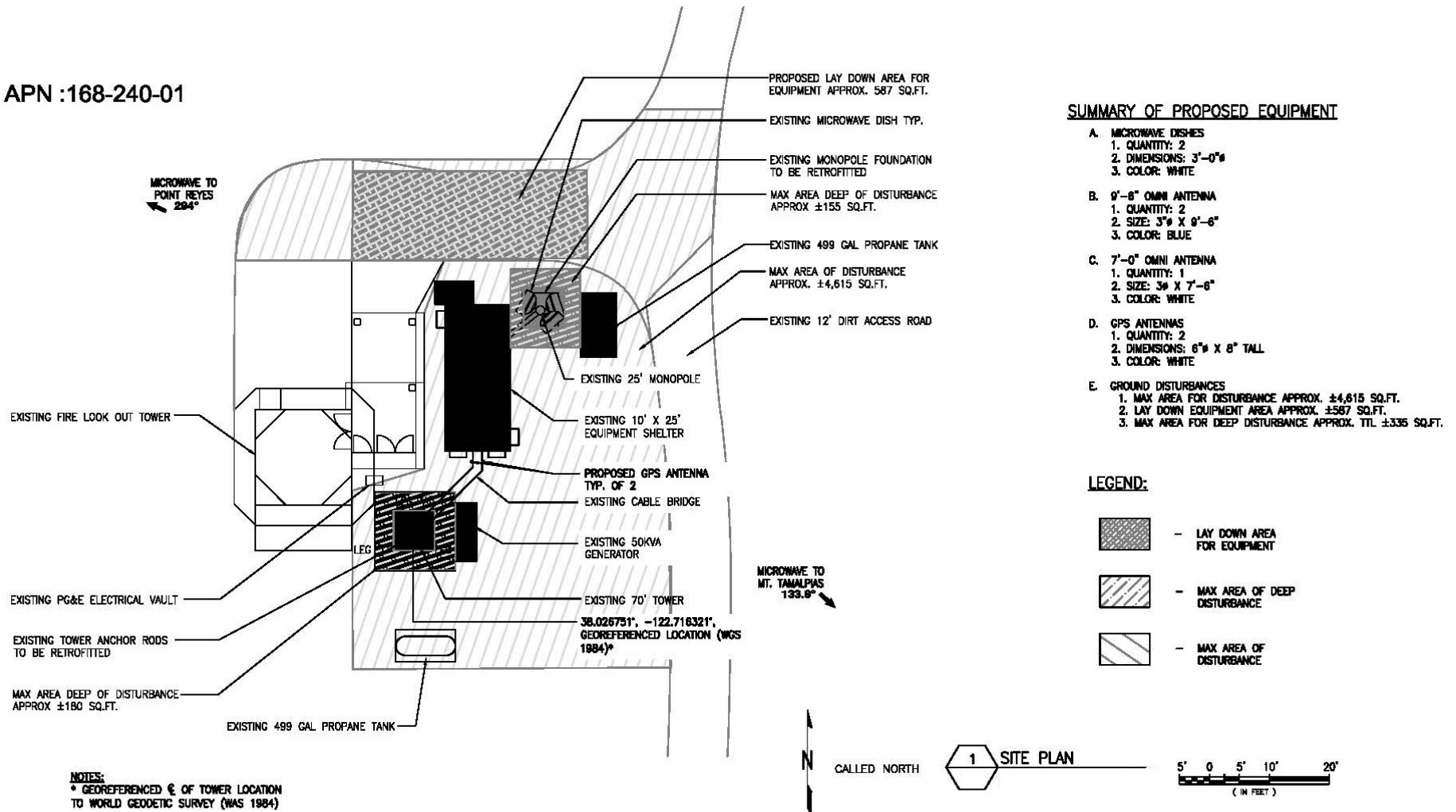
Figure III-29. Site 4 - Mt. Tamalpais Existing and Proposed Stub Tower Elevations



Source: Motorola, 2018

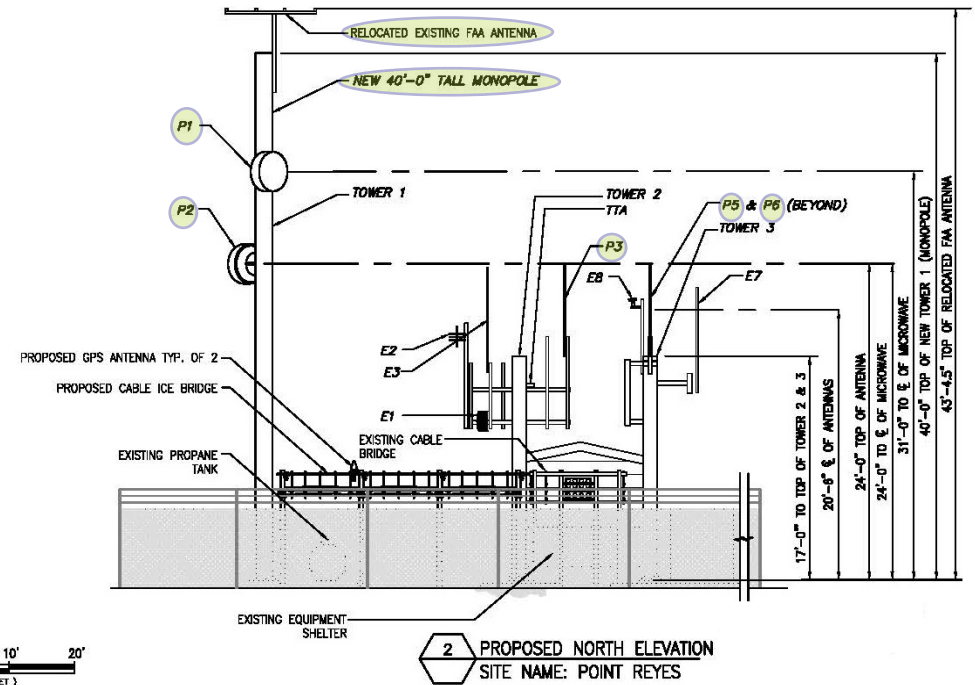
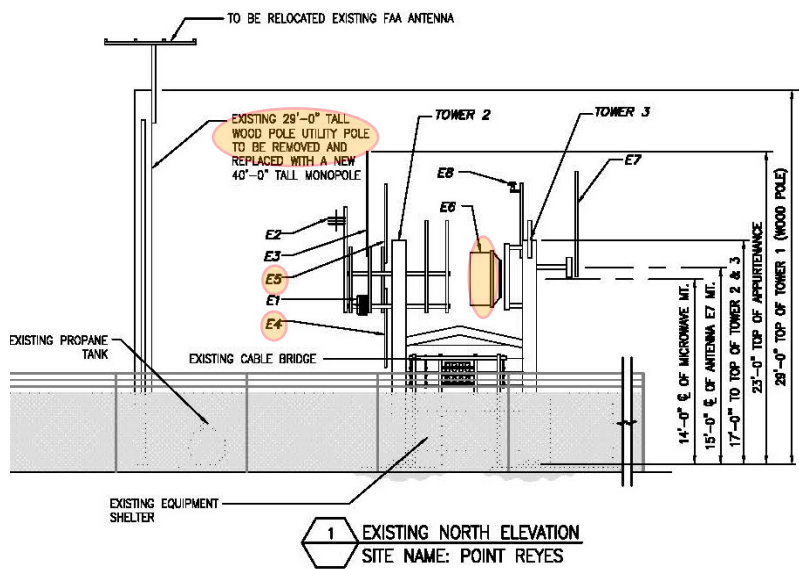
Figure III-31. Site 5 - Mt. Barnabe Existing and Proposed Elevations

APN :168-240-01



Source: Motorola, 2018




Figure III-32. Site 5 - Mt. Barnabe Site Plan



Source, Motorola, 2018

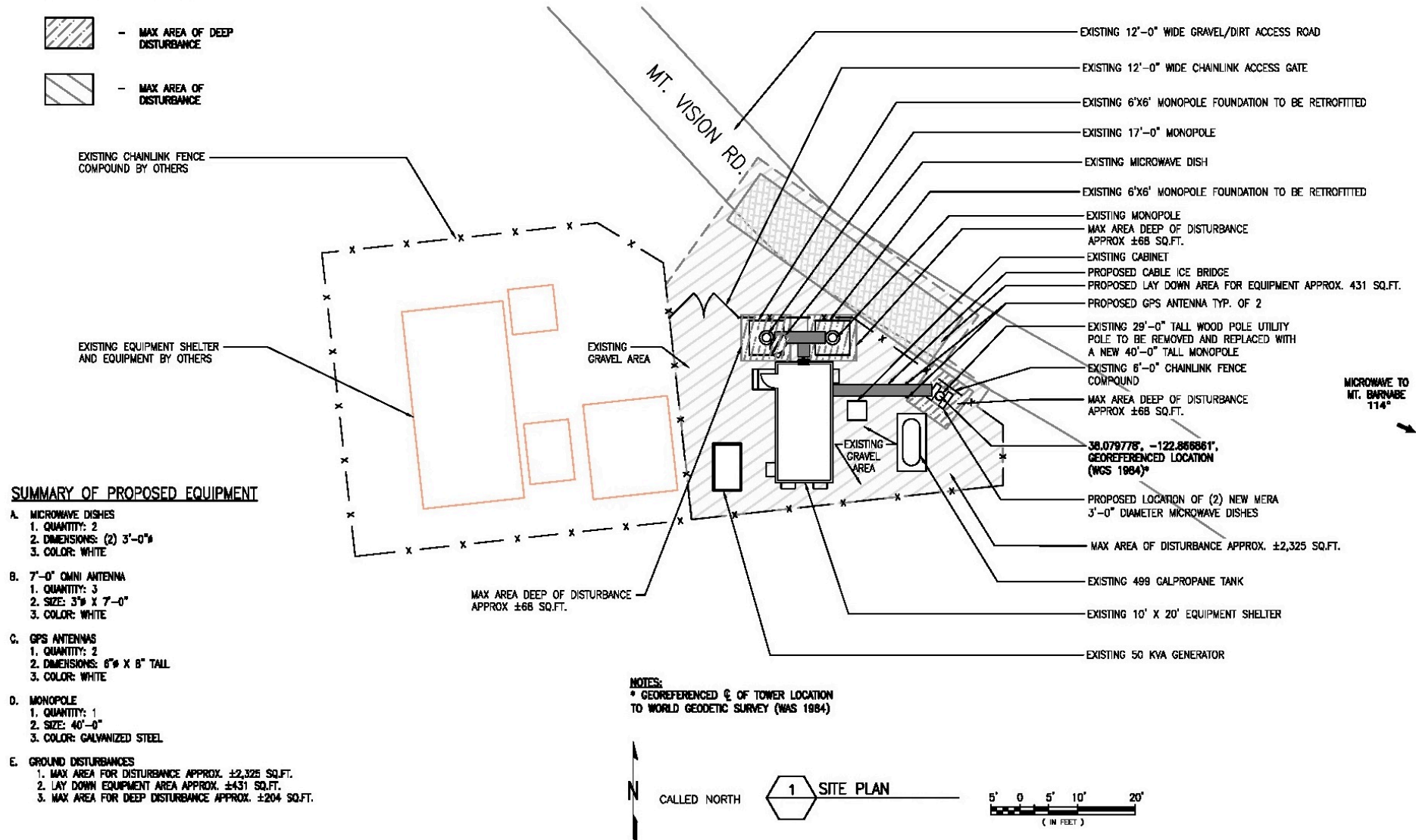
Figure III-33. Site 8 - Point Reyes Hill Existing and Proposed Elevations

LEGEND:

-  - LAY DOWN AREA FOR EQUIPMENT
-  - MAX AREA OF DEEP DISTURBANCE
-  - MAX AREA OF DISTURBANCE

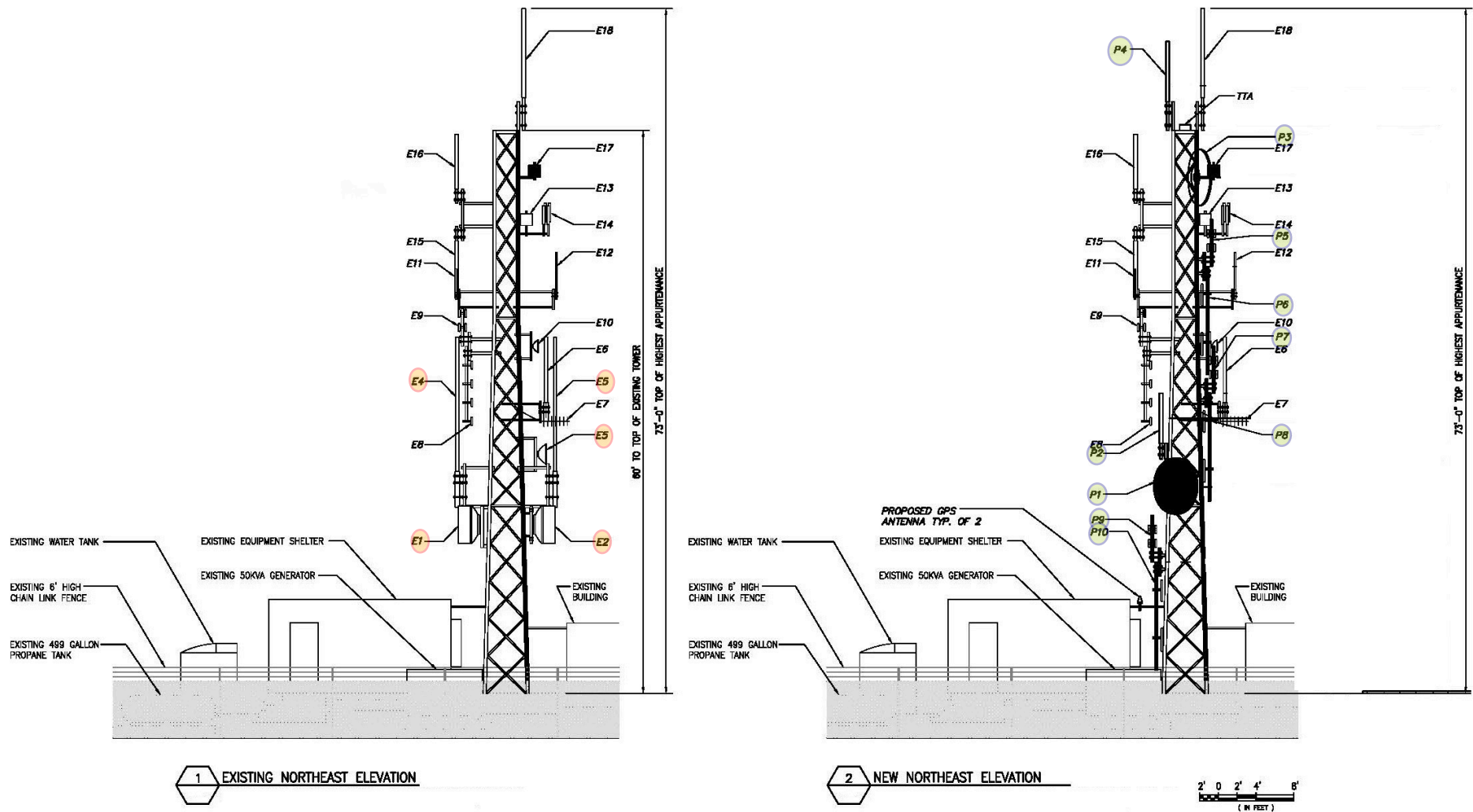
APN : 109-160-23

MICROWAVE TO
COYOTE PEAK
17°



Source: Motorola, 2018

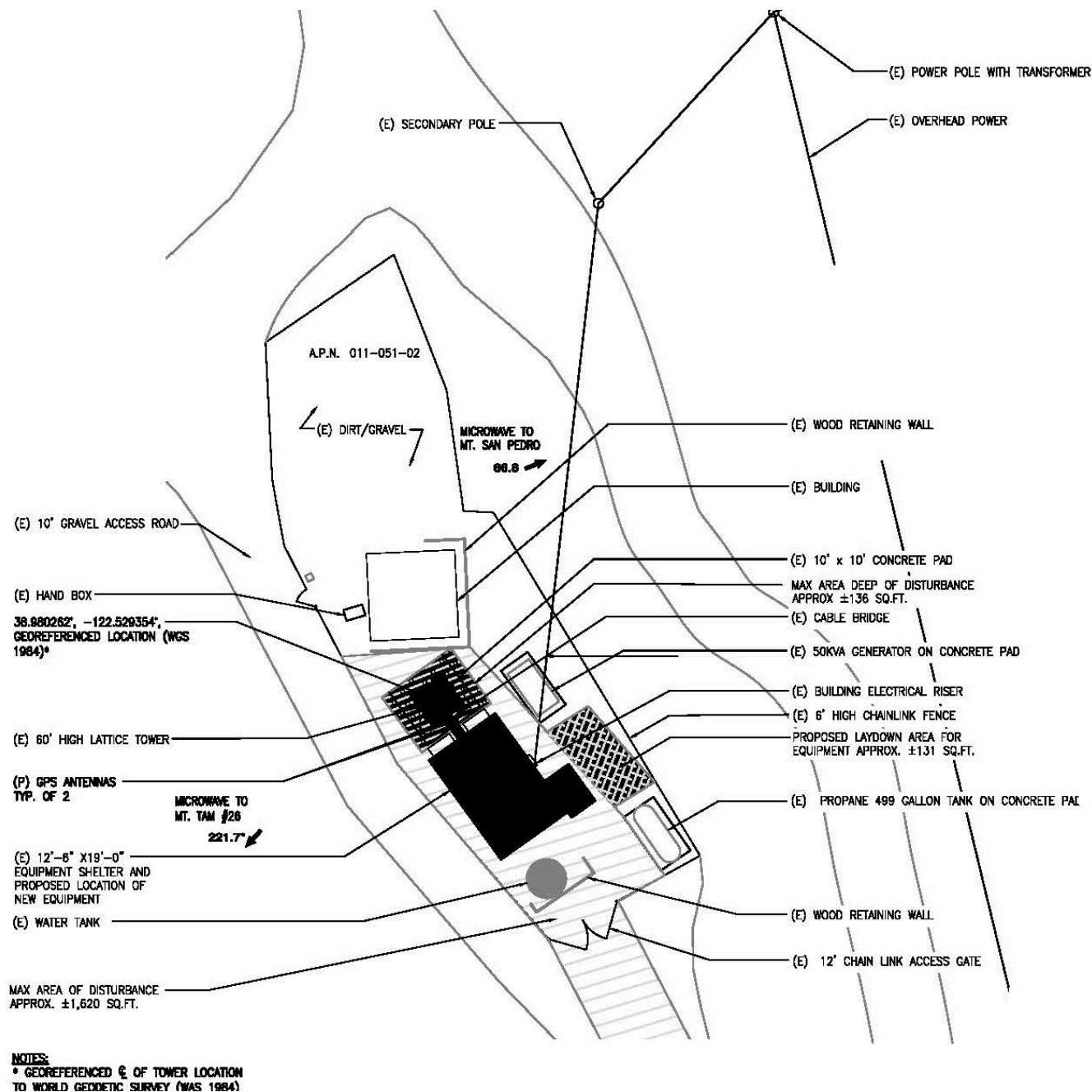
Figure III-34. Site 8 - Point Reyes Hill Site Plan



Source: Motorola, 2018

Figure III-35. Site 10 - Dollar Hill Existing and Proposed Elevations




NERA Next Gen Communications System SEIR

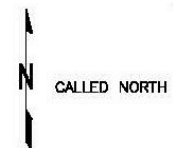


SUMMARY OF PROPOSED EQUIPMENT

- A. MICROWAVE DISHES
 - 1. QUANTITY: 2
 - 2. DIMENSIONS: (2) 6'-0"
 - 3. COLOR: WHITE
- B. GPS ANTENNAS
 - 1. QUANTITY: 2
 - 2. SIZE: 6" X 8"
 - 3. COLOR: WHITE
- C. 9'-6" OMNI ANTENNAS
 - 1. QUANTITY: (2)
 - 2. DIMENSIONS: 3" X 9'-6"
 - 3. COLOR: BLUE
- D. 7'-0" OMNI ANTENNAS
 - 1. QUANTITY: (2)
 - 2. DIMENSIONS: 3.5" X 7'-0"
 - 3. COLOR: WHITE
- E. CONVENTIONAL ANTENNA DB404
 - 1. QUANTITY: 3
 - 2. SIZE: 5'-0" TALL
 - 3. COLOR: GALVANIZE STEEL
- F. CONVENTIONAL ANTENNA 440-2
 - 1. QUANTITY: 3
 - 2. DIMENSIONS: 11'-8" TALL
 - 3. COLOR: GALVANIZED STEEL
- G. GROUND DISTURBANCES
 - 1. MAX DISTURBANCE AREA ±1,620 SQ.FT.
 - 2. LAY DOWN AREA ±131 SQ.FT.
 - 3. DEEP DISTURBANCE AREA ±136 SQ.FT.

LEGEND:

-  - LAY DOWN AREA FOR EQUIPMENT
-  - MAX AREA OF DEEP DISTURBANCE
-  - MAX AREA OF DISTURBANCE



Source: Motorola, 2018

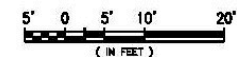


Figure III-36. Site 10 - Dollar Hill Site Plan

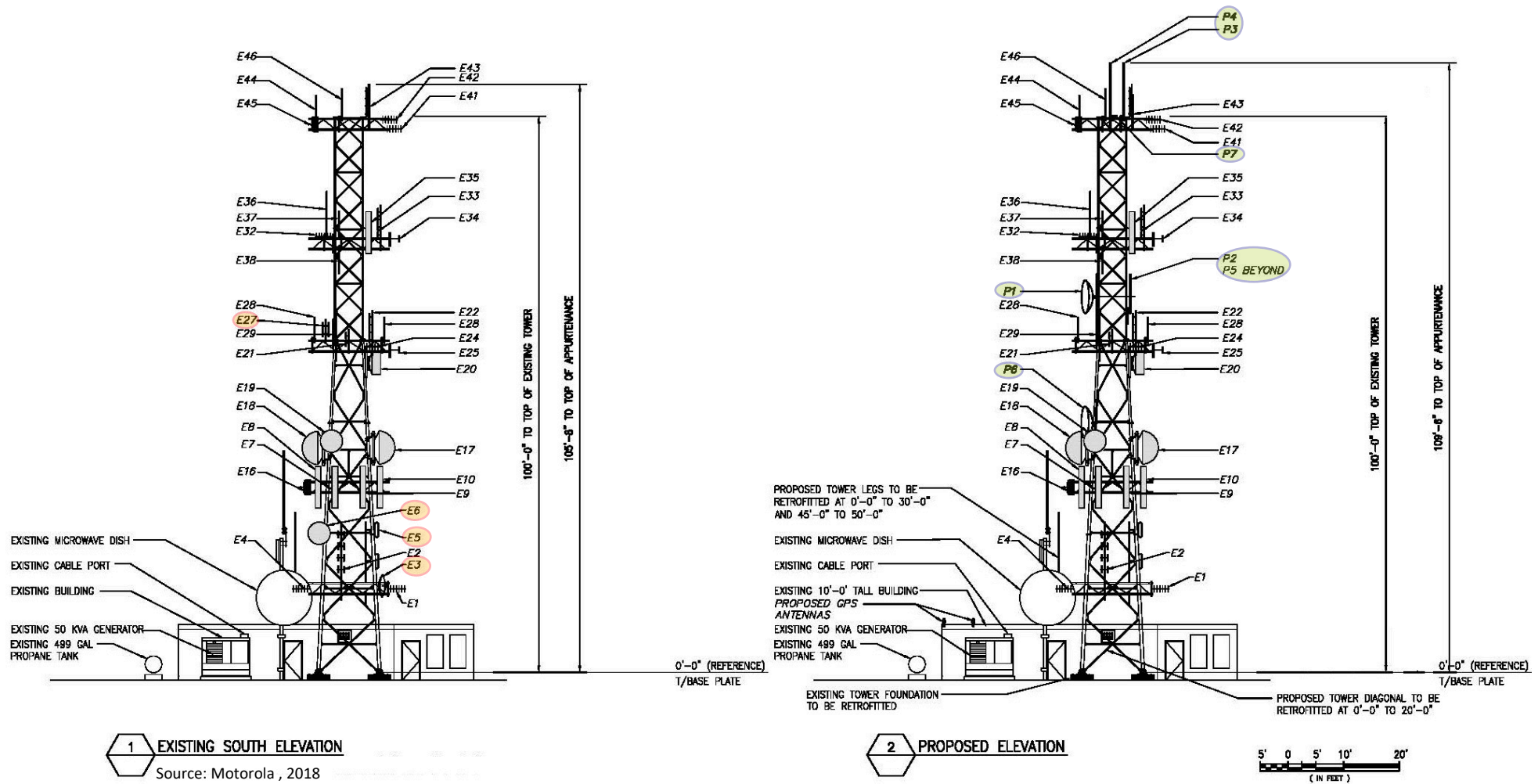
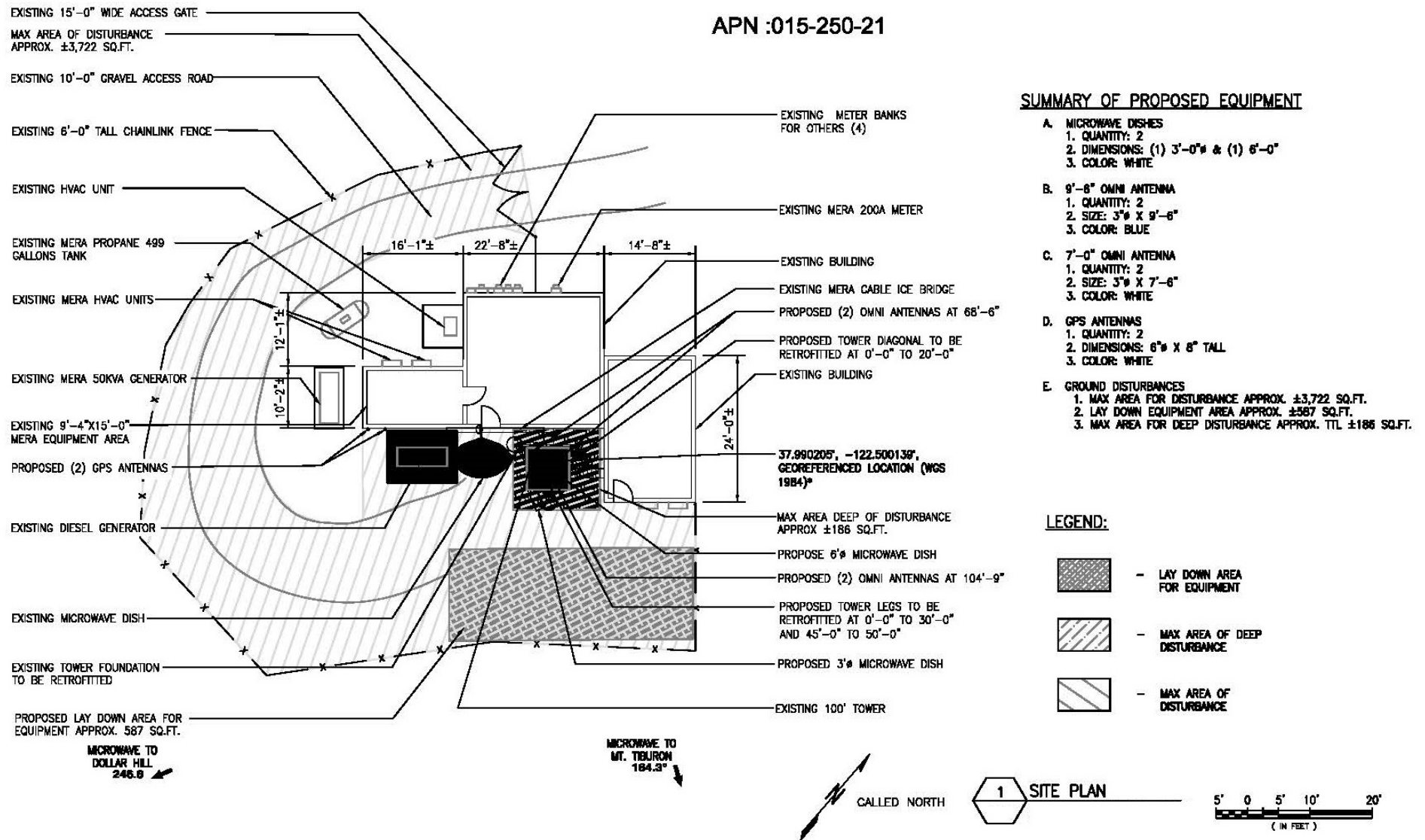


Figure III-37. Site 11 - San Pedro Ridge Existing and Proposed Elevations



Source: Motorola, 2018

Figure III-38. Site 11 - San Pedro Ridge Site Plan

MERA Next Gen Communications System SEIR

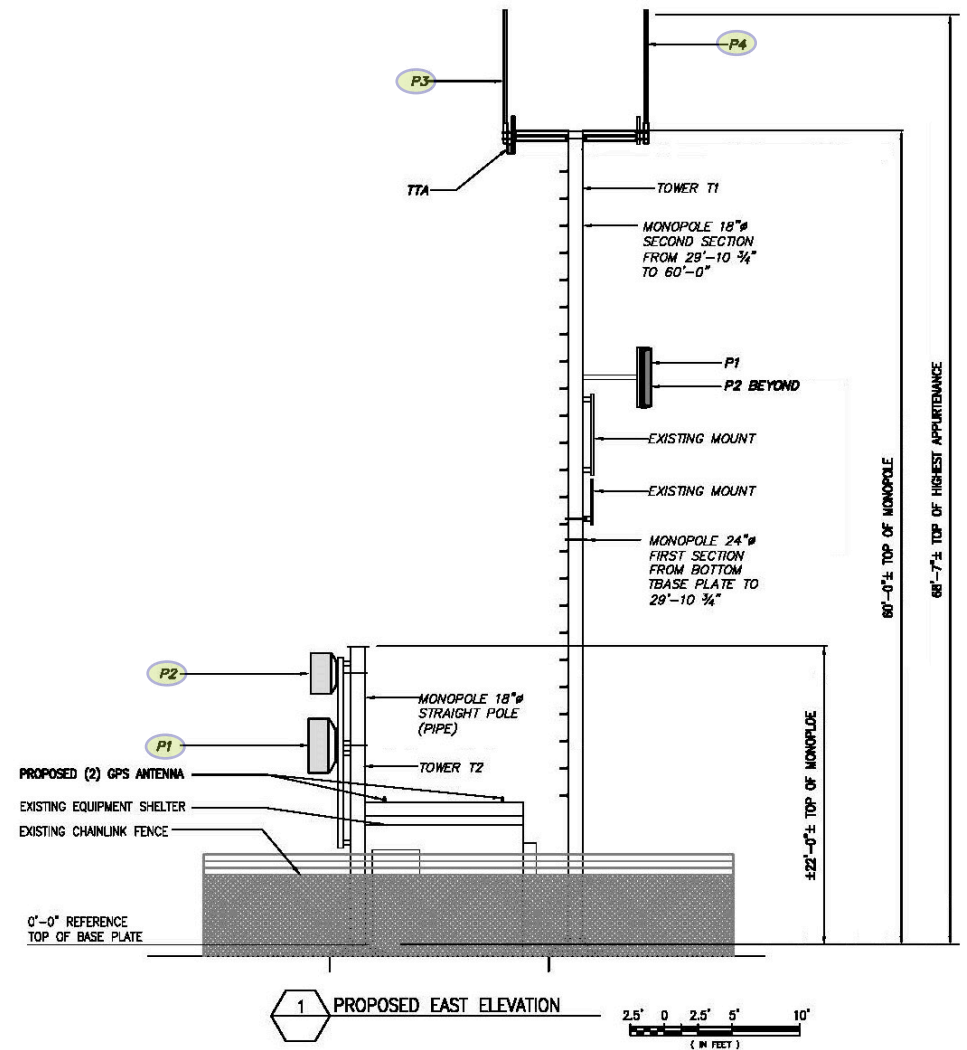
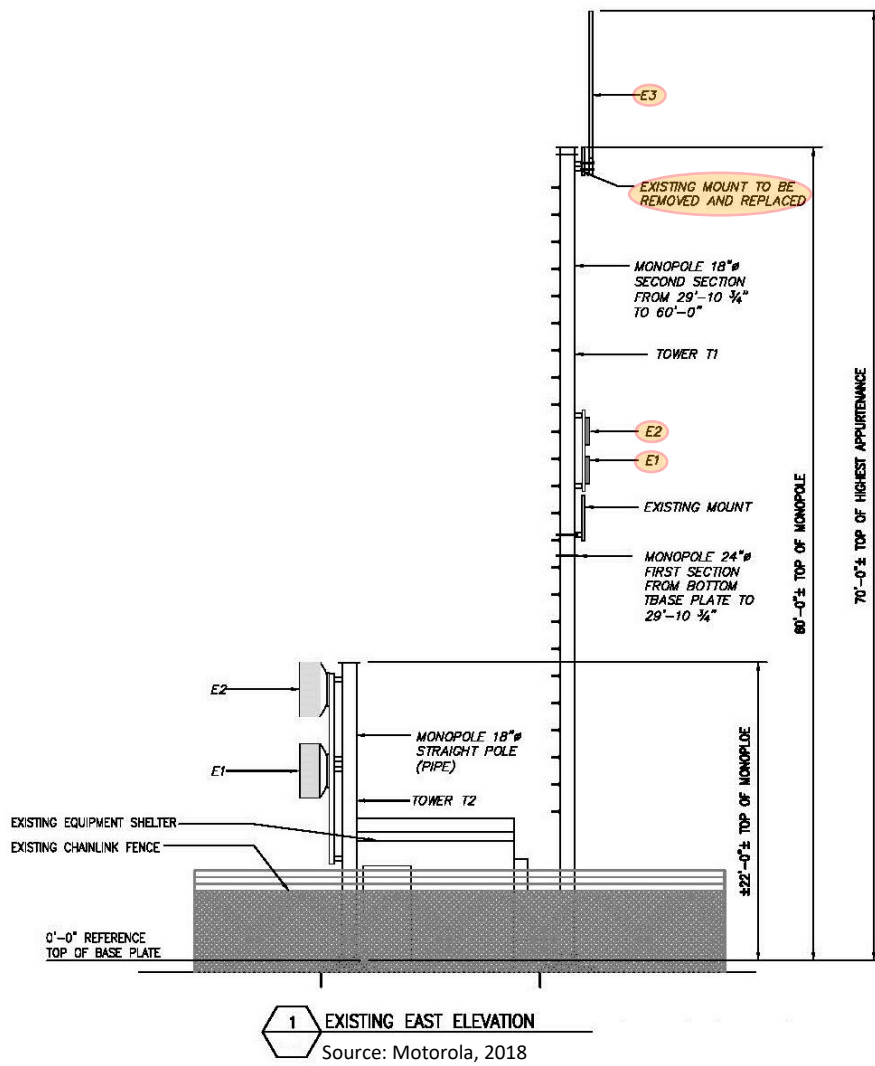
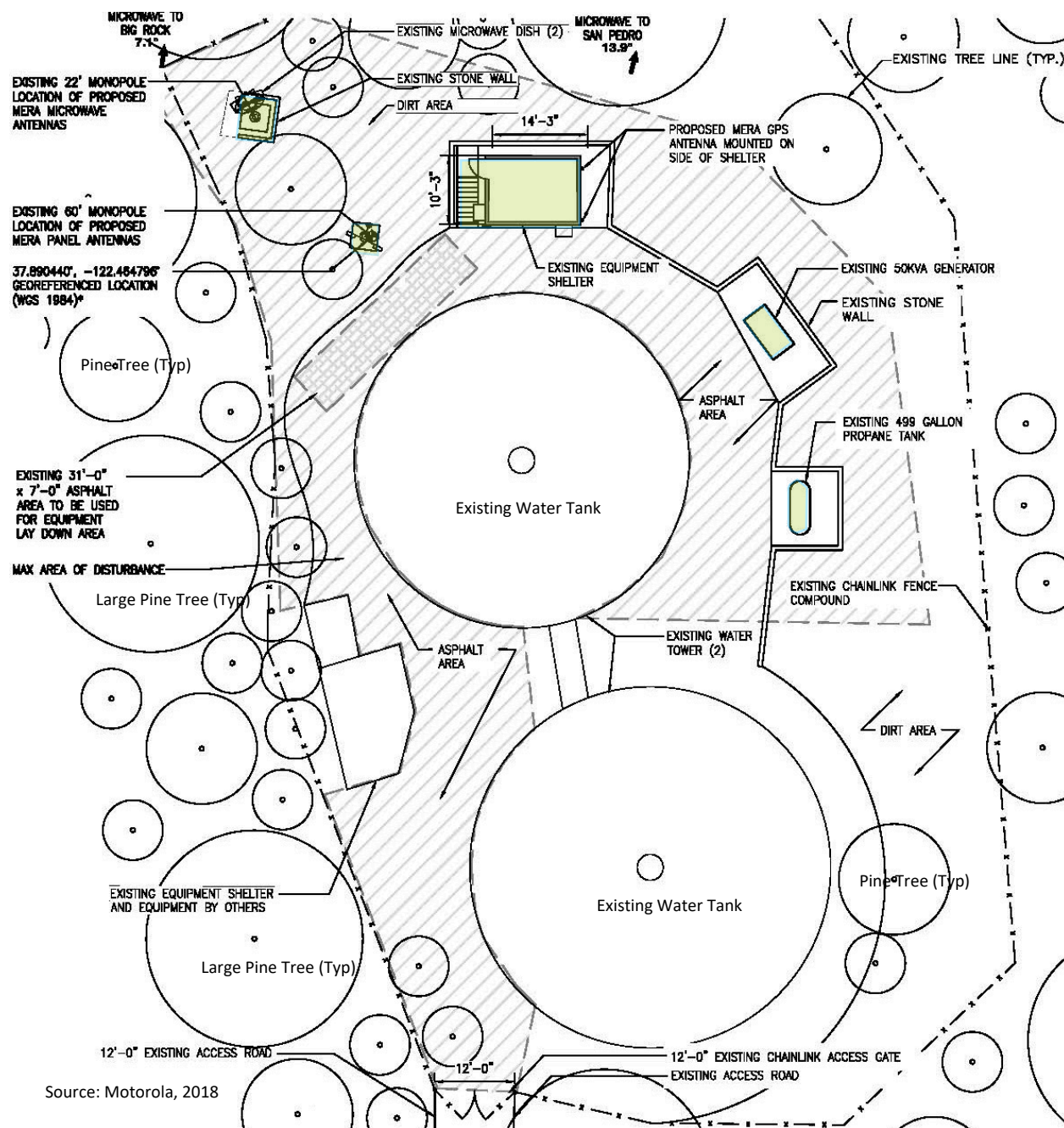
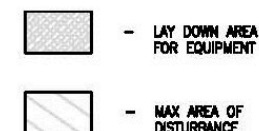


Figure III-39. Site 14 - Mt. Tiburon Existing and Proposed Elevations



SUMMARY OF PROPOSED EQUIPMENT

- A. GPS ANTENNAS
 - 1. QUANTITY: 2
 - 2. DIMENSIONS: 6" X 8" TALL
 - 3. COLOR: WHITE
- B. MICROWAVE DISHES
 - 1. QUANTITY: 2
 - 2. DIMENSIONS: (1) 3'-0" & (1) 4'-0"
 - 3. COLOR: WHITE
- C. 9'-8" OMNI ANTENNAS
 - 1. QUANTITY: (2)
 - 2. DIMENSIONS: 3" X 9'-8"
 - 3. COLOR: BLUE
- D. 4'-5" PANEL ANTENNAS
 - 1. QUANTITY: (2)
 - 2. DIMENSIONS: 4'-5" TALL X 2'-1" WIDE X 8.5"
 - 3. COLOR: WHITE
- E. GROUND DISTURBANCES
 - 1. MAX AREA OF DISTURBANCE ±8861 SQ. FT.
 - 2. LAY DOWN AREA - OVER EXISTING ASPHALT APPROX. ±214 SQ. FT.



 MERA Facility

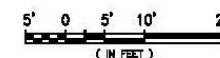
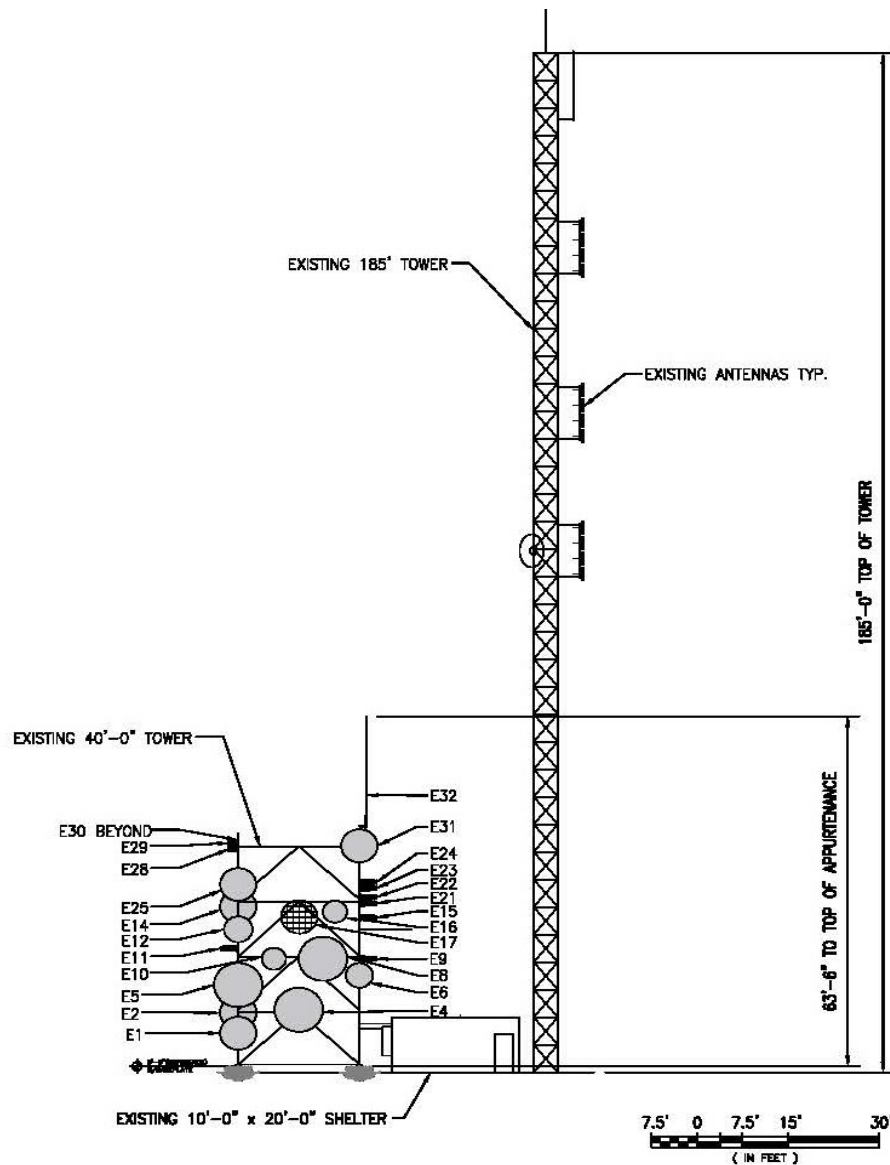
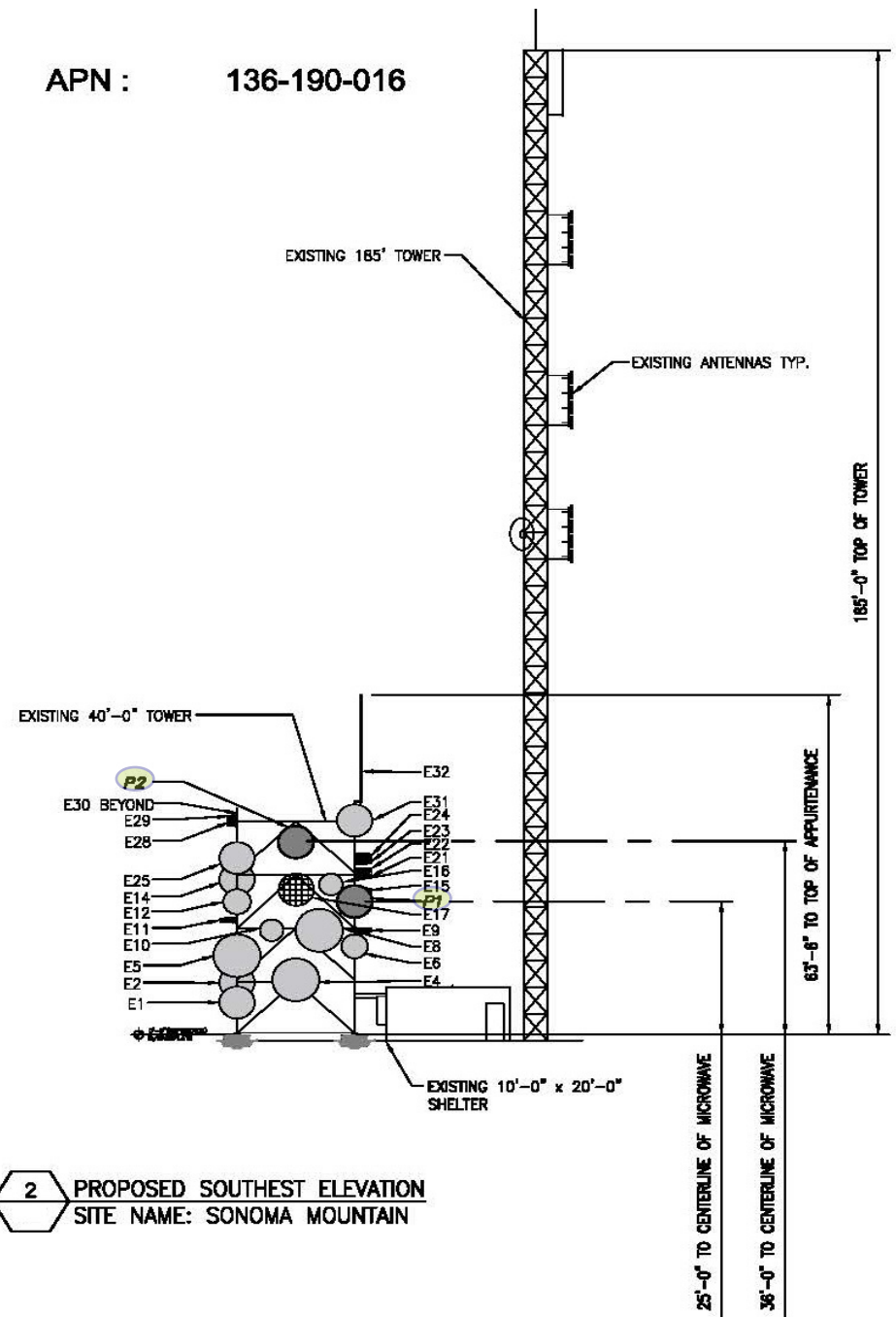


Figure III-40. Site 14 - Mt. Tiburon Site Plan



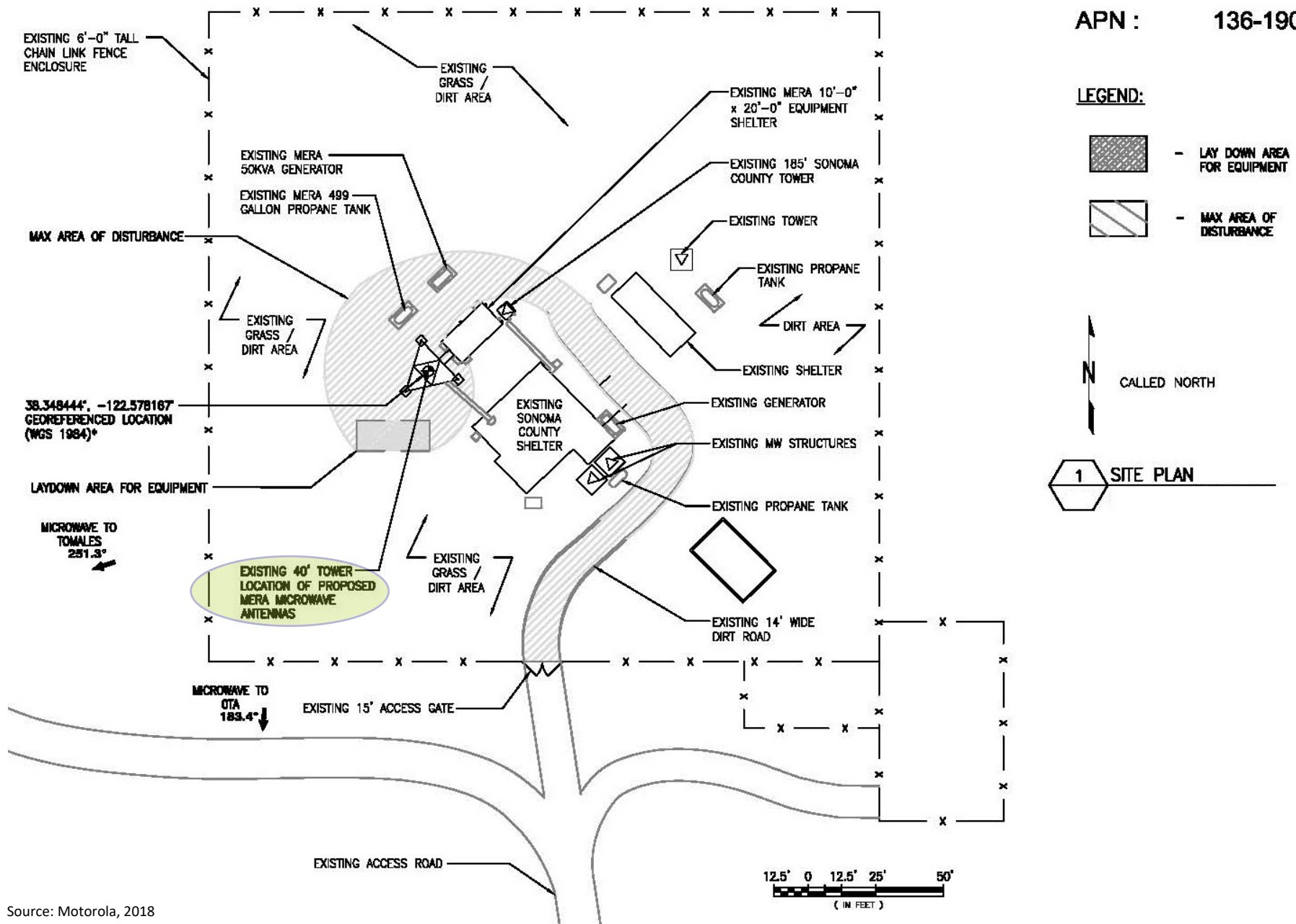
1 EXISTING SOUTHEAST ELEVATION
SITE NAME: SONOMA MOUNTAIN

Source: Motorola, 2018



2 PROPOSED SOUTHEAST ELEVATION
SITE NAME: SONOMA MOUNTAIN

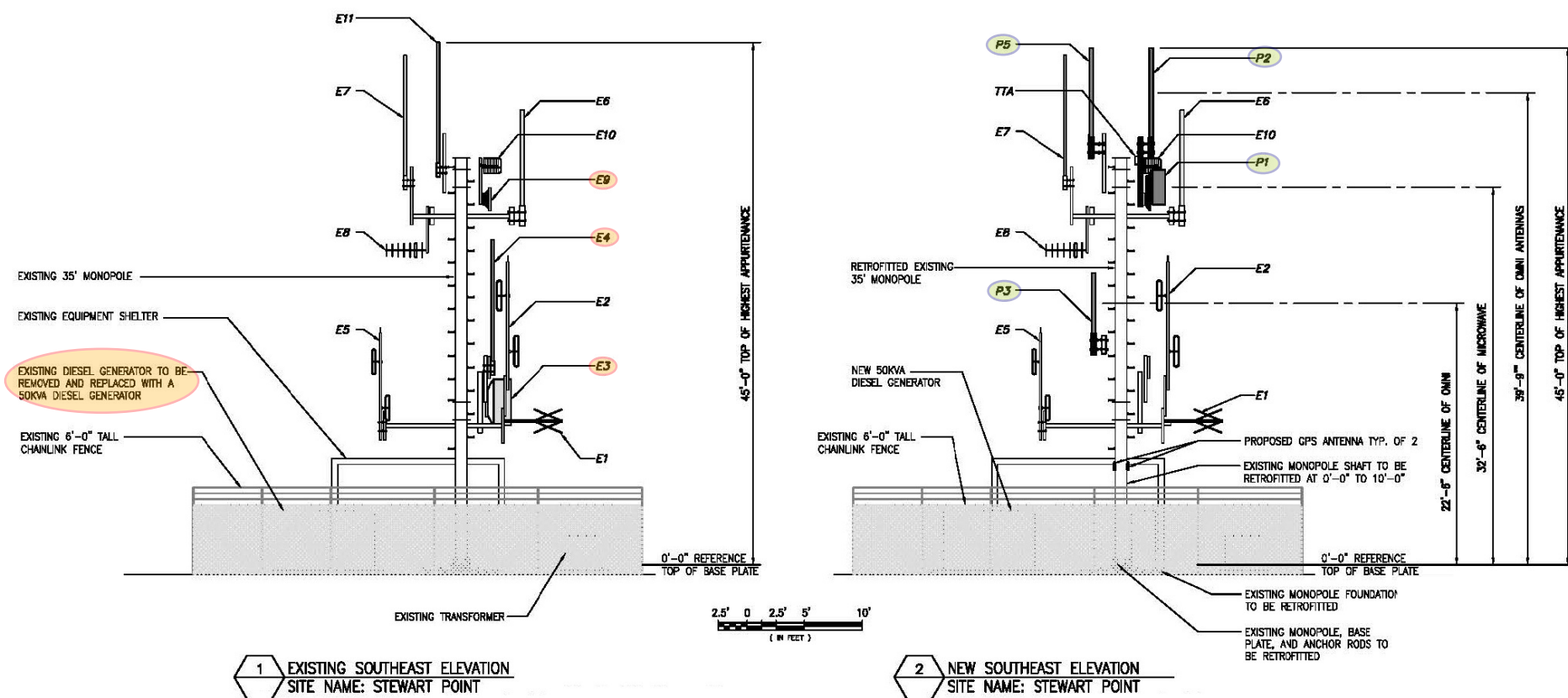
Figure III-41. Site 18 - Sonoma Mountain Existing and Proposed Elevations



Source: Motorola, 2018

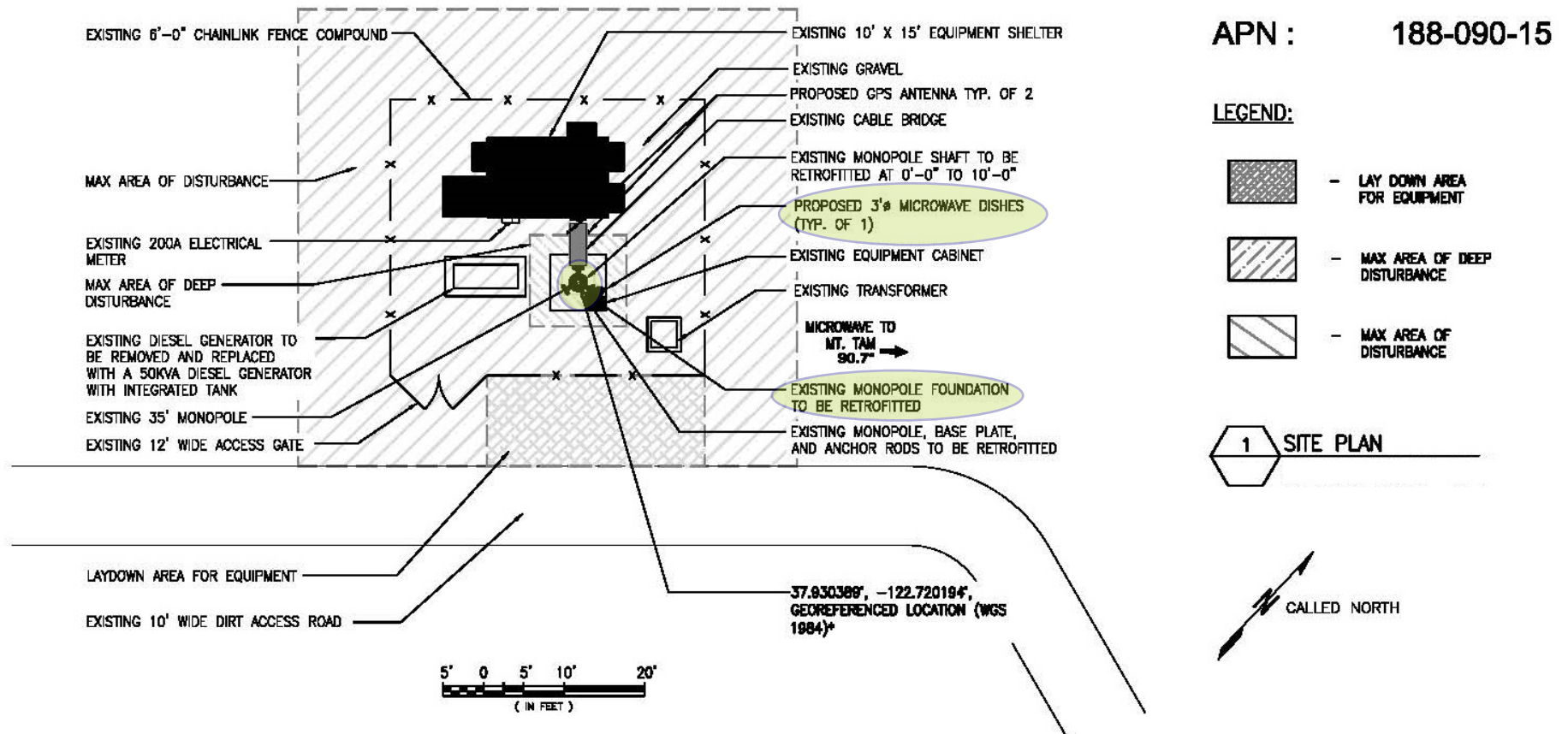
Figure III-42. Site 18 - Sonoma Mountain Site Plan

MERA Next Gen Communications System SEIR



Source: Motorola, 2018

Figure III-43. Site 19 - Stewart Point Existing and Proposed Elevations



Source: Motorola, 2018

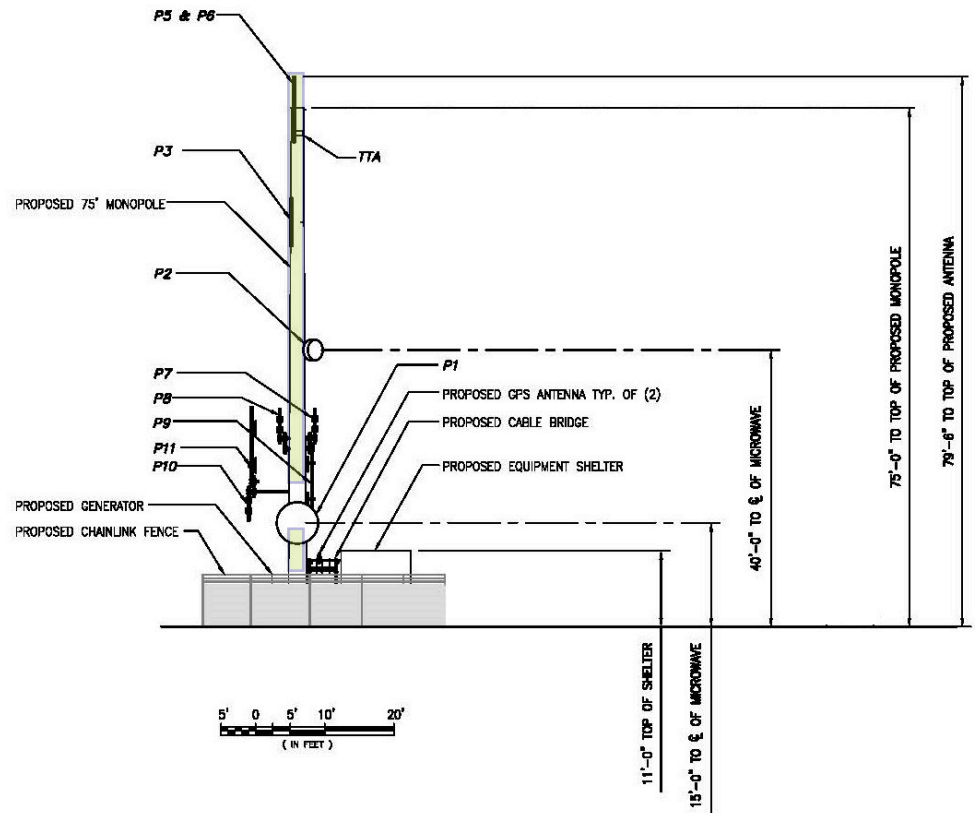
Figure III-44. Site 19 - Stewart Point Site Plan



Existing Cellular Equipment Shelter at Tamales Site

Cell Tower is behind photographer. New monopole and equipment shelter would be to the right.

Source: WRA 2018



Proposed communications equipment on new 75-foot monopole.

Source: Motorola 2018

Figure III-45. Site 20 - Tamales Existing Equipment Photo and Proposed Elevation

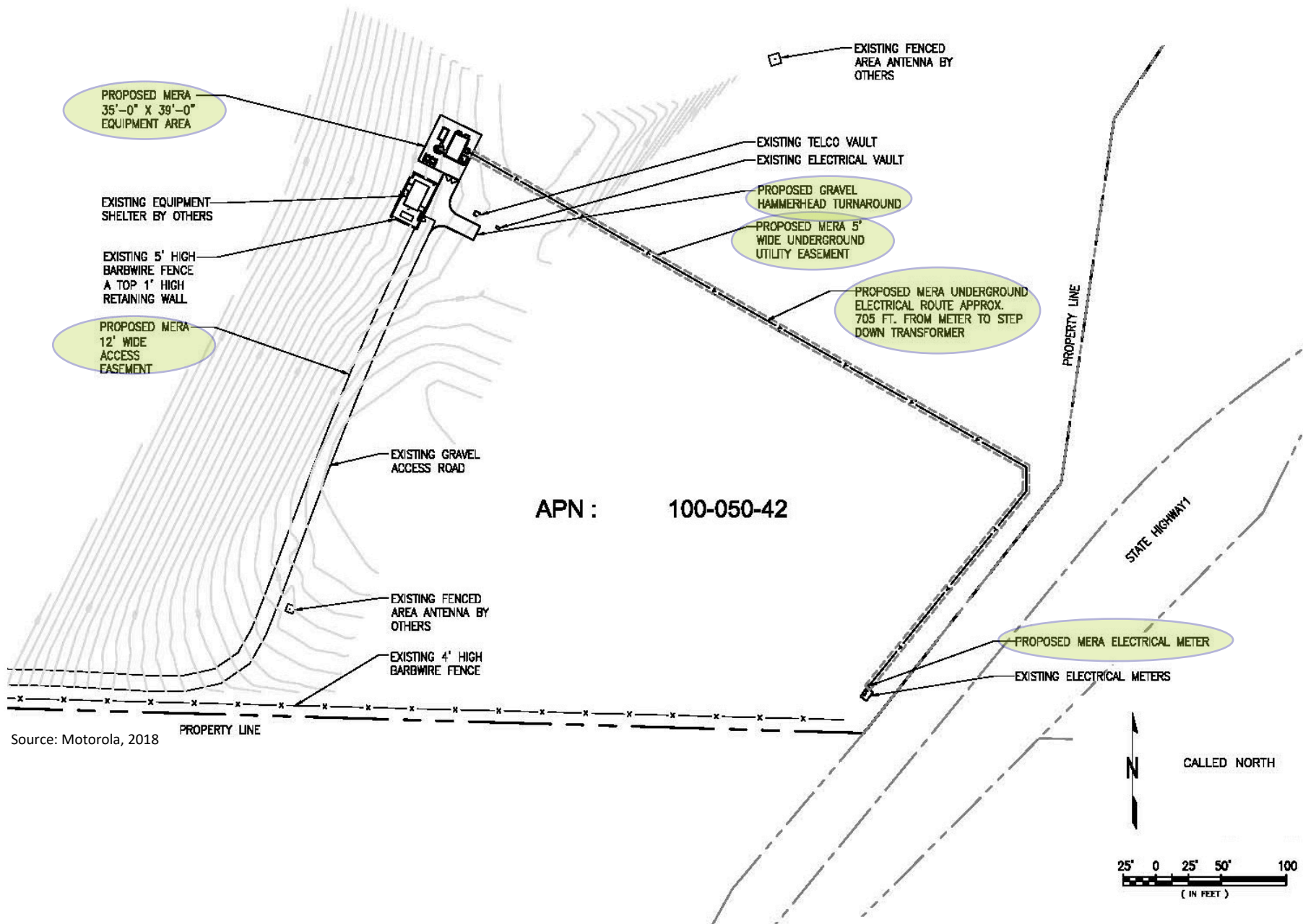


Figure III-46. Site 20 - Tomales Enlarged Site Plan

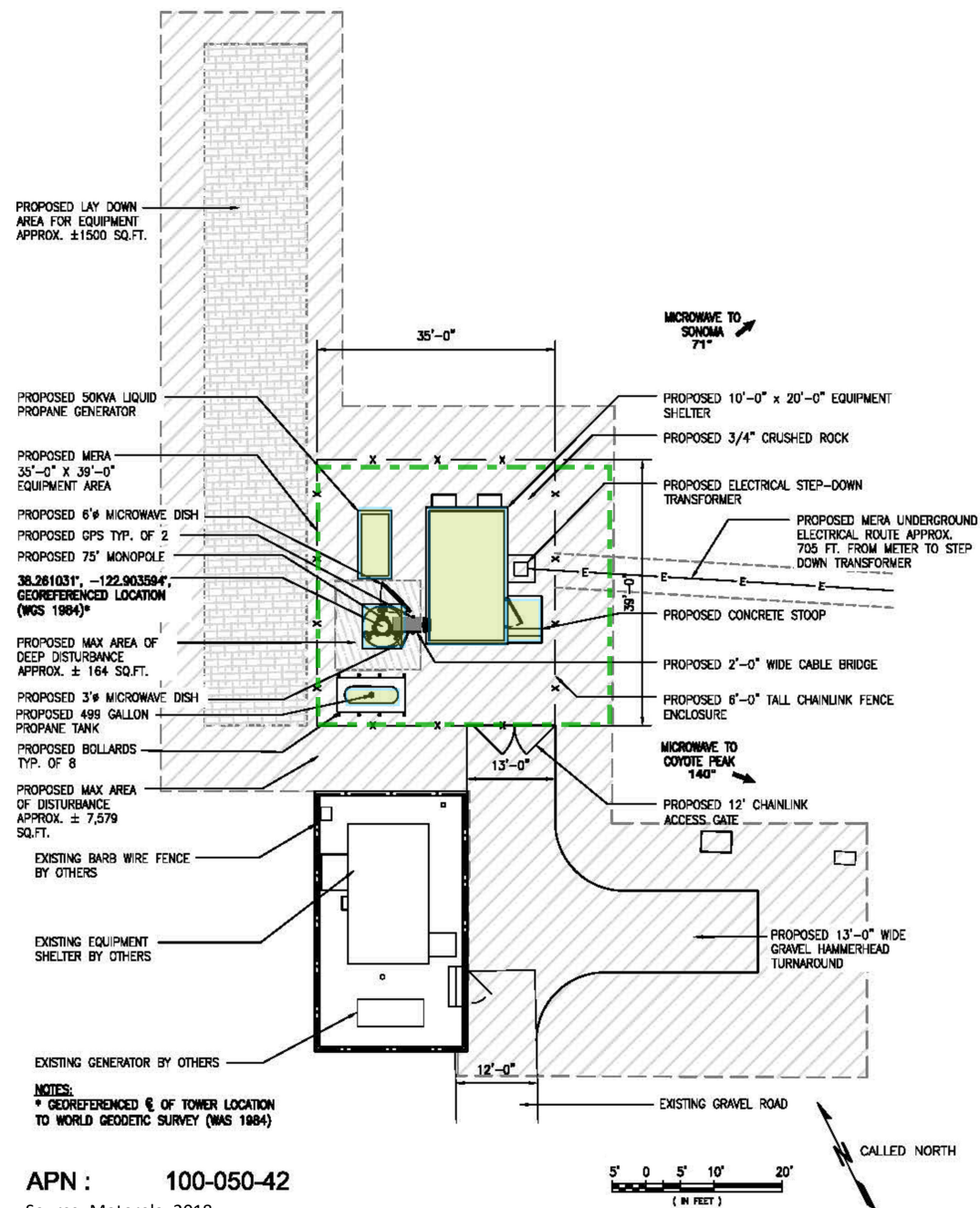
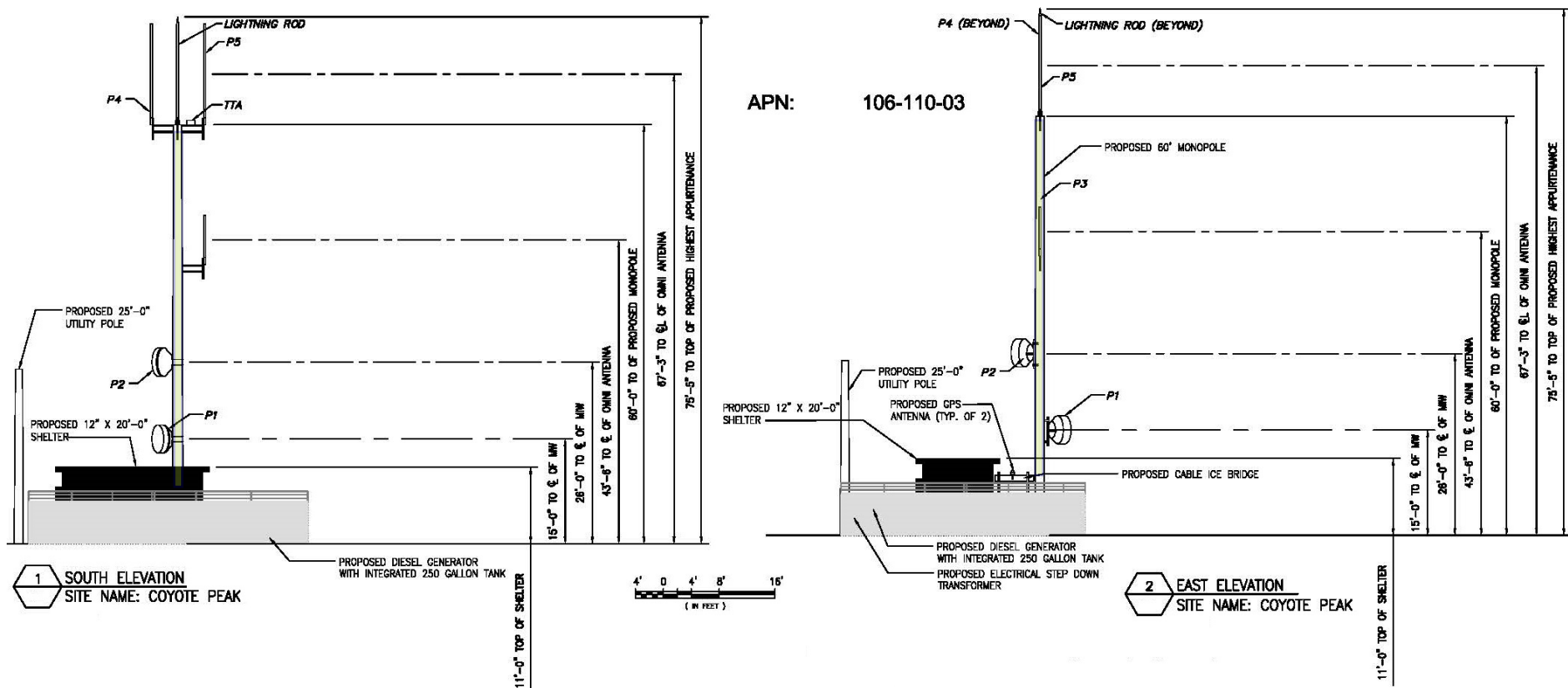


Figure III-47. Site 20 - Tomales Site Plan



Source: Motorola, 2018

Figure III-48. Site 21 - Coyote Peak - Two Proposed Elevations

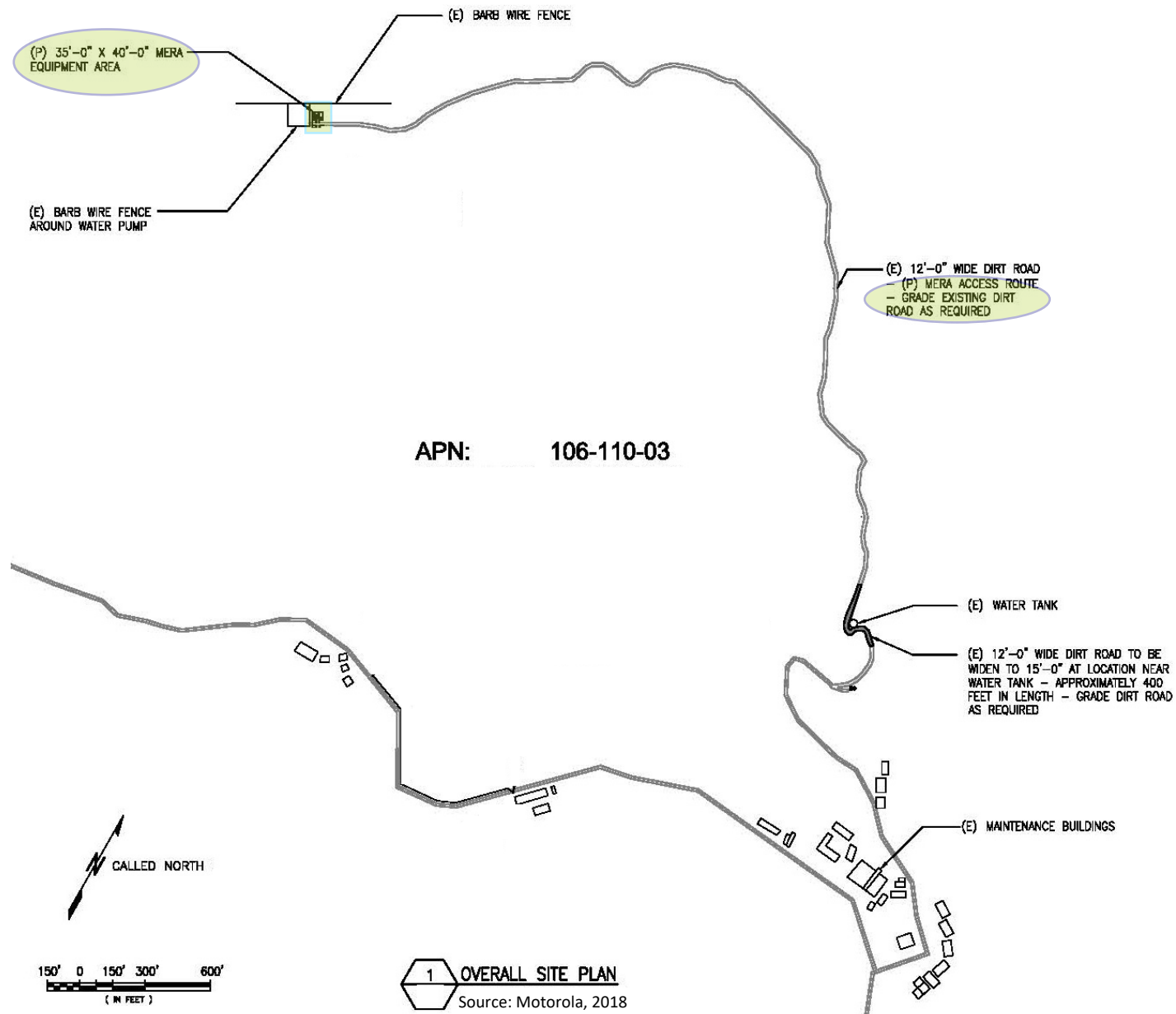
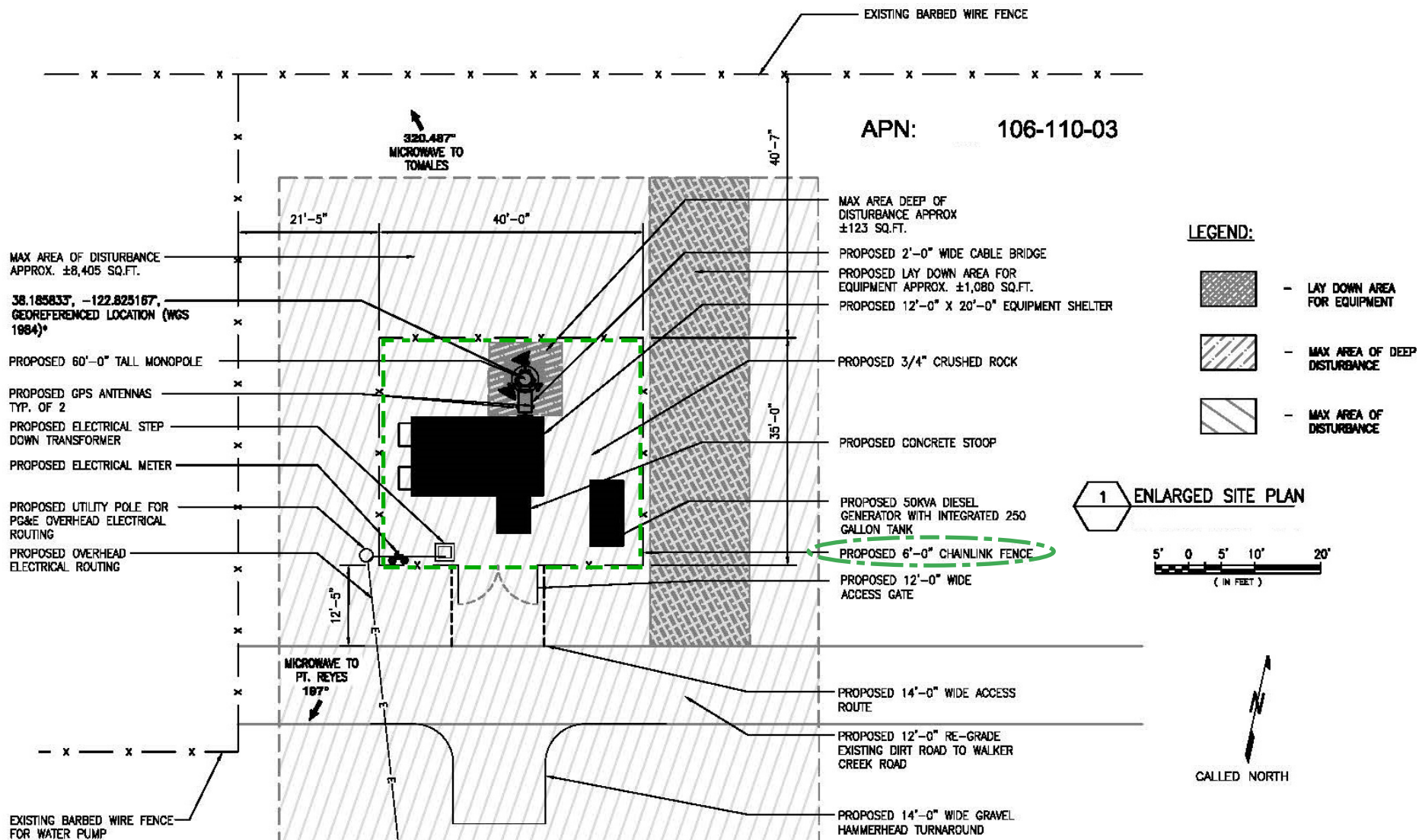
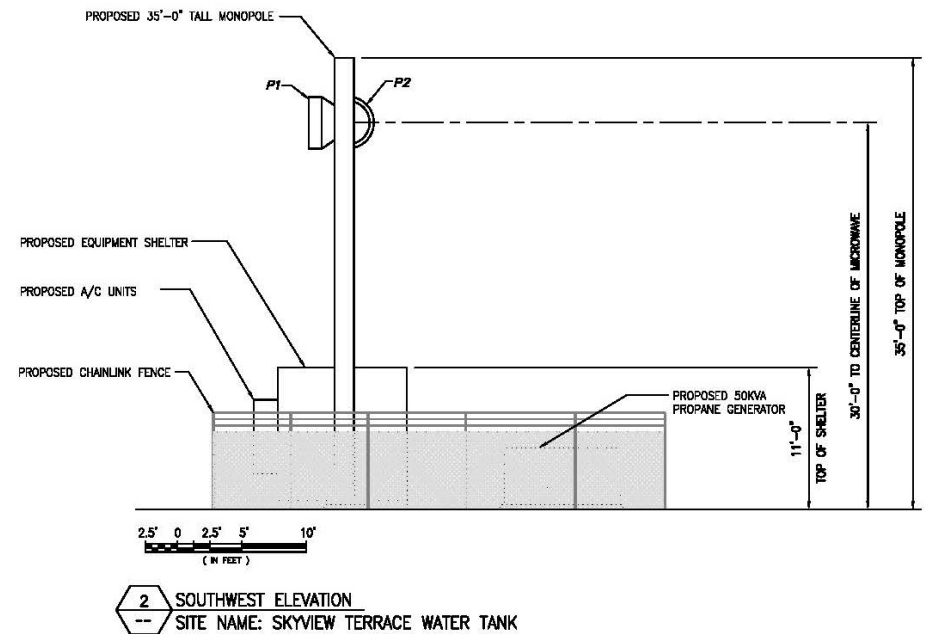
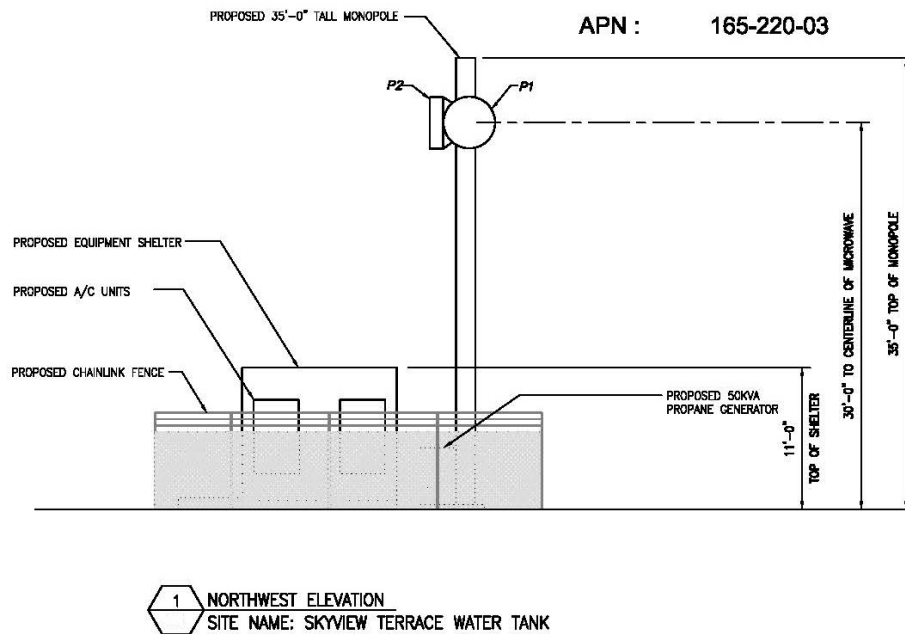


Figure III-49. Site 21 - Coyote Peak Overall Site Plan



Source: Motorola, 2018

Figure III-50. Site 21 - Coyote Peak Detailed Site Plan



Source: Motorola, 2018

Figure III-51. Site 22 - Skyview Terrace Water Tank - Two Proposed Elevations

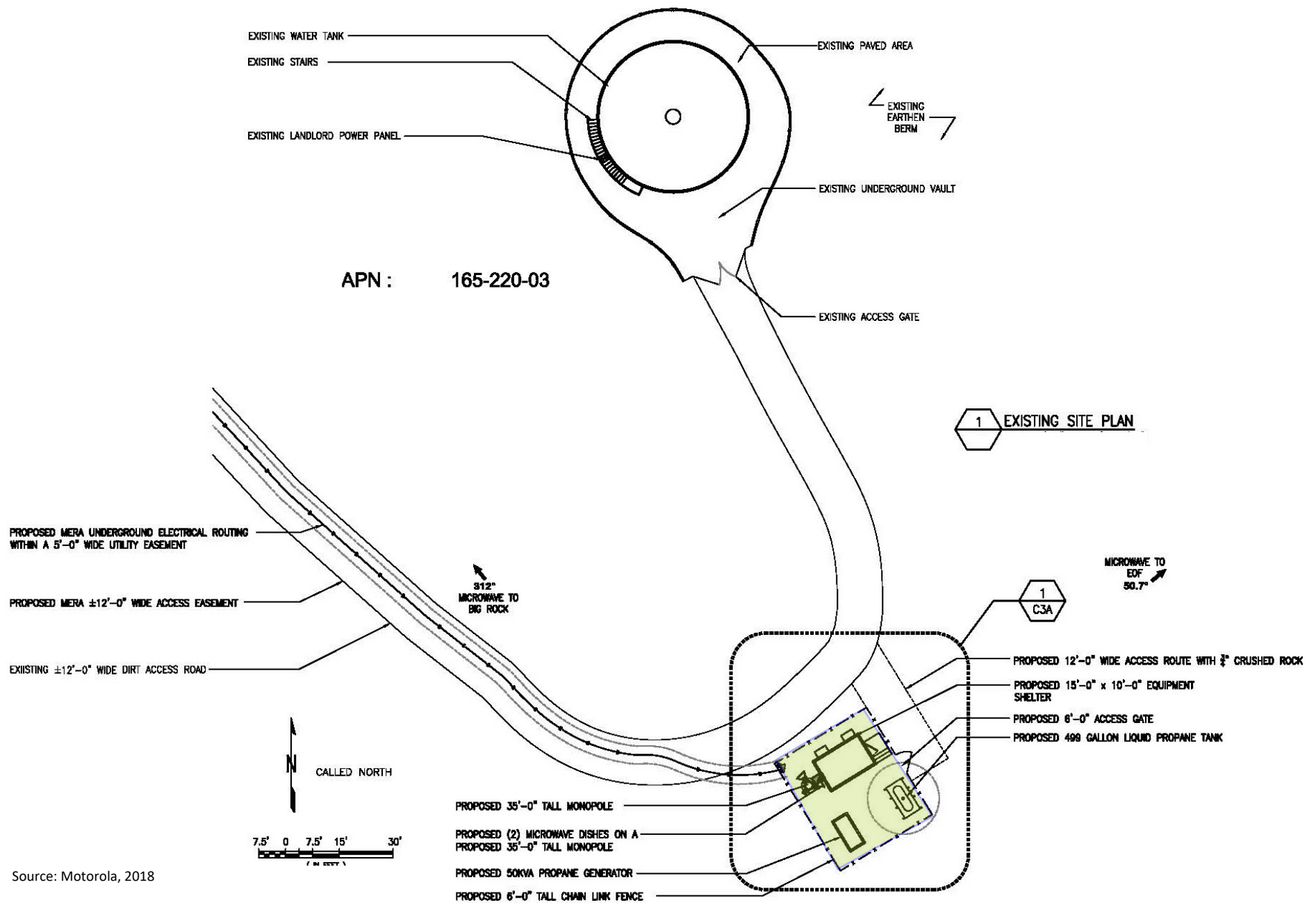
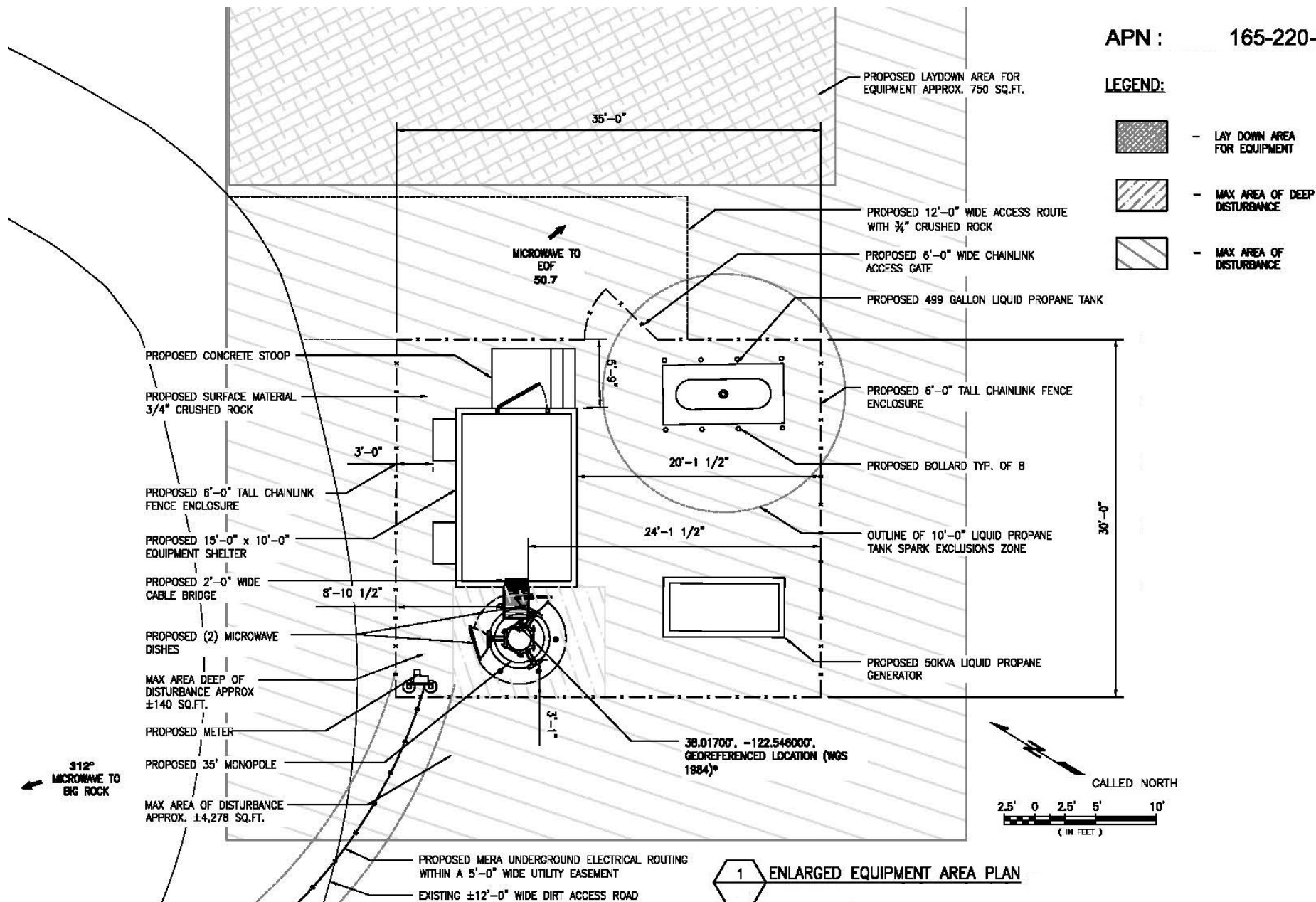


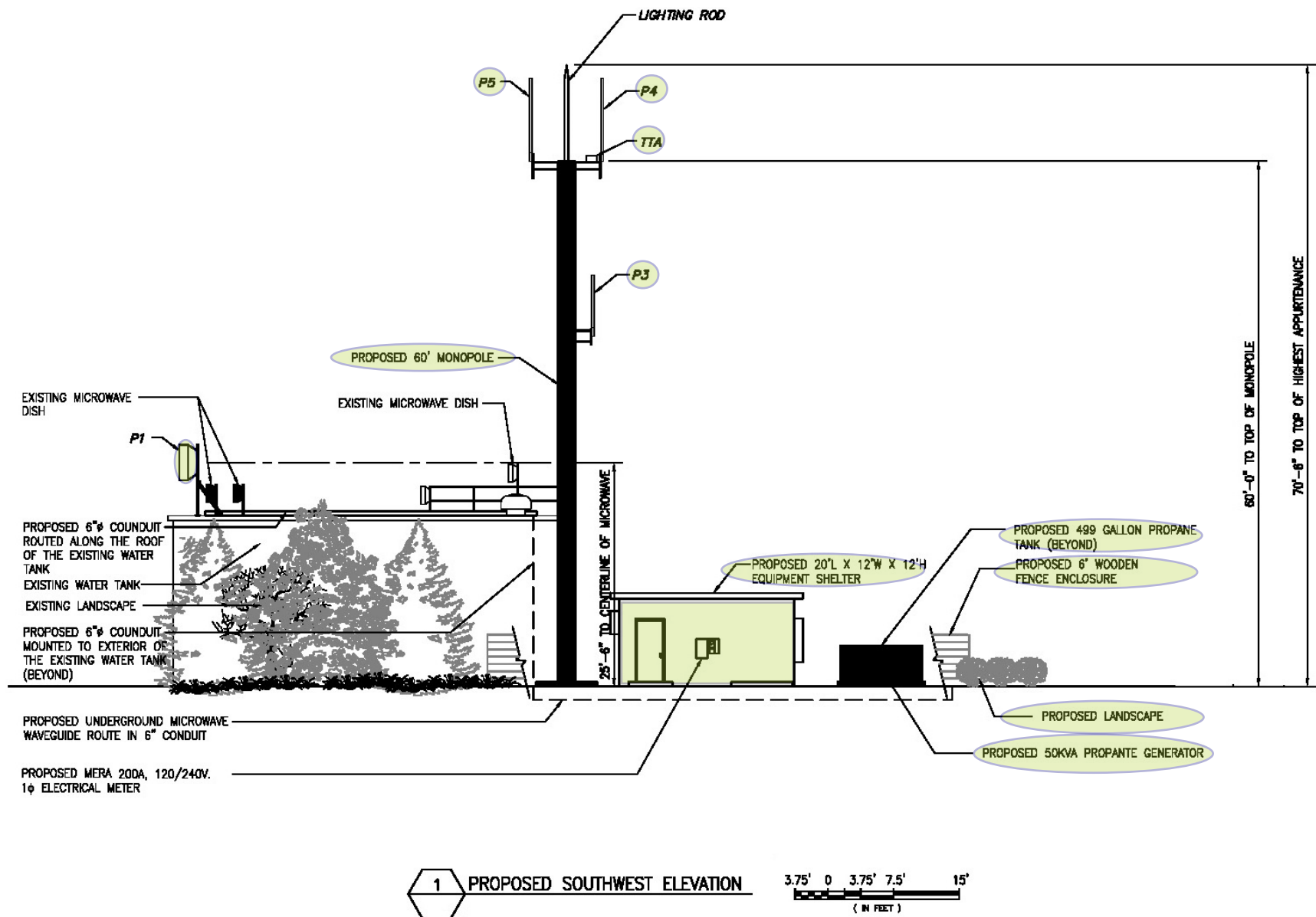
Figure III-52. Site 22- Skyview Terrace Water Tank Overall Site Plan

MERA Next Gen Communications System SEIR



Source: Motorola, 2018

Figure III-53. Site 22 - Skyview Terrace Water Tank Detailed Site Plan



Source: Motorola, 2018

Figure III-54. Site 23 - Muir Beach Proposed Elevation

NERA Next Gen Communications System SEIR

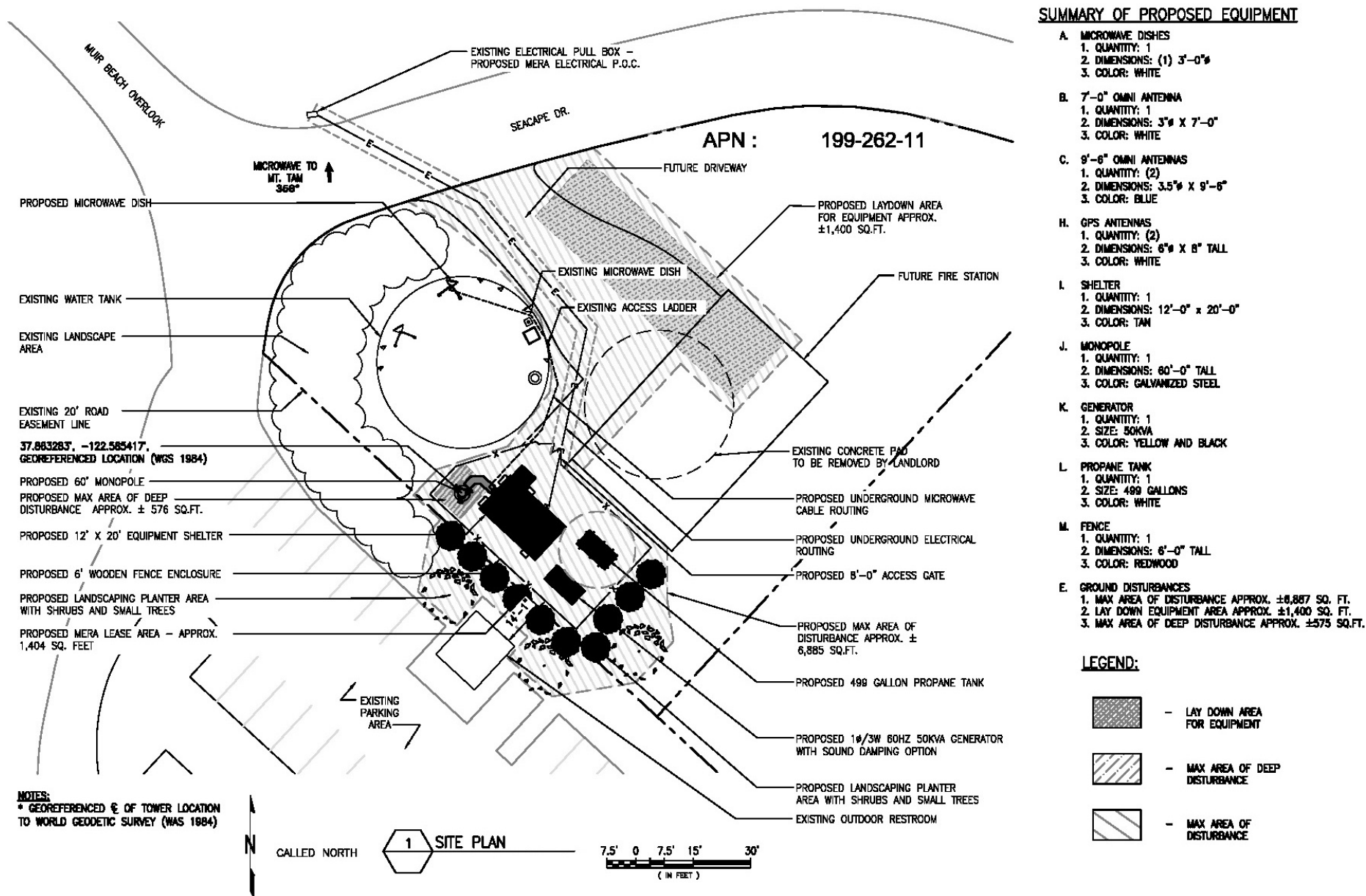
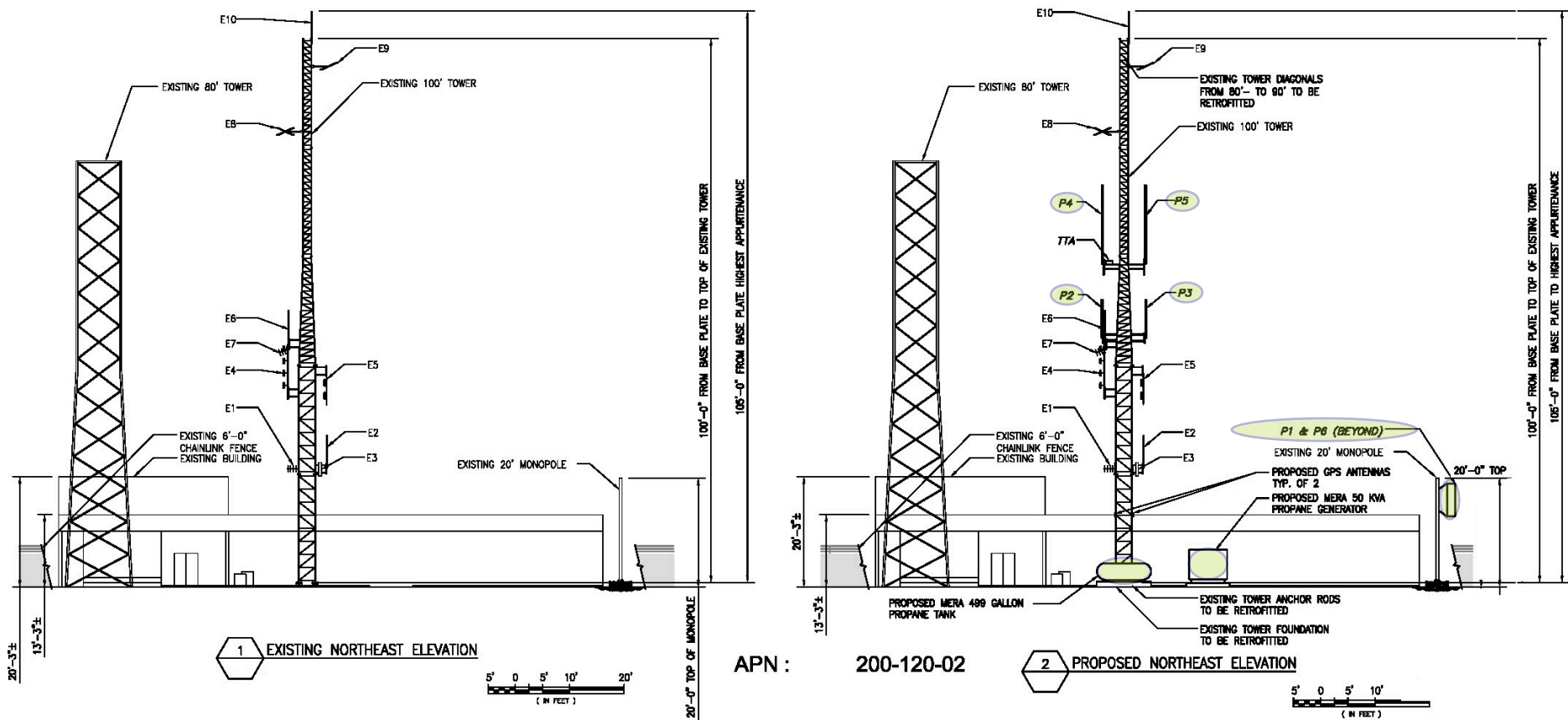


Figure III-55. Site 23 - Muir Beach Site Plan






Source: Motorola 2018

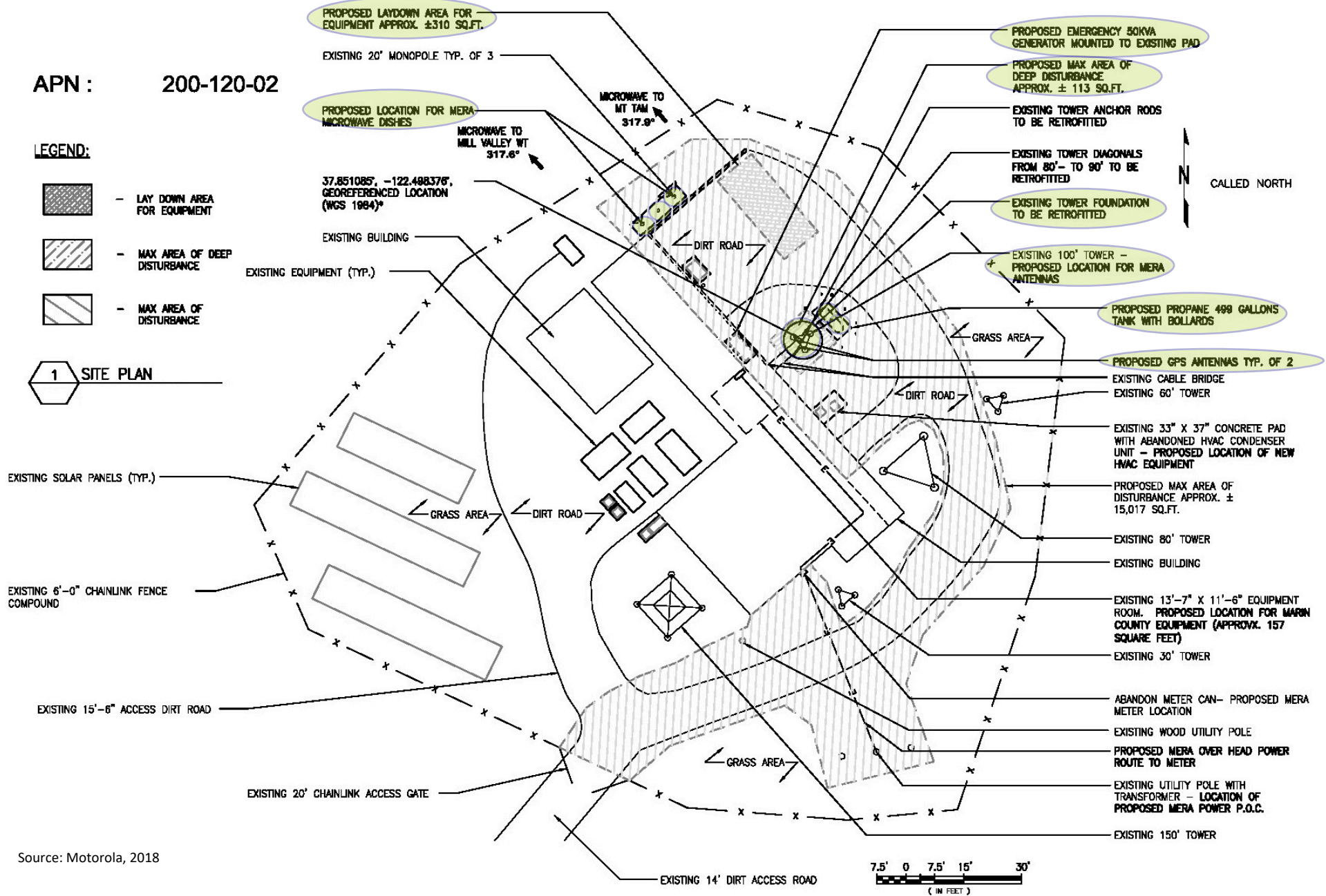
Figure III-56. Site 24 - Wolfback Ridge Existing and Proposed Elevations

APN : 200-120-02

LEGEND:

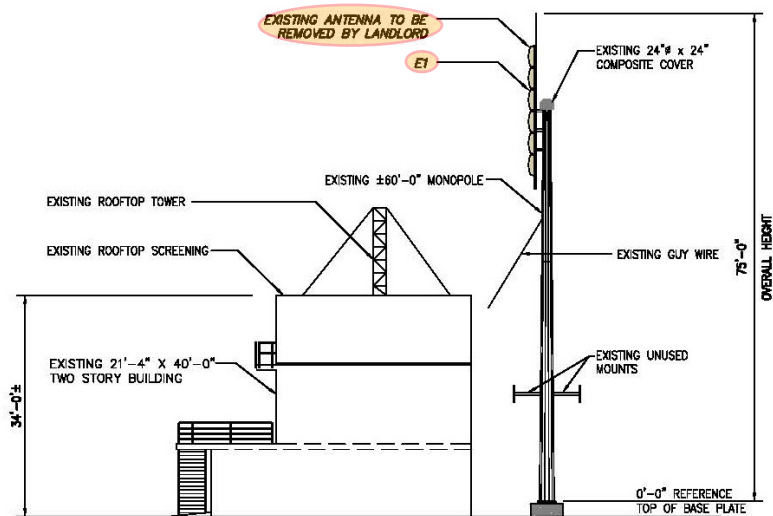
-  - LAY DOWN AREA FOR EQUIPMENT
-  - MAX AREA OF DEEP DISTURBANCE
-  - MAX AREA OF DISTURBANCE

1 SITE PLAN

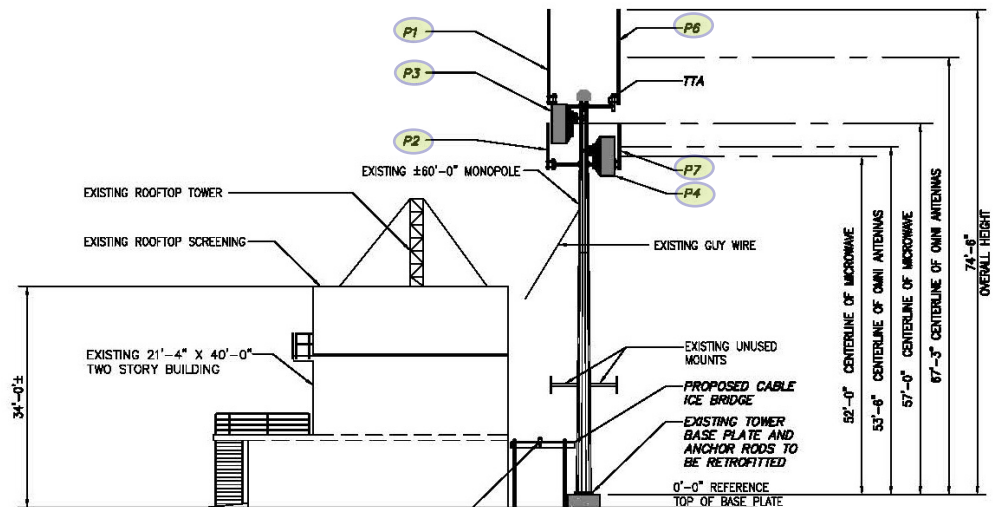


Source: Motorola, 2018

Figure III-57. Site 24 - Wolfback Ridge Site Plan



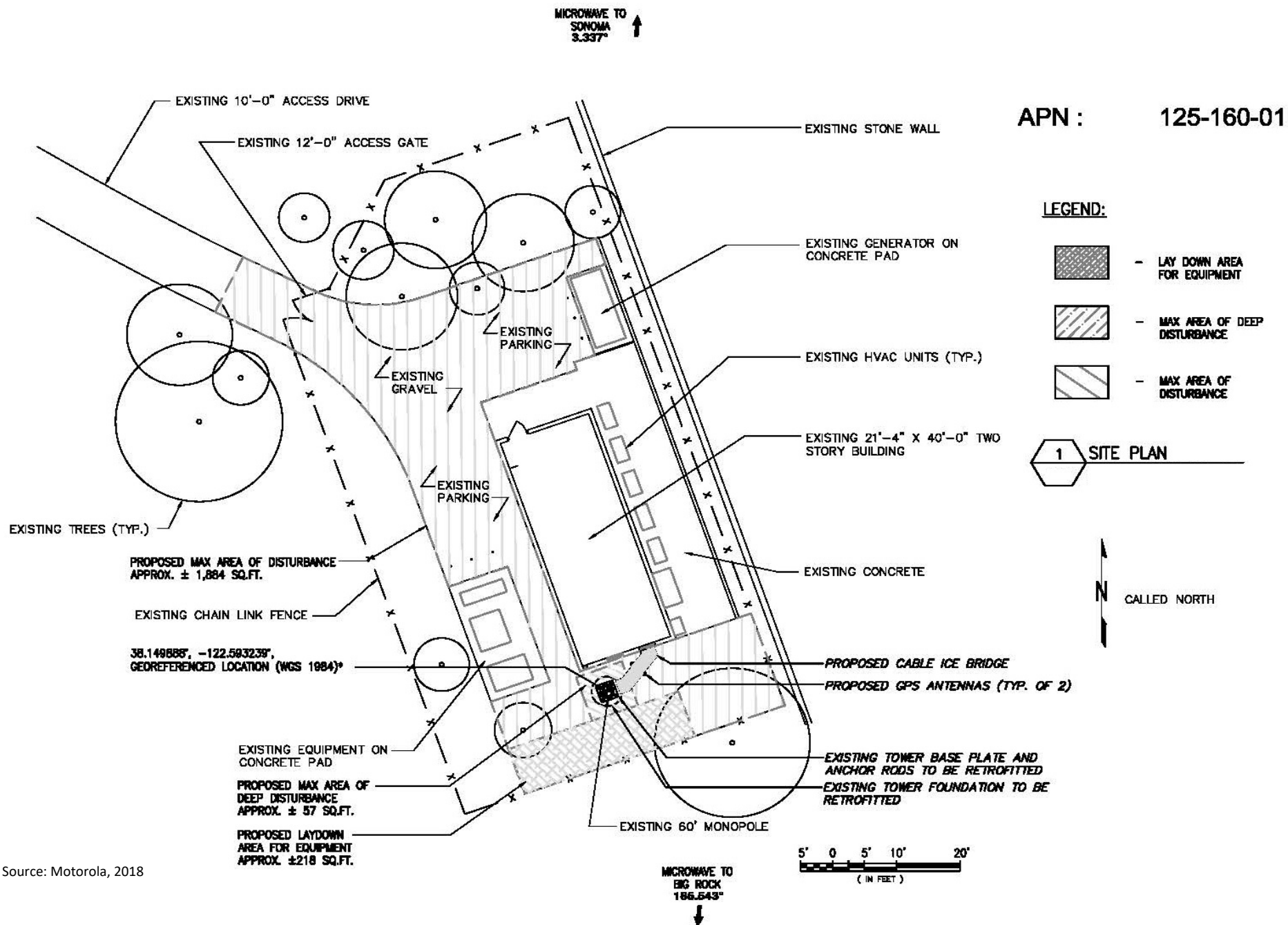
1 EXISTING WEST ELEVATION
SITE NAME: OTA BROADCASTING



1 NEW WEST ELEVATION
SITE NAME: OTA BROADCASTING

Source: Motorola, 2018

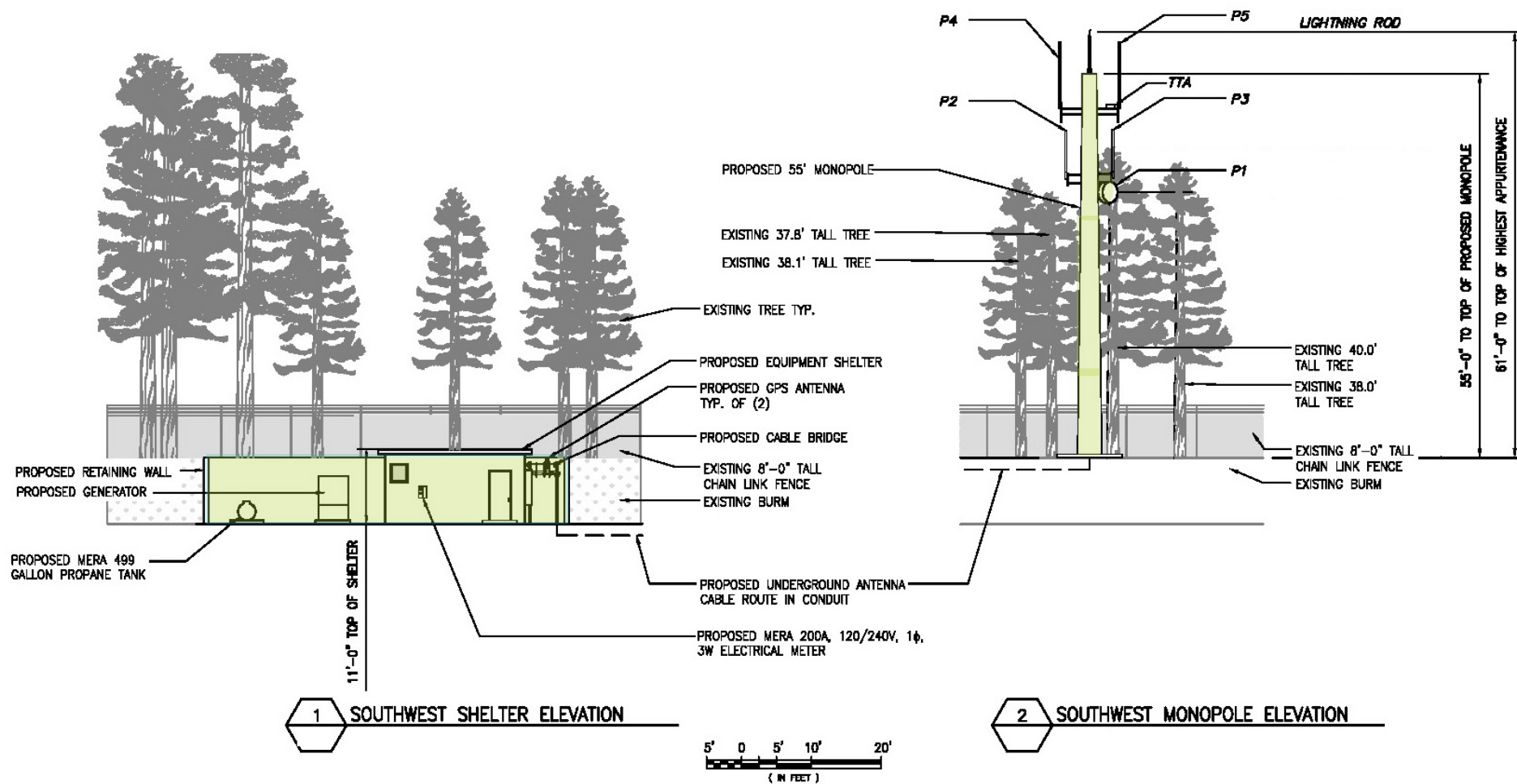
Figure III-58. Site 25 - Mt. Burdell OTA Existing and Proposed Elevations



Source: Motorola, 2018

Figure III-59. Site 25 - Mt. Burdell OTA Site Plan

MERA Next Gen Communications System SEIR



Source: Motorola, 2018

Figure III-60. Site 26 - Mill Valley Water Tank Proposed Elevations

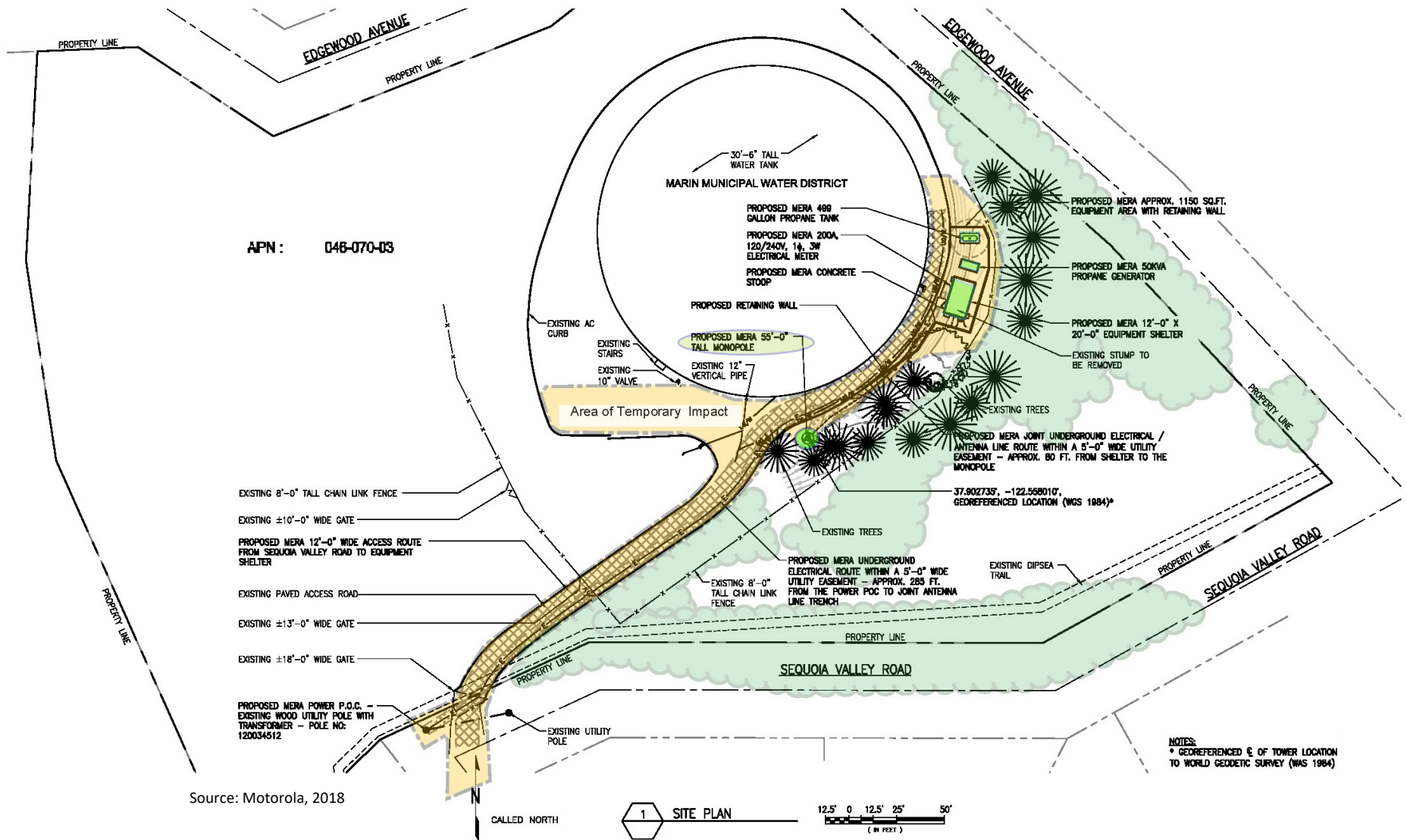


Figure III-61. Site 26 - Mill Valley Water Tank Overall Site Plan

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